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See Appendix, Vol. VI, for

COMPLETE TABLES SHOWING THE

POPULATION OF THE UNITED STATES

By STATES AND TERRITORIES, COUNTIES, CITIES, TOWNS, VILLAGES AND BOROUGHS

As returned at the TWELFTH CENSUS, JUNE, 1900

Prepared under the direction of

WILLIAM C. HUNT

Chief Statistician for Population

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SIMPLIFIED SPELLING

TWENTY CLASSES AND THREE HUNDRED WORDS

THE SIMPLIFIED SPELLING BOARD, in Circular No. 2, issued March 21, 1906, mentions twenty distinguishable classes of words, and includes a list of three hundred common words spelled in two ways, of which the BOARD says: "choose the simpler spelling."

The twenty distinguishable classes of words, arranged in the alphabetical order of the letters or affixes affected, are as follows:

1. Words spelled with **ae, æ** or **e**. Rule: choose **e**. Ex.: *Anesthetic, esthetic, medieval*, etc.

2. Words spelled with **-dge-ment** or **-dg-ment**. Rule: Omit **e**. Ex.: *Abridgment, acknowledgment, judgment, lodgment.*

3. Words spelled with **-ed** or **-t**, the preceding single consonant being doubled before **-ed** (*-pped, -ssed*) and left single before **-t** (*-pt, -st*). Rule: Choose **-t** in all cases. Ex.: *dipt, dript, dropt, stept, stopt*, etc., *blest, prest, distrest, mist*, etc., *blusht, husht, washt*, etc.

(Forms like these, being inflections, are commonly omitted in the dictionary lists of words spelled in two or more ways, but they are genuine historical spellings and can not be ignored. Some are very ancient (for example, *kist* is Anglo-Saxon *cyste*, and *mist* is Anglo-Saxon *miste*), and all are frequent and normal in English literature from Spenser, Shakespeare, and Milton to Tennyson and Lowell. For example, Milton has *compast, languisht, vanquisht, admonisht, astonisht, diminisht, polisht, worshipt, supt, ceast, linkt, matcht, scorcht*, etc.—SIMPLIFIED SPELLING BOARD.)

4. Words spelled with **-ence** or **-ense** (Latin **-ens-a**). Rule: Choose **-ense** Ex.: *Defense, offense, pretense.*

5. Words spelled with **-ette** or **-et**. Rule: Omit **-te**. Ex.: *Coquet, epaulet, etiquet, omelet*, etc.

6. Words spelled with **gh** or **f**. Rule: Choose **f**. Ex.: *Draft.*

7. Words spelled with **-gh** or without. (1) **-ough** or **-ow**. Rule: Choose **-ow**. Ex.: *Plow.* (2) **-ough** or **-o**. Rule: Choose **-o**. Ex.: *Altho* (Bunyan), *tho* (Bunyan), *thoro, -boro* (in place names).

8. Words with the verb suffix, of Greek origin, spelled **-ise** or **-ize**. Rule: Choose **-ize**. Ex.: *Catechize, criticize, exorcize, legalize*, etc

9. Words spelled with **-ite** or **-it**. Rule: Omit **e**. Ex.: *Deposit, preterit.*

10. Words spelled with **-ll** or **-l** (**-ill** or **-il**). Rule: Choose **-l**. Ex: *Distil, fulfil, instil.*

11. Words spelled with **-ll-ness** or **-l-ness**. Rule: Omit one **l**. Ex.: *Dulness, fulness.*

12. Words spelled with **-mme** or **-m**. Rule: Omit **-me**. Ex.: *Gram, program.*

13. Words spelled with **oe, œ** or **e**. Rule: Choose **e**. Ex.: *Ecumenical, esophagus.*

14. Words spelled with **-our** or **-or**. Rule: Choose **-or**. Ex.: *Favor, fervor, flavor, honor, labor, rigor, rumor, tenor, tumor, valor vapor, vigor.*

15. Words spelled with **ph** or **f**. Rule: Choose **f**. Ex.: *Fantasm, fantasy, fantom, sulfate, sulfur.*

16. Words spelled with **-rr** or **-r**. Rule: Omit one **r**. Ex.: *Bur, pur.*

17. Words spelled with **-re** or **-er**. Rule: Choose **-er**. Ex.: *Center, meter, miter, niter, sepulcher, theater.*

18 Words spelled with **s** or **z** (in the root). Rule: Choose **z**. Ex.: *Apprize, assize, comprize, raze, surprize, teazel.*

19. Words spelled with **s-** or **sc-**. Rule: Omit **c**. Ex.: *Simitar, sithe.*

20. Words spelled with or without silent **-ue**. Rule: Omit **-ue**. Ex.: *Catalog, decalog, demagog, pedagog, prolog.*

The three hundred common words spelled in two ways, arranged in alphabetical order, are as follows:

SIMPLER (New)	OLD
abridgment	abridgement
acconter	accoutre
accurst	accursed
acknowledgment	acknowledgement
addrest	addressed
adz	adze
aflixt	affixed
altho	although
anapest	anapæst, anapæst
anemia	anæmia, anæmia
anesthesia	anæsthesia, anæs-
anesthetic	anæsthetic, anæs-
antipyrin	antipyrine
antitoxin	antitoxine
apothem	apothegm, apophth-
apprize	apprise
arbor	arbour
archeology	archæology, archæo-
ardor	ardour
armor	armour
artizan	artisan
assize	assise
ax	axe
bans	banns
bark	barque
behavior	behaviour
blest	blessed
blusht	blushed
brazen	brasen
brazier	brasier
bun	bunn
bur	burr
caliber	calibre
caliper	calliper
candor	candour
carest	caressed
catalog	catalogue
catechize	catechise
center	centre
chapt	chapped
check	cheque
checker	chequer
chimera	chimæra, chimæra
civilize	civilise
clamor	clamour
clangor	clangour
clapt	clapped
claspt	clasped
clipt	clipped
clue	clew
coeval	coæval, coæval
color	colour
colter	coulter
commixt	commixed
comprest	compressed
comprize	comprise
confest	confessed
controller	comptroller
coquet	coquette
criticize	criticise
cropt	cropped
crost	crossed
crusht	crushed

SIMPLER (New)	OLD
cue	quene
curst	cursed
cutlas	cutlass
cyclopedia	cyclopaedia, cyclopædia
dactyl	dactyle
dasht	dashed
decalog	decalogue
defense	defence
demagog	demagogue
demeanor	demeanour
deposit	deposite
deprest	depressed
develop	develope
dieresis	diæresis diæresis
dike	dyke
dipt	dipped
discust	discussed
dispatch	despatch
distil	distill
distresl	distressed
dolor	dolour
domicil	domocile
draft	draught
draut	drachm
drest	dressed
dript	dripped
droopt	drooped
dropt	dropped
dulness	dullness
ecumenical	oecumenical, œcu-nacdile, ædile
edile	ægis, ægis
egis	enamour
enamor	encyclopaedia,-pædia
encyclopedia	endeavour
endeavor	envelope
envelop	Aeolian, Æollan
Eolian	aeon, æon
eon	epaulette
epaulet	eponyme
eponym	æra, æra
era	oesophagus, œsoph-
esophagus	aesthetic, æsthetic
esthetic	aesthetics, æsthetics
esthetics	aestivate, æstivate
estivate	æther, æther
ether	aetiology, ætiology
etiology	exorcise
exorcize	expressed
exprest	faggot
fagot	phantasm
fantasm	phantasy
fantasy	phantom
fantom	favour
favor	favourite
favorite	fervour
fervor	fibre
fiber	fixed
fixt	flavour
flavor	fulfill
fulfil	fullness
fulness	gauge
gage	gazelle
gazel	gelatine
gelatin	gnild
gild	gypsy
gipsy	glose
gloze	glycerine
glycerin	good-bye
good-by	grammie
gram	gripped
gript	harbour
harbor	hearken
harken	heaped
heapt	hæmatin, hæmatin
hematin	hiccough
hiccup	hough
hock	homœopathy, homœ-
homeopathy	homonyme
homonym	

SIMPLER (New)	OLD
honor	honour
humor	humour
husht	hushed
hypotenuse	hypothenuse
idolize	idolise
impresl	impressed
instil	instill
jail	gaol
judgment	judgement
kist	kissed
labor	labour
lacrimal	lachrymal
lapt	lapped
lasht	lashed
leapt	leaped
legalize	legalise
license	licence
licorice	liquorice
liter	litre
lodgment	lodgement
lookt	looked
lopt	lopped
luster	lustre
mama	mamma
manuever	manœuver, -œnvre
materialize	materialise
meager	meagre
medleval	mediaeval, mediæval
meter	metre
mist	missed
miter	mitre
mixt	mixed
mold	mould
molder	moulder
molding	moulding
moldy	mouldy
molt	moult
mullen	mullein
natnralize	naturalise
neighbor	neighbour
niter	nitre
nipt	nipped
ocher	ochre
odor	odour
offense	offence
omelet	omelette
oppresl	oppressed
orthopedic	orthopaedic, -pædic
paleography	palaeography, palæo-
paleolithic	palaeolithic, palæo-
paleontology	palaeontology, palæ-
palcozoic	palaeozoic, palæozoic
paraffin	paraffine
parior	parlour
partizan	partisan
past	passed
patronize	patronise
pedagog	pedagogue, pæda-
pedobaptist	paedobaptist, pædo-
phenix	phoenix, phœnix
phenomenon	phaenomenon, phæn-
pigmy	pygmy
plow	plough
polyp	polype
possest	possessed
practise, v. and n.	practice
prefixt	prefixed
prenomen	praenomen, præno-
prest	pressed
pretense	pretence
preterit	preterite, præterite
pretermit	praetermit, præter-
primeval	primaeval, primæval
profest	professed
program	programme
prolog	prologue
propt	propped
pur	purr
quartet	quartette

SIMPLER (New)	OLD
questor	quaestor, quæstor
quintet	quintette
rancor	rancour
rapt	rapped
raze	rase
recognize	recognise
reconnoiter	reconnoitre
rigor	rigour
rime	rhyme
ript	ripped
rumor	rumour
saber	sabre
sallpeter	sailpetre
savior	saviour
savor	savour
scepter	sceptre
septet	septette
sepulcher	sepulchre
sextet	sextette
silvan	sylvan
simitar	scimitar, cimeter, etc.
sipt	sipped
sithe	scythe
skilful	skillful
skipt	skipped
slipt	slipped
smolder	smoulder
snapl	snapped
somber	sombre
speeler	spectre
splendor	splendour
stedfast	steadfast
stept	stepped
stopt	stopped
strest	stressed
stript	stripped
subpena	subpoena, subpœna
succor	succour
suffixt	suffixed
sulfate	sulphate
sulfur	sulphur
sumac	sumach
suppresl	suppressed
surprize	surprise
synonym	synonyme
tabor	tabour
tapt	tapped
teazel	teasel, teasle, teazle
tenor	tenour
theater	theatre
tho	though, tho'
thoro	thorough, thoro'
thorofare	thoroughfare
thoroly	thoroughly
thru	through, thro', thro
thruout	throughout
tipt	tipped
topt	topped
tost	tossed
transgresl	transgressed
trapt	trapped
tript	tripped
tumor	tumour
valor	valour
vapor	vapour
vext	vexed
vigor	vigour
vizor	visor
wagon	waggon
washt	washed
whipt	whipped
whisky	whiskey
wilful	willful
winkl	winkel
wisht	wished
wo	woe
woful	woeful
woolen	woollen
wrapt	wrapped

may be produced differing widely from the race characters. The numerous widely differing breeds of dogs, pigeons, &c., are cases in point. The same may take place, to a lesser degree, in man. The separation of a people into castes or distinct classes acts as a sort of in-and-in breading, and yields marked human varieties. A nation has often in the past become isolated from other nations of the same race, and in consequence gained persistent traits which might be considered as those of special human breeds. The Greeks and Romans, for instance, seem to have been very closely related, yet were markedly distinct in intellectual character and physical appearance. The Hindus, a cousin race, presented other national characteristics, and the same may be said of the Celts, Germans and Russians. All these descended from a single ancestral race, but subsequent isolation seems to have produced selective action, each tribe varying in a manner different from that of others, perhaps through some influence of nature.

It may be that heredity acts more vigorously on the body than on the mind. The child receives the whole body from its parents. Of its mind it receives only the germ. The mental stores are gathered later, and though they are influenced by the hereditary mental strain, may be of a character to strongly modify this strain. Yet the inherent mental tendencies are very vigorous, and yield but slowly to transforming influences. In conclusion, it may be said that the influence of heredity on organic beings, while probably the most powerful of organic agencies, is not all-powerful, but is opposed by several reversing influences, whose effect is to yield breeds, varieties and races, and, as many maintain, organic species, genera and families. A principal cause of these divergencies is an innate principle of variation, whose origin and mode of action are obscure. Other causes are the mating of unlike individuals, and the influence of natural influences and education on the body and mind of the child, which may modify his whole nature and prepare him for the transmission of new characters to his descendants. In the view of modern evolutionists, the agencies referred to in this article are those which, acting during long periods on organic forms, have caused the vast divergencies which we perceive, while at the same time giving a strong and long continued persistence to family and race characteristics. Organic substances and mental conditions are to a considerable extent plastic, and seem to have been molded by nature's hands into an extraordinary variety of forms, while presenting an active opposing force of heredity which has prevented modifying influences from being too rapid in action and extreme in results.

Heri (*ā're*), or **Huri,** a river of Central Asia, having its source in the Hindoo-Coosh Mountains, 150 m. W. of Cabul, and passing through Afghanistan and Turkestan, terminates in the morass of Tejend, 150 m. E. of the Caspian Sea, after a course, N. and N.W., of 550 m. The city of Herat is situated on its banks.

Her'ing, CONSTANTINE, physician, was born in Oschatz, Saxony, Jan. 1, 1800; studied medicine at Leipsic and Dresden, and received his degree from Würzburg in 1826; became a convert to the homœopathic system through study and a close acquaintance with Hahnemann. He was sent by the King of Saxony to Dutch Guiana, on a scientific mission, after the performance of which he went to Philadelphia (1833) and there established the first homœopathic school in America, filling the chairs of materia medica and medicine in that institution (Hahnemann College) from 1845 to 1869. Dr. *H.* was a man of great ability and force, whose efforts bore fruitful results. He was a copious contributor to the literature of homœopathy, his books being published both in English and German. Died July 23, 1880.

Hering, RUDOLPH, civil engineer, born in Philadelphia, Feb. 26, 1847; graduated at the Polytechnic School in Dresden, Germany; was engineer in charge of surveys and preliminaries for the change in the water supply of Philadelphia; chief engineer of the Chicago commission for drainge and water supply; consulting engineer in numerous other American cities. He prepared, for the National Board of Health, a report on the sewerage of European cities, and jointly with J. C. Trautwine, Jr., translated and supplemented Ganquillet and Kutter's *Flow of Water in Rivers and Channels.*

Her'ington, in *Kansas,* a city of Dickinson co., on C., R. I. & P. and M. P. R. Rs. *Pop.* (1895) 1,446.

Her'komer, HUBERT, artist, was born at Waal, Bavaria, in 1849; was taken to England in 1857; studied at the Southampton Art School, and for a few months at Munich and South Kensington; settled in London (1870) where he was engaged in art work on *The Graphic;* founded a school of art at Bushey. His exhibited works include figure subjects and portraits, in water-color and oil. His picture, *The Last Muster,* is by many considered his best, while *Chelsea Pensioners* and its companion piece, *Eventide,* have been much admired. He was elected an A.R.A. in 1879, and Slade professor at Oxford, in 1885; is an honorary member of the academies of Vienna and Berlin, and an officer of the Legion of Honor.

Her'mann, ALEXANDER, magician, was born in Paris, France, Feb. 10, 1844, his father being a physician whose pastime was magic. His brother, Carl *H.,* was also proficient in sleight-of-hand performances, and appeared professionally before he was 21 years of age. This brother took Alexander to Vienna with him in 1856, taught him the art, and the two travelled over Europe, performing with great success. They came to America in 1861, on a professional tour; Carl subsequently returned to Europe, but Alexander remained and became a citizen of the U. S. He travelled all over the world, professionally, and had few equals in the "black art." Died Dec. 17, 1896.

Her'mansville, in *Michigan,* a post-village of Menominee co., on C. & N. W. and M., St. P. & S. St. M. R. Rs. *Pop.* (1897) about 780.

Herme'sianism, *n.* (*Ch. His.*) The method of religious inquiry taught by George Hermes, a professor of Theology at Rome, born April 22, 1775; died May 26, 1831. He taught that reason must first be exercised in establishing a divine revelation and the claims of the Church of Rome infallibly to interpret its teaching. Reason then itself required an implicit acceptance of all the doctrines of the church. These views he published in an *Introduction to Christian-Catholic Theology* (1819). Against this the Pope issued a brief—Sept. 26, 1835—holding it to be of infidel tendency. This was the occasion of a vehement controversy in Germany.

Hermoge'nians, *n. pl.* (*Eccl. Hist.*) A semi-Christian sect, followers of Hermogenes, who lived toward the end of the 2d century. They believed matter to be the root of all evil, yet that from it was formed everything in the world, the human soul not excepted.

Hermosillo (*ār-mo-sēl'yo*), a city of Mexico, State of Sonora, on a river of same name, 90 m. N. of Guaymas. It is the entrepôt of a considerable trade with the coast. *Pop.* (1897) 15,250.

Herodote'an, *a.* Pertaining to Herodotus, the Greek historian, of the 5th century B.C.

Her'old, LOUIS JOSEPH FERDINAND, an eminent French composer, born in Paris, 1791; died in 1833, at the zenith of his fame. His operas, *Zampa* (1831), and *Le Pré aux Clercs* (1832), are frequently represented on the French and German stage.

Her'on, in *Minnesota,* a post-village of Jackson co., 74 m. W. S. W. of Mankato, on C., St. P., M. & O. R. R.; has manufactures of furniture and hemp. *Pop.* (1895) 646.

Heroph'ilist, *n.* A follower of Herophilus of Alexandria, a physician who was one of the first to make a scientific treatment of anatomy.

Her'ron, FRANCIS JAY, soldier, born at Pittsburg, Pa., Feb. 17, 1837; graduated at the Western University of Pennsylvania, 1853; entered the Civil War as captain in the 1st Iowa Volunteers, and rose through successive grades to be brigadier-general of volunteers (1862); commanded the Army of the Frontier at the battles of Prairie Grove and Van Buren, and was promoted to the rank of major-general for gallant conduct. He held other important commands, and in June (1865) received the formal surrender of the trans-Mississippi Army and all Confederate forces W. of the Mississippi. He was appointed one of the commissioners to negotiate with Indian tribes (1865), but resigned that position and also his commission as major-general, the same year; was U. S. Marshal for the district of Louisiana (1867–69); Secretary of State for Louisiana (1870–72).

Herschel'ian, *n.* Pertaining to the astronomer, Herschel, or his work and discoveries.

Hertz, HEINRICH, electrician, born at Hamburg in 1857; he pursued a course of study in engineering until 1878, when he turned his attention more especially to physics, receiving the degree of Ph.D. from the University of Berlin in 1880. He then studied under Kirchhoff and Helmholtz, being for three years the assistant of the latter. He assumed the chair of Physics at the Technical College of Carlsruhe, in 1885, and four years later succeeded the illustrious Clausius in the chair of Physics at the University of Bonn, which important position he held until his death. His greatest contributions to science were the experimental demonstration that electro-magnetic induction is propagated through space at the velocity of light, by means of a wave-motion in all respects identical with that by means of which radiant energy is transmitted, and that the electric current is capable of being reflected and refracted in the same manner as light. After these remarkable researches, which were begun in 1886, the scientific fame of the young physicist soon became world-wide. In 1888 he succeeded in furnishing an experimental confirmation of the theories already advanced by Faraday and Clerk Maxwell, upon the propagation of electric waves in the surrounding medium; and these demonstrations mark an important epoch in electrical science. The apparatus which he devised is now classic, and is known as the *resonator. H.* confirmed the identity of all the different phenomena of radiation and showed their common origin—ether in vibration—the various phenomena being characterized only by the length of waves and their frequency. The intimate nature of these vibrations is still beyond our ken; and it is a matter of sincere regret that a physicist so talented and an investigator so successful should have been cut off in the very morning of a most promising career. *H.*'s researches have been published in a volume entitled *Die Ausbreitung der Elektrischen Kraft.* Died Jan. 5, 1894.

Hert'zian, *a.* Pertaining to the German physicist, Heinrich Hertz (*q. v.*), or to discoveries made by him.

Hesiod'ic, *a.* Pertaining to the writings or the style of the Greek poet, Hesiod (*q. v.*).

Hesperor'nis, *n.* (*Ornith.*) A fossil bird of striking character, discovered in the Cretaceous strata of the western U. S. It was reptilian in character, in the possession of small, pointed teeth, resembling those of reptiles, and planted in a deep continuous groove, not unlike that of Ichthyosaurus. Its small brain was more reptilian in type than that of any other adult bird known. It measured 5 feet from the point of the bill to the end of the toes, had rudimentary wings, powerful legs, and feet adapted to rapid swimming, it being probably a diving bird. The broad tail could move up and down, and may have given aid in swimming. The jaws were long and slender, and, as in serpents, were united in front only by cartilage, while a joint on each side admitted a degree of accommodation, so that, in the words of Prof. Marsh, "its power of swallowing was doubtless equal to almost any emergency."

Fig. 2929.
RESTORATION OF SKELETON OF HESPERORNIS REGALIS.
a, tooth of same, with germ of second tooth (magnified).

Heteron'omy, *n.* [Gr. *heteros,* other, *nomos,* law.] Subordination to the law or authority of another, opposed to *autonomy.*

(*Metaph.*) A term applied by Kant to the laws imposed on us from without, or the violence done to us by our passions, wants, or desires.

Het'eronym, *n.* [Gr. *heteros,* other, *onyma,* name.] A word spelled like another, but having a different sound and signification; as, close (verb), to shut, and close (adjective), near by.

Heteroto'pia, *n.* [Gr. *heteros,* other, and *topos,* place.] (*Surg.*) A deviation from the natural position of parts. This has been called *objective H.,* in contradistinction to *subjective H.,* which is applied to a sensation of displacement or approximation, such as is experienced in the stumps of an amputated limb.

Het'tinger, in *North Dakota,* a S.W. co.; *area,* 2,160 sq. m. It is intersected by the North and South Forks of Cannon Ball river. *Surface,* rolling; *soil,* very fertile and well watered. Stock raising is the chief industry. Unorganized. *Pop.* (1897) about 125.

Hew'itt, ABRAM STEVENS, manufacturer and politician, was born at Haverstraw, N. Y., July 31, 1822; graduated at Columbia College (1842); studied law, but failing eyesight obliged him to give up the idea of practicing, and he established iron works at Trenton, N. J. In 1867 he was a commissioner to the French Exhibition, and made an able report on *Iron and Steel.* He has been secretary of the Cooper Union for the Advancement of Science and Art since its incorporation in 1859. Mr. *H.* was elected to Congress from New York city in 1874, serving for two terms and declining a re-nomination in 1878; was again elected in 1880 and served until 1886, when he became mayor of New York city, holding this office for one term. On all matters relating to the manufacture of iron he is an expert, and for his proficiency in this science Columbia College gave him, in 1887, the honorary degree of LL.D. Died Jan. 18, 1903.

Hex'agram, *n.* [Gr. *hexagrammatos.*] A combination of two equilateral triangles, forming a six-pointed star; the symbol of the Pythagorean School.

Hex'apla, *n.* [Gr.] A collection of six versions of the Holy Scriptures arranged in parallel columns.

Hex'ateuch, *n.* (*Script.*) The first six books of the Bible. The first five have long been called the Pentateuch, but some recent writers have added the book of Joshua as a sixth. The Pentateuch was a name adopted by early Christian writers, on the ground that these five books formed a distinct division of the Scriptures, called the Torah or Law, and believed to have been written by a single author, Moses. Recent Biblical critics maintain that these books were not written by Moses, but were a later compilation from four ancient documents, and that the book of Joshua properly belongs with them, the six books forming a unit separate from the remaining Hebrew literature. Hence the title Hexatench. See HIGHER CRITICISM.

Hey'se, PAUL, poet and novelist, born in Berlin, Germany, March 15, 1830; studied under Lachmann and Boeckh, and in Bonn under Diez; went twice to Italy for purposes of study; took up his residence in Munich (1854), where he was given a position at the court, and where he has since lived, though resigning his public place in 1868. He is one of the greatest living translators; has written numerous plays and his success as a poet and writer of prose has been great.

Hiawa'tha, *n.* [Am. Indian.] The name given by the Iroquois Indians to a personage of miraculous birth and supernatural attributes, sent among them to clear the rivers and forests and teach the arts of peace,

Other tribes know him as Michabou, Chlabo, &c. Many legends cluster around the name, which are given by Schoolcraft in his *Myth of Hiawatha*, and dealt with imaginatively by Longfellow in his poem of *Hiawatha*.

Hick'ok, Laurens Perseus, divine and scientific writer, born at Danbury, Conn., in 1798; graduated at Union College, Schenectady, in 1820, and in 1852, after holding a professorship in the Theological Seminary, Auburn, N. Y., became vice-president and professor of mental and moral science of Union College, and president, 1866–68. He wrote: *Rational Psychology* (1848); *Moral Science* (1853); *Empirical Psychology on the Human Mind as given in Consciousness* (1854); *Rational Cosmology* (1858); *Creator and Creation* (1872); *Humanity Immortal* (1872). Died in 1876.

Hick'ory, in *North Carolina*, a post-village of Catawba co., on C. & L. and Southern R. Rs. Has wagon works, cotton, flour, saw and planing mills, a shoe factory, tannery, cigar and tobacco works. *Pop.* (1890) 2,023.

Hicks-Beach, Sir Michael Edward, statesman; born in London in 1837; educated at Eton and Oxford; returned to Parliament for East Gloucestershire (1864) serving the Conservative interest. Held various public positions, and was appointed Chief Secretary for Ireland in 1874; in 1877 had a seat in the cabinet; was Secretary of State for the Colonies (1878–1880); Chancellor of the Exchequer (1885), and again Chief Secretary for Ireland (1886); was President of the Board of Trade from 1888 till the change of administration in 1892, when he was again elected to Parliament. In 1895 he became Chancellor of the Exchequer in Lord Salisbury's cabinet (Conservative).

Hicks'ites, *n. pl.* Those Friends who follow the teachings of Elias Hicks (*q. v.*), and who differ from the Orthodox Friends, or Quakers, in their views of the Trinity, the Atonement, authority of the Scriptures, &c., which are rather Unitarian or latitudinarian.

Hi'co, in *Texas*, a post-town of Hamilton co., on Tex. Cent. R.R., 85 miles W. of Waco. *Pop.* (1890) 649.

Hi'eron, *n.* [Gr.] Any holy or consecrated place or building; a temple or chapel.

Hig'bee, in *Missouri*, a post-town of Randolph co., 12 m. S. of Huntsville, on C. & A. and M. K. & T. R.Rs.; coal is mined in this vicinity. *Pop.* 1,093.

Hig'gins, Anthony, born in New Castle co., Del., Oct. 1, 1840; educated at Yale (A. B.), and at the Harvard Law School; admitted to the bar in Delaware, 1864. He was U. S. District Attorney for Delaware (1869–76), and U. S. Senator from Delaware (Republican) from 1889 to 1895.

Hig'ginson, Thomas Wentworth, philanthropist and author, was born in Cambridge, Mass., Dec. 22, 1823; graduated from Harvard (1841), and received the degree of A. M. (1869); studied theology at Cambridge; was ordained minister of the First Religious Society of Newburyport, Mass. (1847); became minister of the Free Church, Worcester, Mass. (1852); resigned from the ministry (1858). Previous to the Civil War he took an active part in the anti-slavery movement, and during the war was captain and subsequently colonel of the 1st South Carolina Volunteers (colored); was wounded in August, 1863, and mustered out in October, 1864. He has since devoted himself to literature and social reform, though serving as a member of the House of Representatives of Massachusetts, and of the Governor's military staff, and for five years as State military and naval historian. He has made earnest efforts to improve the management of Harvard University, and to open all its doors to women. His publications have been varied, and include: *Out-door Papers*, essays; *Army Life in a Black Regiment*, a novel; *Malbone; Oldport Days; Young Folks' History of the United States;* the memoirs of Lydia Maria Child and Margaret Fuller Ossoli, in *Eminent Women of the Age; Harvard Memorial Biographies; Child Pictures from Dickens; Women and Men; A Larger History of the U. S.; Concerning All of Us;* &c.

Hig'ginsville, in *Missouri*, a post-village of Lafayette co., 12 m. S.E. of Lexington, on Mo. Pac. and C. & A. R. Rs.; has flour mills, brick and tile works. *Pop.* (1897) about 2,450.

High'binder, *n.* A ruffian; a member of a secret society among the Chinese whose object is thought to be blackmailing.

High'er Crit'icism. (*Liter.*) Two forms of criticism are recognized in modern letters: the Lower Criticism, which deals mainly with the text of any work of literature, and the Higher Criticism, which considers also the questions of its origin, history, literary form, probable authenticity, &c., judging it from all available points of view. These terms are applied to the study of all ancient literature. A case in illustration of the *H. C.* is the question whether the *Iliad* was written by Homer, or is a compilation of more ancient lays; while the question as to the proper employment of one or another word is an instance of the lower criticism. As now most commonly employed, however, the term is applied to Biblical criticism. It seeks to discover when and under what circumstances the books of the Bible were written; whether they were the work of the authors to whom they are attributed; whether they agree internally and with one another; whether additions may have been made to them or more ancient materials incorporated in them; and to what extent they are confirmed or discredited by the evidence of ancient monuments and contemporary history. An instance of the *H. C.* is the attempt to explain the discrepancy between the accounts of the same events in Kings and Chronicles. Another is the effort to discover what evidence there is in favor of David's authorship of the Psalms. These are a few among the many questions that have been investigated. One principle of the *H. C.* is that no writing can be earlier in date than the historical allusions it may contain, even though it be based on much older documents. It also maintains that when the language, style, and mode of treatment of two documents show marked differences, the presumption is that they had different authors. These and other dogmas of the *H. C.* have been applied to the various books of the Hebrew Scriptures, with results widely at variance with the ordinarily accepted views. The early books of the Bible, for instance, are claimed to be, in their present form, of comparatively late origin, and made up of two or more ancient documents or traditions, welded into one without any attempt to harmonize their language or discrepancies of statement. See Hexateuch.

High'falu'ting, *n.* [Perhaps a corruption of *high flying.*] (*Slang.*) High-sounding, bombastic speech; pompous or affected writing.—Also used adjectively.

High'-grade, *a.* Of high or superior grade or quality.—In stock-breeding, being more than three-fourths of pure blood.

High'land, in *Pennsylvania*, a village of Luzerne co., on the Lehigh Valley R. R. *Pop.* (1897) 720.

High'more in *South Dakota*, a city, cap. of Hyde co., 21 m. W. of Miller, on C. & N.W. R.R. *Pop.* (1895) 294.

High-toned, *a.* Having a high pitch or tone; of high moral, mental or social character.

Hila'ria, *n.* [Lat.] A day or season of festivity; especially, a lively festival among the Romans, in honor of Cybele, observed at the time of the vernal equinox.

Hil'gard, Eugene Waldemar, chemist, born in Zweibrücken, Germany, Jan. 5, 1833; was taken to America in childhood, but afterward he returned to Europe and studied at the Academy of Mines, Freiberg, Germany; also at the Universities of Zurich and Heidelberg, graduating from the latter in 1853. He returned to the U. S. (1855) and was made assistant State geologist of Mississippi. He held, at successive periods, professorships in the State Universities of Mississippi, Michigan, and California; he is the author of numerous papers on geology and agriculture, and on the chemistry and physics of soils, published in *The American Journal of Science*, and *Smithsonian Contributions to Science.* His discussion of the relations of soil and climate, prepared for the U. S. Weather Bureau (1892), has been translated into several foreign languages.

Hilgard, Julius Erasmus, scientist, born in Zweibrücken, Germany, Jan. 7, 1825; received a classical education and studied civil engineering in Philadelphia; became a member of the Coast Survey Service (1845); was appointed assistant in charge of the Coast Survey office (1862), and of the construction of standard weights and measures; was chosen a member of the permanent committee of the international metric commission which met at Paris in 1872, and conducted a determination by telegraph of the differences in longitude between the observatories of Washington, Greenwich and Paris; was president of the American Association for the Advancement of Science (1874) and from 1881 to 1885 superintendent of the U. S. Geodetic Survey. He published papers on geodetic methods, tides, &c., which appeared in the Coast Survey reports, and in various scientific journals. Died May 8, 1891.

Hill, Ambrose Powell, soldier, was born in Culpeper co., Va., in 1825; graduated at West Point in 1847, and became a major-general in the Confederate service in 1862. He commanded a division in the actions of Mechanicsville and Gaines' Mill, the second battle of Bull Run, and at Antietam and Fredericksburg, in 1862; and for his distinguished gallantry on the field of Chancellorsville, in 1863, was made lieutenant-general. He led a corps at Gettysburg in 1863, and in the following year participated in the principal battles of the Virginia campaign. Killed in action near Petersburg, April 2, 1865.

Hill, Benjamin Harvey, politician, born in Jasper county, Ga., Sept. 14, 1823; graduated from the State University of Georgia in 1844; studied law, and was admitted to the bar, (1845). He was active both in State and national politics; was elected a member of the Georgia legislature (1851); earnestly advocated the Union cause, but afterward became a prominent supporter of secession; elected (Feb. 4, 1861), to the Confederate House and in the autumn of the same year to the Confederate Senate, serving in that body till the end of the war. He was taken prisoner at his home in Georgia, in May, 1865, and confined, until the July following, in Fort Lafayette, New York. After the war he wrote *Notes on the Situation*, which were in opposition to the reconstruction policy of Congress; also issued an *Address to the People of Georgia*, which was severely censured; supported the Greeley ticket in 1872; was elected U. S. Senator for Georgia, for a full term (1877-83), but died, before its expiration, on August 16, 1882.

Hill, Daniel Harvey, soldier, born in York county, S. C., July 12, 1821; graduated at West Point (1842), and for gallant services in the Mexican War was presented by his native State with a sword of honor; resigned his commission (1849), accepting the chair of mathematics in Washington College, Virginia (1854), and in the same year that of mathematics and engineering in Davidson College, North Carolina, holding the latter position until 1859. In the Civil War he entered the Confederate army as colonel, attaining the rank of major-general. At the close of the war he engaged in journalism, and published *The Land We Love*, a monthly magazine. He was the author of: *Elements of Algebra; Consideration of the Sermon on the Mount*, &c. Was president of the University of Kansas (1877), and of the Military and Agricultural College at Milledgeville, Ga. (1887). Died Sept. 25, 1889.

Hill, David Bennett, lawyer and Democratic politician, was born at Havana, Schuyler county, N. Y., Aug. 29, 1844; removed to Elmira (1862); studied law and was admitted to the bar (1864), entering into local politics. He was a member of the Assembly (1869–71); alderman of Elmira (1881) and mayor of that city (1882); lieutenant-governor of New York (1882) and acting governor after Jan. 6, 1885, following Grover Cleveland's election to the Presidency; was governor of New York two successive terms (1885–91) and U. S. Senator from 1891 to 1897. In 1894 Mr. *H.* again ran for governor of New York, without resigning his seat in the Senate, and was signally defeated. He has been credited with Presidential aspirations, but these have never approached realization. His democracy is of the most uncompromising character and his seemingly commonplace assertion, "I am a Democrat, was for some occult reason accepted by many of his party as a rallying cry. In 1896 Mr. *H.* opposed the Free Silver wing of his party at their national convention in Chicago, and during the campaign withheld his support from the national ticket there nominated, thus apparently separating himself from the rank and file of Democracy. He resides and practices law at Albany.

Hill, David Jayne, educator and author, born at Plainfield, N. J., June 10, 1850; educated at Bucknell University; became professor of Rhetoric there, and president (1879–1888); and in the latter year president of the University of Rochester. He is the author of *The Science of Rhetoric; Life of Washington Irving: Principles and Fallacies of Socialism; The Elements of Psychology*, and various other works; edited Jevon's *Logic* (New York, 1884).

Hill, Thomas, clergyman and educator, born at New Brunswick, N. J., Jan. 7, 1818; graduated from Harvard in 1843, studied theology, and was ordained pastor at Waltham, Mass. (1845); became president of Antioch College (1859); president of Harvard College (1862–68); was botanist in the Hassler expedition around the coasts of South America under Prof. Agassiz (1871); pastor of a church at Portland, Me. (1872). A close student of the natural sciences and mathematics, he aimed to make all science tributary to religion. He was the author of *Geometry and Faith; Liberal Education, Natural Sources of Theology*, &c. Died in 1891.

Hill City, in *Kansas*, a post-village, cap. of Graham co., on the Union Pacific R. R.; has plow factory. *Pop.* (1895) 348.

Hill City, in *South Dakota*, a city of Pennington co., 46 miles S. of Deadwood, on B. & M. R. R. A mining center. Has lumber and saw mills and mines of tin. *Pop.* (1895) 675.

Hill City, in *Tennessee*, a post-village of Hamilton co. *Pop.* (1890) 1,763.

Hil'lard, George Stillman, orator and litterateur, was born in Maine in 1808, graduated at Harvard in 1828, and five years later was admitted to the Boston bar. In 1852 he delivered the funeral oration on Daniel Webster, and was afterward one of the editors of the *Jurist*, and of the Boston *Courier*. He edited the *Poetical Works of Spenser*, and his *Six Months in Italy* has been highly praised by foreign critics. *H.* also edited a series of School Readers, which have been extensively used. Died in 1879.

Hill-forts. (*Anc. History.*) Many ancient cities grew out of places of refuge or strongholds on elevations, known in modern historical literature as hill-forts, and common in the unsafe conditions of life in early times. As an instance may be named Athens, whose origin lay in the use of the hill of the Acropolis as a hill-fort by the more ancient people of Attica. Rome similarly had its origin in a stronghold on the hills of the Tiber. Traces of such strongholds exist throughout Europe, ranging in date of use from remote prehistoric to early historic times. These forts existed on elevations capable of easy defence, the selected site being enclosed and fortified, sometimes the whole hill-top, at others its most defensible portion being walled in. In some cases these forts, though situated in a hilly country, stand on lower ground, offering opportunities for culture or pasturage. Their walls are usually of earth or stone, these being rarely mingled in the construction. The forts of Gaul at the period of the Roman invasion were often strong and extensive, the walls built of loose masonry, but the stones bound together in the exposed portions by great logs of wood laid longitudinally and transversely, and aiding greatly in resisting the strokes of the battering-ram. At Burghead, in Scotland, is a similar dry stone wall strengthened by logs of oak. It is the only instance of this kind known in Scotland, a country in which hill-forts are more numerous than elsewhere in Europe. These are known as "duns" in the north, and as "camps" in the south. "Dun" is a prefix to various Scottish names, and Edinburgh itself was originally Dun Edin. Hill-forts are by no means confined to Europe. The earthworks of the Mound-Builders of the Mississippi Valley, included many examples of this kind, and the Indian villages at present located on the summits of the mesas of New Mexico and Arizona are existing examples of a mode of defence practiced through all ages. The dwellings of the cliff-dwellers, while not properly hill-forts, arose in response to the same necessity.

Hills'borough, in *Kansas*, a post-village of Marion co., 10 m. W. of Marion, on A., T. & S. Fé R.R.; has manufactures of butter and cheese. *Pop.* (1895) 649.

Hinck'ley, in *Minnesota*, a post-village of Pine co., 77 m. N. of St. Paul, on Gt. Nor. and St. P. & Duluth R.Rs.; has lumber mills. *Pop.* (1895) 589.

Hincks, EDWARD, clergyman and Assyriologist; born at Cork, Ireland, in August, 1792. His father, the Rev. T. D. *H.*, was a professor of Oriental Languages in the Belfast Academical Institution, and the son inherited a fondness for the study of languages; graduated at Trinity College, Dublin, receiving a fellowship; was ordained in the Established Church of Ireland and became rector of Ardtrea, and, in 1826, of Killyleagh. During his studies in Egyptian and Assyrian archæology he laid the foundation of Assyrian grammar, and also discovered the key to the Assyrian numeral system. Died Dec. 3, 1866.

Hin'du (or **Hin'doo**) **Philos'ophy.** (*Philos.*) It is interesting to perceive, in the history of most of the principal religions, how the speculations of thinkers have made the existing dogmas the basis of metaphysical tenets deviating widely from those of the orthodox faith, and restricted in acceptance to the thinking or speculative class, while the body of the people cling to the old dogmas and are quite incapable of understanding the subtleties of the metaphysicians. Such was the case in ancient Hindostan and Greece and is the case in modern Christendom, in which, for a century or two past, philosophers have been busy in explaining the universe, in language and logic quite incomprehensible to the mass of the people, who have been in no sense shaken in their belief by these intricate reasonings. A similar condition has long prevailed in Hindostan. Ages ago the thinkers of the Brahmanic caste developed out of the simple dogmas of the Vedic faith a deep philosophy, which is still maintained; though side by side with it the simplified religion of the people has held its own, developing into a polytheism which bears no relation to the philosophy. It is with these philosophical tenets, which have recently made their way into Europe and America under the form of Theosophy, that we propose here to deal.

The polytheism of the Vedas was not a complete one. Various gods were recognized, but not fully as deities of separate provinces of nature. Each was worshipped as the one great deity, having universal power, and for the time being filled all the mental horizon of the worshipper, to the exclusion of the other deities. Under such a system it was but a step to a conception of the unity of the divine essence; and, while the religion of the people developed into a more distinct polytheism, that of the thinkers became a virtual monotheism. We meet with this conception as a common basis of speculation in the literature of the Brahmana period. A universal spirit, Prajapati, the personal creator of the world, is generally recognized, though under this a general drift of thought toward pantheistic views is discernible. Gradually the pantheistic doctrines became more declared and the belief in a supreme personal deity was made to accord with them in a method accordant with the subtlety of Hindu thought. *Brâhmâ*, a neuter word expressive of abstract sacerdotalism, was raised to the position of the original divine essence, while the masculine form of the word, *Brahmâ*, the old term for the individual priest, became the supreme personal deity. He was created by Bráhmâ (born from a golden egg), and in his turn created the universe, taking the place and the attributes of the earlier Prajapati. From this conception grew up in time the doctrine of emanation. The great divine essence was originally all, and continues all, all lower existences being emanations from this essence, of which they remain part, their individuality being but relative, and into which they must eventually return, all separate conscious existence being seemingly swallowed up in the one great divine existence from which they came, and which continues to include within itself the whole universe. This doctrine was not born full-fledged. Too much deep thought went to its formation for that. It gradually unfolded in the minds of the deep-revolving Hindu thinkers, its growth being marked by several successive systems of philosophy, the characters of which may be briefly epitomized.

THE PHILOSOPHICAL SCHOOLS.—The earliest systematic exposition of the pantheistic doctrine, of which we have knowledge, appeared in the *Mimansa* philosophy, which, as its tenets were believed to be in full harmony with the Vedic dogmas, was regarded as the only orthodox school. In what was probably its first form, the school of *Jaimini*, its reasonings were employed to aid in a correct interpretation of the Vedas. Its later form, commonly known as the *Vedanta* (conclusion of the Veda), ascribed to *Vyasa*, is a metaphysical system which professes to supply a complete exposition of the theology of the *Upanishads*, the speculative portion of the Vedas. Other philosophical systems followed, in which the pantheistic doctrine was more fully developed. These, though accepted as orthodox, were looked on with some degree of doubt. These were the *Sankhya* school of Kapila, the *Nyâya* of Gotama, and the *Vaiseshika* of Kanada. These systems grew gradually one from another. The Vedanta, while having no difficulty with the conception of spirit, was unable to account in any satisfactory way for the origin of matter; and its followers in later times denied the existence of matter, declaring that it was an illusion, due to imperfect knowledge of the soul. Kapila escaped this difficulty by the doctrine of an eternally existing material principle which, while unconscious, was able to will its own development; from it all matter came, and into it all matter would return. Side by side with this was a primary spiritual essence, which from the beginning entered into matter. It was unintelligent in itself, but was endowed with a subtle body consisting of intelligence, the earliest emanation from the material essence, through which it gained the faculty of knowing. The combination of the intelligent principle with the spiritual essence yields the self-conscious, individual soul. Patanjali, a later philosopher, produced the doctrine of the *Yoga* as an improvement on this system, holding that the spiritual principle possessed self-volition, and did not depend on matter for its activity. The two schools, the *Nyâya* and the *Vaiseshika*, represent the universe as proceeding from nine primary substances, of which five—earth, air, water, light and mind—exist eternally as atoms; three—ether, time and place—are one and infinite; and the last—soul—is either one and infinite as the supreme spirit, or manifold as the vital spirit of living beings.

BUDDHISTIC PHILOSOPHY.—The philosophies named, while antagonistic to the orthodox belief in a personal creator, professed to be based on the Vedas, and did not interfere with the system of caste. They were, therefore, not interfered with by the priests of the popular faith, who were not disturbed by a heterodoxy that did not seek to restrict their privileges. But the time was sure to come in which latitude of speculation would be combined with measures of practical reform. Such a reformer arose in Gautama, the founder of *Buddhism*, who at once advanced a philosophical system—not differing essentially from those that had preceded—and attacked the caste system, declaring that all men were equal and that there could be no such thing as a divinely appointed teacher. It was this, and not his philosophy, that aroused the hostility of the Brahmanic priests, and led in the end to the expulsion of the Buddhists from India. In his philosophy Gautama went a step beyond Kapila, and denied the existence of the soul as a substance. He admitted only certain intellectual faculties as attributes of the body and perishable with it. All that survived the body was the sum of the good and bad deeds of the individual—known as *Karma* (deed)—which transmigrated to a new body, these transmigrations continuing until the evil was eliminated and the good became supreme. This theory was in essence accordant with the Brahmanic doctrine of transmigration, differing only in the conception of the Karma. In the end the purified soul or Karma was to attain *nirvâna*, or absorption into the divine essence, with seemingly the loss of all individual consciousness or separate existence. It will suffice to say, in conclusion, that the pantheistic Hindu philosophy seems to have made its way westward in ancient times and influenced some of the Greek systems. In recent times it is the basis of Theosophy (*q. v.*). See BRAHMANISM and BUDDHISM.

Hin'richs, GUSTAVE, composer and operatic conductor; born in Ludwigslust, Mecklenburg, Germany, in 1850; educated at Mecklenburg and Hamburg; went to the U. S., settling in San Francisco and conducting operas and concerts; was assistant conductor of the American Opera Company under Theodore Thomas, (1885); on the reorganization of the company (1887), he became its sole conductor. He afterward conceived the idea of producing grand opera at popular prices, and conducted several successful seasons at Philadelphia and elsewhere. Has composed several operas, one of which *Ontioro*, was produced at Philadelphia, July 28, 1890.

Hins'dale, in *Colorado*, a S.W. co.; *area*, 1,400 sq. m. Drained by Rio Grande del Norte and the Lake Fork of Gunnison river. *Surface*, mountainous. Has gold and silver mines. *Cap.* Lake City. *Pop.* (1897) about 650.

Hin'ton, in *West Virginia*, a post-village, cap. of Summers co., on C. & O. R.R.; has railroad repair shops and lumber mills. *Pop.* (1897) about 2,780.

Hippol'ogy, *n.* [Gr. *hippos*, and *logos*.] The science of, or a treatise on, the structure, habits and characteristics of the horse.

Hirsch, MAURICE, BARON DE, financier and philanthropist, born in Bavaria, of Jewish parentage, in 1831. As a member of the banking house of Bischoffsheim & Goldsmidt, in the building of Hungarian railways and other large enterprises, he accumulated a fortune of many millions, which he employed very largely in charity, being particularly generous in the cause of education. His gifts to Galician schools reached $2,000,000, and in 1881 he offered Russia $10,000,000 for school purposes under the conditions that no distinction of race or religion should be made. In 1891 he expended about $15,000,000 in charity, and in 1892 contributed $25,000,000 for the benefit of Russian Jewish emigrants to the U. S. His gifts aggregated $50,000,000, and since his death his wife has continued his benefactions. Died April 20, 1896.

Hitch'cock, CHARLES HENRY, geologist, born at Amherst, Mass., Aug. 23, 1836; son of Edward *H.*, the noted geologist; graduate of Amherst College, and afterward instructor in Geology there and at Lafayette College; professor of Geology at Dartmouth College, and assistant Geologist of Vermont (1857-61); State Geologist of Maine (1861–62), and New Hampshire (1868–72); vice-president of the American Association for the Advancement of Science (1883). His most important writings were published in the *Final Report on the Geology of New Hampshire;* minor contributions treat of New England geology, crystalline schists, &c.

Hitch'cock, ROSWELL DWIGHT, educator, born at East Machias, Me., Aug. 15, 1817; graduated from Amherst College (1836); entered Andover Theological Seminary (1838). He was engaged successively in several positions as teacher; subsequently as pastor, and was ordained and given the charge of the First Congregational Church of Exeter, N. H., in 1845; spent a year at the Universities of Halle and Berlin, Germany; became professor of Natural and Revealed Religion in Bowdoin College, for which position he resigned his pastorate; professor of Church History in Union Theological Seminary, New York city; president of the American Palestine Exploration Society; received degrees from several colleges, and was elected president of Union Theological Seminary (1880). He wrote many articles for the *Presbyterian Quarterly*, and *The American Theological Review*, and was one of the assistant editors of the latter. His works include: *A Complete Analysis of the Bible* (familiarly known as *Hitchcock's Analysis*, which has had a very large sale); *Hymns and Songs of Praise*, &c.; was joint editor, with Prof. Francis Brown, of *The Teaching of the Twelve Apostles*. Died June 16, 1887.

Hitchcock, in *Nebraska*, a S.W. co.; *area*, 720 sq. m. It is intersected by Republican river. *Surface*, undulating prairie; good pasturage. *Cap.* Trenton. *Pop.* (1890) 5,799.

Hit'tites, *n. pl.* (*Anc. History.*) The name given to an ancient people of whose history almost nothing was known until very recently, but much of whose history has been traced through late discoveries. They are scarcely mentioned in classical history; but this is due to the fact that they had vanished as a nation before the Greeks became familiar with their locality. At one time they formed a powerful and aggressive nation, who for a thousand years waged war with Egypt and Assyria. They were almost constantly in contact with Israelites, and much information concerning them has been derived from the Old Testament. When Abraham moved from Haran to Canaan he found the Hittites in that land, and subsequently purchased from them a grave for his wife at Hebron. Esau married two Hittite wives, and the lands promised the Israelites in Egypt included those of the Hittites. They were among those who opposed Joshua's entrance into the promised land, and were dispersed by his victory. Hittite captains led the armies of David and Solomon, and we read of them at intervals over an era of a thousand years. Later knowledge concerning them comes from the reading of the Egyptian and Assyrian inscriptions. In the former the Hittites appear as rivals to Egypt from the 12th to the 20th dynasties. In the inscriptions of the Assyrians they occupy an important place, and were a formidable power as early as the reign of Sargon I., about 3800 B.C. At one time they seem to have occupied Mesopotamia, and in 1100 B.C. were paramount from the Euphrates to the Lebanon. In the reading of these inscriptions, the Hittites emerge from their long obscurity into the position of one of the great powers of the past, sharing with Egypt and Assyria the empire of that center of early civilization. The two capitals of the Hittites were Kadesh, on the Orontes, and Carchemish, on the Euphrates, their empire extending to the north. Thence they pushed downward through Syria to the borders of Egypt as early as the 12th dynasty. After that time long hostilities prevailed, one evidence of which is given in the inscriptions of Thothmes III., about 1600 B. C., which speak of 13 campaigns waged by him against the Hittites. Egypt boasts of victories, but the Hittites remained unsubdued and grew more formidable after the death of Thothmes. Sanguinary warfare between them and Seti I. is recorded on the walls of the great temple of Karnak, and Ramesea II. fought with them for years, his victory over them at Kadesh being the subject of Pentaur's famous epic poem, which was inscribed in many Egyptian temples and of which a copy exists on a papyrus roll in the British Museum. Records of later wars exist, down to the 20th dynasty; but the Egyptian armies failed to penetrate to the center of the Hittite power, and it was reserved for the Assyrians to subdue this formidable kingdom. For 400 years the contest for supremacy continued between these two neighboring powers. The reigns of Assur-nasir-pal, Shalmaneser, and later kings, are largely records of wars with the Hittites, which continued until the reign of Sargon II. In 717 B. C. this warlike monarch finally captured Carchemish, vanquished the persistent foes of his kingdom and brought the Hittite empire to a close, after 3,000 years or more of existence. Many Hittite inscriptions have been found, extending through northern Syria and throughout Asia Minor, and it is probable that this great empire of the past was far more extensive than has been until recently surmised.

Hives, *n.* (*Path.*) The common name of nettle-rash or other similar disease of the skin.

Hoad'ly, GEORGE, lawyer and politician, was born at New Haven, Conn., in 1826; graduated at Western Reserve College (1844), studied law at Harvard, and was admitted to the Ohio bar (1849); judge of the superior court of Cincinnati (1851) and city solicitor (1855); resigned his judgeship (1866); elected governor of Ohio on the Democratic ticket in 1883, and defeated for same office in 1885. He thereafter withdrew from politics, and practiced law in New York and Cincinnati.

Hoar, EBENEZER ROCKWOOD, jurist, was born in Mass., in 1816; was judge of the superior court of that State (1859–69); U. S. Attorney-General and member of Congress (1873–75). Died Jan. 31, 1895.

Hoar, GEORGE FRISAIL, statesman, was born at Concord, Mass., Aug. 29, 1826; graduated at Harvard, (1846); studied law, and settled at Worcester, Mass.; was member of Congress from his native State from 1869 to 1877, and in the latter year was elected U. S. Senator. He retained his membership in the Senate, with high approbation, till his death, Sept. 30, 1904.

Hobart, AUGUST CHARLES (HOBART PASHA), naval officer and marshal of Turkey, was born in England, April 1, 1822; entered the British navy in 1836; served in the Crimean War with honor, and rose to the rank of captain. During the U. S. Civil War he commanded

a blockado-runner, and in 1867 entered the service of Ottoman government. As this step was taken without the consent of the British government, his name was stricken from the navy list; but he was afterward reinstated and placed on the retired list. In the Sultan's service he was placed in command of the fleet operating against Crete. He resigned from British service on being appointed to the command of the Black Sea fleet in the war between Russia and Turkey. In 1881 he was raised to the rank of marshal of the Turkish Empire. Died June 19, 1886.

Hobart, GARRET AUGUSTUS, was born at Long Branch, N. J., June 3, 1844, being of English descent. He entered Rutgers College at the age of 16, and graduated with honors in 1863; taught school from September until December of the same year, when he entered the law office of Socrates Tuttle, at Paterson, N. J., whose daughter, Miss Jennie Tuttle, he married in 1869. He was admitted to the bar in 1866, and was successful as a counsellor, also acting as receiver of several corporations, showing great executive ability and business acumen in the handling of the large properties thus entrusted to his care. Mr. Hobart's political career began when he was chosen a judge of election in the 4th ward of Paterson (1868); he was subsequently elected assemblyman (1872–73); was speaker of House during the latter year, and declined renomination in 1874, in which year, however, he was elected State senator; re-elected in 1879; president of the Senate in 1881 and 1882. He declined a nomination for Congress on several occasions, also the gubernatorial nomination in 1892 and 1895; in the latter year was chairman of the State Republican Committee. In 1896 he was elected the 24th Vice-President of the U. S. Died 1899.

Hobson, RICHMOND P., naval constructor U. S. navy; born 1872; graduated at Naval Academy 1889; sank the collier *Merrimac* in Santiago harbor, 1898, to close channel against Spanish ships. Taken prisoner and exchanged. Subsequently raised the Spanish ship *Maria Teresa*.

Hock, *n.* (*Slang.*) Pawn, or a pawn-shop.

Hock'ley, in *Texas*, a N.W. co.; *area*, 940 sq. m. Unorganized.

Hodell', FAANS OSCAR LEONARD, Swedish dramatist; was born in 1840; was editor and proprietor of a comic paper, the *Söndags-Nisse*, from 1881 until his death. He wrote and adapted for the comic stage more than 100 plays; also wrote many songs and ballads. His most popular play was *Andersson, Petersson and Lundström*; others are: *The Factory Girl*; *The Seamstresses*; *Three Pair of Shoes*, &c. Died May 25, 1890.

Hodge, FREDERICK WEBB, ethnologist, was born in Plymouth, England, Oct. 28, 1864; taken to the U. S. in childhood; educated in Washington, D. C., and joined the U. S. Geological Survey, resigning to become secretary of the Hemenway Southwestern Archæological Expedition. While on this expedition he made detailed surveys and maps on a large scale of the ruins of Los Muertos, and their accompanying irrigation canals and reservoirs, which are described in his papers on the *Architecture of the Prehistoric Pueblos of Southern Arizona, and Methods of Irrigation of the Ancient Inhabitants of the Salado Valley*. He returned to Washington in 1889, and was appointed to the Bureau of Ethnology, Smithsonian Institution.

Hoe, RICHARD MARCH, inventor and manufacturer of fast printing presses, saws, &c.; born in New York, Sept. 12, 1812, and died in the same city, June 7, 1886.

Hoff'man, WALTER JAMES, ethnologist; born at Weidasville, Pa., May 30, 1846; graduated (M.D.) from Jefferson Medical College, Philadelphia, Pa. (1866); was commissioned as surgeon in the Prussian army during the Franco-Prussian war (1870–71). He was later surgeon to the expedition for the selection, along the Yellowstone river, of a route for the Northern Pacific Railroad. On the organization of the U. S. Bureau of Ethnology (1879) he was appointed assistant ethnologist. He is the author of many papers on ethnology, biology and folk-lore, and has received several decorations from foreign countries.

Hogg, QUINTIN, philanthropist, was born in England, Feb., 1845; son of Sir James Weir *H.*, Bart.; educated at Eton. He became interested in homeless boys in London, and started his work by providing a few boys with humble rooms in the Strand. This work was enlarged till it culminated in the Youths' Christian Institute, which subsequently, on the purchase (1880) of the old Polytechnic in Regent Street, became known as The Polytechnic. The membership now exceeds 14,000. Mr. *H.* has spent over $500,000 in his work.

Hog'wort, *n.* (*Bot.*) A woolly annual plant, (*Croton capitatus*), of the *Euphorbiaceæ*, or spurge family, found in central and southern U. S. It grows to the height of one to two feet, has long petiolate leaves, and flowers in terminal capitate clusters.

Hol'brook, JOHN EDWARDS, naturalist, was born at Beaufort, S. C., in 1795; graduated at Brown University in 1815, and obtained a diploma in medicine from the University of Pennsylvania in 1818. In 1824 he was chosen professor of anatomy in the Medical College of South Carolina. His works include *American Herpetology, or, a Description of the Reptiles Inhabiting the United States* (5 vols.); and *Ichthyology of South Carolina*. Died in 1871.

Holbrook, in *Massachusetts*, a post-town of Norfolk co., 15 m. S. of Boston, on N. Y., N. H. & H. R. R.; has extensive manufactures of boots and shoes. *Pop.* (1895) 2,298.

Hold'en, EDWARD SINGLETON, astronomer; born in St. Louis, Mo., Nov. 5, 1846; graduated from Washington University, St. Louis, in 1866, and from West Point in 1870, being appointed lieutenant in the corps of engineers. He had charge of the U. S. eclipse expeditions to Colorado (1878) and to the South Pacific Ocean (1883); has filled the chair of Astronomy in the University of Wisconsin; was president of the University of California (1886), and director of the Lick Observatory (1888). Jointly with Prof. Simon Newcomb, he published *Astronomy for Students*; and is also the author of *Sir William Herschel: his Life and Works*; *Handbook on Lick Observatory*, &c.

Hol'drege, in *Nebraska*, a post-village, cap. of Phelps co., on B. & M. R.R.; has flour mills, brick and marble yards, and grain elevators. *Pop.* (1897) about 2,900.

Hol'gate, in *Ohio*, a post-village of Henry co., 13 m. E. of Defiance, on B. & O. and T., St. L. & K. C. R.Rs.; has saw and planing mills. *Pop.* (1897) about 1,250.

Hol'idays, Le'gal. (*Law.*) Days set aside by law in which no public business is to be transacted, and in which private business is usually set aside, the days being given over to public enjoyment, or otherwise employed. There is no national holiday in the United States, not even the 4th of July. Congress has at various times appointed special holidays, and has recognized the existence of certain days as holidays for commercial purposes, but has passed no act establishing an annual holiday. The proclamation of the President designating a day of Thanksgiving makes it a legal holiday only in those States which separately legalize it. There are only three days kept as holidays in all the States: Fourth of July, Thanksgiving Day, and Christmas. New Year's Day is kept in all the States except New Hampshire, Rhode Island, Massachusetts, Arkansas, Kentucky, and Mississippi; Washington's Birthday in all except Arkansas, Iowa, and Mississippi; Decoration Day and Labor Day in most of the States, and general election day in more than half their number. Arbor Day is a legal holiday in Kansas, Minnesota, North Dakota, Wisconsin, and Wyoming, the day being set annually by the governor; in Texas, Feb. 22; in Nebraska, April 22; Montana, third Tuesday in April; Utah, April 15; Rhode Island, first Friday in May; Idaho, Friday after May 1; Florida, Feb. 7; Georgia, first Friday in December. The more localized holidays include: Battle of New Orleans anniversary: Louisiana, Jan. 8; Lee's Birthday: Florida, Georgia, North Carolina, South Carolina, and Virginia, Jan. 19; Lincoln's Birthday: Illinois, Minnesota, New Jersey, New York, Penna. and Washington, Feb. 12; Texan Independence anniversary: Texas, March 2; Mardi Gras: Alabama, and Orleans province, La. (mid-Lent); Inauguration Day: District of Columbia, March 4; Confederate Memorial Day: Louisiana, April 6; Alabama, Florida, and Georgia, April 26; North Carolina and South Carolina, May 10; State Election Day: Good Friday: Pennsylvania, Maryland, Alabama, Louisiana, and Tennessee; Patriot's Day: Massachusetts, April 19; San Jacinto Battle Day: Texas, April 21; Mecklenburg Declaration of Independence: North Carolina, May 20; Jefferson Davis's Birthday: Florida, June 3; Pioneers' Day: Utah, July 24; Bennington Battle Day: Vermont, Aug. 16; Admission Day: California, Sept. 9; Nevada, Oct. 31; Lincoln Day: Connecticut, Oct. 15; All Saints Day: Louisiana, November 1; every Saturday after 12 M. in New York, New Jersey, Pennsylvania, Maryland, Virginia, District of Columbia, and in the larger cities of Louisiana, Missouri, and Ohio; in Wilmington, Del., and Denver, Col. Arkansas, Kansas, Mississippi and Nevada have no statutory holidays, but certain holidays are kept in them by common consent. In Great Britain the old holidays, which are more or less generally observed, are Twelfth Day, Jan. 6; Candlemas, Feb. 9; Lady Day, March 25; Midsummer Day, June 24; Lammas Day, Aug. 1; Michaelmas, Sept. 29; All Hallowmas, Nov. 1; All Souls' Day, Nov. 2; Martinmas, Nov. 11; Christmas, Dec. 25; Childermas, Dec. 28. All these are religious festivals. In addition there are various secular holidays, including office holidays of the Supreme Court—Good Friday, Easter Monday and Tuesday, Whit-Monday, Christmas and the two following days, and several bank holidays.

Hol'land, JOSIAH GILBERT, author and journalist; born at Belchertown, Mass., July 24, 1819; graduated at Berkshire Medical College, Pittsfield, Mass., and practiced medicine three years. He was subsequently superintendent of schools for one year at Vicksburg, Miss. His literary career began with contributions to the *Knickerbocker Magazine*, and in 1849 he became one of the editors of the Springfield *Republican*, with which he remained connected until 1866, and which under his control became one of the most influential of New England journals. After a period of travel in Europe he joined Roswell Smith and the firm of Scribner, Armstrong & Co., in establishing *Scribner's Magazine*, the editorship of which, and of the *Century Magazine*, which succeeded it, he retained until his death. He was also a popular lyceum lecturer, and was president of the New York Board of Education. Of his works, some of which were published under the pen-name of TIMOTHY TITCOMB, the most popular was *Bitter-sweet*, a poem that was widely read. He wrote other poems and various novels, including *The Bay Path*; *Miss Gilbert's Career*; *The Mistress of the Manse*; *The Story of Seven Oaks*; *Nicholas Minturn*, &c., with various other works. His poems and novels were moral in purpose, and while reaching no high literary level, appealed to the best instincts of their readers. Died Oct. 12, 1881.

Hol'ley, ALEXANDER LYMAN, engineer, was born at Lakeville, Conn., July 20, 1832; graduated at Brown University (1853); appointed lecturer on iron and steel metallurgy in the Columbia College School of Mines. He introduced the Bessemer process of steel-making into the U. S. (1865); superintended the building of steel works and rolling mills in several cities, and was consulting engineer to many such enterprises; was president of the American Institute of Mining Engineers (1875); vice-president of the American Society of Civil Engineers (1876), and one of the founders of the American Society of Mechanical Engineers. He was a leading authority on railways, ordnance, and steel manufacture, contributed to and edited engineering periodicals, and in collaboration with Terah Colburn published *Railway Economy, a Report on European Railways*; was also author of *A Treatise on Ordnance and Armor*. Died Jan. 29, 1892.

Hol'lister, in *California*, a post-village, cap. of San Benito co., 94 m. S. S. E. of San Francisco, on So. Pac. R. R.; has considerable trade in live stock, wine, fruit, wool and grain. *Pop.* (1897) about 1,325.

Hol'ly Hill, in *South Carolina*, a post-town of Berkeley co., on Atl. Coast Line R. R. *Pop.* (1890) 814.

Hol'ly Sys'tem. [From B. *Holly*, the inventor.] (*Engineering.*) A system of water-works which employs neither reservoir nor stand-pipe, the water being pumped directly into the mains, and the pressure therein being governed by the speed of the pumps. By this means the ordinary pressure required for practical daily purposes may be in a few minutes greatly increased by accelerating the speed of the pumping machinery, thus avoiding the employment of fire-engines in an emergency calling for their use. The rotation of the pumps is controlled by an automatic device whereby the speed is lessened when the pressure in the mains rises above normal, and is accelerated when the contrary condition occurs. In case of a fire, or any other emergency requiring an unusual pressure in the mains, the speed of the pumps may be increased by the engineer in charge at his discretion. The system is largely in use in cities and towns of medium size, its relatively low first cost and economy in the matter of maintenance being largely in its favor. The same principle has been applied, though less widely, to steam heating.

Hol'lywood, in *Pennsylvania*, a village of Luzerne co. (P. O. MILNESVILLE.) *Pop.* (1890) 598.

Hol'ophote, *n.* [Gr. *holos*, and *phōs*.] A lamp for a lighthouse or for submarine investigations, of such form as to utilize the whole of the light in any desired direction by means of reflectors or lenses.

Holst, HERMANN EDWARD, VON, historian, born at Fellin, Livonia, June 19, 1841; studied at Dorpat and Heidelberg; settled in St. Petersburg in 1866; but, having aroused the displeasure of the Russian government by the publication of a pamphlet while travelling in Germany, he was banished, and came to the U. S., engaging in literary work for several years. In 1872 he was appointed professor at Strasburg University; subsequently filled the chair of Modern History at Freiberg, and in 1892 was called to the chair of History at the University of Chicago. His principal work has been translated by J. J. Lalor and A. B. Mason, under the title of *The Constitutional and Political History of the United States*; other works include a *Life of John C. Calhoun*, a *Life of John Brown*, and *The Constitutional Law of the United States of America*.

Hol'stein, in *Iowa*, a post-town of Ida co., 167 m. N. W. of Des Moines, on C. & N. W. R.R.; has machine shops and is a grain shipping point. *Pop.* (1895) 775.

Holt, JOSEPH, jurist, was born in Breckenridge co., Ky., Jan. 6, 1807; educated at St. Joseph's College, Bardstown, and at Chester College, Danville, and admitted to the bar. He was appointed, by President Buchanan, Commissioner of Patents in 1857, and Postmaster-General in 1859; succeeded John B. Floyd as Secretary of War, in Dec., 1860; made judge-advocate-general of the army by President Lincoln, with the rank of colonel; appointed head of the bureau of military justice, with the same title but with the rank of brigadier-general, in 1864, and in that capacity conducted several notable cases, including the trial of the assassins of President Lincoln. In 1865 he was made brevet major-general. Died Aug. 1, 1894.

Holt, in *Nebraska*, a N. co.; *area*, 2,714 sq. m. Bounded on the north by Niobrara river and partly drained by the Elkhorn river. *Surface*, undulating; *soil*, fertile. *Cap.* O'Neill. *Pop.* (1890) 13,672.

Ho'ly Land. A name for PALESTINE (*q. v.*).

Ho'ly of Ho'lies. (*Judaism.*) The inner and most sacred apartment, first of the Tabernacle, then of the Temple, where the Ark of the Covenant was kept, and into which the high priest alone could enter, once a year only, on the day of Atonement, and then "not without blood."

Hol'yoke, in *Colorado*, a post-town, cap. of Phillips co., 156 m. E.S.E. of Cheyenne, on B. & M. R.R. *Pop.* (1890) 649.

Home, DANIEL DUNGLAS, was born near Edinburgh, Scotland, March 20, 1833; was taken to the U. S. at an early age; became noted as a spiritualistic medium, it being asserted that he had developed remarkable powers in childhood. After 1855 most of his life was spent in Europe; became a Roman Catholic in 1856, but was ultimately expelled for his mediumistic performances. He was credited with wonderful powers, and many strange things were told of his doings. In 1866 a Mrs. Lyons made him her adopted son and assigned him £60,000, which she afterward compelled him, by a law suit, to restore. Died June 21, 1886.

Ho'mer City, in *Pennsylvania*, a post-borough of Indiana co., 10 m. N. E. of Blairsville, on Penna. R. R. *Pop.* (1897) about 600.

Home'stead, in *Pennsylvania*, a suburb of Pittsburg, 8½ m. S. E. of that city, on the Monongahela river and the Penna. and P. & L. E. R. Rs. An extensive manu-

facturing place, having large Bessemer steel works and other industries. *Pop.* (1897) about 8,500.

Home'stead Laws. Laws passed in the U. S. Congress to enable settlers to obtain homes on government lands, and by States to exempt the home of a family from sale to pay the debts of its owner and to restrict the right of free alienation. Laws granting some degree of exemption in the ownership of the homestead have been passed in nearly all the States and Territories, which vary considerably in their provisions, though possessing certain characteristics in common. The purpose of these laws is to secure the family in the possession of a home, in the event of misfortune or improvidence in the head of the household. In general the Homestead Laws may be taken advantage of by any person, rich or poor; but in a few States homestead provision is made only for the families of poor debtors, or needy widows or orphans. In general, a homestead exemption may be claimed by a husband or other head of the family, usually by placing on record a written declaration of the claim. The homestead must be owned and occupied by the claimant, and remains liable for purchase-money debt, taxes, builders' liens, and some other obligations. The amount that may be exempted varies in various States, from $5,000 down to $1,000 or less, in some cases it being limited to a few hundred dollars. In Delaware, Pennsylvania, Rhode Island and Oregon there are no homestead exemption laws. Under the Homestead Laws of the U. S., public lands may be entered upon under certain restrictions, and a tract of land of 160 acres occupied for agricultural purposes. The law requires the incumbent to live upon and cultivate the land for five years. This being complied with, he may obtain a patent to the land from the general land office at Washington, which gives him a permanent and absolute title to the homestead, which becomes a sacred provision for the family, being protected by law from alienation by the householder and from execution for his general debts. Where homestead entries are made by soldiers and sailors who served 90 days or more during the Civil War, the term of enlistment, not to exceed 4 years, is deducted from the 5 years' legal residence.

Hom'iculture. *n.* (*Biol.*) [Lat. *homo*, man, *cultura*, culture.] The physical improvement of human beings by means similar to those used in improving the breeds of the lower animals.

Homogen'esis. *n.* (*Biol.*) Lat. *homo* and *genesis*.] The ordinary method of biogenesis, in which the living parent gives rise to offspring that passes through the same cycle of changes as itself.

Homog'eny. *n.* [Gr. *homogeneia*, community of origin.] (*Biol.*) Identity or likeness of kind or character; correspondence of structures so related in origin that they have a single representative in a common ancestor, as shown by the fore-limbs of all vertebrates; opposed to HOMOPLASY (*q. v.*).

(*Geol.*) Community of genesis (in geological formations).

Hom'ograph. *n.* [Gr. *homos*, same, and *graphō*, to write.] (*Mil.*) A system of telegraphic signals by means of a white handkerchief.

(*Philol.*) A word having the same form as another, but of different derivation and meaning; as *art* (noun), meaning skill, is the homograph of *art*, second person singular of the verb *to be*.

Homop'lasy. *n.* [Gr. *homos*, same, *plasis*, forming.] (*Biol.*) Resemblance not traceable to homogeny in the forms of parts; as, the right ventricle of a bird's heart and that of a mammal.

Hon'eybrook, in *Pennsylvania*, a post-village of Chester co., 20 m. N.W. of West Chester, on Penna. R. R.; has extensive manufactures of tobacco, &c. *Pop.* (1897) 595.

Hood, JOHN B., soldier, was born in Bath co., Ky., in 1831; graduated at West Point in 1853, and commanded a division of the Confederate army in the battles of Antietam, Gettysburg, and Chickamauga, in the last of which he was severely wounded, losing a leg. Appointed lieut.-general, he succeeded General Johnston as the commander-in-chief of the army opposed to Gen. Sherman in Georgia, and was defeated by the latter near Atlanta, in July, 1864, with heavy loss. In Dec. of the same year, he was defeated at Nashville by Gen. Thomas, after which he was relieved of his command. Died Aug. 31, 1879.

Hood, in *Texas*, a N. Cen. co., *area*, 460 sq. m. Intersected by Brazos river. *Surface*, hilly and mountainous; *soil*, varied. *Products*, cotton, corn, sweet potatoes; live stock. *Cap.* Granbury. *Pop.* (1897) about 7,600.

Hoo'doo. *n.* (*Colloq.*) A person or thing supposed to bring bad luck; opposed to *mascot*.

—*v. a.* To bring bad luck on a person or an enterprise.

Hook'er, in *Nebraska*, a W. co.; *area*, 720 sq. m. *Rivers*, Middle Loup and North Branch of Dismal river. *Surface*, hilly; *soil*, sandy loam, fertile in parts. *Products*, corn, wheat, rye, oats, potatoes. A fine grazing country. *Cap.* Mullen. *Pop.* (1890) 426.

Hook'y, *n.* (*Slang.*) A truant.—To *play hooky*: to absent one's self from school.

Hoop'er, in *Nebraska*, a post-village of Dodge co., on F., E. & M.V. R.R., 16 m. N. of Fremont; has butter and cheese factory; a shipping point for grain. *Pop.* (1890) 670.

Hoopes'ton, in *Illinois*, a city of Vermilion co., 100 m. S. of Chicago, on the C. & E. Ill. and L. E. & W. R.Rs.; has grain elevators, brick and tile works, corn canning, clothing and carriage factories. *Pop.* (1897) abt. 2,200.

Hoos'ac Tun'nel. (*Engineering.*) A railroad tunnel through Hoosac Mountain, Mass., in the northern end of Berkshire co., near North Adams, on the line of the Fitchburg R. R. It has a total length of $4\frac{35}{100}$ miles, being one of the longest in the world; was begun in 1862 and not completed until 1880, although in partial use after 1875. The Hoosac Mountain forms the "divide" between the Hoosac and Deerfield rivers, and has two summits with a considerable depression of valley between them. Owing to the rivers on either side presenting the same altitude of level above tide-water, it was found necessary to depart from the usual method of tunnelling by grading downward on either side from the center, so as to secure proper drainage; and such grade rising about 20 ft. per mile toward the summit level in the heart of the mountain, it accordingly became incumbent upon the engineers to sink a shaft from the top of the mountain to the summit level of the tunnel. At the outset experiments were made to perform the tunnelling by means of machinery; this proving unsuccessful, the use of hand-drills and gunpowder was resorted to, with better results, but at a slow rate of progress. At length it was concluded to employ the Burleigh drill, similar in operation to the drills used in the Mont Cenis tunnel. This device was worked by compressed air, and consisted simply in a cylinder and a piston. The compressed air being

Fig. 2930.—HOOSAC TUNNEL (EASTERN PORTAL).

admitted by a hose from the supply pipes, by its elastic force moved the piston quickly backward and forward in the cylinder, making about 300 strokes a minute. To the end of this piston the drill was securely fastened, and driven into the rock by the strokes of the piston; a ratchet upon the cylinder turning the pistou and the drill around a little with every stroke. A pressure of six atmospheres, or 90 lbs. to the square inch was given to the air which collected in the huge pipes that conducted the air from the compressing machines into the tunnel. The compressors were simply air forcing-pumps of immense size, worked by water or steam. By this new process, the work was much accelerated.

Hope, SIR JAMES, G. C. B., naval officer, born in Edinburgh, Mar. 3, 1808; educated at the Royal Naval College; became a midshipman in the British Navy (1822); captain (1838). In the operations that led to the taking of Pekin he rendered distinguished services. He was made a G. C. B. in 1865; full admiral in 1870; admiral of the fleet in 1879, and was appointed principal naval aide-de-camp to the Queen in 1873. Died June 9, 1881.

Hope, in *Kansas*, a post-village of Dickinson co., 23 m. S. of Abilene, on A., T. & S. Fé and Mo. Pac. R.Rs. *Pop.* (1895) 503.

Hope Mills, in *North Carolina*, a post-village of Cumberland co., 7 m. from Fayetteville, on Atl. Coast Line and C. F. & Y. V. R. Rs. *Pop.* (1895) about 500.

Hop'kins, JOHNS, philanthropist, born in Anne Arundel county, Maryland, May 19, 1795; received a careful education; entered the grocery business, retiring (1847) with a large fortune, which he invested in banking and railroad operations; president of the Merchants' Bank and director of the Baltimore & Ohio Railroad. He founded the Hopkins Free Hospital, Baltimore, expending about $4,500,000 in the work; was also the founder of an orphanage for colored youth, a convalescent hospital, and the Johns Hopkins University (*q. v.*); this has an endowment of $3,000,000, has attached to it 316 acres of land, and is one of the leading educational institutions of the country. To the University he gave some $3,500,000; and his total benefactions exceeded $8,000,000. Died Dec. 24, 1873.

Hopkins, MARK, educator, born at Stockbridge, Mass., Feb. 4, 1802; graduated at Williams College in 1824, and in medicine (1828); was professor of Moral Philosophy and Rhetoric at Williams (1830–36); subsequently president of that college (1836–72). He was connected with Williams College for a period of more than sixty years. His works include *Evidences of Christianity; Lectures on Moral Science; An Outline Study of Man*, &c. Died June 17, 1887.

Hop'kins, in *Missouri*, a post-village of Nodaway co., 60 m. N. of St. Joseph, on C., B. & Q. and K. C., St. J. & C. B. R.Rs. *Pop.* (1890) 846.

Hop'kinson, JOHN, electrical engineer, was born at Manchester, England, in 1849; educated at Owens College, and at Trinity College, Cambridge. He was one of the earliest electricians to make a systematic study of the dynamo, and did important work in magnetism. He is the author of numerous papers dealing with dynamo-electric machinery, and with the magnetic properties of iron and steel. His researches upon the former subject have been published in *Original Papers on Dynamo Machinery and Allied Subjects*.

Hopkinson, JOSEPH, jurist, was born in Philadelphia, in 1770; became judge of the U. S. Court for the Eastern district of Pennsylvania, and died in 1842. He was author of the well-known national song *Hail, Columbia*.

Ho'po. *n.* (*Afr.*) A trap for large game, consisting of two hedges in shape of the letter V, with a pit near the angle, into which the game is driven.

Hop'pin, AUGUSTUS, artist, was born at Providence, R. I., July 13, 1828; graduated from Brown University (1848), studied law, and began practice in his native city; made a tour of the art galleries of Europe (1854–55), and on his return devoted himself to drawing on wood. His talent ran in the direction of caricature, and he became famous as an illustrator, also achieving some success as an author. Died April 1, 1896.

Horn, EDWARD TRAILL, Lutheran clergyman and writer, was born at Easton, Pa., June 10, 1850; graduated at Pennsylvania College, Gettysburg (1869), and at the Theological Seminary of the Evangelical Lutheran Church, Philadelphia (1872). He was an active leader in the movement for a common liturgy for all English-speaking Lutherans, and witnessed its completion in 1888; was one of the founders, and for a while president, of the United Synod of the South. His works include: *The Christian Year; The Old Matin and Vesper Services of the Lutheran Church*, &c. From 1872 to 1876 he was pastor of a church in Philadelphia, afterward locating in Charleston, S. C.

Horn (*hôrn* or *hoorn*), GUSTAV, COUNT OF, an eminent Swedish military commander, was born in Upland in 1592. He distinguished himself in the campaigns of Livonia and Poland, and, commanding the left wing of the Protestant army at Leipzig in 1631, largely contributed to the success of the day. He next served at Lützen, and was taken prisoner at Nordlingen in 1634. He afterward commanded the Swedish army in its successful invasion of Denmark, and was created Constable of the kingdom. Died in 1657.

Horn, PHILIPPE DE MONTMORENCY NIVELLE, COMTE DE, a Flemish noble, born in 1522, succeeded to the title and vast wealth of his stepfather, Count de Horn. After signalizing his courage on the fields of Gravelines and St. Quentin, he grew into high favor with Philip II., who made him Admiral of the Low Countries, and President of the Council of State. In 1568 he incurred the enmity of the Duke of Alva, Philip's viceroy and commander-in-chief in Flanders, and was arrested, along with his cousin, Count Egmont, on a trumped-up charge of high treason, unjustly condemned, and summarily executed on the scaffold. His tragic end has formed a favorite theme of romancists and dramatic poets.

Horr, ROSWELL G., politician, was born at Waitsville, Vt., Nov. 26, 1830; passed his youth in Lorain co., Ohio, graduated at Antioch College (1857), studied law, and was admitted to the bar in 1863. In 1865 he removed to Missouri and engaged in a mining business, but went from there to Saginaw, Mich., in 1872, where he resumed the practice of law. He was elected to Congress in 1878–80–82, but defeated in 1884; was notable as a campaign orator and debater. After 1891 Mr. *H.* was on the staff of the New York *Tribune*, contributing special signed articles. He was an active "sound money" advocate during the campaign of 1896, and prior to that had engaged in public debate on the currency question with Hon. W. M. Stewart in 1893 and W. H. Harvey ("Coin") in 1895. Died Dec. 18, 1896.

Horse-racing, *n.* Historically, the horse-race goes back to a remote date, a chariot-race being described in the *Iliad* as having taken place at the funeral games in honor of Patroclus. This probably indicates a long antecedent existence of the race. Later it rose to national importance in Greece, the four-horse chariot race being introduced into the Olympic games as early as the 23d Olympiad, the race with mounted horses in the 33d, and such variations as two-horse chariot-races, mule-races, loose-horse races, &c., at later dates. Similar contests held a prominent place at all the other national games of Greece and at many of the local festivals, the love for horse-racing becoming a passion at Athens, and subsequently throughout the Roman empire. There are indications that horse-racing was indulged in by some of the German tribes at a very early period—it being a part of their religious ceremonies—and traces of race-courses belonging to the Roman period in Britain have been frequently discovered. The first historical statement of it as a British sport dates from about 1174, the description of the race indicating that it had long been in vogue and was a popular and exciting sport. In the reign of Richard I. three-mile races for "forty pounds of ready gold" were ridden, but at that period the tournament seems to have surpassed the race-course in public estimation. Public races were established at Chester in 1512, and the poems of Bishop Hall speak of racing in the reign of Elizabeth, though it was seemingly not patronized by the queen. It grew popular and fashionable after the accession of the Stuarts, and in 1607 we read of races being run near York for the prize of a little golden bell. In 1613 subscription purses are first mentioned. Racing grew still more popular during the reign of Charles I., and its popularity has continued until the present day. The St. Leger races were established in 1776, the Oaks in

1779, and the Derby in 1780. The Ascot races are spoken of in 1729, but they were for small prizes, the Gold Cup being first given in 1807. It has been regularly competed for since. The Goodwood races were established in 1802, and the Goodwood cup first given 1812. In addition to the annual races at the regular courses, steeple-chasing and hurdle-racing take place during the winter months, the chief event of this kind being the Liverpool Grand National, run at Aintree toward the close of the hunting season. This dates from 1839, its value averaging about £1,500 annually. The more important of the other steeple-chase and hurdle-races are those at Croydon, Sandown Park, Lincoln, Rugby, Warwick, and Bristol, the prizes at which are nearly always won by thoroughbreds.—*Racing in the United States.* Racing has made considerable progress in other countries of Europe, notably in France, Germany, and Austria, but further description is here unnecessary, and we shall confine ourselves to a brief account of American racing. It was indulged in to a limited extent in Maryland and Virginia as early as the middle of the 17th century. Bully Rock, the first American thoroughbred, was imported into Virginia in 1730, and Bonny Lass, a brood mare of notable pedigree, about 1740. From this time the importations of racing stock became frequent, and the racing area extended from the Carolinas to New York. The first race recorded in South Carolina was at Charleston in 1734, for a purse of £20. After the Revolutionary War the importation of thoroughbred horses became common. Among these were a number of winners of the Derby, from Diomed, who won the first Derby in 1780, to Priam, who won in 1830. Diomed sired one horse, Sir Archy, to whom the great percentage of the blood-horses of America can be traced back. It has been, however, in the development of the trotting horse that the U. S. has attained pre-eminence, the systematic breeding and training of trotters having grown to an industry of great proportions, while nowhere else is it so largely pursued except in Russia. The development of the American trotter began in the importation to Philadelphia of the English thoroughbred, Messenger, in 1788. This was a gray stallion, of good pedigree, who was 8 years old when imported. He was used in breeding for twenty years, the trotting instinct appearing in nearly all his descendants, which became widely spread, and have transmitted the Messenger blood to almost all trotters of merit in America. The first recorded public trotting was in 1818, when the gray gelding Boston Blue was matched to trot a mile in 3 minutes. This feat was then deemed impossible, but he won, though his time was not recorded. From that time the breeding and training of trotting horses increased, and in time attained the prominence above mentioned. At the present day the leading families are the Hambletonians, the Mambrinos, the Bashaws, the Clays, the Stars, the Morgans, the Black Hawks, the Blue Bulls, the Canadians, the Gold Dusts, and the Royal Georges, partly traceable to Messenger, partly from other stocks. In some cases trotters of great speed have appeared which cannot be traced to any of the families named. There are many large establishments for breeding trotters at the present day, all of them extensive in acreage, on several of them a hundred or more brood mares and a number of stallions being kept. Very large prices are frequently paid for young animals, solely on the basis of their pedigree; while for matured trotters such prices have been paid as $40,000 for Smuggler, and long prices for many others, while later animals have been held at $100,000 and more. Since the early days of American trotting the advance in speed has been rapid. For a long time after the performance of Boston Blue the races were generally under saddle and for long distances, 3 miles being a popular length. The best record at this distance is that of Dutchman, who trotted 3 miles under saddle in 7 m. 32½ s. Mile records were those of Edwin Forrest, of 2.31½ in 1834, and Lady Suffolk, of 2.26¾ in 1843. Since 1850 the favorite style of race has been mile heats in harness, "best three out of five," and most of the races are of this character. The horse draws a sulky, often weighing less than 40 pounds, while the required weight of the driver and his blanket seat is 150 pounds. In saddle races the regulation weight is 140 pounds. The first-class tracks have long been of oval shape, with long stretches and easy curves; but within recent years the kite-shaped track has replaced the oval on some courses, one of the first of these being opened at Independence, Iowa, in 1890. The one long turn proved faster than the short turns of the oval track, a record on a kite track standing lower in estimation than one on the regulation oval. The fastest time that any trotter has made is entered as his "record," this being one of the distinctive features of trotting in America. When Albany Pony, in 1824, trotted a mile to saddle on the Long Island course in 2.40, the world of sport was thrilled, and a "two-forty gait" became a popular phrase signifying winning speed in any enterprise. To-day more than 10,000 trotters and pacers might be named that have made better time. In 1892 the pneumatic tire of the bicycle wheel was applied to the very light low-wheeled sulkies which had come into use, with such satisfactory results that it soon came into general favor, friction being reduced, especially at the turns, so that a horse was enabled to lower his mile record from 3 to 5 seconds.

The speed of a mile's trotting successively increased Lady Suffolk holding first place from 1843 to 1853, when Tacony trotted in 2.25½ under saddle. In 1856 Flora Temple trotted 2.24½ in harness, and in 1859 in 2.19¾. This favorite of the turf was thought by many to have reached the trotting limit, but her record has since been far surpassed. Dexter, in 1867, made a mile in 2.17¼. Occident, 1873, in 2.16¾; Goldsmith Maid, 1874, in 2.14; Rarus, 1878, in 2.13¾; St. John, 1879, in 2.12¾; Jay-Eye See, 1884, in 2.10; Maud S., 1885, in 2.08¾; Sunol, 1891, in 2.08¼; the pneumatic tired sulky was now introduced, with which, in 1892, Nancy Hanks reduced the record to 2.04; Alix, 1894, to 2.03¾; and Cresceus, 1901, to 2.02¼. In 1903 new and surprising records were made. Lou Dillon, on August 24, reached the 2 minute mark, in which she was equalled by Major Delmar on September 25. In October 19 Cresceus cut this down to 1.59¼; and in October 24, Lou Dillon made the extraordinary time of 1.58½.—Pacing is a slightly faster gait than trotting, and its records have kept a few seconds in advance, from Drover, who made a record of 2.28 in 1839, to John R. Gentry, who reached 2.00½ in 1896. In 1897 Star Pointer passed the 2 minute goal, pacing a mile in 1.59¼, a record which was matched by Dan Patch in 1902. In 1903 new low records were made, Dan Patch pacing a mile in 1.59 on August 24, Prince Alert in 1.57 on Sept. 23, and Dan Patch in the remarkable time of 1.56¼ on Oct. 22. On Oct. 7, 1905, Dan Patch made a new world's record of 1.55¼, and on Sept. 8, 1906, of 1.55. As in the performance of Lou Dillon, a canvas strip was carried between the wheels of the pace maker's sulky, its purpose being to cut off alike the dust and the wind. In running races the lowest record on the American turf was made at Monmouth Park, N. Y., in 1890, Salvator making a mile in 1.35½. We give below tabulated results of the best 1 mile performances of American trotters and pacers:

TROTTERS.

1806—Yankee (saddle)	2.59
1810—Boston Blue, ch. g. (saddle)	2.48½
1824—Albany Pony, b. g. (saddle)	2.40
1830—Burster (saddle)	2.32
1834—Edwin Forrest, blk. g. (saddle)	2.31½
1835—Oneida Chief	2.31
1839—Dutchman (saddle)	2.28
1845—James K. Polk	2.27
1849—Lady Suffolk (saddle)	2.26
1853—Tacouy	2.25½
1859—Flora Temple, b. m.	2.19¾
1867—Dexter, br. g.	2.17¼
1873—Occident	2.16¾
1874—Goldsmith Maid, b. m.	2.14
1878—Rarus, b. g.	2.13¾
1880—St. Julien	2.11¼
1884—Jay-Eye-See, blk. g.	2.10
1885—Maud S., ch. m.	2.08¾
1891—Sunol, b. m.	2.08¼

PNEUMATIC TIRED SULKEY.

1892—Nancy Hanks, h. m.	2.04
1894—Alix, b. m.	2.03¾
1900—The Abbot, b. g.	2.03¼

BEHIND RUNNING HORSE PACEMAKER.

1903—Major Delmar, b. g.	2.00
1903—Cresceus, ch. s.	1.59¾
1903—Lou Dillon, ch. m.	1.58½

PACERS.

1839—Drover, b. g.	2.28
1844—Fanny Ellsler, gr. m.	2.27½
1844—Unknown, ch. g.	2.23
1852—Pet, rn. g.	2.18½
1855—Pocahontas, ch. m.	2.17½
1869—Yankee Sam, rn. g.	2.16½
1878—Sleepy George, b. g.	2.15½
1879—Sweetzer, gr. g.	2.15
1879—Sleepy Tom, ch. g.	2.14¼
1881—Little Brown Jug, br. g.	2.11½
1884—Johnston, b. g.	2.06¼
1891—Direct, blk. s.	2.06

PNEUMATIC TIRED SULKEY.

1892—Hal Pointer, b. g.	2.05¼
1892—Mascot, b. g.	2.04
1893—Flying Jib, h. g.	2.04
1894—Robert J., h. g.	2.01½
1896—John R. Gentry, b. s.	2.00½
1897—Star Pointer, b. s.	1.59¼

BEHIND RUNNING HORSE PACEMAKER.

1903—Prince Alert, b. g.	1.57
1906—Dan Patch, br. s.	1.55

Horse'shoe, or Horseshoe-crab, *n.* (*Zoöl.*) The popular name of the king-crab, or Limulus (*q. v.*).

Hors'ford, Eben Norton, chemist; born at Genesee, N. Y., July 27, 1818; studied chemistry in Germany under Baron Liebig; from 1847 to 1863, was Rumford professor in Harvard University, and aided in founding the Lawrence Scientific School; endowed the library and laboratory of Wellesley College; engaged in chemical manufacture from 1863 until his death. He published numerous papers on scientific subjects, and a work asserting that the Norsemen colonized Massachusetts. Died Jan. 1, 1893.

Hors'ley, Charles Edward, organist and composer; born in London, Dec. 16, 1822; educated under his father, Moscheles, Hauptman, and Mendelssohn. After his return from Germany, he was organist of several churches in England, and composed several fine anthems and oratorios, *Comus*, a cantata, &c.; visited Australia (1868) and composed a cantata, *Euterpe*, while there; subsequently became organist of St. John's Chapel, Varick Street, New York, and conductor of the Church Music Association. Died Feb. 28, 1876.

Hor'ton, Samuel Dana, born at Pomeroy, O., Jan. 16, 1844; graduated at Harvard, (1864), and at Harvard Law School (1868); although practicing law, much of his time has been spent in Europe in the investigation and study of monetary questions. He was secretary of the International Monetary Conference at Paris, in 1878; and delegate from the U. S. to the Conference of 1881. He has published: *Silver and Gold and their Relation to the Problem of Resumption; The Silver Pound and England's Monetary Policy since the Restoration; Silver in Europe*, &c.

Hot Springs, in *North Carolina*, a post-village of Madison co., on L. R. & H. S. and Southern R.Rs. *Pop.* (1897) 710.

Hot-Air Engine. An engine in which the expansion of heated air is used as the motive power. There have been many efforts to make such a source of power practically useful. Unsuccessful attempts were made early in the nineteenth century by Sir George Cogley and others, and in 1816 Rev. Dr. Stirling, a Scotch inventor, patented an engine which attracted attention. An improvement on it was patented in 1827, and other improvements in 1840. Laubereau and Belou, in France, produced other inventions, while the U. S. inventors include Ericsson, Wilcox, Roper, Shaw, Rider and Merrill; all of them producing machines of some utility in practice, that of Ericsson being most generally accepted. The principal advantage of the

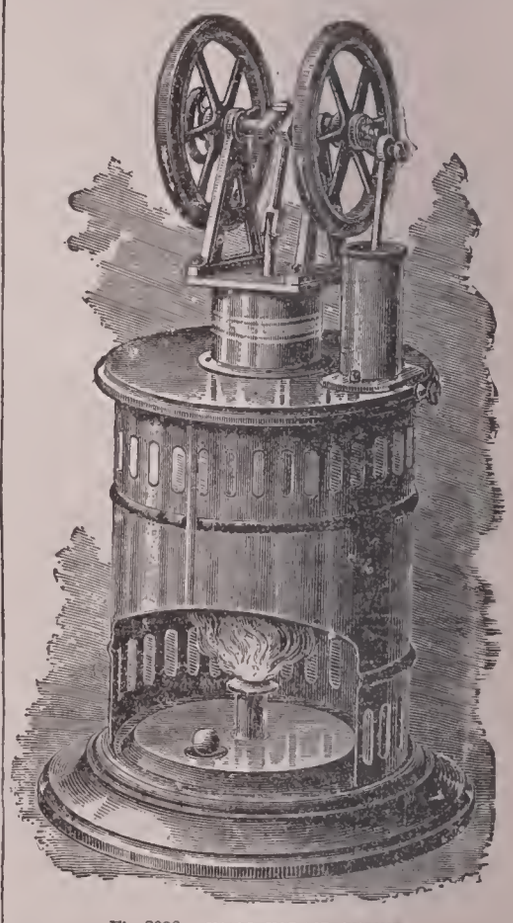


Fig. 2932.—SMALL HOT-AIR ENGINE.

hot-air engine is that it requires no boiler, and thus escapes the weight, the danger, and other inconveniences incident to this appendage of the steam engine. On the other hand, the pressure obtainable from hot air is much less than that of steam, the result being that the working parts of air engines need to be much larger than those of steam engines, thus negativing the gain in space arising from the absence of the boiler. Air engines, however, can be constructed more cheaply than those for steam, are more easily managed, and demand less care. It is also claimed that they economize fuel, but this is questionable. There is a difficulty in heating and cooling the air employed with sufficient rapidity, while the difference in temperature upon which the power depends cannot be carried beyond a certain limit. There are two classes of air engines, the first of which draw their supply directly from the atmosphere and discharge it into the atmosphere after use; the second employ the same air continuously, alternately cooling and heating it. The second class permits the use of higher pressures, but has the disadvantage of requiring refrigerating appliances. In some cases the air is heated in the cylinder in which it does its work; in others, it is heated in a separate chamber; in Laubereau's engine, which belongs to the second class, the air is heated in one cylinder and employed in another. Of hot-air engines that of Ericsson is most usually employed in the U. S., and may be briefly

described. In its original form it consisted of a working cylinder placed immediately over the furnace fire, and above it a supply cylinder of two-thirds its capacity. The engine was single-acting, the working cylinders open, and the working pistons (formed of non-conducting substance) of great bulk. The pistons of the two cylinders were firmly connected and had therefore an equal length of stroke. When the piston descended, air was drawn from the atmosphere into the supply cylinder. When it ascended, this air was compressed and driven into a reservoir, whence it passed to the working cylinder, where it was heated and did its work. On the completion of the upward stroke the heated air escaped through a regenerator of wire gauze, which took its excess heat, and through this the new supply was drawn, so that part of the heat was recovered. A subsequent improvement employed a horizontal working cylinder; but the Ericsson engine as now improved has a vertical cylinder and furnace extension, the cylinder containing two pistons, one of which acts as a supply piston, the air passing through valves in its surface, whence it is driven by compression into a surrounding reservoir, in which it is made to pass in a thin sheet in contact with the heated furnace wall. The working-heat is thus derived. As the power is effective through less than half the revolution, a heavy fly-wheel is necessary to the working of this engine. In other engines, as Roper's, Shaw's, and Belou's, the air is not heated in the working cylinders, but in a separate chamber. That of Belon is the only one that has been used on a large scale as the motive power of an important industry, it being employed in a large paper manufactory at Cusset, France. It employs a single double-acting cylinder, and has an independent supply pump and no regenera-

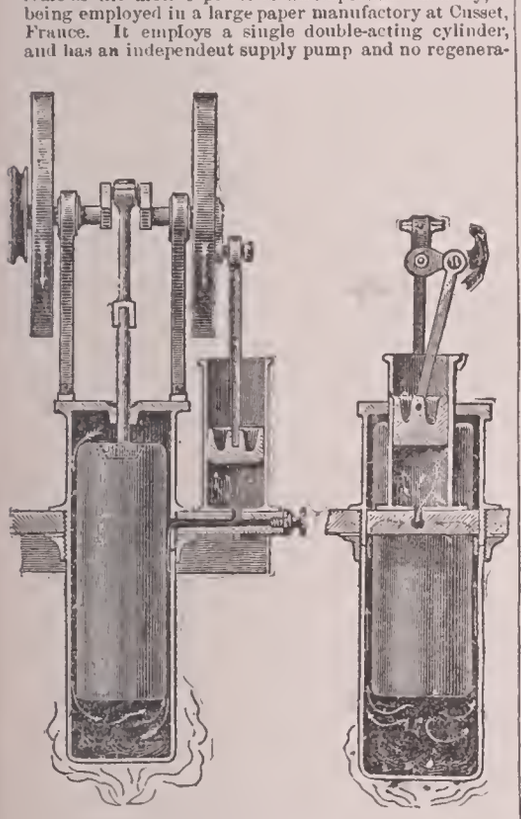


Fig. 2933.—HOT-AIR ENGINE—SECTIONAL VIEW.

tor, this being replaced by a jacket surrounding the cylinder through which the air supply enters. The indicated force of the Cusset engine is 120 horse-power, but of this the supply absorbs 80, and 10 is absorbed in overcoming resistances, leaving only about 30 to be actually utilized. There is a large loss, the escaping air in the chimney having a temperature of 450° F.—*Lauberau's Engine.* This belongs to the class in which the same air is continuously employed. In this a large plunger works in a cylinder occupied by air, which is driven backward and forward by the alternate movements of the plunger. Around the upper portion of the cylinder is a jacket, between which and the cylinder cold water constantly circulates. The plunger nearly fills the cylinder, so that the air, in passing between it and the outer chilled walls, is reduced to a thin stratum. It is to the difference in temperature from the air heated in the furnace and that which is thus cooled, that the working efficiency of the engine is due.

Houghton (*hō'tŭn*), RICHARD MONCKTON MILNES, poet and litterateur, was born in England, of an ancient Yorkshire family, in 1809. After graduating at Cambridge in 1837, he sat in the House of Commons for nearly 25 years, as a member of the Independent Liberal party. In 1863 he was raised to the peerage. His chief works embrace: *Poems, Legendary and Historical; Palm Leaves,* and *The Life, Letters, and Literary Remains of John Keats,* the latter being his most important production. Lord *H.* distinguished himself by his warm advocacy of the National cause during the Civil War. Died Aug. 11, 1885.

Hous'ton, DAVID CRAWFORD, engineer, born in New York City, Dec. 5, 1835; graduated at West Point (1856). During the Civil War he was engaged as engineer, and rose to the rank of colonel. Afterward took charge of the defences of Narragansett Bay, of Connecticut, and of the inner harbor of New York. Died May 18, 1893.

Hous'ton, in *Tennessee,* a N.W. central co.; *area,* 210 sq. m. Bounded on the N.W. by the Cumberland river, on the W. by Tennessee river. *Surface,* undulating; *soil,* fertile. *Products,* corn, tobacco, wheat, oats, sweet and white potatoes, pork, live stock. *Cap.* Erin. *Pop.* (1890) 5,390.

Houston, in *Virginia,* a post-town, cap. of Halifax co., 30 miles E.N.E. of Danville, on the N. & W. R. R.; has tobacco and other manufacturing interests. *Pop.* (1897) about 1,500.

Houtz'dale, in *Pennsylvania,* a post-borough of Clearfield co., 26 m. S. of Clearfield, on A. & P. C. and Penna. R. Rs.; here are extensive collieries with a large shipping trade in coal. *Pop.* (1897) about 2,500.

Ho'venden, THOMAS, artist, born at Dunmanway, Ireland, in 1840; studied at the Cork School of Art, National Academy, New York, and in Paris; he was a member of the Society of American Artists, of the American Water-Color Society, and the Philadelphia Society of Artists. His works include: *John Brown on the Morning of his Execution; Breaking Home Ties; Bringing Home the Bride,* &c. His pictures attract much attention from their naturalness and dramatic character. Resided near Philadelphia, and was killed Aug. 14, 1895, in a heroic effort to rescue a child from death by a railroad train.

Ho'vey, ALVIN PETERSON, soldier, born at Mt. Vernon, Ind., May 8, 1821; studied and practiced law; engaged in the Civil War and attained the rank of brigadier-general of volunteers. April 28, 1862, especially distinguishing himself at the battle of Champion Hills. In July, 1864, he was brevetted major-general of volunteers; resigned in October, 1865; was U. S. Minister to Peru (1866); member of Congress (1886), and governor of Indiana (1888). Died Nov. 23, 1891.

Hovey, CHARLES MASON, horticulturist, born at Cambridge, Mass., Oct. 26, 1810. He was the first to make the culture of the strawberry profitable in the U. S., and was the originator of the Hovey strawberry; editor of Hovey's *Magazine of Horticulture,* and author of *Fruits of America.* Died Sept. 2, 1887.

How'ard, BLANCHE WILLIS, novelist, was born at Bangor, Me., July 16, 1847; went to Germany (1875) and engaged in teaching and literary work at Stuttgart. She became the wife of Baron von Teufel (1890) a physician of Stuttgart. Among her works are: *One Summer; Aunt Serena; Queen; Aulnay Tower; The Open Door,* &c.

Howard, BRONSON, dramatist, born at Detroit, Mich., Oct. 7, 1842; studied at Russell's Military Academy, New Haven, Conn. A failure of his eyesight obliged him to give up the college course for which he had been preparing, and he entered journalism in New York city, being connected with The *Evening Mail, Tribune,* and *Post.* He has been a prolific writer of plays, his productions including: *Saratoga; The Banker's Daughter; Young Mrs. Winthrop; The Henrietta; Shenandoah; Aristocracy,* and several others which have been exceedingly popular.

Howard, in *Arkansas,* a S. W. co.; *area,* 629 sq. m. Drained by Saline creek. *Surface,* diversified; *soil,* fertile. *Products,* cotton, corn, live stock. *Cap.* Center Point. *Pop.* (1890) 13,789.

Howard, in *Kansas,* a city, cap. of Elk co., 40 m. W. N. W. of Independence, on the A., T. & S. Fé. R. R.; has manufactures of cigars. *Pop.* (1895) 1,063.

Howard, in *Nebraska,* an E. cen. co.; *area,* 576 sq. m. Drained by Middle Loup and North Loup rivers. *Surface,* undulating prairie. *Products,* barley, wheat, oats and hay. *Cap.* St. Paul. *Pop.* (1890) 9,430.

Howard, in *Texas,* a N. W. co.; *area,* 840 sq. m. Intersected by Giraud's creek. *Surface,* level; *soil,* rich red loam. *Products,* wool and live stock. *Cap.* Big Spring. *Pop.* (1897) about 2,000.

Howard Univer'sity. (*Educ.*) An institution established in 1867, at Washington, D. C. (by Gen. Oliver O. Howard, then in charge of the Freedmen's Bureau), for the liberal education of freedmen. As it is now conducted, pupils are admitted without distinction of sex or color. In addition to the college course, there are courses in medicine, dentistry, law, pharmacy, theology and normal instruction. It employs 62 instructors.

Howe, EDGAR WATSON, journalist and novelist, born in Wabash co., Ind., May 3, 1854; learned the trade of printing; became editor of the Atchison (Kan.) *Daily Globe* in 1878; is author of: *Story of a Country Town,* which received high praise from competent critics; *The Mystery of the Locks; A Moonlight Boy;* and *A Man Story.*

Howe, TIMOTHY OTIS, statesman, was born at Livermore, Me., Feb. 24, 1816; received an academic education; studied law and was admitted to the bar; elected to the State Legislature (1845). He removed to Wisconsin in 1846, and became a judge of the circuit and supreme courts of that State in 1850, resigning in 1855; was U. S. Senator from 1861 to 1879, and Postmaster-General of the U. S. from 1881 to 1883. He was also a delegate to the International Monetary Congress of 1881. Died March 25, 1883.

How'ells, WILLIAM DEAN, novelist, was born at Martinsville, O., March 1, 1837. His father was a printer and the son learned the trade, becoming afterward connected with the Cincinnati *Gazette,* and the *Ohio State Journal.* He was appointed U. S. consul at Venice in 1861, and remained there until 1865, his experiences abroad being detailed in his *Venetian Life* (1866), and *Italian Journeys* (1867). In 1871 he accepted the editorship of the *Atlantic Monthly,* which he held for ten years. In 1886 he took charge of "The Editor's Study" in *Harper's Magazine,* occupying that position until 1892, during which year he edited the *Cosmopolitan.* Mr. *H.* has written many graceful poems, but his reputation rests upon his novels, in which field of literature he stands high among American authors, being the leading producer of realistic fiction. Among his many novels may be named: *Their Wedding Journey* (1871); *A Foregone Conclusion* (1874); *A Counterfeit Presentment* (1877); *The Undiscovered Country* (1880); *The Rise of Silas Lapham* (1885); *A Hazard of New Fortunes* (1889); *The Coast of Bohemia* (1893). This is but a partial list, one of his most recent books being a work of Socialistic fiction, entitled *Altruria,* in which his acceptance of the doctrines of the Socialists is fully indicated. His works of fiction include also some minor dramas, notable for their humorous situations and skillfully managed dialogue, entitled: *The Register; The Elevator; The Parlor Car; The Sleeping Car,* &c.

How'land, SIR WILLIAM PEARCE, Canadian statesman, born in Pawling, Dutchess co., N. Y., May 29, 1811; educated at Kinderhook, N. Y. In 1830 he removed to Canada and engaged successfully in trade; was a member of the Canadian Assembly (1857–67), and of the Dominion Parliament (1867–68). From 1862 to 1863, he was Minister of Finance; Receiver-General (1863–64); Postmaster-General (1864–66); Minister of Finance (1866–67), and of Inland Revenue (1867–69); lieutenant-governor of Ontario, (1868–73); was knighted in 1879.

How'ling, *a.* (*Slang.*) Remarkable, extreme; as, a *howling* success.

Ho'ya, *n.* (*Bot.*) A genus of *Asclepiadaceæ,* comprising, besides one African species, a large number of species dispersed over tropical Asia. They are herbaceous plants with twining or creeping stems, which throw out roots at the lower nodes. The leaves are opposite; often, but not in all the species, thick and fleshy; and the flowers are in lateral umbels. The corolla is rotate, the five lobes of the limb are ovate and valvate in the bud. The staminal corona consists of five scales inserted on the gynostegium, and usually spreading horizontally like a star in the center of the corolla; the inner angle bears a small tooth incumbent on the anther. The pollen-masses are erect, oblong, and attached in pairs. The stigma is not beaked. The follicles are smooth or with wing-like appendages. The genus comprehends some of the most ornamental among the plants cultivated in our hot-houses.

Fig. 2934.—HOYA IMPERIALIS.

Hoyt, JOHN WESLEY, educator, born in Franklin co., O., Oct. 13, 1831; educated at Ohio Wesleyan University and in the Law and Medical Schools of Cincinnati, O. In 1860–72 was secretary and manager of Wisconsin State Agricultural Society, vice-president of U. S. Agricultural Society commissioner from Wisconsin to London Exhibition (1862); from the U. S. to Paris Exposition (1867); and from the U. S. to Vienna Exposition (1873); Governor of Wyoming (1878–82); president of Wyoming University (1887).

Hoyt, WAYLAND, clergyman and author, born at Cleveland, O., Feb. 18, 1838; educated at Madison University, Brown University (where he graduated in 1860) and Rochester Theological Seminary. He has been pastor of prominent Baptist churches in Pittsfield, Mass., Cincinnati, O., Brooklyn, Philadelphia (Memorial Church), Minneapolis, and again in Philadelphia (Epiphany Church), his present charge (1897). He is author of *Hints and Helps for Christian Life; Present Lessons for Distant Days; Gleams from Paul's Prison; Light on Life's Highway,* &c.

Hoyt'ville, in *Pennsylvania,* a post-village of Tioga co., 34 m. S.S.W. of Tioga, on Erie R.R.; has tannery. *Pop.* (1890) 560.

Hub'bard, JOSEPH STILLMAN, astronomer; born at New Haven, Conn., Sept. 7, 1823; graduated at Yale, in 1843; was assistant in High School Observatory at Philadelphia; employed by Fremont to reduce his Rocky Mountain observations; commissioned professor of Mathematics in the U. S. Navy, (1845), and assigned to duty in the Naval Observatory, at Washington, where he remained during the rest of his life, gaining a high place in his profession. Died Aug. 16, 1883.

Hubbard, or **Hubbard City,** in *Texas,* a post-village of Hill co., 24 m. S.E. of Hillsboro on St. L. S. W. R.R.; has a broom factory. *Pop.* (1890) 894.

Hub'by, *n.* (*Colloq.*) A term of endearment for *husband.*

Hub'ner (*hoob'ner*), JOSEPH ALEXANDER, BARON, diplomatist, was born at Vienna, in 1811. After filling several subordinate posts in the Imperial service, he became Austrian ambassador at Paris in 1850, and in 1856 signed the Treaty of Paris, having been instrumental, it is supposed, in preventing his sovereign from taking part with Russia, and in insuring his neutrality. Later he was employed in missions to Naples and Rome,

and in 1867 was placed at the head of the Austrian embassy in the latter city. He managed many difficult matters with great tact and ability, and was made a grand officer of the Legion of Honor. He visited the U. S. in 1870 and 1871, and afterward resided in Rome, where he published several works of travel and a biography of Pope Sixtus V. Died July 30, 1892.

Huet (*oo-ā'*), Conrau Basken, critic, born at The Hague, Holland, Dec. 28, 1826; educated at the University of Leyden, and entered the ministry. His first charge was at Utrecht; he then settled at Haarlem, remaining for ten years (1851–62), when he gave up the ministry and turned his attention entirely to the field of literary criticism. His extraordinary range and the ability of his work was soon acknowledged. He undertook universal criticism, similar to that of Saint-Beuve in France; wrote for *De Gids*, the leading literary review of Holland; edited the journal *Java-Bode* in Batavia; established a paper of his own called *Algemeen Dagblad van Nederlandsch Indië*. The best of his criticisms are contained in the collections of essays entitled *Litterarische Phantasiën; Nieuwe Litterarische Phantasiën; Oude Romans;* &c. He was also the author of *Overdrukfes; Lidewyde; Novellon; Nationale Vertvogen* and many other works. Died May 1, 1886.

Hu'ger, Benjamin, soldier, was born in South Carolina, Nov. 22, 1805; graduated at West Point (1825) and served on topographical and ordnance duty till 1832, when he was made captain of ordnance; was chief of ordnance and artillery under Gen. Scott in the Mexican War. He received the brevets of major, lieutenant-colonel, and colonel, and was presented by his native State with a sword of honor; resigned in 1861, and served in the Confederate Army as major-general, bearing a prominent part in the early days of the Civil War. He afterward engaged in farming in Virginia. Died in December, 1877.

Hug'gins, William, astronomer, was born in London, Eng., in 1824, and was educated in that city, becoming proficient in natural science, and for some years devoting himself to the study of physiology with the aid of the microscope. Anatomy next attracted his attention, and in 1855 he erected and equipped an observatory at his residence at Upper Tulse Hill for the purpose of applying to this science his familiarity with other branches of physics. In 1858 he obtained from Alvan Clark a telescope of 8 inches aperture, with which he made careful observations of double stars and accurate drawings of the planets. In 1862–64 he applied himself to the undertaking of extending Kirchhoff's mode of spectrum analysis of the sun to the planets, stars, nebulæ, and comets. For many months he prosecuted the arduous but necessarily preliminary task of mapping the spectra of about 26 of the chemical elements. He then compared the spectra of about 50 stars directly in the instrument with the spectra of several terrestrial elements, and decided that the stars are hot bodies, similarly constituted to the sun, and that they contain many of the substances found on the earth. One of the most remarkable of his subsequent discoveries was that of the nature of some of the nebulae. He found that some of these bodies gave a spectrum of a few bright lines only which showed that the light had emanated from heated matter in the state of gas; and, further, that the principal constituents of the gaseous nebulæ are nitrogen and hydrogen. These objects are not, therefore, as was previously supposed, clusters of stars too distant to be separately distinguished. He also examined the spectra of four comets, and found that the greater part of the light of these objects is different from solar light. The spectrum of Winnecke's comet he found to be identical with the spectrum of carbon. Another highly important result of his researches was the discovery, by means of the spectroscope, that some of the fixed stars are approaching and others receding from the earth, and the speed with which they are moving in these directions. These important results, which the ordinary telescope would be incapable of yielding, were obtained by carefully and accurately measuring the variations in the width and position of the lines of the spectrum due to advance or retreat of the light-giving body. He was also able to measure the heat derived from these far-distant orbs. For his discoveries *H.* twice received the gold medal of the Royal Astronomical Society; and twice the medal of the Royal Society; was elected a F. R. S., and made LL. D. by Cambridge and Edinburgh Universities, and D. C. L. by Oxford. He received marks of honor from many foreign societies, and was presented by the Royal Society with a telescope of 15 inches aperture. After 1875 he engaged in photographing the ultra-violet portions of the stellar spectra. From 1876 to 1878 he served as president of the Royal Astronomical Society. The discoveries of Prof. *H.* have been of extraordinary value to astronomical science, and largely serve as the basis of the astronomy which has succeeded that of the past ages. That we should be made aware of the materials which enter into the composition of the remote stellar orbs, discover the state of physical organization of the nebula, and be able to measure the rate of movement in these bodies in radial lines to and from the earth, would have seemed incredible half a century ago; but this seeming miracle has been performed by Prof. *H.*, whose work has set in train a remarkable new evolution in our knowledge of the heavenly bodies.

Hughes, Ball, sculptor, born in London, Jan. 19, 1806; studied with Edward Hodge Bailey. In 1829 he removed to New York, but subsequently settled in Dorchester, Mass. His works include busts of George IV. and the Dukes of York, Sussex and Cambridge, and a high relief of Bishop Hobart in Trinity church, New York. In the Boston Athenæum are his *Little Nell* and *Uncle Toby*, in plaster. Died March 5, 1868.

Hughes, David Edward, inventor of the printing telegraph, was born in London in 1831; was brought by his parents to the U. S., where he pateuted the printing telegraph in 1855. This invention was soon after adopted by the French, Italian and English governments, and subsequently by Russia and other European countries. His discovery of the microphone was announced in 1878, and that of the induction balance in 1879. In 1880 he was elected Fellow of the Royal Society, and he has received numerous orders of knighthood, medals, &c.

Hughes, in *South Dakota*, a central co.; *area*, 756 sq. m. It is bounded on the southwest by the Missouri river. *Surface*, undulating near river, the rest prairie; *soil*, very rich black loam. *Cap.* Pierre. *Pop.* (1895) 3,180.

Hughes'town, in *Pennsylvania*, a borough of Luzerne co., on E. & W. V. R.R. *Pop.* (1890) 1,454.

Hul'dee, *n.* (*Bot.*) An East Indian herb, *Curcuma longa*. See Curcuma.

Hull, William, soldier, was born in Conn., in 1753. He served with distinction in command of a body of volunteers during the Revolutionary War, and in 1805 became governor of Michigan Territory. In 1812 he was given the chief command of the army of the northwest, and in the same year surrendered with his entire force to the English at Detroit. For this act he was tried by court-martial and sentenced to death—a sentence remitted on account of his age and past services. Died in 1825.

Hullabaloo', *n.* An uproar; noisy confusion; tumult.

Hul'lah, John, musical professor, and originator of the Tonic-Sol-Fa method of singing, was born in Worcester, England, in 1812; successively held the positions of professor of Harmony and Vocal Music in King's College, London, conductor of the orchestra and chorus in the Royal Academy of Music, and Musical Inspector of the schools of Great Britain. His published works include: *A Grammar of Harmony; A Grammar of Counterpoint; The History of Modern Music;* and *The Transition Period of Musical History* Died in 1883.

Hu'manism, *n.* Human nature or disposition; humanity.—Polite learning; the humanities.—A system of thought in which human interest is uppermost.

Humanita'rian, *n.* One who is broadly humane in principle and action; a philanthropist. (See also Section I.)

Humanita'rianism, *n.* Broad philanthropy. (Now more generally used in this sense than in the theological). See also Section 1.

Hum'bert I., King of Italy, born March 14, 1844. In 1868 married Marie Marguerite, Princess of Savoy; served with credit against Austria in 1866; in 1870 distinguished himself at the battle of Custozza. After the occupation of Rome by the Italian troops in 1870, Prince Humbert took up his residence in that city, then made the capital of Italy. He succeeded to the throne June 9, 1878, on the death of his father, Victor Emanuel (*q. v.*). His courage in visiting Naples during the cholera epidemic of 1884, and his benevolence to the sufferers, gained him great commendation. Two attempts to assassinate this popular monarch, the first in 1878 and the second in 1897, proved futile, but the third, made July 29, 1900, resulted in almost instant death. His son, Victor Emanuel Ferdinand, born Nov. 11, 1869, succeeded to the throne under the title of Victor Emanuel III. He was married Oct. 24, 1896, to the Princess Helena, third daughter of Prince Nicholas of Montenegro. Died July 29, 1900.

Hum'boldt, in *Nebraska*, a city of Richardson co., 71 m. S. E. of Lincoln, on B. & M. R. R. R. Has a saw mill, several flour mills and a cheese factory. *Pop.* (1897) about 1,500.

Hume, Hamilton, Australian explorer, was born at Paramatta, New South Wales, in 1814. He led an expedition across the Blue Mountains, and accomplished the first journey made by a European from New South Wales to Victoria, discovering the river which bears his name.

Hum'estou, in *Iowa*, a post-town of Wayne co., 73 m. S. E. of Des Moines, on the C., B. & Q., the H. & S. and the K. & W. R. Rs. Has manufactures of hydrants and wood-turning machinery. *Pop.* (1895) 720.

Hum'phrey, in *Nebraska*, a post-village of Platte co., 25 m. N. of Columbus, on F., E. & M. V. and Union Pacific R. Rs. *Pop.* (1890) 691.

Hum'phreys, Andrew Atkinson, soldier and engineer, was born in Philadelphia, on Nov. 2, 1810; graduated from West Point (1831) and served with the engineer corps in Florida and the Mississippi Valley; for 5 years was in charge of the Coast Survey. He reached the rank of major, U. S. A., in 1861; the following year was made brigadier-general of volunteers, and, in 1864, major-general. He was eminent as an engineer, and achieved distinction also in action, commanding a division at Gettysburg and a corps before Petersburg. After the war he became chief of engineers, U. S. A., with the rank of brigadier-general, and retired with the rank of brevet major-general. Died Dec. 27, 1883.

Humphreys, Milton Wylie, educator, born in Greenbrier co., West Va., Sept. 15, 1844; educated at Washington and Lee University, Berlin and Leipsic; appointed adjunct professor of Languages in the University of Washington and Lee (1869–75); filled the chair of Greek at Vanderbilt University (1875–83), and of Ancient Languages in the University of Texas (1883–87); professor of Greek in the University of Virginia (1887); American editor of the *Revue des Revues*; president of the American Philological Association. Author of: *The Clouds of Aristophanes; The Antigone of Sophocles*, &c.

Humpty Dumpty, *n.* A favorite short and portly-figured, egg-shaped, character in pantomimes; hence, a pantomime in which this character appears.

Hun'dredweight, *n.* A weight avoirdupois of 112 pounds, though many articles are now sold at 100 pounds for a hundredweight; and 20 of these make the "short" ton of 2,000 pounds.

Hunt, Henry Jackson, soldier, was born in Detroit, Mich., Sept. 14, 1819; graduated at West Point (1839); served in the Mexican and Civil Wars; was commander-in-chief of the artillery of the army of the Potomac from 1862 till the close of the war, reaching the rank of brevet major-general. For gallant services in the field he was subsequently given the rank of major-general, U. S. A. He was president of the permanent artillery board for the army, and retired in 1883. From 1885 until his death he was governor of the Soldiers' Home at Washington. Died Feb. 11, 1889.

Hunt, Richard Morris, architect, born in Brattleboro, Vt., Oct. 28, 1828; studied at the Ecole des Beaux-Arts in Paris, and under H. M. Lefuel. He was employed upon the Pavillon de la Bibliotheque, Paris, and other structures. In 1855 he returned to the U. S. and was actively engaged in his profession, as architect of the Lenox Library, the Divinity College building at Yale, the *Tribune* building, New York, the Naval Observatory at Washington, the Administration building at the Columbian Exposition of 1893, and numerous other public and private buildings. He was a chevalier of the Legion of Honor, and a corresponding member of the French Academy of Fine Arts. Died July 31, 1895.

Hunt, Sandford, clergyman, was born at Eden, Erie co., N. Y., April 1, 1825; graduated at Allegheny College, Meadville, Pa. (1847), joined the old Genesee Conference of the M. E. church, and held several appointments as presiding elder, showing marked executive and financial ability in freeing from debt the churches under his charge. He was elected (1879) junior agent, and, ten years later, senior agent, of the Methodist Book Concern, in New York, whose business and property, under his management, were widely extended. Died Feb. 10, 1896.

Hunt, William Holman, a distinguished painter of the Pre-Raphaelite School, was born in London, Eng., in 1826. *The Light of the World*, *The Finding of the Saviour in the Temple*, and *The Festival of St. Swithin*, are three of his most masterly efforts. He spent much time in the East, where he made studies of oriental types of character for his religious pictures. He is highly esteemed by the advocates of Pre-Raphaelite art.

Hunt, William Morris, painter, born at Brattleboro, Vt., March 31, 1824; studied in the Dusseldorf Academy, under Coutnre, in Paris, and in the forest of Fontaineblean, with Millet. In 1855 he returned to the U. S., settling at Newport, R. I., but subsequently made his home in Boston. Died Sept. 8, 1879.

Hunt'er, David, soldier, was born in Washington, D. C., in 1802; graduated at West Point, in 1822, and became a colonel in the regular army in 1861. In the same year he was appointed major-general of volunteers, and assigned the command of the department of Missouri. In the year following he was placed at the head of the forces at Fort Royal, and issued an unauthoritative order freeing all the slaves within the limits of his department, May, 1863. Defeated at Lynchburg, June, 1864, he was superseded by Gen. Sheridan. He was twice brevetted for gallant services. Died in 1886.

Hunter, Robert Mercer Taliaferro, statesman, was born in Essex co., Va., 1809; after graduating at the University of the State, practiced law, and was elected to Congress in 1837. From 1839 till 1841 he held the position of Speaker, supported President Polk's policy, and was the originator of the Warehousing System. From 1847 till 1861 he sat in the U. S. Senate, and upon the breaking out of the Civil War became for some months Confederate Secretary of State, and a member of the Confederate Senate. At the time of his death, in 1887, he held a small office under the U. S. government.

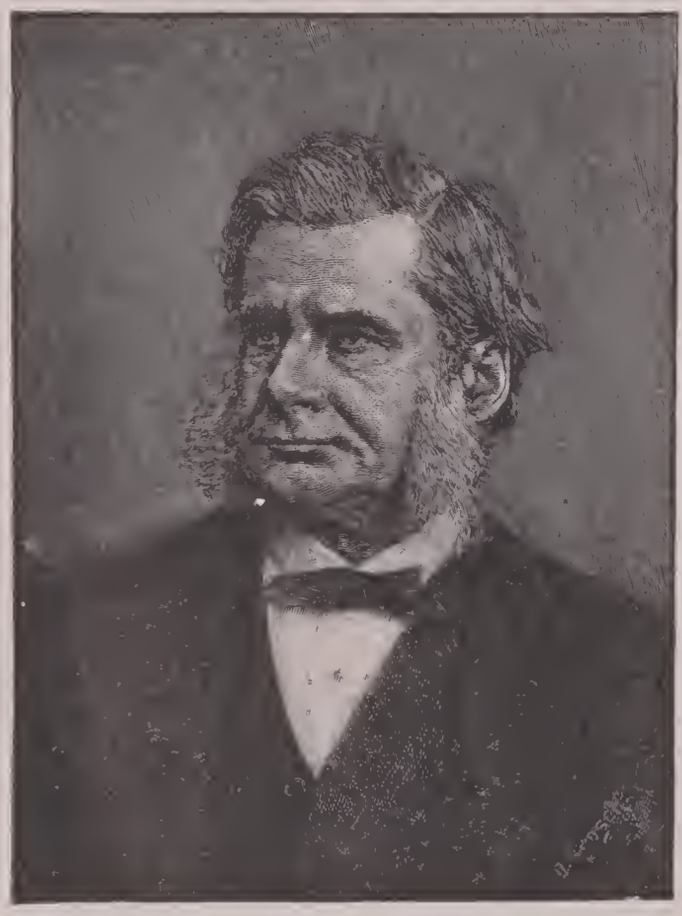
Hunter, in *New York*, a post-town of Greene co.

Hunt'ingburg, in *Indiana*, a city of Dubois co., 44 m. E.N.E. of Evansville, on L., E. & St. L. R. R.; has flour, lumber, brick, pottery and other manufactures. Coal mines in vicinity. *Pop.* (1890) 3,167.

Huntingdo'nians, *n. pl.* (*Ch. Hist.*) A religious denomination, called also "Lady Huntingdon's Connection," founded by George Whitefield, assisted by the purse and influence of the Countess of Huntingdon (1707–1792). They held Calvinistic views and separated from Wesley, whose theology was Arminian. At the time of the death of Lady Huntingdon there were 64 chapels of the denomination. Except that some of them use a part of the English liturgy, they are scarcely to be distinguished from the Congregationalists.

Hunt'ington, Frederic Dan, ecclesiastic, was born at Hadley, Mass., May 28, 1819; graduated at Amherst (1839), and at Cambridge Divinity School (1842); became a Unitarian minister, and had charge of a church in Boston (1842–55); when he was appointed Plummer professor of Christian Morals and preacher to Harvard University; resigned (1860), joined the Protestant Episcopal communion, and was rector of Emmanuel Church, Boston, from 1864 until his elevation (1869) to the episcopate as Bishop of Central New York. He is the author of *Lessons on Parables; Human Society; Helps to a Holy Lent*, &c; was one of the founders of *The Church Monthly*, Boston.

Huntington, Samuel, an American patriot, was born at Windham, Conn., in 1732. He early played a prom-



Thomas Henry Huxley

1825–1895

ficient part in the resistance to English aggression in the colonies, and in 1776, as a member of the Continental Congress, signed the Declaration of Independence. In 1779 he succeeded Mr. Jay in the presidency of the Congress of the Confederation, and later became chief-justice and governor of his native State. Died in 1796.

Huntington, WILLIAM REED, clergyman and author, born at Lowell, Mass., Sept. 20, 1838; graduated at Harvard in 1859, and was instructor in chemistry there from 1859 to 1860; ordained in the Protestant Episcopal Church (1860); assistant rector of Emmanuel Church, Boston (1861–62); rector of All Saints, Worcester, Mass. (1862–63), and has since been rector of Grace Church, New York city. He is the author of *Popular Misconceptions of the Episcopal Church; Questions on the Fourth Gospel; The Peace of the Church*, &c. The revision of the American *Book of Common Prayer* was largely due to his efforts.

Huntington, in *Arkansas*, a post-town of Sebastian co., 120 m. N.W. of Little Rock, on St. L. & S. F. R. R. *Pop.* (1890) 893.

Huntington, in *Utah*, a post-town of Emery co. *Pop.* (1890) 513.

Huntington, in *West Virginia*, a city, cap. of Cabell co., on Ohio river, 20 m. above Ironton, on C. & O. and O. R. R. Rs.; has manufactures of car-wheels, lumber, glass, cigars and iron castings. Coal, iron, lumber and salt are shipped. *Pop.* (1897) about 12,500.

Hunt'sman's-cup, *n.* (*Bot.*) The pitcher-plant, or side-saddle flower, *Sarracenia purpurea*. See SARRACENIACEÆ.

Hunt'sman's-horn, *n.* (*Bot.*) The trumpet-plant, *Sarracenia flava*. See SARRACENIACEÆ.

Hunts'ville, in *Utah*, a post-village of Weber co.; has a lumber mill. *Pop.* (1897) about 860.

Hunt's Up, *n.* The beginning of the hunt, indicated by the cry, "The hunt's up."—A tune played on the horn early in the morning to arouse the hunters; hence, any sound that awakens or disturbs.

Hu'on-pine, *n.* (*Bot.*) See DACRYDIUM.

Hurl'but, WILLIAM HENRY, journalist, born in Charleston, S. C., July 3, 1827; educated at Harvard College, Divinity School and Law School, and the University of Berlin; became one of the staff of *Putnam's Magazine*, and *The Albion* (1855), of the New York *Times* (1857), and of the New York *World* (1862); was proprietor of the *Commercial Advertiser* from 1864 to 1867; travelling correspondent for the New York *World* and editor-in-chief of that journal from 1876 to 1883; resided in Europe from 1883 until his death. Published *Gan Eden; Gen. McClellan and the Conduct of the War*, and other works. Died Sept. 4, 1895.

Hurl'but, STEPHEN AUGUSTUS, soldier, born at Charleston, S. C., Nov. 29, 1815; studied law, and was admitted to the bar in 1837. He held a number of posts in the ministry of public affairs. During the Civil War he commanded a division of the Federal army at the battle of Pittsburg Landing, and was promoted from the rank of brigadier-general to that of major-general of volunteers, Sept., 1862; afterward commanded the Sixteenth Army Corps and the Department of the Gulf; was appointed minister resident to Colombia (1869–72); was member of the Forty-third Congress. He was sent as minister to Peru in 1881, where he died, March 28, 1882.

Hur'ley, in *Wisconsin*, a post-village, cap. of Iron co., 4 m. S.E. of Ashland, on C. & N. W. and Wisconsin Central R.Rs. Iron ore and lumber are largely shipped. *Pop.* (1895) 2,267.

Hu'ron, in *South Dakota*, a city, cap. of Beadle co., 118 miles E. of Pierre, on C. & N. W. and Gt. Nor. R. Rs. Here are the large machine shops of C. & N. W. R. R. It has manufactories of carriages, wagons, ornamental wood-work, flour, bricks, &c. *Pop.* (1895) 2,514.

Huro'nian Formation. (*Geol.*) A geological division of the Azoic rocks of America, later than the Laurentian and older than the Cambrian strata. Its rocks, consisting of sandstones, conglomerates, shales, and limestones, with imbedded igneous rocks, were first observed in 1858, on the north shore of Lake Huron, and were held to be later than the Laurentian granites and gneisses from resting unconformably upon them. Rocks of seemingly the same age have since been discovered elsewhere, and the term has been used to indicate certain dark-colored rocks in all parts of the earth. Extended study of the pre-Cambrian strata has led to the use of the term Algonkian, which is employed to embrace all rocks between the Laurentian and the Cambrian, including those originally described as Hessonian. See GEOLOGY.

Hur'ricane Deck, *n.* The upper deck above the cabins of an American river or lake steamboat.—A raised platform on an ocean steamer, from side to side amidships; a station for the commanding officer.

Hurst, JOHN FLETCHER, ecclesiastic and author, was born near Salem, Md., Aug. 17, 1834; graduated at Dickinson College (1854); studied theology in the Universities of Halle and Heidelberg. In 1858 joined the Newark conference of the M. E. church. He was president of Drew Theological Seminary (1873–80); elected bishop in 1880 and Chancellor of the American University in 1891. Among his numerous contributions to literature are: *History of Rationalism; Outline of Bible History; Life and Literature in the Fatherland; Indika; The Country and People of India and Ceylon; Short History of The Christian Church*. He has also made several translations, including Hagenbach's *History of the Church in the Eighteenth and Nineteenth Centuries*, and is generally accepted as the historian, *par excellence*, of the Methodist Episcopal church.

Husch (*hoosh*), a town of Roumania, capital of a district of same name in Moldavia, on an affluent of the Pruth, 40 m. S. E. of Jassy. *Pop.* (1897) 18,500.

Hus'tisford, in *Wisconsin*, a post-village of Dodge co. *Pop.* (1897) about 600.

Hus'tler (*t* silent), *n.* (*Colloq.*) A person of extraordinary activity and energy; an aggressive and efficient worker.

Hutch'inson, THOMAS JOSEPH, an English explorer and author, born 1820. The leading experiences of his career may be gathered from the titles of the following of his works: *Narrative of the Niger, Tchadda, and Binué Exploration in Western Africa* (1855); *Ten Years Wanderings among the Ethiopians* (1861); *Buenos Ayres and Argentine Gleanings; The Paraná and the Paraguayan War* (1868).

Hutchinson, in *Kansas*, a city, cap. of Reno co., 45 m. N. W. of Wichita, on A., T. & S. Fé, C., R. I. & P., H. & S., and Mo. Pac. R. Rs. Here is a vein of rock-salt 300 feet thick, which is worked by several companies, with a production of 5,700 barrels daily. Has flour mills, a large pork-packing establishment, &c. The State Industrial Reformatory is situated here. *Pop.* (1895) 8,515.

Hutchinson, in *Texas*, a N. W. co.; *area*, 900 sq. m. It is intersected by the Canadian river. Unorganized.

Hut'ton, FREDERICK REMSEN, mechanical engineer, was born in New York city, May 28, 1853; educated at Columbia College and School of Mines; became an assistant in the college, and through successive promotions was made professor of Mechanical Engineering in the School of Mines in 1891.

Hutton, LAWRENCE, author and journalist, was born in New York city, Aug. 8, 1843. He followed a mercantile career for some years; became interested in the stage, and was made dramatic critic of the New York *Evening Mail*; edited the *American Actor* series, and is the author of *Plays and Players*; also *Literary Landmarks of London*, and *Literary Landmarks of Edinburgh*. He has edited "Literary Notes" in *Harper's Magazine* since 1886.

Hutton, WILLIAM RICH, civil engineer, was born at Washington, D. C., March 21, 1826; educated in private schools in Washington; was consulting engineer on the new aqueduct of New York city, the Colorado Midland Railway, and the "Washington bridge" over the Harlem river. He is a member of the U. S. Board of Engineers on obstructions in the Columbia river, and of the Society of Civil Engineers of France.

Hux'ley, THOMAS HENRY, an eminent biologist, born at Ealing, Middlesex co., Eng., May 4, 1825. He graduated with honors from the University of London in 1845; served in the royal navy as assistant surgeon, (1846–53), sailing round the world in H. M. S. *Rattlesnake*, during which he made valuable observations which he communicated to the Royal Society, of which he was made a Fellow in 1851. In 1854 he became professor of Natural History in the School of Mines; from 1863 to 1869 served as Hunterian professor in the Royal College of Surgeons; was president of the Geological and Ethnological Societies (1869–70); on the London School Board (1870–72); secretary of the Royal Society, (1872); lord rector of the University of Aberdeen (1872); president of the Royal Society (1883); served twice as Fullerian professor in the Royal Institution, and was a privy councillor in 1893. For many years Professor *H.* was an incessant and highly able worker in biological science, his researches leading to results that gave him a standing in the most exalted class of scientists. He was principally distinguished for his studies in comparative anatomy and the systematic arrangement of organic beings, proposing radical changes in the existing systems, and pointing out some striking homologies in animal development. The Darwinian theory was quickly accepted and richly illustrated by him, while among his views, which have attracted general attention, are his theory of protoplasm, and his hypothesis that the actions of animals and man, while seemingly voluntary, are really automatic, being independent of any faculty like that known as the will. Professor Huxley's reputation rests, in considerable measure, on his fluency and lucidity as a writer; his skill in expressing the conclusions of science in simple language having brought his works into wide circulation among unscientific people. His principal works on science are: *Man's Place in Nature* (1863); *Lectures on Comparative Anatomy* (1864); *Introduction to the Classification of Animals* (1869); *Anatomy of the Vertebrate Animals* and *Anatomy of the Invertebrate Animals*, two treatises that have gone through a number of editions; *The Oceanic Hydrozoa*, and numerous papers of high scientific value. Aside from his scientific writings he interested himself in educational questions, and published several works on topics of a philosophic and general character, including: *Lay Sermons; Critiques and Addresses; Physiography; Science and Culture*, &c. He engaged in a literary controversy with Gladstone upon questions concerning the Hebrew Scriptures, which he handled with a controversial skill and a keenness in deduction that attracted wide attention, proving himself, in the opinion of scientific thinkers, far superior to his antagonist in the powers of logic and epigrammatic force of language. In addition to the several positions named, *H.* held various others; received the Wollaston medal from the Geological Society, the Copley medal from the Royal Society, the gold medal of the Royal Society of New South Wales, the Swedish Order of the Pole-Star, membership in many foreign societies, and honorary degrees from various universities. Died at Eastbourne, June 29, 1895.

No scientific writer of modern times acquired a more wide spread reputation or greater influence over the progress of thought than Prof. *H.* This reputation is due alike to the breadth of the field covered by his researches, his extensive knowledge, clear, incisive and brilliant literary style, and outspoken advocacy of certain radical and startling doctrines, which brought his name into notice in all ranks of society. One of those is that in which, springing boldly to the ultimate outcome of the Darwinian theory, he advocated the descent of man from the apes. Another—advanced in his *Physical Basis of Life*—combatted the prevailing idea that life is a principle distinct from organization, and held that it is but the outcome of the physical qualities of protoplasm, an organic substance existing in every part of every organism and on which all manifestations of vitality directly depend. A still more startling doctrine, above mentioned, and advocated before the British Association at its meeting at Belfast in 1874, maintained, as a result of the phenomena of certain cases of brain injury and disease, that those seeming voluntary actions of animals, and even of man, are really automatic, being not only independent of the assumed faculty of the will, but even to some extent of consciousness. It embraced the definite declaration that an animal is a machine, wound up, like a highly complex clock, to run for a certain period, and that consciousness is a side-product of its activities, and one which has no actual controlling influence over these activities. Aside from these hypothetical views and from his strong tendency to generalization, Prof. *H.* was one of the most exact and indefatigable of scientists, his researches covering the fields of comparative anatomy, morphology, physiology, embryology, palæontology, physiography, and others, and leading him to many valuable generalizations in the affinities and classification of animals. He first removed the Echinoderm class of animals from the Radiates, and proved their affinity to the Vermes; and he made important additions to our knowledge of the morphology of the Mollusca and the Anthropoda. He was equally suggestive and happy in his dealings with the class of Vertebrate animals, and foresaw, with a prophetic inspiration, the derivation of the birds from the reptiles, and the ancestry of the horse—conceptions which have been amply verified in the discovery of the Dinosaurian reptiles and the toothed birds, and of the Tertiary progenitors of the horse. His similar conception of the close affinity of the batrachia and the fishes was shown in his bringing them together in the single class Ichthyopsida. He had, indeed, a remarkably clear discernment of the laws and affinities of organic nature, and had the high honor of scarcely making a mistake in his numerous scientific deductions. In addition he accomplished the difficult task of rendering intelligible to educated people generally some of the most difficult of the problems of science. In his controversial writings he displayed a fluency, fine powers of reasoning and keenness of sarcasm that made them at once enjoyable and convincing to readers, and added greatly to his reputation as a writer of unusual ability. As a public speaker he was quiet, fluent, and almost colloquial in manner, and gained a strong influence over his hearers and students. In his later years impaired health, due to his arduous labors, forced him to resign many of his positions, in lieu of which a pension was granted him by the government.

Hy'att, ALPHEUS, naturalist, was born in Washington, D. C., April 5, 1838, educated at Yale and the Lawrence Scientific School, graduating B.S. from the latter in 1862; was one of the curators of Essex Institute and Peabody Academy of Science; custodian of the Boston Society of Natural History (1870), and curator of the same (1881). He is a member of most scientific societies in the U. S.; has made a special study of the fossil Cephalopoda, and his theories in regard to their evolution are of great value. His works include: *Fresh-water Polyzoa; Genera of Fossil Cephalopods; Larval Theory of the Origin of Cellular Tissue; Genesis of the Ariciadæ*. His revision of the *North American Porifera* is the first and only monograph upon American sponges. Besides his scientific papers, he has published a series of small books, *Guides to Science-teaching*, for use in the public schools.

Hyde, in *South Dakota*, a central county; *area*, 850 sq. m. It is bounded on the S.W. by the Missouri river. *Surface*, undulating; *soil*, fertile and well watered. *Prod.*, corn, wheat, oats, barley, flax, potatoes. *Cap.* Highmore. *Pop.* (1895) 1,333.

Hydras'tin, *n.* (*Chem.*) See HYDRASTIS.

Hydrau'lic Crane. (*Mech.*) A lifting device employing the hydrostatic press in connection with cranes, derricks, &c. It consists of a vertical cylinder within which works a plunger or piston, moved by water pressure, which, in case of heavy loads, may be increased to 2,000 or 3,000 pounds per square inch. The water is kept under maximum pressure in an accumulator by the aid of steam pumps, the supply being controlled by a cock at the entrance to the cylinder. Such cranes can be so constructed as to lift and lower ponderous weights rapidly and easily, and may be made to swing round in a complete circle, so as to cover a wide area. They are particularly useful in foundries and steel works, in loading and unloading ships and railroad cars, &c., the machinery required being much simpler and less cumbrous than in the case of cranes worked by steam power.

Hydraulic Engine. An engine operated by water pressure. The simplest and easiest method of using water as a source of power is by the aid of the water-wheel; but occasionally it is more advantageous to use it in the same way as steam and hot air are used, to move a piston in a cylinder. In addition to the use of com-

pressed water in the hydraulic crane (*q. v.*), it has also been employed in the drainage of mines. In the great water-engine used in the mines of Huelgoat, Brittany, often described, the water is brought from a source 370 feet above the engine level. The engine makes a stroke over eight feet in length, 5½ times a minute, and acts directly on the piston of the pump which draws the water from the mines. A very ingenious method is employed by which the water pressure is automatically decreased near the end of the stroke, to prevent the shock that would arise from the continuance of the full pressure throughout. Many smaller hydraulic engines have been devised, for use in ordinary industries, the most important of these being the Ramsbottom engine, an English invention. This is a high-pressure oscillating engine, with two cylinders, which operate the same working shaft by means of two cranks at right angles to each other. The water is admitted in such a way as to increase in pressure from the beginning to the middle of the stroke and then to decrease to the end. Very careful adjustment is necessary, so that the valves shall reach their complete closure at the moment of the completion of the stroke, in order to avoid the danger of hydraulic shocks. In case this should not be fully performed, some provision against injurious effects is necessary; and this is obtained by the use of air-chambers and relief valves. The latter open a backward communication between the cylinder and the driving column, and serve, in case of an obstruction to the discharge, to equilibrate the pressure on the two sides of the piston. Engines of this model have been used for various industries, such as operating printing presses, circular saws, lathes, &c., as well as for foundry cranes and other machinery. Their simplicity and neatness make them very suitable in cases where light motors are demanded, and where a head of water for working them can be easily obtained. A natural head of water is not generally available, and a reservoir of water pumped in under heavy pressure is frequently employed. For light industries this is not necessary, a city water supply usually furnishing water at sufficient pressure for the purpose. The hydraulic engine has the advantages of simplicity, compactness, cleanliness, immediate readiness for work, safety and economy while in operation, and complete cessation of expenditure while at rest. In its operation water under pressure is admitted by valves under the piston, which it lifts. At the end of the stroke the supply-valve is closed, the exhaust-valve opened, and the piston forces the water out on its return stroke, and so on successively.

Hydraulic Min'ing. A method of mining coal by a hydraulic process has been recently introduced, in which the coal is undercut as usual and a blasting hole drilled. In this is placed a tightly-fitting steel cartridge about 18 inches long and 3 inches diameter. Water under pressure is forced into this by a small but powerful hand-pump. The pressure causes the cartridge to expand and crack the coal, dislodging it without the shock and shattering of a blast, and without danger of ignition of dust or gases. Its successful employment will greatly reduce the danger of mining operations.

Hydraulic Mor'tar. A cement which sets under water. See CEMENTS.

Hydro-extract'or, *n.* (*Mech.*) An apparatus for removing liquids or moisture from yarns or cloths in the process of manufacture. The main feature or principle of the machine is extremely simple, consisting merely of a circular, open wire-basket, in which the wet cloths are placed as uniformly as possible, and which is then made to revolve with such rapidity that the moisture is thrown out by the centrifugal force through the interstices of the basket. As the *vis inertiæ* prevents the instant communication of a sufficient velocity to the basket loaded with heavy goods, various expedients have been resorted to, to make communicated velocity progressive. The contrivances for this purpose were originally very complicated; but the arrangement shown in the annexed engraving, which is an exterior view of the machine and the driving apparatus, is much more simple, and perfectly effective. The whole machine rests on two square bed-stones; the outside of the case, or tub, is only shown in the figure, within which the wire basket, open at the top for the reception of the goods, revolves on a vertical shaft; to this shaft motion is communicated from the horizontal shaft beneath the tub by means of bevel-gears. On the extremity of this horizontal shaft is fixed the driving pulley, as shown in the figure. This pulley is of the form usually employed on small tilt- or trip-hammers; a belt passing around this pulley, and continually moving, communicates motion to the pulley whenever a binder brings the belt in close contact with its periphery. The binder is attached to the extremities of an oscillating frame, suspended from the top of the tub, as shown in the figure. The binder presses against the belt, so as to communicate motion to the pulley. To stop the motion, the upper end of the oscillating binder-frame is pressed down by a handle; the binder relieves the belt, and a rope attached to the periphery of a small pulley on the binder-frame, passing over a pulley fixed on the horizontal driving-shaft, and fastened at the other end to the bottom of the tub, acts as a friction-brake to retard the motion of the tub and, consequently, of the basket. To keep the binder-frame in extreme positions, a movable weight is placed on the handle-rod at the top of the frame, which slides from one end to the other of the rod, as the binder is raised or depressed. The basket in this machine is about 3½ feet in diameter, and in full action is capable of making 800 revolutions

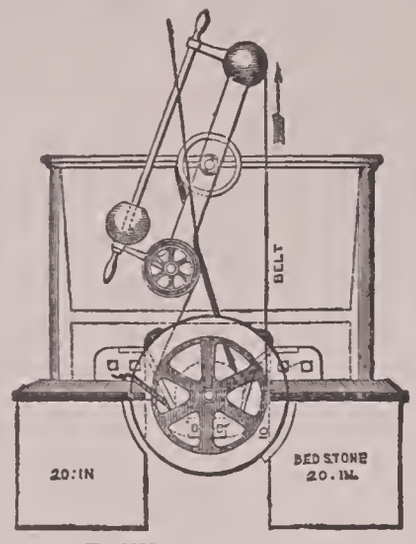


Fig. 2935.—HYDRO-EXTRACTOR.

per minute. The driving belt should be about 8 inches wide, the driving pulley 18 inches in diameter. The principle involved in the hydro-extractor is not confined to the drying of yarns and cloths, but has various other applications, its great utility being in the great rapidity with which the drying process is accomplished. It is of use also for such purposes as the removal of honey from the comb without injury to the structure of the latter, and other separations of fluid from solid substances.

Hydrol'ysis, *n.* [Gr. *hydōr*, water, and *lysis*, loosing.] (*Chem.*) The chemical decomposition of a compound which takes place when water is absorbed by it and new compounds are formed.

Hydromechan'ics. A term adopted by several modern scientists to designate that branch of natural philosophy which is treated in this work under the name of HYDRODYNAMICS (*q. v.*).

Hyetomet'rograph, *n.* An automatic rain-gauge which registers the amount of the rain-fall during successive periods.

Hyme'nium, *n.* [Gr. *hymenion*, dimin. of *hymen*, membrane.] (*Chem.*) The fructifying surface in fungi, in which the spores are naked; the parts in which the spores immediately lie.

Hymnol'ogy, *n.* The art of sacred lyric poetry; a lyrical expression of religious feeling, celebrating, directly or indirectly, some object of worship. Hymns are among the earliest extant examples of literature, having come down to us from remote times in the Hindu Vedas, the Babylonian literary remains, and the literature of ancient Egypt; while of the hymns of antiquity the Jewish psalms are the best known and most cherished. The Greek hymns were in honor of the deities of mythology and were sung at festivals. The hymnology of the Christian era had its great originator in Ambrose (died 397), who founded a school of hymn writers whose productions were marked by a severe simplicity, causing them to appear to many hard and dry. More glowing strains arose from later writers, and after the Reformation an active school of Protestant hymnology arose, which yielded many productions of great worth. Isaac Watts may properly be looked upon as the father of English hymnology, which has continued to develop through two centuries; and at the present day hymns of much excellence are frequently produced, while new hymnals, made up largely of fresh material, are constantly appearing. Among the most complete works on this subject is Julian's *Dictionary of Hymnology* (1892).

Hynd'man, in *Pennsylvania*, a post-borough of Bedford co., 23 m. S.W. of Bedford, on B. & O. and Penna. R. Rs.; has flour mills, a tannery, fire-brick, and hardwood furniture factories, and several small lime-kilns. It is located in the midst of a mountainous region of rugged natural beauty. *Pop.* (1897) 1,220.

Hyper'thesis, *n.* [Gr.] (*Philol.*) The transposition of a letter from one syllable to another.

Hypher'esis, *n.* [Gr. *hyphairesis.*] (*Philol.*) The taking away or omission of a letter or syllable.

Hypob'ole, *n.* [Gr.] (*Rhet.*) A figure in which several things which seem to be opposed to the argument are mentioned, each of them being then refuted in turn.

Hypochæ'ris, *n.* (*Bot.*) A genus of European plants, order *Asteraceæ*. *H. radiata*, or Long-rooted Cat's-ear, is extremely common in meadows and pastures. Its leaves are all radical; and, spread on the ground, resemble in form those of the dandelion, but are rough; the stem is branched; the flowers not unlike those of the dandelion, but smaller. Cattle eat this plant readily, and its abundance is not deemed injurious to pasture or fodder.

Hypochlo'rite, *n.* [Gr. *hypochloros*, greenish.] (*Min.*) A brittle, green mineral, found with native bismuth and cobalt ores in various mines in Saxony. It contains silica, alumina, oxides of bismuth and iron and phosphoric acid.

Hypochlo'rous Acid, *n.* (*Chem.*) An acid formed by pouring a current of perfectly dry chlorine through a tube filled with well-dried oxide of mercury procured by precipitation from a solution of corrosive sublimate by means of potash. *H. A.* is produced, which may be collected, as a deep-red liquid, in a receiver kept cool by a mixture of ice and salt. It boils at about 68°, emitting a vapor of a deeper color than chlorine. It is easily decomposed with explosive violence by the mere heat of the hand. Water dissolves 200 times its bulk of *H. A.*, forming a pale-yellow solution. When concentrated it is easily decomposed, the action of light being sufficient to eliminate chlorine from the compound. With bases it forms the hypochlorites, which are possessed of powerful bleaching properties; in fact, it is now the generally received opinion that the chloride of lime owes its bleaching power to a certain portion of hypochlorite of lime which it contains. *Equiv.*, 435. *Sp. gr.*, 2.977. *Combining volume*, 2. *Form.*, HClO.

Hypochon'drium, *n.* [Lat. from Gr. *hypochondrion*, from *hypo*, and *chondros*, a cartilage.] (*Anat.*) The name given to each lateral and superior region of the abdomen, from its being bounded by the cartilaginous margin of the false ribs, which forms the base of the chest.

Hyp'ocist, *n.* (*Bot.*) See CYTINACEÆ.

Hypoder'mics. Medicines administered by being forced under the skin by aid of a hollow needle attached to a syringe. The first employment of the hypodermic method was by Dr. Wood, of Edinburgh, in 1843, who injected a solution of morphine through the skin. The method was soon followed by others, and its employment has become general in suitable cases. In hypodermic injection the medicament is drawn into the syringe, filling it sufficiently to drive out all the air. The needle is then attached, and its point driven well through the skin, so that it may reach the loose connective tissue beneath, into which it is desired that the liquid shall pass. The needle should be quickly inserted, as this gives less pain, but the injection should be slowly made. It is generally given in the arm or the thigh, and care is taken to avoid veins, lest the drug should be carried directly to the heart, within which organ it might cause mischief. Antiseptic measures are necessary, there being no danger of abscesses from ordinary injections if this is properly attended to. The quantity of medicine used in this manner is about one-quarter or one-half of that taken by the mouth. The advantage lies in the rapid absorption of the drug in case of a necessity for immediate action.

Hypoph'ora, *n.* [Gr.] (*Rhet.*) The forestalling of an argument or objection likely to be used by an opponent in debate.

Hypozeux'is, *n.* [Gr.] (*Rhet.*) The use of a verb with each subject in successive clauses.

Hypsom'eter, *n.* [Gr. *hypsos*, height, *metron*, measure.] An instrument for measuring heights by observing differences in barometric pressures at different altitudes; specifically, an instrument for determining altitudes by observation of the boiling-points of water.

Hystere'sis, *n.* See ELECTRICAL NOMENCLATURE.

Hysteron-prot'eron, *n.* [Gr. the latter first.] (*Rhet.*) A figure of speech in which that word or clause which should properly come last is placed first; as, *valà atque vivit*, he is well and lives.—An inversion of the logical order, in which the conclusion is put before the premises or the thing proved before the evidence.

I.

I is the ninth letter and third vowel of the English language, derived from the Greek and Latin. It is pronounced by throwing the breath, as it issues from the larynx, suddenly against the palate, with a slight hollowing of the tongue, and nearly the same opening of the lips as in pronouncing *a* or *e*. This letter has two principal and three minor sounds in the English tongue, viz., the long sound ī, as in *fine, fire;* the short sound ĭ, as in *fig, fish, pill;* and the three subordinate sounds, as of *e* in *me;* of *e* in *thirst;* and finally of *y*, in many words where it goes before another vowel, as in *cotillion*, pronounced *cotil-yon*. *I* enters into the composition of several digraphs, as *deign, yield, friend*, &c. As a termination its use has been imported into the English language from foreign stocks, principally from the Italian, as in *banditti, illuminati*, &c.; in such cases it possesses the short sound similar to *y* in the like instances. In Italy, France, and other countries possessing pure Latinized idioms, *i* is pronounced similarly to the English *e*. The sound of *i* before another *i* is expressed by *y*. The form of *i* was originally identical with that of *j*, and it is only within the last century that any distinction has been made between them. The letter ι (*iota*) in the Greek language, is the simplest of the alphabetical characters. The dot which we place over lower-case *i* was first used about the 14th century. As a numeral, I signifies *one*, and stands for a unit each time it is repeated; when put *before* a higher numeral, it subtracts from its value; as iv, 4, ix, 9; when placed *after* the higher numeral, so many are added as there are units indicated; as xi, 11, xiii, 13. I is the symbol for iodine. As an abbreviation, I. stands for Idaho, *id*, (ia *i. e., id est*, that is), Iesus (Jesus), in, inner, independent, island, &c.

I, *pron.* The nominative case, singular number of the personal pronoun of the first person. (Possessive, mine; objective, me. Plural: Nominative, we; possessive, ours; objective, us.) The word by which the speaker or writer denotes himself; as, *I* am he; *I* did it.

I (the pronoun used as a noun). (*Metaph.*) The *ego* (*q. v.*), the self-conscious subject, the individual being that thinks, feels and acts.

Iam'bic, Iam'bical, *a.* [Lat. *iambicus;* Gr. *iambikos.*] Pertaining to the iambus.

Iambic, *n.* [Lat. *iambus;* Gr. *iambos*, said to be from *iapto*, to attack or assail, because first used in *satirical* poems.] (*Pros.*) A species of verse used by the Greek and Latin poets, and originally composed of a succession of iambi. (⏑ –.) Among the Greek tragic poets, the iambic is the measure most commonly used. These verses consisted of three entire meters, or six feet, and were consequently called the tragic *trimeter acatalectic*. Although, as stated above, this species of verse originally consisted of iambi only, in time other feet were introduced into the meter. In the annexed table is a list of the variations admitted:

1.	2.	3.	4.	5.	6.
⏑ –	⏑ –	⏑ –	⏑ –	⏑ –	⏑ –
⏑ ⏑ ⏑	⏑ ⏑ ⏑	⏑ ⏑ ⏑	⏑ ⏑ ⏑	⏑ ⏑ ⏑	
– –		– –		– –	
– ⏑ ⏑		– ⏑ ⏑			
⏑ ⏑ –					

A tribrachys, it will, therefore, be observed, was admitted into all places except the last; a spondee in the first, third, and fifth; a dactyl in the first and third; and an anapest in the first. The anapest, in proper names, was also introduced in every place of the verse except the last, with this restriction, that the anapest should be contained in one word. In the comic trimeter, the same number of feet is allowed as in the tragic; but in it a dactyl is allowed in the fifth place, and an anapest, in common words, in every place but the last. For a full account of the iambic meters, the reader is referred to Hermann's *Elementa Doctrinæ Metricæ*, and Parsons's editions of the tragedies of Euripides. In modern European languages verses composed of five iambic feet form a favorite meter. Such verses are much used in the lighter French poetry; and in serious composition by the English, Germans and Italians.

I'amb, *n.* An iambic; an iambus.

Iam'bically, *adv.* After the manner of an iambic.

Iam'bize, *v. a.* To satirize in iambic verse.

Iam'blichus, *n.* A Platonic philosopher, who studied under Porphyry. He gained many disciples by his eloquence and probity. He was the author of the *Life of Pythagoras;* an *Exhortation to Philosophy*, and a protest against Porphyry's letter on the Egyptian Mysteries. Lived about 350 B. C.

Iam'bus, *n.* (*Pros.*) A foot, the same as an IAMBIC (*q. v.*).

Iapetus. [Gr. *Iapetos.*] (*Myth.*) A Titan, brother of Chronos and Hyperion, and father of Prometheus.
(*Astron.*) One of the satellites of Saturn.

Iar, or YAR, a Russian word, signifying *height*, and prefixed to a great number of geographical names.

Iar'bas, the King of Gætulia, who sold to Dido the land upon which she built Carthage. He wished to marry that princess, but she, rather than consent, killed herself. Virgil in his *Æneid*, says that Iarbas was defeated by his rival Æneas, and that Dido did not kill herself till she had been abandoned by the latter.

Iasion (*e-az'-e-ŏn*), or JASION. (*Myth.*) A son of Jupiter and Electra, one of the Atlantides. He reigned over part of Arcadia, where he diligently applied himself to agriculture. He married the goddess Demeter, or Ceres, by whom he had two sons, Philomelus and Plutus, to whom some have added a third, Corybas, who introduced the worship and mysteries of his mother in Phyrgia. He had also a daughter, whom he exposed in a forest as soon as born; but the child was suckled by a she-bear, and afterward rendered herself famous under the name of Atalanta. *I.* was killed with a thunderbolt by Jupiter, and, after his death, ranked among the gods by the inhabitants of Arcadia.

Ias'pis, *n.* (*Min.*) The jasper of the ancients. It included, in Pliny's time, all bright-colored chalcedony, except the carnelian.

I'atan, in *Missouri*, a post-village of Platte co., about 6 m. N.W. of Weston.

Iatralip'tic, Iatrolep'tic, *a.* [Gr. *iatraleiptikos.*] Treating diseases by anointing and friction.

Iat'ric, Iatrical, *a.* [Gr. *iatrikos*, healing.] Having reference to medicine or to its professors.

Iatromathemat'ics, *n. pl.* [Gr. *iatromathematikoi.*] A school of medicine which seems to have originated with Asclepiades, and was promulgated in the 17th century by Borelli, as founded on the atomic philosophy of Descartes. Its advocates explained the functions of the body, and the action of remedies, on mechanical principles.

Ibague (*e-bah'gā*), or IBAQUE, a town of the Republic of Colombia, department of Cundinamarca, about 70 miles W. of Bogota. *Pop.* 6,000.

Ibarra (*eb'ar'rah*), or SAN MIGUEL DE IBARRA a town of Equador, on the N. base of the volcano of Imbabura, about 50 miles N.N.E. of Quito. *Pop.* (1897) 10,500.

Ibar'ra, a village of Mexico, state of Jalisco, about 45 miles N. of Aguas-Calieutes.

Ibera (*e-bā'ra*), or YBERA, a series of marshy lakes in the Argentine Republic, province of Corrientes, between the Parana and Uruguay rivers.

Iberia (*ī-bēe're-a*). (*Anc. Geog.*) The modern Asiatic GEORGIA.—The Greek name for SPAIN.

Iberia, in *Missouri*, a post-village of Miller co., about 40 miles W. of Jefferson City.

Iberia, in *Ohio*, a post-village of Morrow co., about 48 miles N. of Columbus.

Ibe'rian Mountains. A name sometimes applied to the most extensive mountain chain of Spain, beginning to the W. of the Ebro, and extending to the shores of the Mediterranean.

Iberian Penin'sula. The S.W. peninsula of Europe, including the kingdoms of Spain and Portugal.

Ibe'ris, *n.* [Most of the species are native of *Iberia*, now Spain.] (*Bot.*) A genus of plants, order *Brassicaceæ*. They are annual plants, native only of S. Europe, but easily cultivated in this country. *I. umbellata*, the purple candy-tuft, is a favorite for garden borders. They are herbaceous, smooth; leaves linear-lanceolate; flowers purple, terminal, in simple umbels, and like the rest of the genus remarkable for having the two outer petals larger than the two inner ones.

I'berite, *n.* (*Min*). A mineral resembling Pinite (*q.v.*), from Montalvin, near Toledo, Spain. It is of a grayish-green color, and has a *sp. gr.* of 2·89. *Comp.* Silica 40·9, alumina 30·74, oxide of iron 17·18, oxide of manganese 1·33, potash 4·57, water 5·57, with traces of soda, lime, and magnesia.

Ibe'rus, *n.* (*Anc. Hist.*) A river of Spain, now the Ebro, which formerly separated the Roman from the Carthaginian possessions in that country.—A river of Iberia, in Asia, flowing from Mount Caucasus into the Koor.

Iberville, in *Louisiana*, a S. E. central parish; *area*, about 650 sq. m. *Rivers.* Mississippi and Atchafalaya Bayou. *Surface*, low and level; *soil*, fertile, but can only be cultivated in certain parts, owing to the frequent inundation. *Cap.* Plaquemine. *Pop.* (1897) 22,400.—A post-village of the above parish, on the Mississippi river, about 90 miles below New Orleans.

I'bex, *n.* [Lat., a wild goat.] (*Zool.*) An animal belonging to the genus *Capra*, of which it was thought by Cuvier to be the distinguishing type and parent stock. Its characteristics are similar to others of the genus Capra, and will be found given under the article GOAT. The Ibex is sometimes termed the *Steinbok*, and is found principally inhabiting the Alps, the Carpathian Mountains, and the Pyrenees, in Europe, of which continent it is a native. Its horns are extremely long, and are very large. Their color is a deep brown, and they are marked on the upper surface with protuberant transverse rings or half-circles. The nature of the Ibex is gregarious, and consequently it is always met with in small flocks; the animal is likewise remarkably swift, and able to climb the highest mountains and most precipitous ascents. When pursued, it is uncommonly fierce, and will turn on its hunters with the greatest courage, and endeavor to hurl them down

Fig. 1353.—THE IBEX.

the precipices which it affects. It is said, also, to have the faculty of throwing itself down from the most fearful heights and alighting in safety on the ground, as it receives the shock of descent on its horns, which, by their elasticity, preserve it from any injury; the pursuit of the Ibex is, therefore, extremely difficult, and to say the least, hazardous.

Ibiapa'ba, or HIBSIAPPABA, or HIBIAPPABA, or BIAPINA, a mountain-chain of Brazil, province of Ceara. It includes the mountains of Biapina, Boavista, Boritana, Bucos, &c.

Ibicui (*e-be-kwee'*), or YBI, a river of Brazil, in the province of Rio-Grande-do-Sul, flows W. into the Uruguay river at Yapeyu, about Lat. 29° 20′ S.

Ibi'dem, *adv.* [Lat.] In the same place; ditto;—*ibid.* is used as the abbreviated form.

Ibis, *n.* (*Zoöl.*) See TANTATIDÆ.

Ibiturnna, in Brazil. See BOM-SUCCESSO.

Ibrahil', BRAHILOV, or IBRAIL, a fortified seaport town of Turkey in Europe, in Wallachia, on the Danube, 99 m. from its mouth, and 15 m. S. from Galatz. It is the chief shipping port in Wallachia, and from it quantities of corn are exported. *Pop.* (1895) 29,275.

Ibrahim (*e-bra-heem'*), a very common name with the Arabs and Turks. It is a variation of Abraham, and is more generally used as a Christian name than a surname.

Ibrahim, the son of Massoud, eighth caliph of the dynasty of Gaznevides, succeeded his brother Ferokzad. He acquired great reputation as a just and pious prince, notwithstanding the frequent wars he made on the borders of Hindostan, in which he gained such advantages as to acquire the name of the "Conqueror." He reigned 42 years, during which time he erected a number of cities, mosques, and hospitals; he was also a liberal encourager of arts and letters. Died 1098.

Ibrahim, the son of the caliph Mahadi, brother of Haroun-al-Raschid, and uncle of Amin and Mamon. He was an excellent poet and musician, and the first orator of his time. He was proclaimed caliph at Bagdad, on the death of his nephew Amin, in 817; but Mamon marching from Khorassan to Bagdad with a powerful army, Ibrahim thought it prudent to abdicate the throne. Died at Samara, in 839.

Ibrahim, emperor of the Turks, was the son of Achmet, and succeeded his brother Achmet IV. in 1640. He besieged and took the capital of Candia from the Venetians, in 1644; but his cruelties and debaucheries were so great that the soldiers strangled him (1649).

Ibrahim-Bey, a famous Mameluke chief, vanquished by Mehemet Ali in 1805; died in 1816.

Ibrahim Pacha, viceroy of Egypt, stepson and successor of Mehemet Ali, born at Cavella, in Albania,

1789. Inured from infancy to the toils and turmoils of a camp, he at an early age displayed the adventurous spirit, high courage and undaunted resolution which distinguished his subsequent career. In 1819 he became generalissimo of the Egyptian army; and charged with the task of remodeling and disciplining it after the French fashion, he proceeded vigorously to work. In the course of a few campaigns he completely defeated the Wahabees in Arabia, who from 1818 to 1824 had resisted all the efforts of the Egyptian forces to subdue them. He invaded the Morea at the head of an Egyptian army in 1825, with the view of reducing it under the power of Mehemet Ali; but the intervention of the great Powers in the affairs of Greece compelled him to abandon this enterprise in 1828. Mehemet Ali having conceived the design of adding Syria to his dominions, Ibrahim crossed the Egyptian border with an army in October, 1831, took Acre by storm, and quickly made himself master of the whole of Syria. A peace was concluded on May 4, 1833, the Turks not only consenting to give up Syria, but also making over Adana to Ibrahim personally, on a kind of lease. When war broke out again between Mehemet Ali and the sultan in 1839, Ibrahim was again successful, totally routing the Turks in the great battle of Nisib on June 24th. The interference of the great Powers eventually compelled him to relinquish all his Syrian conquests, and to return to Egypt, suffering during his passage through the desert the most terrible hardships and losses, while the attempt to elevate Egypt to complete independence came to an end. He visited France in 1845, for the purpose of obtaining medical aid, and settled for one year in a village of the Pyrenees. In 1848, when the aged pacha had sunk into absolute dotage, *I.* went to Constantinople, and was installed by the Porte as Viceroy of Egypt; but on November 9, 1848, he died at Cairo. He was succeeded, not by any of his own children, but by Abbas Pacha, the favorite grandson of Mehemet Ali.

Ib'zan. (*Script.*) The 10th judge of Israel, B. C. 1182. His property is marked by the great number of his children (30 sons and 30 daughters), and his wealth by their marriages—for they were all married.

Içа (*ee'sa*), or IZA, a town of Peru, department of Lima, near the Pacific ocean, about 168 m. S.S.E. of Lima. *Pop.* (1891) 6,906.

I'ça, a tributary of the Amazon. See PUTUMAYO.

Icacina'ceæ, *n.* (*Bot.*) A small order of plants, alliance *Berberales*. They consist of evergreen trees and shrubs, closely resembling those of the order *Olacaceæ*, among which they were formerly included. Natives of tropical and nearly tropical countries. The species are little known. See OLACACEÆ.

Ica'rian, *a.* High-soaring; bold in flight, like Icarus.

Ic'arus, *n* (*Myth.*) See DÆDALUS.

Icatu (*e-ka-too'*), or HYCATU, a town of Brazil, in the province and about 52 m. S.E. of the city of Maranhão.

Ic'co, a town of Brazil. See ICO.

Ice, *n.* [A. S. *is, iss;* Du. *ijs;* Ger. *eis.*] Frozen water. At the temperature of 32°, water, in its ordinary condition, crystallizes into ice, which if slowly produced forms prisms crossing each other at angles of 60° and 120°. The primitive figure has not been ascertained,

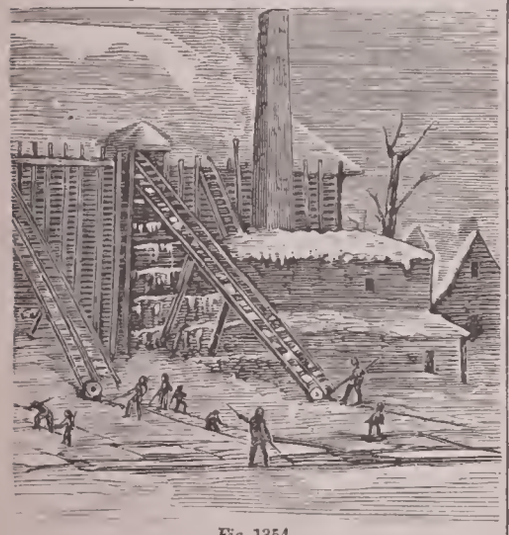


Fig. 1354.
ICE-HOUSE AND ELEVATORS AT ROCKLAND LAKE, N. Y.

though it is probably rhomboidal. The arrangement of the acicular prisms in flakes of snow is very various; but in the same snow-storm the same forms of arrangement generally prevail. The specific gravity of ice in its densest form is about ·950. It is a non-conductor of electricity, and becomes electric by friction. The expansion of water in the act of freezing takes place with irresistible force; and the frequent rupture of thick iron and leaden pipes from this cause is a familiar instance of it. Exposed to air, ice loses considerably by evaporation. In the act of freezing, water parts with all soluble matter, so that colored water becomes colorless ice, saline solutions become pure water, and spirituous liquors part with their alcohol. To effect this purification perfectly, the ice must be formed under circumstances which prevent the accumulation of blebs and air-bubbles, and the entanglement in the ice of any of the unfrozen or ejected liquor; for the foreign matters held previously in solution in the water are in the act of freezing transferred to the portion which remains unfrozen. If the whole of the water becomes a mass of porous ice, the impurities are retained in the pores; but if the freezing takes place slowly and regularly, time is given for the escape of the impurities, and thus the brilliant and perfectly transparent and dense masses of ice which come from the most northern countries, yield, when thawed, water almost equal in purity to that which has been distilled, and nearly free from air. A remarkable property possessed by ice is that of *regelation*, first noticed by Prof. Faraday. If two pieces of melting ice be placed together in a warm room, the film of water between them soon freezes and cements the two masses together; and this effect also takes place beneath the surface of warm water. The phenomena attending the conversion of water into ice are noticed under the heads FREEZING, LATENT HEAT, TEMPERATURE, and WATER.

Ice-house. A cellar constructed for the purpose of preserving ice in warm temperatures for a considerable time. Cellars made for this object are surrounded with thick walls, and either arched over or provided with a conical wooden roof. The water from the melting ice can be removed either by means of a drain under the cellar, or may be raised to the surface and drawn off by a pump. The roof of the cellar may be covered with earth to any required extent in very hot climates. In all cases, the outer air should be excluded from ice-houses. The best soil for the foundation of

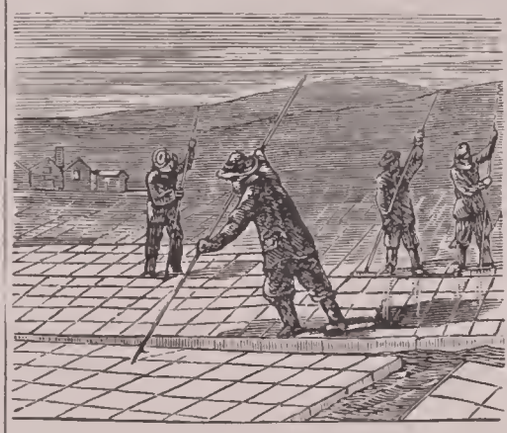


Fig. 1355.—BARRING OFF THE ICE.

an ice-house is chalk, since it permits the water from the melting ice to percolate through. In this country, vast buildings (Fig. 1354) are erected above the ground for the storing and preserving of ice. Some of them are 200 feet long, and resemble huge barns. Around Forest Pond, in Massachusetts, are nearly 50 of these immense structures.

Ice-trade. The storage of ice and snow was practiced by the Greeks and Romans. The custom of cooling beverages with saltpetre was general in Italy in the 16th century. In the 17th century, "ice-cups" were introduced into France and Spain. A new mode of producing ice by chemical means was invented by Walker, in 1782. Leslie employed sulphuric acid for the same purpose in 1810. There are now many kinds of ice-making machines, some of which are described under FREEZING. The importance of the ice harvest is not generally known. Not only in Boston, but in New York, and nearly every considerable town and city, there are large amounts invested in the ice business, and employment given to thousands of laborers. The immense demand for ice is met by the cutting and storing of natural ice and its manufacture artificially. The harvesting of ice is conducted as follows:—The ice is first cleared, if necessary, of fallen snow, by means of V-shaped snow plows and common road-scrapers. The cleared surface is then marked by an iron point, as a guide for the ice-plow, which is a blade with coarse teeth like a series of plane-irons placed one after another. This, when drawn across the ice, makes a deep groove or furrow. Attached to one side of the plow is a guide, which runs in one groove and serves to mark the distance of the next one. When the ice is sufficiently grooved by the plow it may be split up by the use of an iron bar terminated below by a heavy chisel. Fig. 1355 shows the operation of *barring off* large masses which have already been marked by the plow. These are floated toward the ice-house by the aid of horses. Of late years the ice is hoisted into the houses by means of *elevators* moved by steam power (Fig. 1354), and consisting of an endless chain carrying shelves or ledges upon which the cakes of ice are placed and conveyed to the interior of the building. When the cakes arrive within the ice-house they are stowed away. It is necessary to have the mass as compact as possible, and care is taken to secure square edges to the cakes in order that they may stow closely together without any air spaces between them. The interior is lighted only by the openings through which the ice enters, and the strong light striking upon the translucent masses, among which the workmen are actively moving, produces a picturesque and novel effect.

Ice Commerce. The private storage of ice for use on farms and estates has been common for several centuries, ice-houses being built and filled from the most accessible body of pure water, the ice-houses being either wholly or partly underground, or, as usual in the U. S., wholly above ground, their walls being made non-conducting by the use of straw, sawdust and other materials. The harvesting of ice for commercial purposes began early in the nineteenth century, and the exportation of this product was first engaged in by Frederick Tudor, of Boston, in 1805, 130 tons being shipped to Martinique. The trade was extended to Cuba in 1815, to various ports in the southern States in 1820, to the East Indies in 1833, and subsequently extended to the Straits Settlements, China and Japan. This exported ice, and that for domestic use in Boston, was obtained from several small lakes near the city, such as Wareham Lake, Saugus Lake, Fresh Pond, &c. New York derived much of its supply from the Hudson above tide-water, and from Rockland, Mahopac, Greenwood, and other lakes; Philadelphia, from the Delaware and Schuylkill rivers, and several small lakes; while any lack of supply in these and other coast cities was made up from the great annual harvest in Maine, gathered from the Kennebec, Penobscot and Androscroggin rivers and the waters of some of the lakes. The cities of the Mississippi Valley obtain an abundant supply from the Great Lakes and the many smaller bodies of water, and the Pacific cities from the waters of Washington, Oregon and Alaska. Europe is largely supplied from Norway, though the use of ice on that continent is much less common than in the U. S. Recently the manufacture of artificial ice has become a great industry, it competing in price with natural ice, and greatly decreasing the demand for the latter. It is particularly advantageous in the South and in tropical countries, and ice exportation has virtually come to an end. Ice is not only used for cooling purposes in summer, but as a preserving agent, the bodies of the dead being kept by its use till the time of burial; meats and other provisions preserved by it in storehouses or for transportation by railroads or vessel, perishable fruits carried for thousands of miles, &c. See FREEZING; FREEZING APPARATUS.

Ice, *v. a.* To cover with ice; to convert into ice; to chill; to freeze; to make cold with ice; as, *iced* lemonade.—To cover with concreted sugar; to frost.

Ice'-anchor, *n.* A grapnel for taking hold of ice.

Ice'-belt, *n.* A belt of ice adhering to the coast above the ordinary level of the sea.

Ice'-berg, *n.* [*Ice*, and Ger. *berg*, a hill, a mountain.] A mountainous mass of ice floating in the sea. Icebergs are produced by the breaking off of great masses from glaciers which have descended into the sea. When numbers of icebergs freeze together, they form what are called "fields" or "packs," which are often of great extent, stretching across the ocean as far as the eye can reach, and often rising in perpendicular cliffs from 80 to 100 feet above the water. Solitary icebergs are also of vast dimensions; and instances are given, both in Arctic and Antarctic voyages, of floating islands of ice several miles in circumference, rising from 40 to 200 feet above sea-level (Fig. 1356), and loaded with blocks

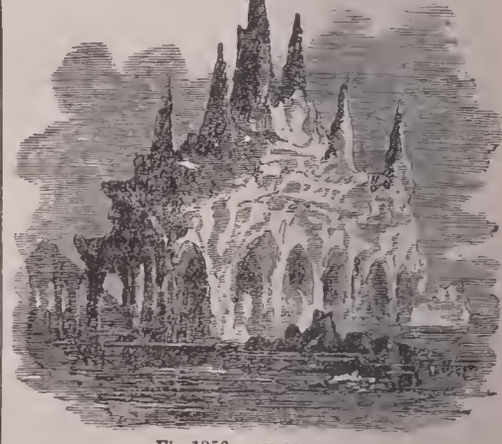


Fig. 1356.—AN ICEBERG.

and shingle. As they are floated by the polar currents to warmer latitudes, they melt away, dropping their burdens of boulders and debris on the bottom of the ocean. Some geologists regard the water-worn blocks, the gravel, and shingle of the "boulder-clay," as the deposits of ancient icebergs; but these are believed to have been mainly due to land glaciers.

Ice'-bird, *n.* (*Zoöl.*) A bird frequenting icy regions; common to Greenland.

Ice'-blink, *n.* An appellation given by seamen to a luminous appearance seen near the horizon in northern latitudes. It is caused by the light being reflected by the fields of ice, and it is seen long before the ice itself, which causes it, can be observed.

Ice Boat. A boat employed to break the ice in rivers leading to important ports, for the purpose of keeping open a channel for shipping in winter. Such boats are necessary in several of the ports of the northern United States, particularly where situated on rivers at a considerable distance from their mouths. This is notably the case with Philadelphia, lying as it does on the Delaware about a hundred miles from the sea, with its port liable to be closed for a considerable period each

winter by the freezing of the stream. The boats employed to break the ice aud open the channel are strongly and solidly built, with sharp prows formed of a solid mass of iron, and are provided with powerful engines, enabling them to give a vigorous blow to the ice. Thin ice makes little resistance to the assault of these massive vessels, and they can easily plow their way through ice of considerable thickness, breaking it into floating fragmonts and setting it adrift upon the tide. Ice boats, as now constructed, are made so as to ride upward on ice too thick to be cut through and break it dowu by their weight, thus setting great floating fields adrift by their continued assaults. The vessels built specially for Arctic navigatiou are of this character, it being necessary that they shall be able to give rending blows to the thick ice of the Arctic seas without injury to their structure. The vessel employed by Nansen in his journey north, the *Fram*, with sides and prow of great strength and solidity, was built with such slopes as to enable it to be lifted upon closing ice fields, a structure which proved effectivo in saving it from being crushed. After an experience such as uo other Arctic vessel has escaped nuscathed, the *Fram* returned none the worso for the power of the ice, and in condition for new conflicts with this dangerous element of the northern seas. The name of ice boat, or ice barge, is also given to vessels adapted for the transportation of ice. These were formerly employed in the exportation of ice to tropical couutries, and are now in use to carry ice from the rivers of Maine to more southern cities, and from Norway to the cities of southern Europe, which derive most of the ice they employ from this source. The name is also applied to the structure otherwise called au ice yacht (*q. v.*).

Ice'-bound, *a.* Hemmed in by ice; surrounded with ice, so as effectually to impede progress; as, an *ice-bound* ship.

Ice'-brook, *n.* A brook frozen over with ice.

Ice'-built, *a.* Constructed of ice.—Bearing piled masses of ice.

Ice Cream. Cream, milk or custard, which has been sweetened and flavored and frozen by the aid of a freezing mixture, usually ice and salt, it being agitated by a dasher while freezing, so as to make it of uniform consistency and prevent it from becoming lumpy in the process. It forms a favorite summer dessert, its cooling properties rendering it highly palatable in warm weather. Very extensively a frozen custard does duty as ice cream, true ice cream being somewhat limited in scope. Of all localities Philadelphia has the highest reputation for the excellence of its ice cream.

Ice'-drop, *n.* (*Bot.*) A transparent process resembling an icicle.

Ice'-fall, *n.* A mass of ice shaped as a waterfall.

Ice'-field, *n.* An extensive sheet of ice.

Ice'-float, or **Ice'-floe,** *n.* A large mass of floating ice.

Ice'-glazed, *a.* Glazed with ice.

Ice'-house, *n.* See Ice.

Ice'-island, *n.* A vast body of floating Ice.

Ice'land, a large island under the dominion of Denmark, in the North Atlantic Ocean, on the confines of the polar circle, 500 miles from the north of Scotland, and 130 miles from Greenland; between Lat. 63° 24′ and 66° 33′ N., and Lon. 13° 31′ and 24° 17′ W. Its extreme length E. and W., is 301 m., by a corresponding breadth of 200 miles; area, 39,543 square miles, 7,000 more than Ireland. In shapo it is said to resemble somewhat a heart, with its apex toward the south. The coastline of *I.* is nearly unbroken on the S. E.; but in all other directions is cut up by bays, inlets, fiords, and innumerable creeks; on the N. W. a peninsula stretches

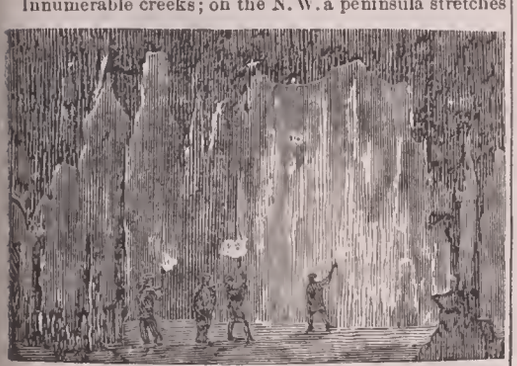


Fig. 1357.—CAVERN OF SUTZKELLIR.

ont for a considerable distance, having an isthmus of scarcely 5 m. in breadth. The water around the coast is very deep, and the bays are in general supplied with good and secure harbors; but, in consequence of the great number of rocky islets besetting the coast, the navigation into each is extremely difficult. The internal aspect of the country is, on the whole, extremely wild, desolate, and inhospitable, presenting in all directions mountainous masses of volcanic origin. Many of these mountains are half buried in perpetual snow and ice, which, stretching down their sides or filling up huge rifts, imparts a sense of crushing desolation to the landscape, which the seamed and rent surface of the valleys, and the blackened scoriæ covering the plain, in no way lessen or mitigate. The mountains, which take the common name of Sökull, culminate at a height of 6,409 feet, and though most of them are cased in a perpetual armor of ice, several are in constant volcanic operation, vomiting from their frozen months sheets of fire and volumes of sulphurous smoke and scoriæ. The island is in fact a perpetual contradiction of intense frost and seething heat, for, independently of the volcanic mountains, flames occasionally burst from the plains, and hot springs and boiling fountains are common, more or less, in every part of the island. The *Geysers* (Fig. 1153) are regarded as among the most remarkable pheuomena in nature. In the N. E. part of the island, near My Vatu, are three hot springs, hardly inferior to the Geysers; also a sulphur mountain, on which vast beds of sulphur are covered with so thin a crust as to be very dangerous to the traveller. At the N. E. extremity of the island is the cavern of Sutzkellir, (Fig. 1357), formed of lava; while, on several parts of the coast, basaltic caves occur, not inferior in comparison to that of Fingal, in the island of Staffa. Several immense lakes and numerous rivers exist in *I.* The most valuable minerals are sulphur, liguite, rock-crystal, and refracting spar. The air is damp and misty, the weather suddenly variable, but the climate generally mild for so northern a latitude—the mean temperature for the year being 40°; in summer 56°, and in winter 29° 30′. The average period of life is below that of Denmark, the mother-country, which stands at 47 years for males and 50 for women; but in *I.* it is 37 for males and 48 for females. Vegetation is very limited; of the few trees found, none exceed ten feet in height. Potatoes are the chief agricultural product. The most valuable crop is grass, on which large flocks of sheep, cattle, and horses are reared. The horses are of a small breed, hardy and enduring, and largely exported to England for use in the coal mines. The reindeer, introduced a century ago, has become of extreme value to the natives. Wild fowl abound, and the feathers of the eider-duck are exported. The chief support and wealth of the inhabitants, however, is derived from the fisheries, especially that of the seal, which is very abundant in the seas and fiords of the Island. The manufactures are entirely of a domestic nature, each family making its own clothes, stockings, and woollen articles of personal and domestic requirement. The exports are wool, sulphur, leather, oil, fish, and Iceland-moss. The Icelanders, according to Rev. Mr. Paijkull, who visited them in 1865, and Mr. Lee Howard, who explored *I.* in 1880, are indisposed to enterprise of any kind. Even the fisheries on the coast are chiefly in the hands of Frenchmen, the natives having no other than boats to compete with the well-manned vessels from France. They are of a Scandinavian origin, speak the original Norse, and are simple in their manners, pure in their morals, and have no distinction of rank; but they are prone to drunkenness, and uncleanly in their houses, which are built of driftwood and lava, more generally of mud and thatch; they seldom eat meat, but live almost exclusively on fish, butter, milk, and cheese. Notwithstanding their poverty and other adverse circumstances, it is rare to find an Icelander who cannot read and write. They belong to the Protestant Church. The clergy are, like their parishioners, very poor; they are under one bishop. The Icelanders are strongly attached to their native country, and delight in the study of its history as set forth in ancient *sagas* and poems. *I.* was discovered and colonized in the 9th century by one of the emigrating tribes from Norway, when a chieftain named Harold, the Fairhaired, made himself king of that country. In the 10th century the inhabitants formed themselves into a republic, which existed for nearly 400 years; but at the end of the 13th century the country fell again under Norwegian rule, passing with that crown to Denmark, to which State it has belonged, despite all political changes, since that date. *Pop.* (1895) 72,660.

Fig. 1358.
FEMALE ICELANDER.

Ice'land-moss, *n.* (*Bot.*) See Cetraria.

Ice'land-spar, *n.* (*Min.*) A variety of Calcite or calcareous spar (*q. v.*), first found in Iceland. It occurs in transparent rhomboidal crystals and possesses the property of double refraction.

Ice Palace, *n.* An elaborate edifice built of ice in countries of low winter temperature. The first recorded example of such an edifice was a highly ornate and costly palace built at St. Petersburg, for the amusement of one of the Russian Czars. This transparent work of art, after serving its purpose of astonishing the world during a long Russian winter, flowed away as running water under the warm rays of the summer's sun. The idea thus embodied has been adopted of recent years in the Western world, edifices built of slabs of ice being erected annually at Montreal for festive purposes, and presenting an aspect as of fairyland when flashing back the rays of the electric lights with which they are brilliantly illuminated. The same conception has been applied in St. Paul, Minnesota, to purposes of exhibition, a structure of ice being erected in which the products of the State are shown, and whose materials give the builders no trouble when the time for their removal arrives, the rays of the spring sun carrying them silently away.

Ice'-plant, *n.* (*Bot.*) The popular name of several plants. See Mesembryanthemum.

Ice'-spar, *n.* (*Min.*) A variety of feldspar (*q. v.*) occurring in transparent glassy crystals in lava.

Ice Yacht. A framework of iron and wood, of various forms and light in structure, for gliding over smooth expanses of ice. It is provided with a mast, sails, and steel runners resembling skates. These boats are usually sloop-rigged. In the United States the framework is generally in the form of a Roman cross, of which the transverse bar is supported at its extremities by skates or steel runners, while the long arm is provided with a similar runner, which is pivoted and serves the purpose of a rudder. At the stern there is a platform with railed sides, which serves to accommodate the crew. These boats are intended to glide over the surface of smooth ice before the wind, as on long reaches of a river, or over the surface of a lake. They attain great speed, moving forward before a strong wind with remarkable rapidity. The waters of Canada, from their long continued congelation and the consequent greater smoothness of their ice, are specially adapted to them, being less liable to the dangers of broken or hummocky ice.

Ich'away-noch'away Creek, in *Georgia*, enters Flint River in Baker co.

Ich dien, (*ik deen.*) [Ger., I serve.] (*Eng. Her.*) The motto of the Prince of Wales. Besides the coronet, this prince has a distinguishing mark of honor, called the Prince of Wales' feathers. This consists of a plume of three ostrich-feathers, with an ancient coronet; under which in a scroll is the motto "Ich Dien." This device was first assumed by Edward the Black Prince, after the battle of Cressy, in which he slew with his own hand John, king of Bohemia. It was from the head of this Bohemian potentate that Edward, then prince of Wales, took such a plume and motto, which have ever since been borne by his successors, in remembrance of the event.

Ichneumon'idæ, Ichneumon Flies, *n. pl.* (*Zoöl.*) A family of hymenopterous insects, the genera and species of which are very numerous, and their manners extremely diversified, but all agreeing in this characteristic—that they deposit their eggs in the bodies of other living insects, and generally in those of caterpillars. The females have a sharp and strong abdominal tube or ovipositor, which is used to insert their eggs into the bodies of caterpillars that live beneath the bark, or in the crevices of wood; this is generally long, and capable of piercing almost any substance; while such as have a short ovipositor place their eggs in or upon those caterpillars to which they have easy access. When the eggs are laid upon the surface of the larvæ, the parasites, as soon as hatched, eat their way into their victim. When deposited inside, the young ichneumons feed on the tissues of the body, gradually consuming its life, till the parasite goes into the pupa state, and the insect dies. There may be only one *I.* thus feeding within, or many of them, which at length fill the inside of the body with little cocoons placed vertically next to one another. Some *I.* do not destroy their victim in the larva state, but allow it to become a pupa, in the body of which they undergo their transformations, and come forth perfect insects. Most of the insects of this family spin a silken cocoon; and these cocoons are sometimes found in a mass together, enveloped in a general covering of glossy silk. About 3,000 species are known.

Fig. 1359.—ICHNEUMON,
(*Pimpla persuasoria.*)

Ichneumon, (*ik-nu'mon,*) *n.* [Lat. and Gr. *ichneumon*, from Gr. *ichneuō*, to track, to trace, or hunt after, from *ichnos*, a track, a footstep, from *ikō*, to come to.] (*Zoöl.*) An animal of the *Viverridæ*, or civet family, though very closely resembling the weasel tribe both in form and habits. From the snout to the root of the tail it is about 18 inches long; it has a long agile body, short limbs, semi-plantigrade feet, small glowing eyes, and a pointed nose, (Fig. 1360.) It glides towards its prey with a snake-like movement, and then darts suddenly upon it. These animals feed upon birds, reptiles, rats, mice, &c. Their disposition is as sanguinary as their habits are predatory; but though the destruction they cause among the poultry is very annoying, it is well compensated by the incessant war they wage against reptiles, the eggs of which they devour with the greatest avidity. The most celebrated species inhabits Egypt and the adjacent countries, where it is called "Pharaoh's rat." It is larger than a cat, but formed like a weasel; it is of a gray color, and has a long tail terminated by a black tuft. This species was ranked by the ancient Egyptians among their numerous divinities, on account, it is supposed, of the benefits it confers on man by the destruction of crocodiles, whose eggs it digs out of the sand, and sucks. The *I.* is easily domesticated, seeming to form an attachment to its place of residence; and it

is not unfrequently kept tame, both in India and Egypt, for the purpose of clearing the houses of mice and rats. *I.* are sometimes seen to squat on their haunches, and feed themselves with their fore-paws like the squirrel.

Fig. 1360.—THE ICHNEUMON, (*Herpestes ichneumon*—LINN.)

When they sleep, they bring their head and tail under their belly, and appear like a round ball. In a wild state they generally reside along the banks of rivers; and they swim and dive like the otter, being able to continue under water for a great length of time.— *I.* is also the name of an insect, for which see ICHNEUMONIDÆ.

Ich'nolite, *n.* [Gr. *ichnos*, a footstep, and *lithos*, a stone.] A stone which has retained the impression of the footmark of a fossil animal.

Ichnolithol'ogy, *n.* [Gr. *ichnos*, *lithos*, and *logos*, a discourse,] Ichnology.

Ichnolog'ical, *a.* Relating to Ichnology.

Ichnol'ogy, *n.* [Gr. *ichnos*, and *logos*.] (*Pal.*) That section of the sciences which treats of the impressions made on mud or sand, now indurated into rock, by the animals of the period to which the rocks belong, or by meteoric or other transitory physical forces. The actual remains of the hard portions of the animals themselves are the materials on which chiefly rests our knowledge of the former inhabitants of the globe; but of many animals we know nothing more than the more or less distinct impressions made by them as they moved over the surface of a muddy shore. And in some beds, not only is the evidence of the shore-wave preserved in the ripple-mark, and the influence of the sun's heat exhibited in the superficial cracks, but frequently the passing hail-storm, or the sudden and heavy thunder-shower, has left its impress upon them, and this so perfectly, that it is not difficult to determine, from the form of the cup-like depression, whether or not the rain was accompanied by a breeze; for, by observing the amount of difference in the sides of the cup, and the position of the highest side, the direction of the gale and its velocity may be approximately determined. Though the force or body forming the impression has been removed immediately after it has made the pressure, yet in these prints the ovidences of animal life, and of the activity of physical forces, have come down to us from the remotest periods. These impressions occur almost invariably on rocks that have been deposited as mud; only in a few cases have they been noticed in sandstone. Sometimes the argillaceous deposit is a thin layer between two sandstone beds; it is then difficult to obtain a clear surface in the shale; but the details are carefully preserved in relief in the natural cast on the under surface of the superimposed sandstone. Large numbers of such footprints, varying greatly in size, were discovered by Prof. Hitchcock in the argillaceous sandstones of Connecticut, which are now known to be of the Lower Oölitic age. The structure of the tridactyle feet which produced these impressions exhibits the regular progression in the number of the toe-joints from the innermost to the outermost too peculiar to birds, but they are now known to have been made by a class of three-toed reptiles, the Dinosaurs, which are believed to have walked erect on their long hind legs. They resembled birds in other particulars, and are thought to have been the progenitors of the birds.

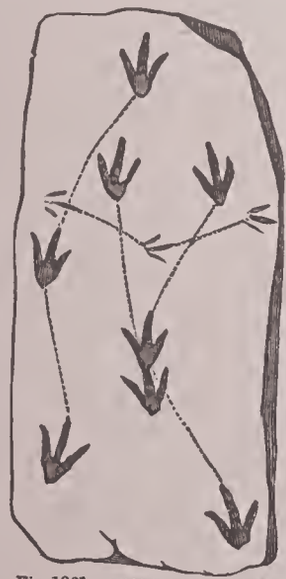


Fig. 1361.—FOSSIL FOOTPRINTS. (On the Oolitic Sandstones of Connecticut.)

Ichor (*i'kor*), *n.* [Gr. *ichōr*.] (*Myth.*) The ethereal juice that flowed in the veins of the gods.

(*Med.*) A thin, watery humor, like serum or whey; colorless matter coming from an ulcer.

I'chorous, *a.* Like ichor; thin; watery: serous.

Ichthyocol'la, *n.* [Gr. *ichthys*, fish, *kolla*, glue.] (*Chem.*) Fish-glue. It is the dried swimming-bladder of the sturgeon, and is principally used in refining wines. When dissolved in warm water and poured into the wine, the acid of the wine causes it to coagulate, and its filaments forming a kind of network carry down the impurities of the wine with it.

Ichthyog'raphy, *n.* [Gr. *ichthys*, a fish, and *grapho*, to describe.] A description of, or a treatise on, fishes.

Ichthyological, (*ik-thi-o-loj'ik-al,*) *a.* Pertaining to ichthyology.

Ichthyol'ogist, *n.* One versed in ichthyology.

Ichthyol'ogy, *n.* [Gr. *ichthys*, a fish, and *logos*, discourse, treatise, doctrine.] The science of fishes, or that branch of the study of zoölogy which comprehends the structure, form, habits, and classification of fishes.

Ichthyoph'agist, *n.* [Gr. *ichthys*, a fish, and *phago*, to eat.] One that feeds or lives on fishes.

Ichthyoph'agous, *a.* Eating or subsisting on fish.

Ichthyophthal'mite, *n.* [Gr. *ichthys*, fish, *ophthalmos*, eye.] (*Min.*) A white or grayish mineral resembling in color the eye of a fish when boiled — whence the name. It is composed of silicate of lime and potash with some fluorine. *Sp. gr.* 2·3–2·4. Found in this country at Bergen Hill, N. J., Cliff Mine, Lake Superior, and at Gin Cove, Maine. (Called also *Apophyllite.*)

Ichthyosau'rus, *n.* [Gr. *ichthys*, fish, and *sauros*, lizard.] (*Zoöl.*) A well-known genus of extinct marine saurians, so called from the combination of fish and lizard characters. The great æra of ichthyosaur development was from the middle Trias to the Chalk inclusive, the Lias formation being the chief repository of their remains in England. In this deposit specimens of all ages and of all sizes have been found — from the fœtus of a few inches to the adult more than 30 feet in length. The following are the most striking peculiarities in the structure of the fish-lizard: The vertebræ resemble those of fishes in being concave at each end. The cranium resembles that of the crocodile, but is characterized by a remarkably large eye-orbit, furnished with a circular series of bony sclerotic plates — a structure observable in the eyes of turtles, lizards, and many birds. The teeth, which are extremely numerous, resemble in structure those of the crocodiles, but are implanted in a deep continuous groove, and not in distinct sockets. The locomotive extremities are similar to the paddles of a whale; but they are four, instead of two, in number. From the form and position of masses of crushed and apparently half-digested fish-bones and scales in the abdominal cavity, it is concluded that the ichthyosaurs preyed upon fish; and from the shape of their *coprolites*, or fossil excrements, it is obvious that their intestinal canals were furnished with spiral valves, as in the sharks. In one or two instances, very small, and to all appearances fœtal specimens, have been found within the pelvic cavities of large ichthyosaurs; and from this circumstance it has been inferred that these extraordinary creatures, like the whales, were viviparous.

Fig. 1362.—ICHTHYOSAURUS COMMUNIS.

Ichthyo'sis, *n.* [Gr. *ichthys*, a fish.] (*Med.*) A disease of the skin, which takes its name from the surface of the cuticle suggesting the idea of the scaly skin of a serpent or fish. It is distinguished from lepra and psoriasis by the absence of deciduous exfoliations, distinct or partial patches, and the constitutional disorders which more or less accompany those diseases. It is generally confined to patches in the armpits and on the breast or chest; but sometimes it attacks the face.

Ichthyot'omy, *n.* [Gr. *ichthys*, and *tomeo*, to cut.] The anatomy or dissection of fish.

Icicle, (*is'i-kl,*) *n.* [A. S. *ises-gicel*; Du. *ijskegel.*] An ice-drop, or pendent, conical mass of ice, formed by the freezing of water or other fluid as it flows down an inclined plane, or collects in drops and is suspended.

Ic'iness, *n.* State of being icy, or of being cold; the state of generating ice.

Ic'ing, *n.* A covering of concreted sugar.

Icica, *a.* [The name in Guiana.] (*Bot.*) A tropical genus of *Amyridaceæ*, consisting of large trees abounding in balsamic or resinous juice. The balsam obtained from many of the species is odoriferous, and is used as a perfume in South America. These balsams remain fluid for a considerable time, but ultimately harden, when they are used as incense. *I. heterophylla* yields the Balsam of Aconchi, employed as a vulnerary; while that of *I. heptaphylla* is used as a remedy for dysentery, &c. The wood of *I. altissima* is preferred by the Indians for making canoes, and is called Cedarwood from its fragrance. It grows in the forests of Guiana to the height of one hundred feet or more.

Icil'ius, a Roman tribune to whom Virginia was betrothed. When the latter was carried off by the decemvir Applus Clandius, he raised an army against the decemvirs, and having caused their fall, was created by the people tribune for the second time, B. C. 449.

Ickesburg, (*iks'burg,*) in *Pennsylvania*, a post-village of Perry co., abt. 40 m. W.N.W. of Harrisburg.

Ico, (*ee'ko.*) or Icco, a town of Brazil, prov. of Ceara, on the Salgado River, abt. 32 m. N.N.E. of Crato. *Pop.* 9,000.

Ico'nium, a town of Asia Minor, now called Koniah, *q. v.*

Ico'nium, in *Iowa*, a post-office of Appanoose co.

Iconoclast, (*i-kon'o-klast.*) *n.* [Fr. *iconoclaste*; Gr. *eikon*, an image, and *klastēs*, a breaker, from *klaō, klasō*, to break.] (*Eccl. Hist.*) Literally, a breaker or destroyer of images. A title applied to two of the Byzantine emperors, Leo the Isaurian, and his son Constantine Copronymus, who during their reigns, which extended from 726 to 795, persevered in overthrowing the images in the Christian churches, and in extirpating their worship. The 338 bishops, also, who attended a council at Constantinople in the reign of the latter prince, and declared themselves in favor of his views, were stigmatized by the orthodox party under the same name. In the year 787, however, a general council was assembled at Nicæa by the empress Irene, who inclined towards the old superstition, and the images were on this occasion restored to their former honors. This council, the second of Nice, is the last respecting which the Greek and Latin churches coincide; the practice, however, of the Greek Church makes a distinction between the use of pictures, which it allows, and graven images, which it studiously rejects.

Iconoclas'tic, *a.* Breaking or destroying images; as, an *iconoclastic* zeal.

Iconograph'ic, *a.* That relates to iconography.

Iconog'raphy, *n.* [Gr. *eikon*, an image, and *grapho*, to write.] In an extended sense, the description of any figures found in paintings and sculpture, as well as monumental records of ancient date; but in its restricted signification this word is confined to descriptions and drawings of any sculptured images or paintings of the human form, animals, and inanimate objects, that are found in buildings and appurtenances, and furniture, devoted to ecclesiastical purposes. This is more properly termed Christian iconography, and embraces all objects connected with Christian art from the earliest times, as far as the close of the 15th century. When the word is understood in this sense, it is a branch of ecclesiology.

Iconol'ater, *n.* A worshipper of images; a name given by the Iconoclasts to the Roman Catholics.

Iconol'atry, *n.* [Gr. *eikon*, and *latreia*, worship.] The worship or adoration of images.

Iconol'ogy, *n.* [Gr. *eikon*, and *logos*, discourse.] A description and explanation of allegorical figures, symbols, emblems, and visible representations, or embodiments of abstract qualities.

Iconom'ical, *a.* [Gr. *eikon*, and *mache*, a battle.] Hostile to images.

Icosahe'dral, *a.* [Gr. *eikosi*, twenty, and *edra*, a base.] That has twenty faces.

Icosahe'dron, *n.*; *pl.* ICOSAHEDRA. (*Geom.*) One of the five regular solids, according to the Platonic theory, and composed of equilateral and equal triangles. As it is composed, therefore, of twenty equal and similar pyramids, whose vertices all meet in the same point, the content of one of these multiplied by twenty will give the whole content of the icosahedron. If one of the linear edges of the faces of this solid be denoted by x, then the superficies, or surface, will be equal to $5x^2\sqrt{3} = 8{\cdot}660254x^2$; and the solid content will be

$$\frac{5}{6}x^3\sqrt{\frac{7+3\sqrt{5}}{2}} = 2{\cdot}181695\,x^3.$$

Icosan'dria, *n. pl.* [From Gr. *eikosi*, twenty, and *aner*, a man or husband.] (*Bot.*) A class of plants in the sexual system of Linnæus, consisting of those which have hermaphrodite flowers furnished with twenty or more stamina that are inserted into the inner side of the calyx, or petals, or both. By this last circumstance is this class distinguished from *Polyandria.*

Icosan'drous, *a.* That has twenty or more perigynous stamens.

Icter'ic, *n.* [From Gr. *ikeros*, the jaundice.] A remedy against jaundice.

Icter'ic, Icter'ical, *a.* Affected with the jaundice, or good against jaundice.

Icte'ria, *n.*; **Icteri'dæ,** *pl.* (*Zoöl.*) A genus and family of Insessores birds, distinguished by a long bill, tail rather long and rounded, the legs stout, the basal joint of the middle toe free on the inner side, and united half-way on the outer. This family includes the Blackbirds, the Larks, the Orioles, &c.

Ic'terus, *n.* [Lat., from Gr. *ikteros.*] (*Med.*) The JAUNDICE, *q. v.*

Icy, (*is'i,*) *a.* Abounding with ice; cold; frosty; made of ice; resembling ice; chilling; cold; frigid.

—Destitute of affection or passion.

Ice Cape, or **Icy Cape,** in *Alaska*, a headland projecting into the Arctic Ocean, in the 71st degree of North Latitude, and in about 161° West Longitude, about the middle of that long reach of the Arctic coast between Cape Lisburne on the S.W., and Cape North or Point Barrow on the N.E. It was discovered by Cook, in 1778, and was his furthest point north of Bering's Strait. The name was given it because of the immense masses of ice by which it is usually surrounded.

I'd. Contracted from *I would*, or *I had.*

I'da, a high mountain range in Asia Minor, extending from Phrygia through Mysia into Troas. The city of Troy was situated at its base. It is the scene of many ancient legends. The S. part of the range was called Gargarus, the highest peak of which is about 4,700 feet above sea. Here there was a temple of Cybele, who therefore was called the *Idæan Mother.* From Ida flow several famous streams, as the *Granicus*, *Simois*, and *Scamander.* — There is another Ida in Crete, extending from west to east, and now called Psiloriti. On this Ida, according to an ancient legend, Zeus was educated.

Ida, in *Iowa*, a W.N.W. central co.; *area*, abt. 400 sq. m. *Rivers.* Inyan Yankey or Little Sioux River, and Soldier

IDAHO

SCALE OF MILES
10 5 0 10 20 30 40 50 60

Indian Reservation Boundaries
Forest Reserve
State Capital ⊛ County Seats ·
Places of 3,000 and over BOISE
" " 1,000 to 3,000 Hailey
" " 500 to 1,000 Shoshone

CANADA

MONTANA

WYOMING

NEVADA

UTAH

OREGON

WASHINGTON

Hammond's 8 x 11 Map of Idaho.
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Longitude West from Greenwich

IDAHO.

Land surface, Sq. m. 84,290
Water surface, Sq. m. 510
Pop. 1900 ..161,772
White....154,495
African.....293
Indian.....4,236
Chinese ...1,467
Japanese.. 1,291
Native-born, 137,168
Foreign-born, 24,604
Males. 93,367
Females ..68,405

COUNTIES.

Ada .....B 6
Bannock.....G 7
Bear Lake....G 7
Bingham .....F 6
Blaine. ... ...D 6
Boise.....C 5
Canyon.....B 6
Cassia.....D 7
Custer .....D 5
Elmore ..... C 6
Fremont... ..F 5
Idaho .....C 4
Kootenai.....B 1
Latah .....B 3
Lemhi.. .. ...E 5
Lincoln.....D 7
Nez Perces....B 3
Oneida .....F 7
Owyhee .....B 7
Shoshone .....C 2
Washington ..B 5

CITIES-TOWNS

Pop. Thousands.	
5	Boise.....B 6
4	Pocatello....F 7
2	Moscow.... A 3
2	Wallace.....B 2
2	Lewiston....A 3
1	Montpelier..G 7
1	Weiser.....A 5
1	Blackfoot...F 6
1	Idaho Falls.F 6
1	Hailey .. ..D 6
1	Grangeville.B 4
1	Rexburg....G 6
1	Burke.....C 2
1	Gem .. . ...C 2
1	Malad City..F 7

Pop. Hundreds.	
9	Caldwell ...B 6
9	Silver City..B 6
9	Paris .. ....G 7
7	Nampa.....B 6
7	Genesee ....B 3
7	Harrison. ..B 2
6	Shoshone...D 7
6	Payette.... B 5
5	Mountain Home C 6
5	Coeur d'Alene B 2
4	Kendrick ...B 3
4	Franklin....G 7
4	Soda Springs G 7
4	St. Anthony G 6
4	Rathdrum..B 2
3	Salmon.....E 4
3	Idaho City. C 6
3	Challis.....D 5
3	Bellevue....D 6
3	Bonners Ferry B 1
3	Albion.....E 7
2	Postfalls....B 2
2	Juliaetta ...B 3
2	Troy .....B 3
2	Placerville..C 6

creek. *Surface*, diversified; *soil*, fertile. *Cap.* Ida Grove. *Pop.* (1895) 11,425.

Ida, in *Michigan*, a post-township of Monroe co., 23 m. E. of Adrian. *Pop.* of township (1897) 1,514.

I'da Grove, in *Iowa*, a post-town, cap. of Ida co., on C. & N. W. R. R., 125 m. N. W. of Des Moines. *Pop.* (1895) 1,720.

I'daho, in *Idaho*, a N. central co.; *area*, about 11,400 sq. m. *Rivers.* Lewis or Snake, and Salmon rivers. *Surface*, much diversified; *soil*, in the valleys, fertile. *Min.* Gold. *Cap.* Idaho City. *Pop.* (1897) about 4,000.

Idaho, one of the United States, is situated E. of Oregon and Washington, extending from the boundary between the U. S. and British America, S. through 7 degrees of latitude, or 410 m. to Nevada and Utah, with a width of 40 m. on its N. boundary, gradually expanding southward to 257 m.; its E. boundary being the diagonal range of the Bitter Root and Rocky Mountains, which separate it from Montana and Wyoming.—*Area.* According to the census of 1890 the total area is 84,800 sq. m. *I.* lies within the basin of the Columbia River, being principally drained by the Lewis Fork (otherwise known as the Snake or Shoshone River), and its various tributaries, called Clearwater, Boise, Salmon, Fayette, Malade, Blackfoot, Bear, Bruneau, and Owyhee rivers; the northern extension of the territory, embracing the basins of lakes Roothain, Pend d'Oreilles, and Cœur d'Alène, is drained by Clark's Fork of the Columbia and its tributaries, the Kootenah, Cœur d'Alène, and St. Joseph rivers. —Snake River, or Lewis's Fork of the Columbia, from the south, traverses the S. portion of *I.*, a distance of 450 m. It is navigable as far as Lewiston; above this point, for more than 100 m., it is so shallow and rapid that navigation is impracticable for other than very light-draught steamers, and even then is frequently attended with difficulty and danger; but the excellent facilities afforded for the establishment of mills and manufactories, by the rapidity of the current, compensate in a great measure for the want of navigability. Above the mouth of Powder River, however, it is navigable for steamboats, through the heart of *I.*, for 150 to 200 m., on the direct route to Salt Lake City, and to within 150 m. of the Pacific Railroad. There are several precipitous falls in the course of Snake River through this territory — one of them, called Shoshone Falls, situate near the 115° W. longitude, being two hundred yards wide, and rivalling the Falls of Niagara in volume and height of descent, while far surpassing the latter in magnificent picturesqueness of surrounding scenery. The upper or Clark's Fork of the Columbia is navigable in its entire course through the N. part of the territory, including that section where it expands into the beautiful Lake Pend d'Oreilles, and is already extensively used for the conveyance of freight to and from the upper parts of *I.* and Montana. Its certain future improvement and development into a great artery of inland water-communication, with the aid of railroad or canal portages past rapid sections of its own course and those of the Lower Columbia, will materially assist in rendering available the resources of the inviting country through which it flows. The surface of *I.* possesses characteristics similar to those of the great inland basin lying further S., being elevated, within the Sierra Nevada and Cascade Mountains on the W., and the Bitter Root and Rocky Mountains on the E., to an altitude of from 2,000 to 5,000 feet above sea, and having insufficient rain-fall for the highest development of vegetation during the summer months without the aid of irrigation. Excellent crops of grain and vegetables have been grown in several of the valleys without other than the natural watering, and the tendency to aridity is considerably less than in Utah and Nevada, the average range of summer heat in this northern latitude not being so exhaustive of the surface moisture. The many streams intersecting the valleys, having their sources in mountain-heights covered with snow during the greater part of the year, also offer unsurpassed advantages for irrigation, and render this one of the most copiously watered of our inland territories. In some sections, as in the region of country around the sources of the Clearwater, Salmon, Boise, and Snake rivers, in the Bitter Root and Rocky Mountains, the average yearly fall of rain and snow is very large, rain-storms occurring during the dryest months of the summer sufficient to maintain the volume of these streams at nearly the same average in all seasons of the year, excepting the short rainy seasons of the spring and autumn. The necessity of irrigation is much less apparent in the N. portion of the territory than further S.; but the extreme cold which often attends the winters of the latitudes approaching the British boundary repels the immigrant agriculturist, and this region consequently contains fewer settlements than the central and southern parts. The mountains of *I.* often attain great altitude, having peaks rising above the line of perpetual snow, their lower slopes being furrowed with numerous streams and alternately clothed with magnificent forests and rich grasses. The plains are elevated tablelands covered with indigenous grasses, constituting pasturage unsurpassed in any section of our country. Among the largest, best situated, and most attractive of the valleys of *I.* are those of the Clearwater, Salmon, Fayette, Wood, Weiser, St. Joseph, and Cœur d'Alène, these being all profusely watered, and possessing soil of extraordinary fertility, readily yielding, with irrigation, abundant crops of barley, wheat, rye, and oats, as well as all the ordinary vegetables and fruits of the temperate zone; while vast stretches of magnificent forest, presenting abundant supplies of timber and firewood, constitute a conspicuous element of beautiful mountain scenery. Bottom-lands of great fertility and considerable extent surround the shores of lakes Cœur d'Alène and Pend d'Oreilles, in the N. part of the territory; and there are numerous small but very productive valleys on the streams emptying into those lakes. The preference of agricultural settlers, however, is for the valleys lying within the water-system of the more S. branch of the Columbia. The climate of *I.* varies considerably with the degrees of latitude through which its limits extend, but not so much as would naturally be supposed from its great longitudinal extension; the isothermal lines of the territory, running from E. to W., have a well-defined northward variation, caused by the influence of air currents from the Pacific Ocean. Throughout the spring, summer, and autumn months, in the N. as well as the S. sections, the weather is generally delightful and salubrious: in the winter months the range of the thermometer depends greatly upon the altitude of the surface, the higher mountains being visited by extreme cold and heavy falls of snow; the lower mountain ranges and the plains having winters generally less severe than those of N. Iowa and Wisconsin or central Minnesota, while greater dryness of the atmosphere renders a lower fall of the thermometer less perceptible; and the valleys being rarely visited by cold weather, high winds, or considerable falls of snow. Considered in its yearly average, the climate is exactly adapted to sheep-growing and the production of wool, the herding of cattle, and the manufacture of dairy products; the raising of very superior breeds of horses, as well as the culture of all northern varieties of fruits, such as apples, pears, plums, cherries, peaches, grapes, and all of the ordinary cereals and vegetables. Besides the great wealth in mines of gold and silver which *I.* contains, constituting the principal attraction to emigrants thus far in the history of the territory, extensive deposits of not less important useful minerals are known to exist in different sections within its limits, although there has yet been no organized geological survey and very little prospecting; such disclosures of minerals, precious or otherwise, as have been made having resulted from accident rather than from careful investigation, inducing the general belief among geologists and mineralogists that but little is really known of the mineral resources of this remote section of the public domain, and that the future of its mining developments will far exceed in importance present general anticipations. Conspicuous among the useful minerals are vast beds of salt, found upon analysis to be almost chemically pure, extensive fields of iron ore, and apparently inexhaustible strata of excellent coal. The coal and salt are already prominent among the mining products; the local demand created by their employment in the process of reducing and refining the ores of gold and silver, as well as by domestic necessity, rendering their production profitable; but increased facilities for transportation to adjacent states and territories are required to develop these branches of mining industry to a degree commensurate with the great extent and value of the deposits. The first discoveries of gold in Idaho were made in 1852, on the Pend d'Oreilles River, near the lake bearing the same name. In 1860 an extraordinary quantity of valuable placer detritus was ascertained to exist on the south Fork of Clearwater River. A fever of excitement prevailed there relative to the gold mines of Idaho, the consequence being overcrowding, disappointment, and unreasonable neglect. Since that time, however, the mining industry has steadily advanced in importance. The chief minerals produced are silver, lead and gold; their production being in the order named. *I.* ranks third among the lead-producing States, and is rich in the precious metals. The argentiferous galena yields lead of such purity that it pays to work for the lead alone, without regard to its silver. Mines of the metals named are now worked in five or six counties of the State, and many other districts are rich in minerals, though at present not easily accessible. The completion of the Union Pacific railroad in 1869 gave a strong impetus to the mining industry which was added to by the opening of the Northern Pacific in 1883; and the value of gold, silver and lead produced since 1860 has been considerably over $200,000,000. In 1891 the yield was reported as follows: silver, $7,564,000; lead, $6,400,000; gold, 3,204,000. In 1895 it was: silver, $5,214,498; gold, $2,594,066; lead, $2,301,321. In 1901 the yield of the precious metals was: gold, $1,475,000; silver, $7,569,842. *I.* stands fifth in lead production in the United States. In addition to its mineral product it is rich in timber, possessing in its mountain districts 7,000,000 acres of timber land.—*Divisions.* *I.* is divided into 21 counties, as follows:

Ada,	Cassia,	Lemhi,
Bannock,	Custer,	Lincoln,
Bear Lake,	Elmore,	Nez Perce,
Bingham,	Fremont,	Oneida,
Blaine,	Idaho,	Owyhee,
Boisé	Kootenai,	Shoshone,
Canyon,	Latah,	Washington.

The populations of the principal towns were as follows by census of 1900: Boise, 5,957; Pocatello, 4,046; Moscow, 2,434; Lewistown, 2,425; Wallace, 2,265; Montpelier, 1,444; Weiser, 1,364, Idaho Falls, 1,262. The population of the Territory in 1870 was 14,999; in 1880, 32,610; of the State when admitted in 1890, 84,385; in 1900, 161,772. *Finances.* *I.* had in the year 1902 a State debt of $546,500. The assessed valuation of taxable property was $51,440,758; the tax rate $4.75 per $1,000. *Schools.* There is a State university at Moscow, endowed by a land grant, and several agricultural experiment stations. 40,899 acres have been set aside for the support of public schools; the school children of the State numbering about 40,000. State normal schools were dedicated at Lewistou and Albion in June, 1896. There is a State insane asylum at Blackfoot, and a penitentiary at Boisé City, while the deaf, dumb and blind are now provided for in Colorado.—*Irrigation, &c.* The biennial report of the State Engineer, Jan. 1, 1897, estimates the area cultivated by irrigation at 315,000 acres, and the total area under ditch or that can be reached by laterals and distributories from existing canals, at 1,250,000 acres. 66,430 acres have been withdrawn on Snake river to be fed by a canal from that river, water rights being furnished at a charge of $10 per acre. The State Horticulturist reports 20,000 acres under fruit culture; apples, prunes, pears, peaches, cherries and berries being raised. The leading grain product is wheat. The estimated yield of sugar beets is 17 tons per acre, with a calculated product of 17 to 21 per cent. of saccharine matter. The live stock of the State is valued at $12,189,741, consisting mainly of sheep and cattle.—*History.* Up to 1850 *I.* had only been traversed by the explorers Lewis and Clark, and by the daring trappers and hunters, who sought it for game and furs. Gold was discovered in 1852, but attracted few miners. *I.* was included in the Territory of Oregon until 1863, in which year it was organized as a separate Territory, including portions of the previous Territories of Oregon, Washington, Utah and Nebraska. Part of its area was added to Montana in 1864. It was admitted to the Union as a State, July 3, 1890.

Idaho City, in *Idaho*, a post-town, cap. of Boisé co., at the junction of Elk and Moore's creeks, 36 m. E. N. E. of Boisé City; Lat. about 43° 50′ N., Lon. 115° W. There are some manufactures, and gold and silver mining is carried on. Its former name was Bannock City. *Pop.* (1897) about 600.

I'daho Springs, in *Colorado*, a post-town of Clear Creek co., 38 miles west of Denver, on U. P., D. & G. R. R.; has hot soda springs and is a place of resort. Gold and silver are mined in the vicinity. *Pop.* (1890) 1,338.

Id'do. (*Script.*) A prophet of Judah, who prophesied against Jeroboam and wrote the history of Rehoboam and Abijah, (2 *Chr.* ix. 29; xii. 15; xiii. 22.) Josephus and others are of opinion that he was sent to Jeroboam, at Bethel, and that it was he who was killed by a lion.

Idea, (*ī-dē'a,*) *n.* [Fr. *idée;* Late Lat. *idea*, from Gr. *idea*, from *eidō, idein*; Sans. *vid*, to see.] That which is seen by the mind's eye; form; image; model of anything in the mind; that which is held or comprehended by the understanding; object of thought; an image in the mind; notion; conception; thought; opinion.

(*Phy.*) In a general sense, whatever is the immediate object of thought. In the Platonic philosophy, however, the word possesses a different and a higher signification. According to him, ideas were the patterns after which the Deity made or fashioned the phenomenal or material world. He held that all things consisted of matter and form, and that the matter of which all things were made existed from all eternity, without form; but he believed that there also existed eternal forms of all possible things which exist without matter, and to these eternal and immaterial forms he gave the name of ideas. By Descartes and subsequent philosophers, the term idea has been employed to signify all our mental representations, all the notions which the mind frames of things; and when, in common language, we speak of having an idea of anything, we mean no more by that expression than that we are thinking about it. By idea, Kant designates every conception formed by the reason and raised above all sensuous perception. These he subdivides into empirical, or such as are partly drawn from experience, and pure, such as are totally free from any empirical element. Another division of ideas is into theoretical and practical. As to the origin of our ideas, some attribute all our ideas to sense; others admit that the earliest notions proceed from the senses, yet maintain that they do not produce the whole knowledge possessed by the understanding; while others deny the senses to be anything more than instruments conveying objects to the mind.

Ide'al, *a.* [Fr. *idéal;* Lat. *idealis.*] Existing in idea or conception; intellectual; mental; existing in fancy, or imagination only; visionary; fanciful; imaginary; belonging or relating to ideas generally.

Beau Ideal. (*Fine Arts.*) An expression denoting a selection of the finest parts of different subjects united, so as to form one harmonious whole, of a more complete character than is usually found in nature. In other words, it is "the divesting nature of accident, in the representation of an individual. From the nature of the expression, and its definition, it is clear that it more immediately attaches to the arts of painting and sculpture; in architecture, it is susceptible of refinements, dependent on the selection of examples, upon which, however, a less universal agreement exists."

Ide'al, *n.* An imaginary model of perfection, considering ideas as images or forms in the mind.

Idea'less, *a.* Destitute of ideas.

Ide'alism, *n.* [Fr. *idéalisme.*] (*Phil.*) The doctrine that in external perceptions the objects immediately known are ideas. Of this doctrine there are several varieties. Some absolutely deny the existence of all material substances; others regard the real simply as ideal, and judge the material world to be merely assumed from the ideal; while a third class, without denying or asserting the existence of a material world, are content with confessing an ignorance of its nature. "I see a tree. The common psychologists tell me that there are three things implied in this one fact of vision; viz.—a tree, an image of that tree, and a mind which apprehends that image. Fichte tells me that it is I

alone who exist The tree and the image of it are one thing, and that it is a modification of my mind. This is *subjective idealism*. Schelling tells me that both the tree and my *ego* (or self) are existences equally real or ideal; but that they are nothing less than manifestations of the absolute, the infinite, or unconditioned. This is *objective idealism*. But Hegel tells me that all these explanations are false. The only thing really existing (in this one fact of vision) is the idea, the relation. The *ego* and the tree are but two terms of the relation, and owe their reality to it. This is *absolute idealism*. According to this there is neither mind nor matter, heaven nor earth, God nor man. The only real existences are certain ideas or relations. Everything else that has name or being derives its name and being from its constituting one or other of the two related terms, subject and object; but the only thing that is true or real is the identity of their contradiction, that is, the relation itself."

Ide'alist, *n.* One who holds the doctrine of idealism.

Idealis'tic, *a.* Relating to the doctrine of idealism. (R.)

Ideal'ity, *n.* Quality of being ideal.

Idealiza'tion, *n.* The act of idealizing.

Ide'alize, *v. n.* To form ideas. — *v. a.* To make ideal.

Ide'alizer, *n.* One who idealizes.

Ide'ally, *adv.* In idea; intellectually; mentally.

I'dem, and its contraction **Id.** [Lat.] The same.

Iden'tical, *a.* [Fr. *identique*, from Lat. *idem*, the same. See IDENTITY.] The same; not different.

Iden'tically, *adv.* With sameness.

Iden'tifiable, *a.* That may be identified.

Identifica'tion, *n.* Act of identifying, or of making or proving to be the same.

Iden'tify, *v. a.* [Fr. *identifier*; Lat. *idem*, and *facio*, to make.] To make to be the same; to unite or combine in such a manner as to make one interest, purpose, or intention; to treat as having the same use; to consider as the same in effect; to ascertain or prove to be the same.

—*v. n.* To become the same; to coalesce in interest, purpose, use, effect, &c.

Iden'tity, *n.* [Fr. *identité*; L. Lat. *identitas*, from Lat. *idem*, this very, exactly this, the same, from *is*, this or that, and *dem*, demonstrative suffix; Sansk. *idam*, this.] Sameness, as distinguished from diversity; similitude; the sameness of a substance or being, under every possible variety of circumstances.

(*Philos.*) The sameness of the conscious subject, *I*, throughout all the various states of which it is the subject. The question, Wherein consists our identity, and what is its evidence? has been a source of manifold controversy to modern metaphysicians. By philosophers of the materialist school the doctrine has been ejected as incompatible with daily and obvious experience. But independently of any hypothesis respecting the nature of the soul in itself, it has been argued, that, as all our knowledge of a substance is derived from the qualities or phenomena which it presents to our senses, and that all we can mean by a substance being the same with itself, is, that it possesses the same qualities which it previously did (for, if not, the substance is changed), so all we can know of the substance *mind* in particular is derived from observation of the changes which it undergoes. But we find that what we conceive to be the same individual does, at different periods, assume under the same circumstances widely varying appearances. A man will laugh at what when he was a child would have excited his anger or jealousy. This reasoning contains an evident fallacy. It does, in fact, like all other reasoning of the same kind, imply that very doctrine which it means to refute. Consciousness, it is asserted, is the joint effect of two substances acting one on the other. How, then, can we affirm that one of these substances is changed, unless by assuming that the other remains the same? How can we show that the phenomenon laughter in the man is different from the phenomenon jealousy or anger in the boy, unless we admit that we who *observe* these phenomena — *i. e.*, by the premises, on whom these phenomena produce a given effect — remain the same as we were when we were affected previously in a different manner. A lump of sugar, as we take it to be, no longer melts in what we take to be water. Assuming that the water remains water, we may fairly infer that the lump in question is not sugar, or *vice versâ*; not so if we profess ourselves equally ignorant of the identity of both substances. This argument, it will be seen, applies equally to the materialist and non-materialist. Such may be said to be the *negative* evidence of our identity. Its positive evidence rests on the necessity and universality of its belief, as implied in every act of memory. *To remember*, is to refer a past state of consciousness to the same subject which now at the present moment recalls it. — IDENTISM, or SYSTEM OF IDENTITY, are names usually given to the metaphysical theory of the German writer SCHELLING, *q. v.*

Ide'ographs, or **Ideograph'ic Characters,** *n. pl.* See HIEROGLYPHICS.

Ideology, (*i-de-ol'o-ji,*) *n.* [Fr. *idéologie*; Gr. *idea*, and *logos*, discourse.] A treatise on ideas, or the doctrine of ideas, or of the operations of understanding; the science of mind. — It is the term employed by the later disciples of Condillac to designate their system and philosophy. The name was first employed by Dertutt de Tracy in his work entitled *Elémens d'Idéologie*.

Ides, (*idz,*) *n. pl.* [Lat. *idus*, from the Etrus. *iduo*, to divide.] (*Calendar.*) The 2d of the three great divisions of the month in the ancient Roman calendar. The *calends* were the first days of the month; the *ides*, near the middle of the month; and the *nones*, the ninth day before the ides commenced. In March, May, July, and October the ides fell on the 15th of the month; but during the remaining months of the year they fell on the 13th. The plan which the Romans pursued was very peculiar. Instead of employing the ordinal numbers first, second, third, and so on, they distinguished the various days of the month by the number which intervened between any given day and the division which next followed the one which was current. For example, as there were always eight days between the nones and the ides, the day after the nones was termed the *eighth before the ides*; the next, the *seventh before the ides*; and so on.

Id est. [Lat.] That is.

Idioc'rasy, *n.* [Gr. *idios*, peculiar, and *krasis*, a mixture.] Same as IDIOSYNCRASY, *q. v.*

Idiocrat'ic, Idiocrat'ical, *a.* Idiosyncratic.

Idiocy, (*id'e-o-se,*) *n.* [Fr. *idiotic*; Gr. *idioteia*. See IDIOT.] Same as IDIOTISM, *q. v.*

Idio-elec'tric, *a.* [Gr. *idios*, peculiar, and Eng. *electric*.] Electric *per se*, or containing electricity in its natural state.

Idiom, (*id'e-om,*) *n.* [Fr. *idiome*; Lat. *idioma*; Gr. *idiōma*, from *idios*, proper, peculiar to one's self.] (*Philology.*) A mode of speaking or writing foreign from the usages of universal grammar or the general laws of language, and restricted to the genius of some individual tongue. Thus, a sentence or phrase consisting of words arranged in a particular manner may be a Latin idiom; the same, arranged in a different manner, an English idiom, &c. The use of a particular inflection of a word may also be an idiom. We also use the term *idiom* in a wider sense, to express the general character of a language. We have a number of subordinate words to express the idioms of particular tongues: thus, a Latin idiom is a Latinism, a French idiom a Gallicism, &c. The word *idiom* is also not uncommonly, but incorrectly, used in the same sense with the French *idiome*, a dialect or variety of language. *Idiotisme* is the French term expressing the correct signification of the English *idiom*.

Idiomat'ic, Idiomat'ical, *a.* [Gr. *idiomatikos*.] Peculiar to a language; pertaining to the particular genius or modes of expression which belong to a language.

Idiomat'ically, *adv.* According to the idiom of a language.

Idiopathet'ic, *a.* Same as IDIOPATHIC.

Idiopath'ic, *a.* [Fr. *idiopathique*.] (*Med.*) A term applied to such diseases as arise naturally in the human body, independent of all extraneous causes, and contradistinguished from *symptomatic* diseases, or such as are induced by or spring from some other disease or malady. All diseases belong to one or other of these orders, and are either *I.* or symptomatic.

Idiopath'ical, *a.* Pertaining to idiopathy or idiopathic diseases.

Idiopath'ically, *adv.* In the manner of an idiopathic disease.

Idiop'athy, *n.* [Fr. *idiopathie*; Gr. *idios*, peculiar to one's self, and *pathos*, affection, from *pascho*, *pathein*, to suffer.] A peculiar affection or feeling. — A morbid state or condition not produced by any preceding disease; an idiopathic disease.

Idiosyn'crasy, *n.* [Fr. *idiosyncrasie*; Gr. *idiosynkrasia*—*idios*, peculiar to one's self, *syn*, together, and *krasis*, a mixing, temperament, from *kerannūmi*, to mingle, to mix.] (*Med.*) A condition or temperament peculiar to any animal body, whereby it has, either in health or sickness, a peculiar inclination to or aversion against some particular things. Thus, when a man has a predisposition to gout, rheumatism, gravel, or any other complaint, we allude to his idiosyncrasies. The person who faints at the smell of a rose, cannot conquer his aversion for bread, or sickens at the sight of a cat, is commonly said to have antipathies to such and such things and objects; but professionally they are said to be his idiosyncrasies. So strong is this prejudice, antipathy, or idiosyncrasy in some persons, that the most infinitesimal dose of a medicine will produce all the violence of action found after an excessive dose; while to others, the mere *smell* of a drug will produce on the system all the effects of a large dose; and others, again, whose idiosyncrasy is so powerful, that the mere mention of a drug will cause the mouth to become so impregnated with the *taste* of the article only heard or mentioned, that it is difficult, by changing the subject and diverting the mind, to get rid of the offensive taste or impression.

Idiosynerat'ic, *a.* Of peculiar temper or disposition.

Id'iot, *n.* [Fr. *idiot*; Lat. *idiota*; Gr. *idiotes*, from *idios*, one's own, peculiar, private, separate.] One void of understanding; a natural fool from his birth; a foolish person; one unwise. — See IDIOTISM.

Id'iotcy, *n.* Same as IDIOCY and IDIOTISM, *q. v.*

Idiot'ic, Idlot'ical, *a.* [Gr. *idiotikos*.] Relating to or like an idiot; foolish; sottish.

Idiot'ically, *adv.* After the manner of an idiot.

Id'iotism, *n.* [Fr. *idiotisme*. See IDIOT.] (*Med.*) A state of mental imbecility proceeding from a defective or a disorganized state of the brain, resulting in complete or partial fatuity. *I.* is a congenial disease, and one of those hereditary misfortunes which are handed down from a succession of weak or diseased parents, propagated by the frequent intermarriages of families of weak or tainted intellect, of those of intemperate habits, and of persons having a scrofulous diathesis. *I.* are divided into the harmless and the mischievous; those with perfect fatuity, and those who possess a glimmering of intelligence, which, in such cases, usually degenerates into malice or cunning. See FATUITY, INSANITY, &c. (*Philol.*) See IDIOM.

Id'iotize, *v. n.* To become stupid.

Id'iotry, *n.* Idiotcy; idiotism.

Idle, (*i'dl,*) *a.* [A. S. *idel*, *ydel*; Du. *ijdel*; Dan. *ledig* Ger. *eitel*. The root is found in Sax. *adlian*, to languish, Heb. *chadel*, to become languid, to leave off, to cease.] Unoccupied: unemployed; inactive; doing nothing. — Indolent; given to rest and ease; sluggish; slothful. — Useless; ineffectual; futile. — Affording leisure. — Of no use or importance; trifling; frivolous or vain; unprofitable.

—*v. n.* To be idle; to lose or spend time in inaction, or without being employed in business.

—*v. a.* To spend in idleness; — sometimes followed by *away*.

I'dleness, *n.* State or quality of being idle. This word is capable of many acceptations, but is generally used to express abstinence from labor or employment, or, in other words, the state of a person who is unemployed in labor or unoccupied with business. Shakspeare has *idleness* to express unimportance and trivialness, while Bacon deems it identical with foolishness and infatuation, as in *idleness* of brain. In the sense of *laziness*, in which the word is sometimes, in fact, often, understood, idleness is but a form of moral degradation — one that debilitates the body in as great a proportion as it incapacitates the mind for healthy labor.

I'dle-head'ed, *a.* Foolish; unreasonable.

"These *idle-headed* seekers resort thither."—*Carew.*

—Delirious; infatuated.

"Upon this loss she fell *idle-headed*."—*L'Estrange.*

I'dle-pat'ed, *a.* Idle-headed; stupid.

I'dler, *n.* One who idles; one who does nothing: one who spends his time in inaction; a lazy person; a sluggard.

I'dle-wheel. *n.* (*Mach.*) A wheel placed between two others for the purpose of simply transferring the motion from one axis to the other, without change of direction; a carrier-wheel.

I'dly, *adv.* In an idle manner; lazily; sluggishly; foolishly; uselessly; carelessly; vainly; ineffectually.

Id'ocrase, *n.* [Gr. *eidos*, form, *krasis*, mixture,—from the resemblance of its crystalline forms to those of other species.] (*Min.*) Same as VESUVIANITE, *q. v.*

I'dol, *n.* [Fr. *idole*; Gr. *eidōlon*, from *eidos*, that which is seen, form, shape, figure, from *eidō*, to see.] An image, form, or representation, usually of a man or other animal, consecrated as an object of worship; a pagan deity. — See IDOLATRY.

—A person loved and honored to adoration; anything on which we set our affections inordinately.

Idol'ater, *n.* [Fr. *idolâtre*; Gr. *eidololatres*. See IDOLATRY.] A worshipper of idols; one who worships as a deity that which is not God; a pagan.—An adorer; a great admirer.

Idol'atress, *n.* A female idolater.

Idol'atrize, *v. a.* To offer idolatrous worship to; to idolize. (R.) (*Milton.*) — To admire to excess.

—*v. n.* To practise idolatry.

Idol'atrous, *a.* Pertaining to idolatry; partaking of the nature of idolatry; consisting in the worship of idols; consisting in or partaking of an excessive attachment or reverence.

Idol'atrously, *adv.* In an idolatrous manner.

Idol'atry, *n.* [Fr. *idolâtrie*; Gr. *eidōlolatreia*—*eidolon*, *idol*, and *latreuō*, to worship, to serve, from *latron*, pay, hire.] The worship of idols, images, or anything made by hands, or which is not God. — Excessive attachment or veneration for anything, or that which borders on adoration.

(*Myth.*) Idolatry is spoken of in many books of the Hebrew Scriptures, and the practice of it doubtless existed from a very early period. Of this we have evidence in the most remote historical remains, those of Egypt, Babylonia and Assyria, and in the anthropological relics of various ancient peoples. It seems to have had its origin in *Fetichism*, in which individual worshippers ascribe supernatural powers to ordinary inanimate objects, and to have grown in elevation of idea until the celestial orbs and numerous invisible beings were worshipped in the form of symbols and images. The worship of the sun became in time one of the most widely extended forms of idolatry, the solar orb being worshipped directly, or as symbolized in fire, and in other symbolic forms. In Egypt idolatry largely took the form of animal worship, a practice which may have arisen from a preceding totemism like that prevailing so widely among barbarous and savage tribes. The idolatry of the Greeks and Romans was dignified with the charms of art and poetry, though rude and almost formless images were among the popular Greek idols. The Hebrews imitated the superstitions and idolatries of others, but invented none. When in Egypt,

Fig. 1363.—THE HINDOO IDOL SULLIAD.

many of them worshipped Egyptian deities; in the wilderness, they worshipped those of the Canaanites, Egyptians, Ammonites, and Moabites; in Judea, those of the Phœnicians, Syrians, and other people around them. Rachel, it may be, had ndored idole at her father Laban's, since she carried off his teraphim, (*Gen.* xxxi. 30.) Jacob, after his return from Mesopotamia, required his people to reject the strange gods from among them, and also the superstitions pendants worn by them in their ears, which he hid under a terebinth near Shechem. He preserved his family in the worship of God while he lived. Under the government of the Judges, "the children of Israel did evil in the sight of the Lord, and served Baalim. They forsook the Lord God of their fathers, and followed other gods — of the gods of the people that were round about them; and they forsook the Lord, and served Baal and Ashtaroth," (*Judg.* ii. 11, 12.) Gideon, after he had been favored by God with a miraculous deliverance, made an ephod, which ensnared the Israelites in unlawful worship. Micah's teraphim also were the objects of idolatrous worship, even till the captivity of Israel in Babylon. During the times of Samuel, Saul, and David, the worship of God seems to have been preserved pure in Israel. There was corruption and irregularity of manners, but little or no idolatry. Solomon, seduced by complaisance to his strange wives, caused temples to be erected in honor of Ashtoreth goddess of the Phœnicians, Moloch god of the Ammonites, and Chemosh god of the Moabites. Jeroboam, who exceeded Solomon, set up golden calves at Dan and Bethel, and made Israel to sin. The people, no longer restrained by royal authority, worshipped not only these golden calves, but many other idols, particularly Baal and Ashtoreth. Under the reign of Ahab, idolatry reached its height. The impions Jezebel endeavored to extinguish the worship of the Lord, by persecuting his prophets, (who, as a harrier, still retained some of the people in the true religion.) Judah was almost equally corrupted. The descriptions given by the prophets of their irregularities and Idolatries, of their abominations and lascivionsness on the high places and in woods consecrated to idols, and of their human sacrifices, fill us with dismay, and unveil the awful corruption of the heart of man. It is one of the most remarkable among the anomalies of the history of the Jews, that the great and radical purification of their faith in the unity of God dates from their protracted Babylonian captivity, from which time it was maintained, notwithstanding the effort of Antiochus Epiphanes to introduce the Greek idolatry (1 *Macch.* i.), down to the coming of our Lord. At the present day, *I.* prevails over a great portion of the earth; almost all the heathen nations, as the Chinese, the Hindoos, &c., have their images to which they bow down and worship. The idolatry of the African and Oceanican races is for the most part of the class described under the head FETICHISM.

I'dolism, *n.* Idolatrous worship.

I'dolist, *n.* One who worships idols; an idolater.

I'dolize, *v. a.* To worship as an idol.
—To love to excess; to love or reverence to adoration.

I'dolized, *p. a.* Loved or reverenced to adoration.

I'dolizer, *n.* One who idolizes or loves to reverence.

Idol'oclast, *n.* [Gr. *eidolon*, an idol, and *klao*, to break.] A breaker of idols.

Idomeneus, (*i-dom'e-neus,*) king of Crete, succeeded his father Deucalion on the throne, and accompanied the Greeks to the Trojan war with a fleet of 90 ships. During this war he rendered himself famous by his valor. At his return he made a rash vow, in a dangerous tempest, to Neptune, that, if he escaped, he would offer to the god whatever living creature first presented itself to his eye on the Cretan shore. This was his son, who came to congratulate him on his safe return. Idomeneus performed his promise, but the inhumanity of this sacrifice rendered him so odious to his subjects, that he was exiled from his country. D. in Italy, at an advanced age.

Id'ria, a town of Austria, in Carniola, 30 m. from Trieste, on a river of the same name. It is celebrated for its mines of quicksilver, said to be the richest in Europe, and to which the descent is by 757 steps, hewn in the rock, easy and free from danger. *Pop.* 5,000.

Id'rialite, *n.* [From *Idria*, where it is found.] (*Min.*) An hydrocarbon found mixed with cinnabar and other impurities, and called *inflammable cinnabar* from its being combustible. In its pure state it is white and crystalline, and consists of carbon 94·9, hydrogen 5·1.

Id'ryl, *n.* (*Min.*) A black substance obtained from the condensation chambers of the quicksilver mines at Idria. It has the composition of Idrialite, *q. v.*

Idumæa. See EDOM.

Idyl, (*i'dil,*) *n.* [Lat. *idyllium*; Gr. *eidyllion*, dimin. of *eidos*, form, shape, sort, a particular kind.] (*Poet.*) A short pastoral poem, or an animated description and representation of ordinary objects of nature in harmonious verse. The bucolic poems of Theocritus are called idyls, while those of Virgil are distinguished by the name of Eclogues, which renders it a difficult matter to decide why there should be any difference in name, as both compositions are of a similar nature throughout. That the ancients did not restrict the use of the word, may be seen by the works of Ausonius, which are called Idyls. In English literature, Thomson's *Seasons*, Burns's *Cotter's Saturday Night*, Goldsmith's *Deserted Village*, and Tennyson's *Idylls of the Kings*, are examples of idyls.

Idyl'lic, *a.* Pastoral.

I. E. Stands for Lat. *id est*, that is.

If, *conj.* [A.S. *gif*, if; O. Ger. *ibu*; Ger. *ob*, if; Sans. *iva*, as if, just as if, as, so as.] Snppose it be so, or it were so, that.

"*If* they have done this deed, my noble lord.—
If I talk'st thou to me of *ifs*? Thou art a traitor."— *Shak.*

—Whether or not.

"In doubting *if* she doubts or no." — *Prior.*

—Allowing that; suppose it be granted that.

Ierne. See IRELAND.

Igarapé, (a canoe-pass.) The name given by the Indians to the side-channels or *bayous* by which the river Amazon is bordered from its mouth up to a great distance.

Igasu'ric Acid, *n.* (*Chem.*) A peculiar acid found in connection with strychnia in the *Nux vomica* and St. Ignatius' Bean.

Igatimi, (*e-ga-te-mee',*) a river of S. America, enters the Parana River abt. 24° 40′ S.; *length*, abt. 200 m.

Ig'lau, a fortified town of Austria, in Moravia, on the Iglawa, 49 m. W.N.W. of Brünn. It has a military school. *Pop.* 18,000.

Igle'siasite, *n.* (*Min.*) Native carbonate of lead; white-lead ore. — Same as CERUSSITE, *q. v.*

Ignacio, (*ig-na'se-o,*) a group of islands of Mexico, in the Gulf of California, off the coast of the State of Sinaloa.

Ignatius, (St.,) (*ig-nai'she-us,*) surnamed THEOPHORUS, a father of the Church, and martyr, was a native of Syria, and a disciple of St. John the Evangelist, by whom he was made bishop of Antioch, A. D. 68. After discharging the episcopal office with great zeal for 40 years, the emperor Trajan, passing through Antioch in his Parthian expedition, sent for him, and endeavored to prevail upon him to renounce his religion. Ignatius continued inflexible; on which the emperor sent him under a guard of soldiers to Rome, where he was exposed to wild beasts in the amphitheatre for the amusement of the people. The martyr joyfully heard his sentence, and endured his sufferings with fortitude. Two pious deacons of his church gathered up his bones, and conveyed them to Antioch, where they were carefully preserved. Seven of his genuine epistles are extant, and were published by Usher at Oxford, in 1645. Some others have been attributed to him; but these are generally accounted spurious. Suffered martyrdom between 107 and 116.

Ignatius Loyola. See LOYOLA.

Ignatia, (*ig-nai'she-a,*) *n.* (*Bot.*) A genus of plants, order *Loganiaceæ*. The species *I. amara* has been supposed to yield the seeds known as St. Ignatius's beans, but Bentham believes that these seeds are the produce of a species of *Strychnos*. They come from the Philippine islands. They are intensely bitter, and contain the alkaloid strychnia in even larger proportions than the *nux vomica* seeds.

Igneous, (*ig'ne-us,*) *a.* [Lat. *igneus*, from *ignis*; Sansk. *agni*, fire.] Pertaining to, or consisting of, fire; fiery; on fire; having the nature of fire; resembling fire.

I. Rocks. (*Geol.*) A term applied to all agencies, operations, and results, which seem connected with, or to have arisen from, subterranean heat; and igneous rocks include the Volcanic, Trappean, and Granitic series, all of which are evidently the products of fusion, either in the interior or at the surface of the crust; geologists, consequently, use the term igneus as synonymous with Plutonic, pyrogenous, unstratified, and other similar terms.

Ignes'cent, *a.* [Lat. *igneseens*, from *igneseo*, from *ignis*, fire.] Turning into fire; becoming inflamed; — emitting sparks of fire when struck with steel; scintillating.

Ignic'olist, *n.* [Lat. *ignis*, and *colo*, to revere.] A worshipper of fire.

Igniferous, *a.* [Lat. *ignis*, and *fero*, to bear.] That produces or brings fire. (B.)

Ignip'otent, *a.* [Lat. *ignis*, and *potens*, powerful.] That presides over fire.

Ig'nis Fatu'us, *n.*; *pl.* IGNES FATUI. [Lat., literally, the *foolish fire*, translation of the Fr. *feu follet*.] (*Physics.*) A kind of luminous meteor, which flits about in the air a little above the surface of the earth, and appears chiefly in marshy places, or near stagnant waters, or in churchyards, during the nights of summer. Many instances are related of travellers having been decoyed by these lights into marshy places, where they perished; and hence the names *Jack-with-a-lantern*, *Will-o'-th'-wisp*: the people ascribing the appearance to the agency of evil spirits, who take this mode of alluring men to their destruction. This phenomenon has not yet received a satisfactory explanation. The most general opinion is, that it is due to the emanation and spontaneous combustion of some highly inflammable gas, given off by decaying organic matter.

Ignite', *v. a.* [Lat. *ignio*, *ignitus*, from *ignis*, fire.] To kindle or set on fire; to communicate fire to, or to render luminous or red by heat.
—*v. n.* To take fire; to become red with heat.

Ignit'ed, *p. a.* Set on fire; rendered red or luminous by heat or fire.

Ignit'ible, *a.* Capable of being ignited.

Igni'tion, *n.* [Fr.] Act of kindling or setting on fire; act or operation of communicating fire or heat, till the substance becomes red or luminous; state of being kindled; state of being heated to redness or luminousness. See INCANDESCENCE.

Igno'ble, *a.* [Fr., from Lat. *ignobilis* — *in*, and *nobilis*, from *nosco*, *novi*, to know.] Not noble; not illustrious; of low birth or family; not honorable, elevated, or generous; degenerate; degraded; mean; base; dishonorable.

Igno'bly, *adv.* In an ignoble manner; meanly; dishonorably; disgracefully; basely.

Ignomin'ious, *a.* [Fr. *ignominieux*; Lat. *ignominiosus* — *in*, and *nomen*, *nominis*, a name.] Incurring disgrace; cowardly; of mean character; very shameful; reproachful; dishonorable; infamous; despicable; worthy of contempt.

Ignomin'iously, *adv.* Meanly; disgracefully; shamefully.

Ig'nominy, *n.* [Fr. *ignominie*; Lat. *ignominia*. See IGNOMINIOUS.] Lose or want of name, character, or reputation; infamy; disgrace; dishonor; shame; opprobrium; contempt.

Ignora'mus, *n.* [Lat., we are ignorant, from *ignoro*.] (*Law.*) The indorsement of a grand-jury on a bill presented for inquiry, when there is no evidence to sustain the charge.
—One who knows nothing; an ignorant person. — A vain pretender to knowledge.

Ig'norance, *n.* [Fr.; Lat. *ignorantia*.] State of being ignorant; want, absence, or destitution of knowledge; the negative state of the mind which has not been instructed; state of being illiterate, uninformed, or uneducated.

Ig'norant, *a.* [Fr.; Lat. *ignorans*, from *ignoro* — *in*, and *gnorus*, knowing; allied to *notus*, from *nosco*, to know.] Not knowing; destitute of knowledge or information; uninstructed; uninformed; untaught; illiterate; unskilled; unskilful; unacquainted with.

Ig'norantly, *adv.* Without knowledge, instruction, or information; unskilfully; inexpertly.

Ignoran'tines, *n. pl.* (*Eccl. Hist.*) This Roman Catholic Association for the gratuitous instruction of poor children in secular and religious knowledge, founded in France by the Abbé de la Salle in 1724, has been introduced into other Roman Catholic countries. The brethren, expelled from France at the Revolution, were recalled in 1806 by Napoleon I.

Ignore', *v. a.* [Lat. *ignoro*. See IGNORANT.] Not to know: to be ignorant of; to pass over or overlook, as if ignorant of.

Igoo'lik, a small island of British N. America, in Fury and Hecla Strait; Lat. 69° 21′ N., Lon. 81° 53′ W.

Igor I., (*e'gor,*) grand-duke of Russia, succeeded his father Rurick, and, after making war a long time against his neighbors, proceeded to ravage the East, deluging with blood Pontus, Paphlagonia, and Bithynia. He left his throne to his wife Olga, who, in her old age, embraced Christianity. D. 935. — IGOR II., grand-duke in 1146.

Igrapiuna, (*e-gra-pe-oo'na.*) a town of Brazil, prov. of Bahia, near the town of São-Jorge-dos-Ilheos; *pop.* 1,800.

Iguaçu, (*e-gwa-soo',*) or IGUAZU, a town of Brazil, in the prov. and about 21 m. N.W. of the city of Rio Janeiro; *pop.* 5,000.

Iguaçu, or IGUAZU, or CURITIBU, a river of Brazil, enters the Paraña about Lat. 26° S.; length, about 250 m.

Ignalada, (*e-gwa-la'da,*) a town of Spain, in Catalonia, on the Noya, 36 m. from Barcelona; *pop.* 12,000.

Igua'la'pa, a town of Mexico, dep. of La Puebla, abt. 180 m. S.S.W. of the city of La Puebla; *pop.* 3,000.

Igua'na, *n.* (*Zoöl.*) The genus of the *Iguanidæ*, a family of Saurian reptiles, characterized by having a large thin fold of skin, or dewlap, under the chin; cephalic cutienlar plates, polygonal, unequal in diameter, flat, or carinated; a double row of small palatal teeth; maxillary teeth, with their edges finely dentilated; a crest on the back and tail; toes long and unequal; tail,

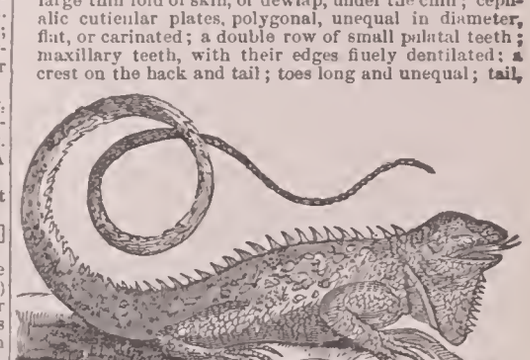


Fig. 1364. — IGUANA TUBERCULATA.

very long, slender, and compressed, and covered with small, equal, imbricated, carinated scales. It is a very nimble reptile generally, and lives in warm climates. Some of the species live upon vegetables, and others upon animal food. It particularly inhabits S. America and the West Indies, where it is very numerous. From its cleanly habits and delicate flesh, it is esteemed a great dainty, and tastes much like chicken. It lives for the most part on trees; but when forced to take the water it can swim very readily. The common Iguana, or *Iguana tuberculata* (Fig. 1364), is about five feet in length, although many exceed that. It is of a more or less green color throughout, and its dewlap is of a bright yellow color, as is also the crest which runs along the back. They are thought to be best fitted for eating in the spring, when they are sought and hunted with great avidity. Although in reality very timid animals, they have a very formidable appearance, which is utterly denied by their harmless habits, and endeavors always to escape when pursued. The female deposits her eggs in the sand, where they are hatched by the warmth of the sun.

Iguan'idæ, *n. pl.* (*Zoöl.*) A family of Saurians, comprising scaly reptiles which are lizard-like in general appearance, but which have their tongues thick, fleshy, non-extensible, and only emarginated at the tip. The type of the family is the IGUANA, *q. v.*

Iguan'odon, *n.* [Lat. *iguana*, and Gr. *odons*, a tooth.] (*Pal.*) An extinct gigantic reptile, closely resembling the Iguana in the form of its teeth, whose remains were discovered by Dr. Mantell in the Wealden formation of

the S. of England. From its dentition there seems to be no doubt that it was herbivorous; the form of the teeth, considered with relation to the demands made by the habits of the animal, being well adapted for cropping tough vegetable food, such as the *Clathraria* and similar plants which are found buried with the *I.* Mantell estimated this animal to have been 70 feet long, but the complete skeleton now set up at Brussels is 23 feet in full length. The *I.* formed a family of the Dinosaurians, bird-like reptiles with long hind and short forelegs, and three-toed feet, they thus making tracks when they walked that at first were taken for bird-tracks. In 1878 the remains of about 23 specimens, belonging to two species, were found in Belgium. No Iguanodons have been found in America, but Camptosorus, a form found in the Jurassic beds of Wyoming, is nearly a lied.

Iguape (*e-gwa'-pē*), in Brazil, a river which enters the Atlantic Ocean about 85 m. S.W. of Santos. *Length*, about 150 miles.

—A town near the mouth of the above river, province São Paulo, 90 m. from Santos. *Pop.* 10,000.

Ignaracu (*e-gwa-ra-soo'*), or IGUARASSU, a town of Brazil, the oldest in the prov. of Pernambuco, about 20 m. N.N.W. of the city of Pernambuco. *Pop.* 7,000.

Igumen', a town of Russia, cap. of a circle of the same name, 400 m. from Minsk.

I. H. S. Abbreviation of *Iesus* (*Jesus*) *Hominum Salvator* (Jesus, the Saviour of Men). It is not uncommonly believed to be an abbreviation of "I have suffered."

I'jamsville, in *Maryland*, a post-village of Frederick co., on the B. & O. R. R.

Il-. One of the forms of *in*, used before words beginning with *l*, commonly giving a negative sense to the word to which it is prefixed.

Il'chester, in *Maryland*, a post-village of Howard co.

Ildefon'site, *n.* (*Min.*) A variety of Tantalite, *q. v.*, from Ildefonso, Spain.

Ildefon'so, San, a town of Spain, prov. of New Castile, on the river Cogolludo, 40 m. from Madrid. The town contains a magnificent palace built by Philip V., also a large plate glass manufactory. *Pop.* 6,000.

Il'eum, *n.* [Gr. *eileo*, I turn about, from its numerous convolutions.] (*Anat.*) The last portion of the small intestines, terminating at the valve of the cæcum.

Il'eus, Il'iac Passion. [Lat. *ileaca passio.*] (*Med.*) A severe intestinal disease, characterized by violent griping pain, accompanied with retraction and spasms of the abdominal muscles, costiveness, and vomiting of fæcal matter. It arises from many causes, and is generally symptomatic of some other disease. Among the most frequent causes of this disease are strangulated hernia, intussusception, or the retention of one part of the bowel within another, unnatural adhesions between adjacent folds of the intestines, inflammation, &c. The medical treatment consists in removing the exciting cause. If there is evidence of an inflammatory state, blood should be freely abstracted from the arm, and leeches applied to the abdomen. For the rest, carminative aperients, fomentations, and glysters are to be used. Dry and humid fomentations, warm baths, and warm and copious glysters, afford the most reasonable chance of success.

Ilex, *n.* (*Bot.*) The Holly, a genus of plants, order *Aquifoliaceæ*.—The American Holly, *I. opaca* (Fig. 164), is an evergreen shrub, 6–10 feet high, at home from Massachusetts to Florida in shady swamps. It is chiefly interesting for its foliage, which is of rich, shining, perennial green, very ornamental in gardens. Its wood, fine-grained and compact, is used in turnery, cabinet-making, &c. By culture, more than a hundred varieties have been developed. The deep shining green leaves and beautiful coral berries of the holly are essential elements in the domestic decorations with which Father Christmas is honored in Europe. From the inner bark of the holly, birdlime is prepared. The leaves have been employed in intermittent fevers. The berries are purgative and emetic. The North-American species, *I. vomitoria*, has bitter leaves, of which the Creek Indians make a decoction which they use as an emetic, under the name of *black drink*. The leaves and young twigs of *I. Paraguayensis*, the Brazilian or Paraguay holly, are extensively employed in South America as tea, under the name of *maté* or *Paraguay tea*. It is remarkable that *maté* contains *caffeine*, the principle existing in coffee and Chinese tea. It has somewhat similar properties to those of Chinese tea: but it is more exciting, and, when taken to excess, produces a kind of intoxication. Another *maté*, called *gongonha*, is prepared in Brazil from the species *I. gongonha* and *theezans*. Johnston has estimated the consumption of *maté* at 50,000,000 lbs. annually. The fresh leaves of the South-American hollies have great astringency, and on this account they are much used by the dyers of Brazil.

Il'ford, (Great,) a village of Essex, England, on the Roding, 7 m. from London. *Pop.* 4,000.

Il'fracombe, a seaport-town of England, in Devonshire, at the mouth of the Bristol channel, 41 m. from Exeter. *Pop.* 4,000.

Ilha, (*eel'ya,*) a Portuguese word signifying island, forming a part of many names in Brazil.

Il'ha do Governador', (*Governor's Island,*) an island of Brazil in the Bay of Rio Janeiro, about 7 m. N. of the city of Rio Janeiro.

Il'ha Grande, (*Great Island.*) an island of Brazil, in the Bay of Angra, about 68 m. W.S.W. of Rio Janeiro; *area*, about 120 sq. m. It contains the village of Santa Ana. Total pop. 3,000.

Ilheos, (*eel-ya'oce,*) a group of four islands of Brazil off the coast of Batica. Their former name was Capitania of Jorde-de-Figueire-do-Correa.

Il'ia. See RHEA.

Il'ia, *n. pl.* [Lat.] The flanks, or the part of the abdomen which includes the small intestines.

Iliac, (*il'i-ak,*) *a.* [From Lat. *ilia*, the flank, the small intestines, from Gr. *eilo-ō*, to wind.] (*Anat.*) Pertaining to the lower bowels.

I. Passion. (*Med.*) See ILEUS.

Il'iad. See ODYSSEY.

Il'ion, in *New York*, a post-village of Herkimer co., on the Mohawk River, abt. 11 m. E. of Utica; *pop.* abt. 4,000.

Il'inm, or **Il'ion.** See TROY.

Ilk, *a.* and *n.* [A. S. *ælc*; Dut. *elk.*] A word still used in Scotland and the N. of England, signifying *each*, as, "*ilk* ane of you;" it also denotes, as a substantive, the same name, and is employed when an estate is of the same name as the possessor's patronymic, as, "Ravenswood of that *Ilk*," or Ravenswood of Ravenswood.

Il'keston, a town of England, in Derbyshire, 8 m. from Derby.

Ill, *a.* [Probably contracted from *evil*; A. S. *ufel*; Ger. *übel*; Icel. *illr.* See EVIL.] Bad or evil, in a general sense; contrary to good; depraved; wicked; iniquitous; criminal; bad; evil; unfortunate.—Cross; crabbed; surly; peevish.—Diseased; disordered; sick or indisposed; impaired.—Homely; ugly; unfavorable; suspicious.—Rude: unpolished, as manners.

—*n.* Evil; wickedness; depravity; misfortune.—Disease; pain.—Whatever annoys or impairs happiness, or prevents success.

—*adv.* Not well; not rightly or perfectly; badly; not easily; with pain or difficulty.

Illa'basco. See COJUTEPEC.

Ill-affect'ed, *a.* Not well affected; affected with bad impressions; inimical.

Illaps'able, *a.* That may illapse.

Illapse', *v. n.* [Lat. *illabor—in*, and *labor*, *lapsus*, to fall, to slide or glide.] To fall, pass, or glide into.

—*n.* A sliding in; an immission or entrance of one thing into another.—A falling on; a sudden attack.

Illa'queable, *a.* That may be entangled or entrapped.

Illa'queate, *v. a.* To entangle; to entrap; to ensnare.

Illaqueation, *n.* The act of catching or ensnaring.—A snare; anything to catch another.

Illa'tion, *n.* [Lat. *illatio—in*, and *latio*, from *fero*, *latus*, to bear, to carry.] A carrying or bringing in.

(*Rhet.*) An inference from premises; a conclusion; deduction.

Il'lative, *a.* Relating to illation; that may be inferred; that denotes an inference.

Illaud'able, *a.* [Lat. *in*, priv., and *laudabilis*, praiseworthy.] Unworthy of praise or commendation.

Illaud'ably, *adv.* Unworthily; without deserving praise.

Ill'-blood, *n.* Bad feeling; resentment; enmity.

Ill'-bod'ing, *a.* Ominous of evil.

Ill'-bred, *a.* Not well bred; unpolite; unpolished; rude.

Ill-breed'ing, *n.* Want of good breeding; unpoliteness; rudeness.

Illecebra'ceæ, PARONYCHIACEÆ, *n.* [From Lat. *illicio*, I entice or induce: from its power to vesicate when applied to the skin in cataplasms.] (*Bot.*) An order of plants, alliance *Silenales*. DIAG. Both calyx and corolla present and symmetrical, but the latter rudimentary, amphitropal ovules and scarious stipules.—They are herbaceous plants, generally of little importance. This order is divided into 24 genera and 100 species.

Ille et Vilaine, (*eel-a-vē'layn,*) a maritime dept. of France, on the N.W. coast, and part of the ancient prov. of Bretagne. It is bounded N. by the English Channel and La Manche; S., by the Loire-Inférieure; E., by Mayenne; and W., by Morbihan and Côtes-du-Nord. *Area*, 2,582 sq. m. The soil is rich, fertile, and highly productive. Its chief articles are wheat, flax, hemp, tobacco, rye, barley, oats, and buckwheat. Apples are cultivated in great plenty, the pasturage is excellent, and the dairy products of the first quality. The forests afford abundance of superior timber, and the mineral yield of iron, lead, copper, limestone, granite, slate, and quartz for glass purposes, is highly valuable. The manufactures are sail-cloth, linens, cottons, woollen yarns, Russia ducks, leather, cordage, pottery, &c. Ship-building is also carried on. *Chief towns.* Rennes, (the cap.,) Fougères, St. Malo, Vitré, and Redon.

Ille'gal, *a.* [*In*, and *legal.*] Not legal; contrary to law; unlawful; lawless; prohibited; illicit; contraband.

Illegal'ity, *n.* State or quality of being illegal; contrariety to law; unlawfulness.

Ille'galize, *v. a.* To render illegal.

Ille'gally, *adv.* In an illegal or unlawful manner; unlawfully.

Ille'galness, *n.* State of being illegal; illegality.

Illegibil'ity, *n.* Quality of being illegible.

Illeg'ible, *a.* [Lat. *in*, priv., and *legibilis*, legible, from *lego*, to read.] Not legible; that cannot be read; unreadable.

Illeg'ibleness, *n.* State of being illegible; illegibility.

Illeg'ibly, *adv.* In a manner not to be read.

Illegit'imacy, *n.* State of being illegitimate: state of being born out of wedlock; the state of bastardy.—State of being not genuine, or of legitimate origin.

Illegit'imate, *a.* [Lat. *in*, and *legitimus*. See LEGITIMATE.] Not legitimate; not according to law; contrary to law; unlawful; illegal.—Unlawfully begotten; born out of wedlock; spurious.

(*Logic.*) Not legitimately deduced; illogical.

—Not authorized by good usage, as a word or phrase.

—*v. a.* To render illegitimate; to prove to be born out of wedlock. to bastardize.

Illegit'imately, *adv.* Not legitimately; not in wedlock.—Without authority.

Illegitima'tion, *n.* The state of one not begotten in wedlock.—Want of genuineness.

Illegit'imatize, *v. a.* To render illegitimate; to legitimate.

Il'ler, a large river of Suabia, which rises in the Tyrol, near Baar, and after a course of about 100 m., joins the Danube near Ulm.

Illev'iable, *a.* [Lat. *in*, and Fr. *lever*, to raise.] That cannot be levied or exacted.

Ill'-favored, *a.* Having a bad countenance; ugly; ill-looking; deformed.

Ill'-grounded, *a.* Not well-grounded; having loose principles.

Illib'eral, *a.* [Lat. *in* and *liberalis.*] Not liberal; ignoble; base; mean; sordid; not free or generous; not noble; not ingenuous.—Of a contracted mind; cold in charity: not candid; uncharitable in judging; not generous; not munificent; sparing of gifts.

Illib'eralism, *n.* Illiberal principles of practice. (R.)

Illiberality, *n.* [Lat. *illiberalitas.*] Quality of being illiberal; narrowness of mind; contractedness; meanness; want of catholic opinion; parsimony; want of munificence.

Illib'eralize, *v. a.* To imbue with illiberal principles.

Illib'erally, *adv.* In an illiberal manner; ungenerously; uncandidly; uncharitably; disingenuously; parsimoniously.

Illib'eralness, *n.* Illiberality.

Illic'it, *n.* [Lat. *illicitus—in*, and *licitus*, from *liceo*, used impersonally, *licet*, it is allowable, allowed, or permitted. See LICENSE.] Not permitted or allowed; prohibited; unlawful; lawless.

Illic'itly, *adv.* Unlawfully.

Illic'itness, *n.* Quality of being illicit; unlawfulness.

Illic'inm, BA'DIAN, BADIANIF'ERA, *n.* [Lat. *illicio*, I allure, from having a most agreeable perfume.] (*Bot.*) A genus of plants, order *Magnoliaceæ*. They are remarkable for the fragrance and beauty of their flowers and foliage. *I. anisatum*, the Star-anise, has the odor and flavor of anise-seed. The fruit is used by the Chinese as an aromatic and carminative, and as a spice. The oil obtained from the seeds is said to be substituted occasionally for oil of anise.

Illim'itable, *a.* [Fr. *in*, and *limitable.* See LIMIT.] That cannot be limited or bounded; boundless; unlimited; infinite; unbounded; immense; vast

Illim'itableness, *n.* State of being illimitable; boundlessness.

Illim'itably, *adv.* Without limits; without possibility of being bounded.

Illini'tion, *n.* A rubbing in of ointment.

(*Min.*) A thin crust of some extraneous substance found in minerals.

Illinois (*il-li-noy'*), one of the most important Central States of the U. S. of America, having Wisconsin on the N., Lake Michigan, Indiana and Kentucky on the E., Kentucky and Missouri on the S., and Missouri and Iowa on the W. It lies between Lat. 37° and 42° 30′ N., and Lon. 87° 30′ and 91° 30′ W. Length, N. to S., 380 m.; average breadth about 156 m. *Area*, 56,650 sq. m.; 50,000 of which is considered susceptible of cultivation. *Desc.* The surface of *I.* may be regarded as a table-land, elevated from 350 to 800 feet above sea-level, with a general inclination towards the Ohio and Mississippi, and consists mostly of vast undulating prairies, or rich plains, called by the settlers *barrens*, producing stunted oak, hickory, pine, and other trees. Many tracts in the S. are densely wooded, especially those lying along the rivers; and the prairies are sometimes interspersed with copses, though much more frequently studded with isolated trees at short distances. The State is well watered. Next to the Mississippi and Ohio, the chief rivers are the Illinois, its tributary the Sangamon, the Kaskaskia, Great Wabash, and Rock rivers. The Illinois rises in the N.E. part of the State, and intersecting it in a S.W. direction, falls into the Mississippi about 25 m. above its junction with the Missouri, after a course of 450 m., most part of which is navigable for steamboats. The Sangamon has a course of about 180 m., with a boat-navigation of 120 or 130 m. The Kaskaskia rises in the centre of the State, runs with a S.W. course for nearly 300 m., and falls into the Mississippi 10 m. below Vandalia, to which city it is navigable. The Great Wabash belongs more properly to Indiana: but it forms the lower two fifths of the E. boundary of *I.*, and falls at its S.E. angle into the Ohio. The Rock River runs through the N.W. portion of the State. It has a S.W. course, like the Illinois, Kaskaskia, and other tributaries of the Mississippi, which river it enters about Lat. 41° 30′, after a course of nearly 400 m., for about 200 m. of which it is navigable. The total length of navigable rivers is estimated at 4,000 m. Small lakes are numerous; and in the N. is Winnebago Swamp, a considerable extent of marsh land. In the W., and probably throughout most of the central and N. parts, the geological strata succeed each other in the following order:—A vegetable mould from 8 to 30 inches in depth, clay, limestone, shell, bituminous coal (generally from 4 to 5 feet thick), soapstone, and sandstone. Limestone ap-

Fig. 1365.—SEAL OF THE STATE.

ILLINOIS

State Capital ⊛ County Seats ⊙

Places of 50,000 and over;	CHICAGO
10,000 to 50,000	Springfield
5,000 10,000	Centralia
3,000 5,000	Lewistown

SCALE OF MILES

10 5 0 10 20 30 40 50

Hammond's 8 x 11 Map of Illinois
Copyright, 1901 by C.S. Hammond & Co.

Longitude E West 90 from G Greenwich

ILLINOIS.

Land surface, Sq. m. 56,000
Water surface, Sq. m. 650
Pop. 1900..4,821,550
White...4,734,873
African....85,078
Indian.....16
Chinese 1,503
Japanese.....80
Native-horn, 3,854,803
Foreign-horn, 966,747
Males...2,472,782
Females2,348,768

COUNTIES.

Adams.....C 6
Alexander G11
Bond..... ..G 8
Boone.....H 1
Brown.....D 6
Bureau.....F 3
Calhoun.....D 7
Carroll.....F 1
Cass .....E 6
Champaign....I 5
Christian.....G 6
Clark .....J 7
Clay.....H 8
Clinton ....G 8
Coles..... ...I 6
Cook.....J 2
Crawford.....J 7
Cumberland...I 7
Dekalb .....H 2
Dewitt..... ....H 5
Douglas.....I 6
Dupage..... I 2
Edgar.... .....J 6
Edwards.....I 9
Effingham....H 7
Fayette.....G 7
Ford.....I 4
Franklin.....H10
Fulton.....E 5
Gallatin.....I 10
Greene.....E 7
Grundy..... I 3
Hamilton.....H 9
Hancock..... .C 5
Hardin.....I 10
Henderson....D 4
Henry ..... E 3
Iroquois .....J 4
Jackson.....G10
Jasper.....I 7
Jefferson .....H 9
Jersey..... ....E 7
Jo Daviess.....E 1
Johnson.....H11
Kane.....I 2
Kankakee.....J 3
Kendall.....I 2
Knox.....E 4
Lake. .. ..J 1
Lasalle.....H 3
Lawrence.....J 8
Lee.....G 2
Livingston....H 4
Logan.....G 5
McDonough...D 5
McHenry .....I 1
McLean.....H 5
Macon .....H 6
Macoupin.....F 7
Madison.....F 8
Marion.....H 8
Marsball .....G 3
Mason.....F 5
Massac.....H11
Menard.....F 5
Mercer.....D 3
Monroe.....E 9
Montgomery .G 7
Morgan.....E 6
Moultrie.....H 6
Ogle.....G 1
Peoria.....F 4
Perry .....G 9
Platt.....H 6
Pike .....D 6
Pope.....H11
Pulaski.....G11
Putnam.....G 3
Randolph.....F 9
Richland.....I 8
Rock Island...D 3
St. Clair.....F 9
Saline.....H10
Sangamon ....F 6
Schuyler.....D 5
Scott .....E 6
Shelby .....H 7
Stark.....F 3
Stephenson ..F 1
Tazewell..... F 5
Union.....G10
Vermilion.....J 5
Wahash.....J 9
Warren.....D 4
Washington ..G 9
Wayne .....I 9
White.....I 9
Whiteside.....F 2
Will..... J 3
Williamson...H10
Winnehago...G 1
Woodford.....G 4

CITIES-TOWNS

Pop. Millions.

1 Chicago.....J 2

Pop. Thousands.

56 Peoria.....F 4
36 Quincy.....C 6
34 Springfield F 6
31 Rockford ..G 1
29 E. St. Louis.E 8
29 Joliet .....I 2
24 Aurora.....I 2
23 Bloomington H 5
22 Elgin .....I 1
20 Decatur ....H 6
19 Rock IslandD 3
19 Evanston...J 1
13 Galeshurg..E 4
17 Belleville...F 8
17 Moline.....D 3
16 Danville....J 5
15 Jacksonville E 6
14 Alton.....E 8
14 Streator ...H 3
13 Kankakee...J 3
13 Freeport ...F 1
12 Cairo G11
10 Ottawa.....H 3
10 Lasalle .....G 3
9 Mattoon.....I 7
9 Waukegan ..J 1
9 Champaign..I 5
8 Pekin .....F 4
8 Kewanee....F 3
7 Dixon .....G 2
7 Monmouth..D 4
6 Belvidere...H 1
6 Peru.....G 3
6 Centralia....G 8
6 Canton.....E 4
6 Murphyshoro G 10
6 Sterling.....F 2
6 Spring Val..G 3
6 Blue Island..J 2
6 Paris. .....J 6
5 Litchfield...F 7
5 Dekalb .....H 2
5 Urhana .....I 5
5 Pana .....G 7
5 Charleston ..I 7
5 Harvey .....J 2
5 Macomb .... D 5
5 Mt. Vernon.H 9
5 Chicago Heights. J 2
5 Galena .. ...E 1
5 Zion City.....J 1
4 Beardstown E 6
4 Lincoln..... G 5
4 Maywood....J 2
4 Clinton.....H 5
4 Duquoin.....G 9
4 Mt. Carmel..J 9
4 Morris .....H 3
4 Pontiac.....I 4
4 Olney.....I 8
4 Taylorville..G 6
4 EdwardsvilleF 8
4 Harlem.....J 2
4 Metropolis..H11
4 Princeton...G 3
4 Collinsville..E 8
3 Batavia.....I 2
3 Hoopeston...J 5
3 Normal .....H 5
3 Effingham..H 7
3 Mendota ....G 3
3 Sycamore .. H 2
3 Shelhyville .H 7
3 Jerseyville..E 7
3 Carlinville..F 7
3 Geneseo .....E 3
3 Savanna ....E 1
3 Carhondale..G10
3 Braidwood ..I 3
3 Havana .....E 5
3 Granite .....E 8
3 Paxton .....I 5
2 Sparta.....F 9
2 Carmi..... I 9
2 Mt. Olive....F 7
2 Chester.....F10
2 Petershurg..F 5
2 Highland Park J 1
2 Staunton ....F 7
2 Mound City.G11
2 Fulton .....E 2
2 Galva.....E 3
2 St. Charles ..I 2
2 Vandalia....H 8
2 Lockport....J 2
2 Toluca .....G 3
2 Naperville...I 2
2 Anna.....G11
2 Coal City ....I 3
2 Harvard... H 1
2 Melrose Pk..J 2
2 Hinsdale.....I 2
2 Tuscola.....I 6
2 Marseilles...H 3
2 Minonk.....G 4
2 Sandwich...H 3
2 Marion.....H10
2 Watseka.....J 4
2 Lewistown ..E 5
2 Greenville...G 8
2 Woodstock ..I 1
2 Bushnell ....E 4
2 Venice .....E 8
2 Lemont.....J 2
2 Geneva .....I 1
2 Sullivan ....H 6
2 Upper Alton E 8
2 N. Peoria....F 4
2 Pinckneyville G 9
2 Carrollton ..E 7
2 Roodhouse ..E 7
2 Wheaton.....I 2
2 Fairfield .....I 9
2 Warsaw..... C 5
2 Morgan Park J 2
2 Flora.....I 8
2 Morrison....F 2
2 Wilmette....J 1
2 Pittsfield....D 6
2 Rushville ...D 5
2 Virden.....F 7
2 Lake Forest .J 1
2 Harrishurg.H10
2 Fairhury ....I 4
2 Nashville....G 9
2 Rockfalls ... F 2
2 Mascoutah ..F 9
2 Waterloo ...E 9
2 Carthage....C 5
2 Downers Gr..I 2
2 Aledo.....D 3
2 Marshall.....J 7
2 Rochelle ....G 2
2 Gihson Cy....I 5
2 Whitehall...E 7
2 Momence ....J 3
2 Abingdon ...E 4
2 Dwight .....I 3
2 Marengo.....H 1
1 Arcola ..... I 6
1 Monticello ..H 5
1 Madison.... E 8
1 Highland... F 8
1 Mt. Carroll..F 1
1 Mt. Sterling.D 6
1 Grayville....J 9
1 Hillshoro....F 7
1 Mason Cy....F 5
1 W. Chicago..I 2
1 Carlyle.....G 8
1 Polo .....F 2
1 Knoxville ...E 4
1 Winnetka....J 1
1 Amhoy.....G 2
1 Lebanon.... F 8
1 Germantown J 5
1 McLeanshoro H 9
1 Carterville. G10
1 Farmington.E 4
1 Elmhurst....I 2
1 Trenton.....F 8
1 Assumption.G 7
1 Chillicothe..G 4
1 Shawneetown I 10
1 Astoria.....E 5
1 Rohinson ....J 7
1 Braceville ...I 3
1 Des Plaines..J 2
1 Farmer Cy ..H 5
1 Girard.....F 7
1 Eureka .....G 4
1 Barry.....C 6
1 Mt. Pulaski G 5
1 Salem.....H 8
1 Henry .....G 3
1 Colchester ..D 5
1 Plano.....H 2
1 Newton..... I 8
1 Leroy .....H 5
1 Westville.....J 5
1 Lacon .....G 3
1 Virginia.... E 6
1 Laharpe ....D 4
1 Elmwood... F 4
1 Oregon.....G 1
1 Ft. Sheridan.J 1
1 Waverly.....E 6
1 Averyville...F 4
1 Breese.....F 8
1 Keithshurg .D 3
1 Herrin .....G 10
1 River Forest.J 2
1 Athens ..... F 6
1 Bradley.....J 3
1 Chenoa .....H 4
1 Riverton ....F 6
1 Casy..... I 7
1 Wenona.....H 3
1 Bement .....H 6
1 Moweaqua..H 6
1 Washington G 4
1 Eldorado....H10
1 Gilman.....I 4

pears to be a universal formation; and coal and sandstone are found almost everywhere. In the N.W., a mineral district, very rich in lead, &c., extends for 100 m. N. and S. by a breadth of half that distance, communicating with a tract of similar character across the Mississippi. The smelting of lead ore on the banks of Rock river began as late as 1822; it rapidly increased for several years, but the product of that metal is at present reduced to less than 2,000,000 lbs. annually. After lead, iron, copper, coal, salt, and lime are the chief minerals. The coal-field of Illinois (estimated at 37,000 sq. m.) stretches from Mississippi river, near Rock Island, E. toward Fox river, thence S.E. through Indiana, and S.W. into Kentucky, occupying the greater part of Illinois, the S.W. portion of Indiana, and the N.W. part of Kentucky, measuring 375 m. in length from N.W. to S.E., and 200 m. in width from St. Louis eastward—estimated to contain 1,277,500,000,000 tons of coal, being more than 6 times as large as all the coal-fields of Great Britain and embracing one-third of all the coal measures of North America. The coal contains from 35 to 40 per cent. of volatile bituminous matter. Petroleum is found in the N.E. part; zinc ore in the lead district in Jo Daviess co., and sulphur in Jefferson and other counties; copper and iron are also found in various parts. Both above and beneath the coal veins in many localities are thick beds of excellent fire-clay, which are of much manufacturing importance. Kaolin clay is found in Pope and Hardin counties from which fine porcelain is made. There are extensive and valuable beds of limestone in parts of the State, and heavy beds of sandstone occur, which are largely worked for building material. Lead ore is mined near Galena, but the iron ore is not in workable quantity. The salt springs near Shawneetown yield 60 lbs. of salt from 160 gallons of water. Other salt springs, and sulphureous and chalybeate mineral waters, are found in many places. The climate is healthy, except in the marshy tracts along the rivers or elsewhere. The winter is, in most parts, short and mild; and the summer heat not oppressive. Probably no portion of the territory has a mean annual temperature of more than 54° Fahr.; and the mean of the State at large is not above 51°. It is the fourth State of the Union in point of extent, and is supposed to possess the greatest proportion of first-rate cultivable land. —*Agriculture.* All the grains, fruits, and roots of temperate regions grow luxuriantly; and in none of the western States is corn raised with greater facility and in more abundance. Wheat yields a good and sure crop, especially on the banks of the Illinois, and in the north. It weighs upwards of 60 lbs. a bushel, and is preferred in the markets of New Orleans to the wheat of Ohio and Kentucky. The main cereal products in the year 1900 were as follows: corn, 398,149,140 bushels, grown on 8,000,000 acres; wheat, 19,795,728 bushels, on 1,700,000 acres; oats, 180,305,630 bushels, on 4,000,000 acres. Its product of corn surpassed that of Iowa, and largely that of others of the States. In oats also it ranked as the first State, the next in rank being Iowa. In addition to the grains named, there is a considerable product of rye, buckwheat and barley. Hay is a very important crop, tobacco is grown in the southern counties, and there is a broad area devoted to fruit growth and vineyards. There are large grazing interests, and in the production of butter and cheese Illinois ranks high. In the census year Illinois possessed 264,151 farms, being fourth in rank in this particular. They embraced 32,794,728 acres of land, of which about 27,000,000 were improved, being surpassed in cultivated area by only two States in the Union. The total landed valuation was $1,514,174,970; value of buildings, etc., $295,454,000; of live stock $193,758,037. The mineral output was large, the coal mined amounting to 27,331,552 tons.—*Flora and Fauna.* Illinois has a very small proportion of woodland, its main area being unwooded prairie. The general average of woodland to prairie is about 15 per cent. A yellow clay forms the general subsoil, with gravel in some counties. Above this lie drift deposits, of presumably glacial origin, from 10 to 200 feet deep, and overlaid with a surface soil of rich black loam, from 10 to 50 inches deep, and of great fertility. On the river bluffs rests a silicious deposit called *loess;* while from their feet stretch the alluvial river bottoms, with a soil so deep and rich as to be almost inexhaustible. The native flora is very varied, ranging from the cypress and cane of the south to the juniper and tamarack of the north. There are various species of oak, hickory, ash, maple and walnut, in addition to which may be named the catalpa, beech, sassafras, elm, poplar, cottonwood, sycamore, pecan, cucumber, tulip, &c. Wild fruits and berries are numerous. Formerly the country contained great numbers of buffalo, deer, wapiti, bears, wild-cats, wolves, &c., with beaver, otter, mink and muskrat on the streams; but these have largely vanished, while the turkey, prairie hen and quail, once abundant, are now scarce. The rivers and ponds are still visited by wild ducks and geese, rabbits are found in large numbers, and the raccoon and opossum are still hunted.—*Railroads and Canals.* Illinois is admirably situated for commerce, having internally and on her borders over 400 miles of navigable rivers, while by way of Lake Michigan she has navigable connection with the Atlantic. The principal trade of the State has its center in Chicago, while the manufacturing interests, which are extensive, also find their principal center in that city. In the article on Chicago (*q. v.*), statistics concerning them are given. The railroad system of Illinois is on a scale commensurate with its commercial and agricultural advantages. 4,000 miles of railroad were in operation in 1870, 9,383 in 1880, 10,153 miles in 1890, and 11,116 miles in 1900, this State surpassing any other in the Union in its length of railroad lines. In addition there is considerable length of canal, the leading enterprise in this direction being the great drainage canal connecting the Illinois river and Lake Michigan and affording water communication from the Great Lakes to the Mississippi river. (See CANAL.) Cargoes of wheat and other produce can be loaded at the wharves of Chicago and shipped to Europe without breaking bulk, and also to the ports of the Gulf of Mexico.—*Counties and Towns.* The State is divided into the following 102 counties:

Adams,	Fayette,	Lee,	Pulnam,
Alexander,	Ford,	Livingston,	Randolph,
Bond,	Franklin,	Logan,	Richland,
Boone,	Fulton,	McDonough,	Rock Island,
Brown,	Gallatin,	McHenry,	St. Clair,
Bureau,	Greene,	McLean,	Saline,
Calhoun,	Grundy,	Macon,	Sangamon,
Carroll,	Hamilton,	Macoupin,	Schuyler,
Cass,	Hancock,	Madison,	Scott,
Champaign,	Hardin,	Marion,	Shelby,
Christian,	Henderson,	Marshall,	Stark,
Clark,	Henry,	Mason,	Stephenson,
Clay,	Iroquois,	Massac,	Tazewell,
Clinton,	Jackson,	Menard,	Union,
Colcs,	Jasper,	Mercer,	Vermilion,
Cook,	Jefferson,	Monroe,	Wabash,
Crawford,	Jersey,	Montgomery,	Warren,
Cumberland,	Jo Daviess,	Morgan,	Washington,
De Kalb,	Johnson,	Moultrie,	Wayne,
De Witt,	Kane,	Ogle,	White,
Douglas,	Kankakee,	Peoria,	Whitesides,
Du Page,	Kendall,	Perry,	Will,
Edgar,	Knox,	Piatt,	Williamson,
Edwards,	Lake,	Pike,	Winnebago,
Effingham,	La Salle,	Pope,	Woodford.
	Lawrence,	Pulaski,	

The principal cities and towns are Chicago, the leading city in the State; Springfield, the capital; Cairo; East St. Louis; Decatur; Elgin; Freeport; Jacksonville; Joliet; La Salle; Peoria; Quincy; Belleville; Alton; Rockford; Bloomington; Ottawa; Aurora; Rock Island; Galesburg; and Vandalia.—*Education.* The most ample provision is made by the State legislature for a system of free schools, at the head of which is a superintendent of public instruction. The permanent school fund amounts to $10,985,553, yielding an annual income of $635,000, though this is but a small fraction of the amount annually needed for school purposes, this reaching about $15,000,000 yearly. The State possesses about 1,250,000 children of school age, of whom over 850,000 are enrolled, while nearly 25,000 teachers are employed. The public school property is valued at over $30,000,000. It also possesses, as a part of its educational system, three institutions of a higher grade, known as the State Normal University (at Normal), the Southern Normal University (at Carbondale), and the University of Illinois (at Urbana), the latter a semi-industrial insti-

Fig. 1366—THE STATE NORMAL UNIVERSITY.

tution, its primary object being instruction in agriculture and mechanics. This institution has a land grant endowment of 480,000 acres. Cook county maintains a normal school at Englewood, which is of wide repute, and in addition the State has 28 colleges and universities of the liberal arts, 37 endowed academies and seminaries, and a considerable number of special and technical schools. Chief among its institutions is the very liberally endowed University of Chicago. *I.* is prominent for the number and management of her charitable and benevolent institutions for the blind, deaf, dumb, insane and others, possessing a Deaf and Dumb Institution, a Blind Institution and a Central Insane Hospital, at Jacksonville; a Southern, a Northern, and an Eastern Insane Hospital; a Soldiers' Orphans' Home at Normal; an Asylum for Feeble-minded Children at Lincoln; a Soldiers' and Sailors' Home at Quincy; an Eye and Ear Infirmary at Chicago, &c.—*Finances.* The finances of the State are in a very satisfactory condition. There is no outstanding bonded debt except a balance of $18,500 which has ceased to bear interest. There are 220 national banks, with an aggregate capital of $38,671,000, and resources amounting to $240,000,000; while the State banks have $130,000,000 in resources. The savings banks have 103,828 depositors, and deposits amounting to $27,548,277, being an average of $265 to each depositor. There are 177 fire and marine insurance companies, with insurances of $1,110,636,963; while the life insurances amount to $946,411,693.—*Government and Justice.*—The legislative part of the government is vested in a Senate and House of Representatives, meeting biennially, each district returning three members to the lower house, while cumulative voting is permitted in order to provide for the representation of minorities. Twenty-two representatives are sent to the U. S. Congress. The executive duties are discharged by a governor and lieutenant-governor, elected every four years. The high judicial functions are exercised by a supreme court composed of a chief justice and six associate judges. At Springfield, the capital, the corner stone of the State Capitol was laid in 1868. The ground plan of this handsome edifice is in the form of a Greek cross, the architectural order adopted being the Corinthian (*Fig.* 1367). The building is 354 feet long, 240 wide, 95 high, and is surmounted by a dome 83 feet in diameter at base, and ascending to a total height of 254 feet. This building cost several million dollars, and is one of the handsomest of the State capitols.—*History.* Illinois formed a portion of the Northwestern Territory, which comprised three territorial gifts of Massachusetts,

Fig. 1367.—THE STATE CAPITOL.

Connecticut and Virginia, to the U. S., and from which the States of Ohio, Indiana, Illinois, Michigan and Wisconsin were formed. It was organized as a Territory in 1809 and admitted as a State Dec. 3, 1818. The territory embraced had originally belonged to the French, who gave it its name, but was ceded by treaty to the English in 1763, and was captured for the U. S. in 1778 by George Rodgers Clark, who led an expedition from Virginia, to which State it was for a time attached as the county of Illinois. Important historical events have been the Indian wars that followed the Revolution, the Black Hawk war of 1832, and the Mormon troubles in 1840–44. The State has had three constitutions; the one under which it was admitted, a second in 1840, and a third in 1870. It has furnished two Presidents to the Union, Abraham Lincoln and Ulysses S. Grant, than whom America has produced no abler or more distinguished men. *Pop.* (1900) 4,821,550. When admitted in 1818 it had but 34,620 inhabitants.

Illinois Bay'ou, in *Arkansas,* enters the Arkansas river in Pope co.

Illinois City, in *Illinois,* a post-village of Rock Island co.

Illinois Fur'nace, in *Illinois,* a vill. of Hardin co.

Illinois Grove, in *Iowa,* a post-village of Marshall co.

Illinois Riv'er, in *Illinois,* the largest river in the State, is formed in Grundy co. by the union of the Des Plaines and Kankakee rivers, and flowing a general W. and S.W. course, enters the Mississippi river at Grafton, between Jersey and Calhoun cos. During its course it receives several rivers of considerable size, and affords communication between many important cities, towns, and villages, being navigable for steamboats for about 286 miles above its mouth. It is the southwestern outlet of the great Chicago drainage canal. *Length,* exclusive of its branches, about 320 miles.

Illinois River, in *Oregon,* enters Rogue river in Curry co.

Illinois'town, in *California,* a village of Placer co., about 18 m. N.E. of Auburn.

Illinoistown, in *Illinois,* a village of St. Clair co., on the Mississippi river, opposite St. Louis, Mo. Its post-office is EAST ST. LOUIS.

Illiop'olis, in *Illinois,* a post-township of Sangamon co. *Pop.* (1897) about 750.

Illision (*il-lizh'un*), *n.* [Lat. *illisio,* from *illido—in,* and *laedo,* to strike or dash with force against.] Act of striking or dashing into or against.

Illit'eracy, *n.* State of being illiterate, untaught, or unlearned; want of a knowledge of letters; ignorance.

Illit'erate, *a.* [Lat. *illiteratus—in* and *literatus,* learned.] Unlettered; ignorant of letters or books; untaught; unlearned; uninstructed in science.

Illit'erately, *adv.* In an illiterate manner.

Illit'erateness, *n.* Want of learning.

Ill'-judged, *a.* Injudicious; foolish; nonsensical.

Ill'-lived, *a.* Leading a wicked life.

Ill'-looking, *a.* Of a bad appearance; ugly; unsightly.

Ill-man'nered, *a.* Having bad manners; rude; boorish; uncivil; unpolished.

Ill-na'ture, *n.* Evil nature, or temper; crossness; crabbedness; habitual bad temper, or want of kindness; fractiousness.

Ill'-natured, *a.* Evil or bad tempered; cross; crabbed: surly; intractable; of habitual bad temper; peevish; fractious; that indicates ill-nature.

Ill'-naturedly, *adv.* In a peevish or forward manner; crossly; unkindly.

Ill'-naturedness, *n.* Ill-nature; malevolence; malignity.

Ill'ness, *n.* Disease; indisposition; malady; disorder of health; sickness.

Illog'ical, *a.* Not logical; contrary to the rules of logic or sound reasoning; ignorant or negligent of the rules of logic or correct reasoning.

Illog'ically, *adv.* In a manner contrary to the rules of logic or correct reasoning.

Illog'icalness', *n.* The state of being Illogical.

Ill'-omened, *a.* Attended with unfavorable or dismal forebodings; having unlucky omens.

Illora, (*eel-yor'a,*) a town of Spain, in Andalusia, 32 m. from Granada; *pop.* 8,000.

Ill'-sorted, *a.* Not classified in regular order.

Ill'-starred, *a.* Affected or influenced by unlucky stars; fated to be unfortunate.

Ill'-suppressed', *a.* Not fully suppressed; improperly suppressed.

Ill'-tempered, *a.* Of bad temper; morose; crabbed; sour; peevish; fretful.

Ill'-time, *v. a.* To do or to attempt at an unsuitable time.

Ill'-timed, *a.* Done or said at an unsuitable time.

Ill'-treat, *v. a.* To treat ill; to abuse.

Ill'-turn, *n.* An unkind or injurious act.

Ill'ness, *n.* —A slight attack of illness. (Familiar.)

Illude', *v. a.* [Lat. *illudo* — *in,* upon, and *ludo,* to play.] To deceive; to mock; to impose on; to play upon.

Illume', or **Illu'mine,** *v. a.* [Lat. *illumino* — *in,* and *lumino.*] To illuminate; to enlighten. — To throw or spread light on; to make light or bright. — To enlighten, as the mind; to cause to understand. —To brighten; to adorn.

Illu'minable, *a.* That may be illuminated.

Illu'minant, *n.* That which affords light.

Illu'minary, *a.* That relates to illumination; illuminating.

Illu'minate, *v. a.* [Lat. *illumino, illuminatus* — *in,* and *lumino,* from *lumen, luminis,* light.] To light up; to make light; to enlighten; to throw light on; to supply with light; to adorn with festal lamps or bonfires. To enlighten intellectually. — To adorn with ornamented letters, pictures, &c., as books and manuscripts; to illustrate.

Illu'minated, *p. a.* Enlightened; rendered light or luminous. — Illustrated; adorned with ornamented letters and pictures.

Illuminati, (*il-lu-mi-na'ti,*) *n. pl.* [Lat., the enlightened.] (*Hist.*) A name applied to the members of a secret society, founded in 1776, by Adam Weishaupt, professor of canon law at Ingolstadt. The professed object of the society was, by one single tie, to unite men of all countries, in spite of different opinions, religions, and ranks; to instruct all classes; and to surround monarchs with men of integrity, justice, truth, and courage. From the ablest of his law-students, Weishaupt selected apostles for his new scheme. These apostles he called *Areopagists,* and sent to various parts of Europe to work out his new system. Lodges, numbering 1,000 disciples, were established in Bavaria, Suabia, Franconia, Milan, and Holland, before the existence of the society was known at Ingolstadt. The society itself formed a hierarchy consisting of eight grades, exclusive of minor subdivisions; namely, the Novice, the Minerva, the *Illuminatus minor,* the *Illuminatus major,* the Scottish Cavalier, the Priest, the Regent, and the King. Young men were preferred, and Lutherans were taken rather than Catholics. The Baron de Knigge, and Bode, the philosopher, zealously promoted the views of the society, which contained, in its most flourishing condition, 20,000 members. A dispute at length arose between Weishaupt and Knigge, when the latter was deposed, retired to Bremen, and wrote against the Illuminati. In 1785 the whole society was dissolved by order of the Bavarian government. The papers and documents of the leaders were seized in the following year, and Weishaupt fled to Halle, where he died. A new combination, the founder of which was Dr. Bardt, was soon afterwards formed, under the name of the Germanic Union. Although it is doubtful whether this second society ever attained to a perfect organization, it is generally believed that its political intrigues favored and hastened on the French revolution.

Illu'minating, *n.* The act, practice, or art of adorning manuscripts and books with ornamented letters and paintings, which was practised in the mediæval ages prior to the introduction of printing. Illuminating was generally executed by the monks, almost every monastery having a *scriptorium,* or writing-room, in which copies of the Scriptures and other works were made with great labor, neatness, and care, and afterwards ornamented with pictures and devices in gold and colors. The colors employed by the artists were extremely brilliant, and the general effect was heightened by the introduction of gold and silver leaf, which was highly burnished. The initial letters and ornamental borders are generally very elaborate, and executed with great skill and taste; and although the figures are for the most part stiff and formal, the expression of various passions is frequently conveyed with great force and correctness, and the portraits of eminent persons, particularly those which were executed between the 5th and 10th centuries, are often extremely good. The illuminations that were executed in the 11th, 12th, and 13th centuries are not so carefully drawn and colored, nor do they evince so much artistic skill, as those of an earlier period, but from the commencement of the 14th century to the introduction of printing, they show considerable improvement in style and execution. The figures in the Bayeux tapestry (see BAYEUX TAPESTRY) may be taken as a fair specimen of the manner in which the human form and other objects were rendered by mediæval artists. The illuminators, and the art itself, were said by Felton to borrow their titles "from the illumination which a bright genius giveth to his work." Illumination was practised by the Romans, as Pliny mentions in his "Natural History," book xxv. ch. 2 — a biographical work, written by Varro, which included the lives of 700 Romans of eminence, and was enriched with portraits executed by the author himself. Illuminated works are of great value to the archæologist and historian, as they show the manners, customs, and habits of the ancients, and the various nations of Europe, to the close of the 15th century, in matters ecclesiastical, military, and civil; and they afford illustrations of the various implements, utensils, armor, and weapons, that were used by them, as well as the prevailing style of architecture of the period. They are also of the greatest use in illustrating and explaining many important points which relate to the history of the times in which they were respectively drawn. Many valuable specimens of illuminated manuscripts are preserved in all the principal libraries of Europe. Since the revival of Gothic architecture, and the introduction of mediæval ornamentation into our churches, the illumination of scrolls with texts of Scripture, for decorative purposes in connection with churches, schools, &c., and a variety of ornamental work, has become a fashionable amusement, and affords easy and lucrative employment to many who practise it. Handbooks for instruction in the art, which is similar in its style and method of execution to heraldic painting and painting in body-colors, with boxes of colors and liquid gold and silver, prepared for the purpose, may be obtained from any bookseller or artist's colorman.

Illu'minator, *n.* [L. Lat.] He who or that which illuminates or gives light. — One who decorates manuscripts and books with ornamented letters, &c.

Illumina'tion, *n.* [Lat. *illuminatio.*] Act of illuminating or rendering luminous; the act of supplying with light; act of illuminating a house or city by artificial lights, or the state of being thus rendered light; that which gives light; brightness; splendor. —Infusion of intellectual or spiritual light; inspiration. —The act, art, or practice of adorning manuscripts and books with ornamental letters and pictures. See ILLUMINATING.

(*Applied Chemistry.*) All artificial light is obtained as a result either of combustion or of incandescence; or it may be more accurate to classify illuminating agents as those which emit light as a result of chemical action, and those which glow, from the presence of a large amount of heat, without thereby giving rise to any chemical change. The materials whence artificial light of the nature of flame has been derived are principally bodies rich in carbon and hydrogen. Wax, fats and oils, on exposure to a certain amount of heat, undergo destructive distillation, evolving inflammable gases; and it is really such gases that are consumed in the burning of lamps and candles, the wicks bringing small proportions of the substances into a sufficient heat. Wood and coal also, when distilled give off combustible gases; and ordinary gas-lighting only differs from illumination by candles and lamps, in the gas being stored up and consumed at a distance from the point where it is generated. Inflammable gas is formed in great abundance within the earth in connection with carbonaceous deposits, and has been very largely emitted from wells dug for petroleum. This natural gas is extensively employed in the petroleum regions as an illuminant, as well as for power production, but there are strong indications that its use will be only temporary, some of the deposits being already practically exhausted. Artificial gas is now distilled from a variety of substances, among which are coal, lignite, petroleum, turf, wood, resins, oils and fats; and it is also prepared by carbureting or impregnating with volatile hydrocarburet other non-luminiferous gases. Petroleum being a substance obtained in great abundance, chiefly in this country, is now used everywhere to a considerable extent as an illuminating agent. The processes involved in the preparation, distribution and consumption of coal gas, still remain essentially the same as when the system was first elaborated; but in all details of the industry numerous improvements have been introduced, resulting in marked economy and efficiency of the system. Were coal gas to cease to be made primarily and principally for artificial illumination, and to become more a heating and cooking agent, it is certain that the manufacturing process would be very materially modified. Costly cannel-gas, with its high illuminating power, is not better suited for motive power than common gas; and for heating purposes a much greater yield of gas might be obtained, which, in burning, would evolve more heat than is sought in making illuminating gas. When it is considered how exceedingly small is the total proportion of illuminants in coal gas to the bulk of the material dealt with, it is not difficult to imagine that modification of processes may be devised, whereby a great increase of lighting effect might be practically available. It may be regarded as already demonstrated that for busy thoroughfares—almost, it may be said, for open air lighting generally—and for large halls and enclosed spaces, electric lighting will, in the near future, supersede gas. The advantage of electric light for such places, in brilliancy, penetration and purity, are so manifest, that its use must ultimately prevail, irrespective of the question of comparative cost, and of the fact that municipalities and wealthy corporations have an enormous pecuniary stake in gas property. In regard to domestic illumination the incandescent electric light has not as yet been widely adopted, and may perhaps be superseded by new gas-burning processes, such as the Welsbach light, which has replaced the electric light in many places. The remarkable powers of illumination possessed by acetylene gas also promise to play their part in future light-giving, if the danger attending the use of this substance can be overcome. Electric lights based on new principles also are likely to come into use, employing a current which is made and broken with immense rapidity, or the glow of a fluorescent material under electric stimulation. See LIGHTING.

Illu'minative, *n.* [Fr. *illuminatif.*] Having the power of illuminating or giving light.

Illu'sion, *n.* [Fr., from Lat. *illusio,* from *illudo*—*in,* and *ludo,* to play, to sport, to deride.] A mocking or unreal vision; dream; mockery; deception; delusion; hallucination; vision; phantasm. (*Illusion* is used of the senses; *delusion,* of the mind.)

Illu'sionist, *n.* One given to illusion.

Ill'usive, *a.* Deceiving by false show; deceitful; fallacious; illusory.

Illu'siveness, *n.* Quality of being illusive; deception; false appearance.

Illu'sory, *a.* [Fr. *illusoire,* from L. Lat. *illusor,* a mocker, from Lat. *illudo, illusus.*] Deceiving or attempting to deceive by false appearances; fallacious.

Illus'trate, *v. a.* [Lat. *illustro, illustratus,* from *illustris*—*in,* and *lustro,* to enlighten, from *lustrum,* from *luceo,* to shine.] To light up; to make clear, bright or luminous; to brighten; to make glorious, or to display the glory of; to explain or elucidate; to make clear, intelligible, or obvious.—To explain and adorn by means of pictures, drawings, &c.

Illus'trated, *p. p.* Made bright or glorious; explained; elucidated; made clear to the understanding. —Explained by means of pictures, &c.

Illustra'tion, *n.* [L. *illustratio.*] Act of illustrating, or rendering bright or glorious.—Explanation; elucidation.

(*Printing.*) Specifically, an engraving or picture, made to embellish or illustrate a book. It is not enough to say that since an early period man has illustrated his written thoughts with pictures of the things described. It is nearer correct to say that in the earliest period he wrote his thoughts only in pictures, and that from these the existing methods of writing slowly emerged. Each letter of the alphabet was originally a picture, and we can trace the development of writing from the grouped drawings of savage tribes, the more developed picture writing of the Mayas of Central America, and the modified pictures of the Egyptian hieroglyphics, down to the modern alphabet, from whose symbols every semblance of a pictorial illustration has departed. But the old taste for pictured thought has not gone. From the times of the papyrus down, pictures, engravings, carvings, &c., have testified to man's love for illustration. The illumination of manuscripts, so common in the mediæval period, was but a method of supplying this want. (See ILLUMINATING.) The first printed books partook of the nature of wood-cuts, pictures and text both being printed from blocks engraved in relief. The first edition of the *Speculum Humanæ Salvationis,* said to have been printed about 1440, is supposed to be the first book in which two different-colored inks were used on the same page. Beautiful specimens of printing in two colors are seen in the ornamental capitals of the *Psalter* of Faust and Schöffer, of 1457. The *Fables* of Ulrich Bohner, issued in 1461, and illustrated with 101 engravings on wood, is believed to be the first book with wood-cuts used with the text. Other illustrated books from the same period exist, and in 1477 was issued the first book with illustrations engraved in intaglio on metal (*Il Monte Santo di Dio*). About the middle of the 16th century engraved plates and wood engravings began to be used in the same book, and at a later date wood engraving declined and etching and metal engraving took the lead. Colored illustrations, though usually colored by hand, were sometimes produced by means of carefully made wood blocks, each printing a different color. The invention of lithography, in 1796, introduced a new method of illustration, whose cheapness brought it into vogue in place of steel engraving, while its adaptability for colored work was an important factor in its favor. The revival of wood engraving by Bewick and his pupils led in time to a restoration to favor of that method of illustrating, and it held its own until within the recent period when the photogravure and half-tone processes now in vogue were introduced, whose cheapness and photographic accuracy of detail threaten to render obsolete steel and wood illustration alike. The half-tone illustrations, however, cannot be successfully printed except upon paper having a high finish, and the best of them are likely to be more or less indistinct as to detail; while the "direct" reproductions, from pen drawings, are seldom as clean as wood engravings. For certain purposes, therefore, the old style of hand engraving is still required. See ENGRAVING, PHOTO-.

Illus'trative, *a.* Having the quality of elucidating and making clear what is obscure; having the quality of rendering glorious, or of displaying glory.

Illus'trator, *n.* [L. Lat.] One who illustrates or makes clear.—One who makes or furnishes illustrations.

Illus'tratory, *a.* Illustrative.

Illus'trious, *a.* [Lat. *illustris*—*in* and *lustro*; Fr. *illustre.*] Conspicuous; distinguished by the reputation of greatness; renowned; eminent; exalted; celebrated; noble; conferring honor or renown; manifesting glory or excellence; glorious. —A title of honor.

Illus'triously, *adv.* Conspicuously; nobly; eminently; with dignity or distinction; gloriously; in a way to manifest glory.

Illus'triousness, *n.* Quality of being illustrious; eminence of character; greatness; grandeur; glory.

Ill'-will, *n.* Unkind or hostile feeling; enmity; malice; hatred; malevolence.

Ill'-wisher, *n.* One who wishes evil; an enemy.

Illy'ria, ILLY'RIS, ILLYA'ICUM, a name anciently applied to all the countries on the E. coast of the Adriatic. In the 4th cent. B. C., the northern portions of Illyria were visited by the Gauls, who expelled the natives, and drove them to the south. Philip II., king of Macedon, waged war with the Illyrians B. C 359; and the Romans sent an army against them, and compelled them to sue for peace, B. C. 232. The second Illyrian war commenced B. C. 229, and also terminated in favor of the Romans. The Dalmatæ revolted from the Illyrians B. C. 180, and formed the independent state of Dalmatia, *q. v.*; and the remaining country was reduced into a Roman province by L. Anicius B. C. 168. It became an imperial province B. C. 11. Dalmatia, Carniola, and some neighboring countries, received the name of Illyrian Provinces by a decree issued by Napoleon I., Oct. 14, 1809. In 1815, these provinces were united as a kingdom to the Austrian empire, and some alterations were made in its boundaries, especially by the restoration to Hungary of what had formerly belonged to it, and the annexation of the whole of Carinthia instead. The kingdom was divided into the two governments of Laibach and Trieste, Laibach being the cap.: which arrangement existed till 1849, when it was subdivided, for administrative purposes, into the duchies of Carinthia and Carniola, and into the coast district, containing the territory of Trieste, and the counties of Görz, Gradiska, and Istria.

Illyria, (*il-lir'i-a,*) in *Iowa*, a post-township of Fayette co.

Ilm, a river of Prussia, rising on the N.E. slope of the Thuringerwald, in Saxony, and after a course of 60 m., falling into the Saale at Sulza.

Il'men, a lake of European Russia, near the W. border of Novgorod. It is 33 m. long, with a breadth of 28. It receives numerous streams, and, by the Volkhov, discharges into Lake Ladoga.

Ilmenoru'tile, *n.* (*Min.*) A var. of *Rutile*, q. v., containing titanic acid 89·3, oxide of iron 10·7.

Ilori, ILORIN, ALORI, a large town of Africa, the great centre of the Fulbe, in Yoruba; Lat. 8° 30′ N., Lon. 4° 33′ E.; 46 m. S.W. of the banks of the Niger, and about 150 m. N.E. from the shores of the Bight of Benin.

Ilovla, (*e'love-la,*) a river of Russia in Europe, rising in the N.W in the govt. of Saratov, and after a course of 200 m., falling into the Don at Fort Donskain.

Ilus, fourth king of Troy, son of Tros by Callirhoe. He extended and embellished his city, called Ilium, and also Troy, after his father *Tros*. Jupiter gave him the Palladium, a celebrated statue of Minerva, and promised that so long as it remained in Troy, the city would remain impregnable. When the temple of Minerva was in flames, Ilus rushed into the middle of the fire to save the Palladium. For this action he was deprived of his sight by the goddess; but subsequently recovered it. He is said to have reigned between 1402 and 1347 B. C.

Il'vaite, *n.* [From the Latin name of *Elba*, where it was first found.] (*Min.*) It is a brittle, iron-black mineral, having a *sp. gr.* of 3·7–4·2, and composed of silica 32·8, sesquioxide of iron 23·4, protoxide of iron 31·5, lime 12·3.

Im'age, *n.* [Fr. *image*; Lat. *imago*, akin to *imitor*, to imitate, *similis*, like, and Gr. *homos*, one and the same, from Sansk. *sama*, like, equal. See SAME.] An imitation or copy of anything; a likeness; a representation or similitude of any person or thing formed of a material substance.—A statue; an idol; the representation of any person or thing that is an object of worship.—A picture; a resemblance painted; any copy, representation, or likeness; appearance.

—An idea; a conception; a picture drawn by fancy.

(*Optics.*) The spectrum, or appearance of an object made by reflection or refraction. "The brightness of an image depends evidently on the quantity of light concentrated on each point. Setting aside the effects of aberration, the brightness must therefore be proportional to the apparent magnitude (as seen from the object, or the mirror or lens by which the rays are reflected or refracted, multiplied by the area of the object, and divided by the area of the image. But the apparent magnitude of the lens, as seen from the object, is proportional to the square of the diameter of the lens divided by the square of the distance of the object; and the area of the object divided by the area of the image is equal to the square of the distance of the object divided by the square of the distance of the image from the lens; therefore the brightness of the image is proportional to the square of the diameter of the lens divided by the square of the distance of the image from the lens; that is to say, the brightness, or degree of illumination, of the image depends only on the apparent magnitude of the lens, as seen from the image, and not in any way on the distance of the object." For this reason certain stars are rendered visible by the aid of large telescopes, and are perfectly invisible when a smaller one is used.

(*Rhet.*) Although somewhat loosely used, this term appears generally to denote a metaphor dilated, and rendered a more complete picture by the assemblage of various ideas through which the same metaphor continues to run, yet not sufficiently expanded to form an allegory.

—*v. a.* To represent or form an image of; as, a person's face *imaged* in a mirror.—To form a likeness of in the mind; to copy by the fancy, or from memory; to imagine.

"And *image* charms he must behold no more."—*Pope.*

Im'ageable, *a.* Imaginable; that may be imagined.

Im'ageless, *a.* Without an image. (R.)

Im'agery, *n.* Sensible representations, pictures, statues; imitation-work.

"An altar carv'd with cunning *imagery*."—*Faërie Queene.*

False appearance; unreal show.

"What can thy *imagery* of sorrow mean?"—*Prior.*

—Forms of the fancy; false ideas; imaginary phantasms.

"The *imagery* of a melancholic fancy, such as musing men mistake for a reality."—*Atterbury*

—Lively descriptions in writing or speaking, which impress the images of things on the mind; figures in oratory or discourse.

"I wish there may be in this poem any instance of good *imagery*."—*Dryden.*

Im'age-worship, *n.* Idolatry; worship of images or symbolic representations.

Imag'inable, *a.* [Fr. See IMAGINE.] That may, or can be, imagined or conceived.

Imag'inableness, *n.* State or condition of being imaginable.

Imag'inably, *adv.* In an imaginable manner.

Imag'inal, *a.* Imaginative; partaking of imagination.—Using rhetorical imagery.

Imag'inarily, *adv.* In an imaginary manner.

Imag'inariness, *n.* State or quality of being imaginary.

Imag'inary, *a.* [Fr. *imaginaire*; Lat. *imaginarius*, from *imago.*] Existing only in imagination or fancy; ideal; fanciful; unreal.

"*Imaginary* ills and fancied tortures."—*Addison.*

Imaginary quantity. (*Algeb.*) The even root of a negative quantity, or the imaginary results of some impossible operation. By infinite series, and continued fractions, it can be easily proved that—

$$\sqrt{x^2-1} = x - \frac{1}{2x} - \frac{1}{8x^3} - \frac{1}{16x^5} - \&c.;$$

where, if $x = \pm 0$, we shall have $\sqrt{-1} = \pm 0 \mp \frac{1}{0}$ &c.,

to which no definite arithmetical meaning can possibly be attached; and, consequently, $\sqrt{-1}$ cannot be assigned, and not even an approximation can be made to its value. This circumstance shows, that, though $\pm\sqrt{-1}$ may have arisen from the generalizations of symbolical algebra, the origin and meaning must be looked for in other quantities than numbers; for in *arithmetic*, considered without reference to its *applications*, every *inverse* operation implies the previous performance of the corresponding *direct* operation; and therefore *surd* quantities, whereof the arithmetical values can never be *exactly* ascertained, have their origin in the application of arithmetic to geometry. Although imaginary quantities have no real value, yet they are of important aid in the higher parts of mathematical analysis, as they indicate a marked distinction between quantities which have no natural or necessary dependence on each other.

Imagina'tion, *n.* [Fr.; Lat. *imaginatio.*] (*Phil.*) A term used in various significations. According to Dr. Reid, imagination, in its proper sense, signifies a lively conception of objects of sight, being distinguished from conception as a part from a whole; and Addison says that "the pleasures of imagination are such as arise from visible objects, since it is the sense of sight that furnishes the imagination with its ideas." Others, however, employ the word in a much wider signification: some, as synonymous with *fancy*; others, as denoting generally that faculty of the human mind by which thoughts or ideas are produced at will. Philosophers have divided imagination into two kinds,—the reproductive and the productive. By the former, they mean imagination considered simply as reëxhibiting or representing the objects presented by perception, that is, exhibiting them without addition or retrenchment, or any change in the relations which they reciprocally held when first made known to us through sense. The productive or creative imagination is that which is usually signified by the term imagination or fancy in ordinary language. According to W. Hamilton, "imagination, in the common acceptation of the term, is not a simple, but a compound faculty—a faculty, however, in which representation—the vivid exhibition of an object—forms the principal constituent. The reproductive imagination is not a simple faculty; it comprises two processes: first, an act of representation, strictly so called, and secondly, an act of reproduction arbitrarily limited by certain contingent circumstances; and it is from the arbitrary limitation of this second constituent that the faculty obtains the only title it can exhibit to an independent existence." In like manner, "the imagination of common language—the productive imagination of philosophers—is nothing but the representative process *plus* the process; to which I would give the name of the comparative." The imagination represents ideas in three principal orders: 1. The natural order, that in which we receive the impressions of external objects, or the order according to which our thoughts spontaneously group themselves. 2. The logical order, presenting what is universal prior to what is contained under it as particular, or presenting the particular first, and then ascending to the universal which they constitute. 3. The poetical, which consists in seizing individual circumstances, and grouping them in such a manner that the imagination shall represent them so as they might be offered by the sense. There are different kinds of imagination, as there are different kinds of intellectual activity. There is the imagination of abstraction, the imagination of wit, the imagination of judgment, the imagination of reason, the imagination of feeling, and the imagination of the passions.

Imag'inative, *a.* [Fr. *imaginatif.*] Formed by the imagination; characterized by the workings of the imagination; as, *imaginative* composition—Full of imagery; fantastic; fanciful; as, an *imaginative* mind.

Imag'inativeness, *n.* State of being imaginative.

Imagine, (*im-aj'in,*) *v. a.* [Fr. *imaginer*; Lat. *imaginor*, from *imago*, an image.] To picture to one's self; to fancy; to conceive; to form a notion or idea of in the mind; to form, as ideas or representations, in the mind by modifying and combining our conceptions; to produce by the imagination.

—To contrive in purpose; to scheme; to machinate.

"He . . . exhausted worlds, and then *imagined* new."—*Johnson.*

—To think; to believe; to suppose; to deem; to inly represent to one's self.

—*v. n.* To conceive; to devise; to form a mental design or conception.—To have a notion or idea; to opine; to infer; to suppose; to think; as, from what I hear I should *imagine* he's in the right.

Imag'iner, *n.* One who forms ideas; one who devises or contrives.

Ima'go, *n.* [Lat., an image.] (*Physiol.*) The last and adult state of insect life, *i. e.*, the third and perfect state

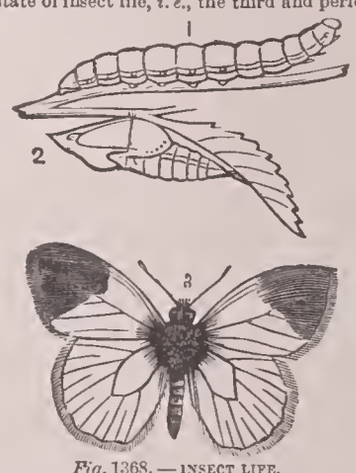


Fig. 1368.—INSECT LIFE.
1, larva; 2, pupa; 3, imago or perfect insect.

of insects (3, Fig. 1368), when they appear in their proper shapes and colors, and undergo no more transformations.

Imaum', Imam', Iman', *n.* [Ar. *imâm.*] Among the Moslems, a priest who performs the daily religious service of the mosque.—In some Oriental countries, a Mohammedan sovereign who rules both spiritually and temporally; as, the *imaum* of Muscat.

Imbalm', *v. a.* See EMBALM.

Imban', *v. a.* To utter the ban of civil excommunication. (R.)

Imband', *v. a.* To form or enroll into a band or bands; as, an *imbanded* people.

Imbank', *v. a.* Same as EMBANK, *q. v.*

Imbank ment, *n.* See EMBANKMENT.

Imban'nered, *a.* Displaying banners.

Imbar'go, *n.* See EMBARGO.

Imbark', *v. a.* Same as EMBARK, *q. v.*

Imbase', *v. a.* See EMBASE.

Imbathe', *v. a.* To bathe all over. (Used poetically.)

Imbead', *v. a.* To fasten or secure with a bead.

Imbecile, (*im-be-sēl',*) *a.* [Fr. *imbécile*; Lat. *imbecillus*—*in.* and *bacillum*, a small staff, dim. of *baculum*; Gr. *baktron*, a staff, from *bāō, bainō*, to go.] Weak; feeble; infirm; impotent; destitute of strength, either of body or mind; decrepit.

—*n.* One without strength, either physically or mentally.

Imbecil'itate, *v. a.* To weaken; to enfeeble; to debilitate.

Imbecil'ity, *n.* [Lat. *imbecillitas*; Fr. *imbécillité.*] Want of strength; weakness; feebleness of body or mind; decrepitude.

(*Law.*) The state of a person who, although not positively non compos, or insane, is yet of such great weakness of mind as to be unable to guard himself against imposition, or to resist importunity or undue influence. (Story's *Equity Jurisprudence.*) Equity will not set a contract aside on the mere ground of imbecility; but its existence affords a material ingredient in examining whether it has been obtained fraudulently or by undue influence. The same principle prevails in the Civil Law, and in the Scottish and other systems founded on it.—See LUNACY.

Imbed', *v. a.* [*In* and *bed.*] To sink, lay, or place in a mass of earth, sand, or other substance, as in a bed.

Imbez'zle, *v. a.* Same as EMBEZZLE, *q. v.*

Imbibe', *v. a.* [Lat. *imbibo*—*in.* and *bibo*, to drink. See BIBULOUS.] To drink in; to absorb, as moistnre; as, the earth *imbibes* rain, man *imbibes* punch—To admit into the mind, and retain; as, to *imbibe* errors.

"It is not easy for the mind to put off those confused notions and prejudices it has *imbibed* from custom."—*Locke.*

Imbib'er, *n.* The person who, or thing which, imbibes.
Imbibition, (*-bish'un,*) *n.* [Fr.] The absorption of a liquid into the pores of a solid. Much importance has been attributed to this property as belonging to the organic tissues, and as affecting their functions.
Imbit'ter, *v. a.* To make bitter; hence, to make unhappy; to render grievous or distressing.
"Let them extinguish the passions which *imbitter* their lives." *Addison.*
—To exasperate; to make more severe, poignant, painful, violent, or malignant; as, *imbittered* political antagonists.
Imbit'terer, *n.* The person who, or thing which, imbitters.
Imblaze', *v. a.* See EMBLAZE.
Impla'zon, *v. a.* Same as EMALAZON, *q. v.*
Imbod'y, *v. n.* See EMBODY, the more common spelling.
Imbold'en, *v. a.* See EMBOLDEN.
Imbor'der, *v. a.* Same as EMBORDER, *q. v.*
Imbosk', *v. a.* [It. *imboscare*, to lay in wait for. See BOSCAGE.] To hide; to conceal; to shelter, as in a husb or thicket.
Imbos'om, *v. a.* To hold in the bosom; to cover fondly with the folds of one's garment; hence, to hold in nearness or tender intimacy; to receive into one's affection.
"Glad desire, his late *imbosomed* guest." — *Sidney.*
—To place in the midst of; to surround; to inclose; to environ; to envelop.
"Villages *imbosomed* soft in trees." — *Thomson.*
Imboss', *v. a.* See EMBOSS.
Imbow', *v. a.* Same as EMBOW, *q. v.*
Imbow'el, *v. a.* See EMBOWEL.
Imbow'er, *v. a.* and *n.* See EMBOWER.
Imbox', *v. a.* To lodge or deposit in a box.
Imbran'gle, *v. a.* To entangle; to mix or mingle in confusion. (R.)
Im'bricate, Im'bricated, *a.* [Lat. *imbricatus — imbrex, imbricis*, a gutter-tile, from *imber*, heavy rain.] Bent and hollowed like a roof or gutter-tile.
(*Bot.*) A term used in speaking of the arrangement of bodies, to denote that their parts lie over each other in regular order like the tiles upon the roof of a house, as, for example, the scales upon the cup of some acorns: also applied in speaking of the æstivation of petals or leaves, to denote that they overlap each other at the margin without any involution.
Imbrica'tion, *n.* [L. Lat. *imbricatio.*] A concave indenture, like that of tiles; an overlapping, as seen in tiling.
Im'brieative, *a.* (*Bot.*) Having imbrications.
Imbroca'do, *n.* A term formerly given to cloth brocaded in gold or silver.
Imbroglio, (*im-brōl'yo,*) *n.* [It., a broil.] A complicated or tangled state of things; contention; embarrassment; confusion.
(*Dram.*) A close, intricate, and exciting plot, or that portion of the plot which immediately precedes the catastrophe.
Imbrown', (sometimes written EMBROWN,) *v. a.* To make brown or dusky; to obscure; — hence, by implication, to tan; to darken the color or complexion of; as, a sun-*imbrowned* face.
"The mountain mass by scorching skies *embrowned*." — *Byron.*
Imbrue', *v. a.* [O. Fr. *embreurer*, to moisten, to bedew; Fr. *breuvage*, drink, potion; L. Lat. *beveragium*, from Lat. *bibere*, to drink.] To wet or moisten; to soak; to steep; to drench in a fluid, chiefly in blood.
"Lo! these hands in murder are *imbrued*." — *Prior.*
Imbrue'ment, *n.* Act of imbruing.
Imbrute', *v. a.* [It. *imbrutire.*] To brutalize; to bring into a brutal or inhuman state.
"This essence to incarnate and *imbrute*." — *Milton.*
—*v. n.* To descend or sink to a level with brutes.
"The soul . . . by contagion, imbodies and *imbrutes*." — *Milton.*
Imbue', *v. a.* [Lat. *imbuo — in*, and root *bi*, whence *bibo*, to drink. See BIBULOUS.] To tinge or stain deeply; to dye, as clothes.
—To tincture deeply; to cause to imbibe, as the mind; as, to be *imbued* with prejudices.
Imbue'ment, *n.* A deep dye or tincture.
Imeritia, (*im-e-rē'te-a,*) a province of Russia, now included in Kutais. It stretches along the southern limit of Caucasus, having the Black Sea on the west, and Georgia on the east. *Desc.* Very uneven and rugged, being traversed by ramifications of the Caucasus. *Rivers.* The Rioni and its tributaries. *Prod.* Wheat, maize, barley, tobacco, madder, and hemp. The climate being delightful, fruits grow spontaneously, and cherries, apricots, chestnuts, and walnuts spring up in every direction. The vine, also, is said to grow spontaneously. Considerable attention is paid to the rearing of bees and silkworms. *Manuf.* Unimportant; and the trade is wholly in the hands of Armenians, Greeks, and Jews. *Pop.* about 80,000. — In the 14th century, this province formed a part of the kingdom of Georgia; but afterwards became independent, and was governed by its own sovereigns, one of whom, in 1804, voluntarily made it over to Russia.
Imitabil'ity, *n.* State or quality of being imitable.
Im'itable, *a.* [Fr.; Lat. *imitabilis.*] That may be imitated or copied.
—Worthy of copy; deserving of imitation; as, *imitable* qualities."
Im'itableness, *n.* Imitability; state, condition, or quality of being imitable.
Im'itate, *v. a.* [Fr. *imiter*; Lat. *imitor, imitatus*; root *im*, or *sim*, whence *imago*, image, and *similis*, like. See IMAGE and SIMILAR.] To copy; to endeavor to bit off, as the manners, peculiarities, &c., of another person; to portray from as a pattern or model to follow; to study from, as an example.
"Nature's journeyman . . . *imitated* humanity so abominably." *Shaks.*
—To copy in form, color, or quality; to attempt or endeavor to copy or resemble; to mimic; to counterfeit.
"I would carcss some stable man of note,
And *imitate* his language and his coat." — *Man of Taste.*
—To produce or put forward as a counterfeit resemblance.
"That (haud) sustaiu'd an *imitated* shield." — *Dryden.*
—To pursue as the course of composition, so as to use like images and examples.
"For shame! what, *imitate* an ode!" — *Gay.*
Imita'tion, *n.* [Fr.; Lat. *imitatio.*] Act of imitating, or of following in manner, or of copying in form; act of making the similitude of anything, or of attempting a resemblance.
"Poetry is an art of *imitation*." — *Sidney.*
—That which is made and presented as a copy; likeness; resemblance; a counterfeit; as, "true *imitations* of nature." — *Dryden.*
(*Mus.*) A species of composition in which each part is made to imitate the others. Sometimes the motion or figure of the notes only is imitated, and frequently by a contrary motion, making what is called a *retrograde imitation*, or *imitazione cancherizante.* Imitation is subject to less strict form and rule than fugue.
Imita'tional, *a.* Used in the practice or process of imitation; as, *imitational* faculties.
Im'itative, *a.* [Fr. *imitatif.*] That imitates; inclined to follow in manner; aiming at resemblance; that is used in the business of forming resemblances; as, painting is our *imitative* art, man is our *imitative* being. — Formed after a pattern, example, model, or original, as manner.
"This temple . . . *imitative* of the first in Thrace." — *Dryden.*
Im'itativeness, *n.* The imitative quality.
Im'itator, *n.* [Lat.; Fr. *imitateur.*] One who imitates or follows in manner or deportment; one who copies or attempts to make the resemblance of anything.
"*Imitators* are but a servile kind of cattle, says the poet." *Dryden.*
Im'itatorship, *n.* State or condition of one who imitates.
Im'itatress, Im'itatrix, *n.* A female imitator.
Im'lay, in *Michigan*, a post-township of Lapeer co., 50 m. N. of Detroit. *Pop.* (1897) about 2,750.
Im'laystown, in *New Jersey*, a post-village of Monmouth co., 14 m. S.E. of Trenton. *Pop.* (1897) about 180.
Immac'ulate, *a.* [Lat. *immaculatus — in*, and *maculatus*, from *macula*, a spot; Fr. *immaculé.*] Without spot or blemish; pure; unstained; undefiled.
"His love sincere, his thoughts *immaculate*." — *Shaks.*
—Untainted with deleterious matter; limpid; pure.
"Thou clear, *immaculate*, and silver fountain." — *Shaks.*
I. Conception. (*Eccl. Hist.*) The dispute respecting the Immaculate Conception of the Virgin Mary commenced about 1140, the Franciscans supporting and the Dominicans contending the dogma that the mother of our Saviour was free from the taint of original sin. In 1384 the discussion was revived at Paris by the Dominican John de Montesono, and having been continued with great bitterness, resulted in the exclusion of the Dominicans from the university in 1389. It also occasioned great discussion during the pontificates of Paul V. (1605–1621), of Gregory XV. (1621–1623), and of Alexander VII. (1655–1667). Pius IX. wrote letters on the subject, Feb. 2, 1849, and May 20, 1850; and it was made an article of faith of the Romish Church by a bull promulgated Dec. 8, 1854.
Immac'ulately, *adv.* With spotless purity.
Immac'ulateness, *n.* Unblemished purity; chastity.
Immal'leable, *a.* [*im* and *malleable.*] Not malleable, incapable of extension by being beaten out with a hammer; as, *immalleable* iron.
Immanacle, (*-măn'a-kl.*) *v. a.* To fetter with manacles; to gyve; — hence, to curb or restrain, as the will.
"This corporal rind thou hast *immanacled*." — *Milton.*
Im'manence, Im'maneney, *n.* State or condition of being immanent; intrinsicalness; inherence. (R.)
Im'manent, *a.* [Fr. *immanent*, from Lat. *immanere*, to remain near.] Inherent; indwelling; intrinsic; internal or subjective; — correlative to *emanent*, or transitive.
"A cognition is an *immanent* act of mind." — *Sir W. Hamilton.*
Imman'ity, *n.* [Lat. *immanitas.*] Barbarity; savagery; atrocity; as, "*immanity* and bloody strife." *Shaks.*
Imman'uel, *n.* Same as EMMANUEL, *q. v.*
Immar'ginate, *a.* (*Bot.*) Without a margin, rim, or border.
Immate'rial, *a.* [Fr. *immatériel.*] Not material; not consisting of matter; incorporeal; unsubstantial; spiritual.
"Spirit is *immaterial* mind." — *Davies.*
—Without weight or moment; of no essential consequence; trifling; insignificant; unimportant; as, it is quite *immaterial* whether he comes or not.
Immate'rialism, *n.* [Fr. *immatérialisme.*] The doctrine of the non-existence of matter, and that all being may be reduced to mind and ideas in the mind.
Immate'rialist, *n.* One who professes the doctrines of immaterialism; a believer in spiritualism.
Immaterial'ity, *n.* [Fr. *immatérialité.*] State or quality of being immaterial, or not consisting of matter; destitution of matter; spiritualism; incorporeity.
Immate'rialize, *v. a.* [Fr. *immatérializer.*] To make immaterial; to divest of material properties; to render incorporeal; as, "*immaterialized* spirits." — *Glanville's Scepsis.*
Immate'rially, *adv.* In a manner not depending on matter; without matter. — In a manner irrelevant or unimportant.
Immate'rialness, *n.* State of being immaterial, or distinct from matter; immateriality; incorporeity.
Immature', **Immatured',** *a.* [Lat. *immaturus — im* for *in*, and *maturus.* See MATURE.] Not mature or ripe; crude; crass; imperfect; not brought to a complete state; as, *immatured* knowledge. — Premature; hasty; too early; before the fit or natural time.
"We call not that death *immature*, if a man lives till seventy." *Taylor.*
Immature'ly, *adv.* Too soon; prematurely; crudely; before ripeness or completion; in advance of the natural time.
Immature'ness, Immatu'rity, *n.* [Lat. *immaturitas.*] State or quality of being immature; unripeness; incompleteness.
"Faults committed in an *immaturity* of age and judgment." *Granville.*
Immeabil'ity, *n.* [Lat. *im* for *in*, and *meabilis*, passage.] Want of the power of passage; incapability of allowing passage; as, "*immeability* of the juices." *Arbuthnot.*
Immeasurable, (*im-mĕzh'ur-a-bl,*) *a.* That cannot be measured; infinite; illimitable; immense; indefinitely vast or extensive.
"They view'd the vast *immeasurable* abyss." — *Milton.*
Immeas'urableness, *n.* State of being beyond all measure; condition of being incapable of measurement.
Immeas'urably, *adv.* Beyond all measure in quantity or degree; to an indefinite or illimitable extent.
"The Spaniards *immeasurably* bewail their dead." — *Spenser.*
Imme'diacy, *n.* [See IMMEDIATE.] Power of acting independently, or with freedom from control or dependence of any kind.
Immediate, (*im-mē'di-āt,*) *a.* [Fr. *immédiat*; Lat. *im* for *in*, and L. Lat. *mediatus — medio*, to halve, from Lat. *medius.* See MEDIATE.] Without anything in the midst or intervening; proximate; close; near; as, an *immediate* heir.
—Acting without a medium, or without the intervention of another cause or means; producing its effect by its own direct agency; not acting by second causes.
"Moses mentions the *immediate* causes of the deluge." — *Burnet.*
—Instant; present; without the intervention of an interval of time; as, he was ordered to *immediate* execution.
"*Immediate* are my needs, and my relief must . . . find supply *immediate*." — *Shaks.*
Imme'diately, *adv.* Without the intervention of any other cause or event; proximately; — in contradistinction to *mediately.*
"God's acceptance of it, either *immediately* by himself, or mediately by the hands of the bishop." — *South.*
—At the present time; on the moment; directly; quickly; at once; instanter; as, consent was *immediately* given.
Imme'diateness, Immedia'tion, *n.* Relation or quality of being immediate; exemption from second or intervening causes; nearness of proximity in regard to time.
Immed'icable, *a.* [Lat. *immedicabilis.*] Incurable; beyond the reach or power of medicine; as, "wounds *immedicable*." — *Milton.*
Immelo'dious, *a.* Without melody; harsh; dissonant.
Immem'orable, *a.* [Lat. *im* for *in*, and *memorabilis*, memorable.] Not worth remembering.
Immemo'rial, *a.* [Fr. *immémorial — in*, and *mémorial.*] Without or beyond the compass, scope, or reach of memory; relating to time whose beginning is not remembered; time out of mind; anterior to remotest tradition; as, *immemorial* custom.
"The moan of doves in *immemorial* elms." — *Tennyson.*
(*Law.*) A custom of prescription is said to be immemorial when its existence is presumable from a period anterior to possible proof. It is therefore deemed that a custom is established at law when reasonable affirmative evidence of its antiquity is shown, and no instance to the contrary is proved to have taken place since that year, commonly termed the period of "legal memory," or "whereof the memory of man runneth not to the contrary."
Immemo'rially, *adv.* Beyond memory.
Immense', *a.* [Fr.; Lat. *immensus — in*, and *mensus, metior*, to measure. See MENSURATION.] Vast in extent; very great; huge in bulk; unlimited; unbounded; enormous.
Immense'ly, *adv.* Immensurably; infinitely; vastly; illimitably.
Immense'ness, *n.* Quality of being immense; vastness; unbounded greatness; immensity.
Immen'sity, *n.* [Lat. *immensitas*; Fr. *immensité.*] Immenseness; an extent beyond measure; infinity; illimitableness.
"By the power we find in ourselves of repeating, as often as we will, any idea of space, we get the idea of *immensity*." — *Locke.*
—Vastness in extent or bulk; indefinite greatness; as, the *immensity* of the solar system.
Immensurabil'ity, *n.* State or quality of being immensurable, or impossible to be measured.
Immensurable, (*im-mĕns'yu-ra-bl,*) *a.* [Fr.] That cannot be measured; immense.
Immens'urate, *a.* Unmeasured.
Immerge', *v. a.* [Lat. *immergo — in*, and *mergo*, to dip, or dip in.] To dip, sink, or plunge into a fluid; to immerse.
—*v. n.* To disappear by entering into any medium, as into the light of the sun or the shadow of the earth.

Immers'able, *a.* That may be immersed; that cannot be merged.

Immerse', *v. a.* [Lat. *immersus—in*, and *mergo, mersus.* See IMMERGE.] To dip, sink, or plunge into water; to put under water or other fluid; to plunge; to dip; to sink or cover deep. — To cover wholly.

"More than a mile *immers'd* within the wood."—*Dryden.*

—To overwhelm; to involve; to engage deeply.

"Deeply *immersed* in the enjoyments of this life."—*Atterbury.*

Immersed', *p. a.* That grows entirely under water. *Gray.*

Immers'ible, *a.* That may be immersed.

Immer'sion, *n.* [Fr.; L. lat. *immersio.*] Act of immersing or of putting into a fluid below the surface; act of plunging into a fluid till covered; state of sinking into a fluid — State of being overwhelmed or deeply engaged, or involved.

(*Astron.*) The disappearance of one heavenly body behind another, or within the shadow cast by another during an eclipse. *I.*, or incidence of an eclipse, takes place as soon as the disc of the body that is eclipsed begins to pass behind the disc or shadow of the other.

Baptism by Immersion. (*Eccl.*) See BAPTISM.

Immer'sionist, *n.* An adherent to the doctrine of baptism by immersion.

Immesh', *v. a.* To entangle in the meshes of a net; to ensnare.

Immethodical (*im-me-thod'ik-al*), *a.* [*In*, and *methodical.*] Not methodical; having no method; without systematic arrangement; without order or regularity.

Immew', *v. a.* See EMMEW.

Im'migrant, *n.* [Lat. *immigrans.* See IMMIGRATE.] A person who removes into a country for the purpose of permanent residence.

Im'migrate, *v. n.* [Lat. *immigro—in*, and *migro, migratus*, to remove from one place to another.] To remove into a country for the purpose of permanent residence.

Im'migration, *n.* [Late Lat. *immigratio.*] Act of immigrating or passing or removing into a country for the purpose of permanent residence. The earliest permanent settlement of immigrants in the original U. S. was at Jamestown, Va., in 1609; New York was settled in 1613, and New England in 1620. They continued to come during the 17th and 18th centuries, all the nations of western Europe being represented in the inflow, though the numbers were small as compared with a later period, it being estimated that the total immmigration up to the year 1820 numbered only 250,000 persons. We have no official record of the number of immigrants arriving in this country until the year 1817 when Congress provided for returns to be made in the several customs districts. In the year named, 2°,140 immigrants arrived, a much larger number than in previous years, and such were the abuses and sufferings on shipboard that Congress was obliged to provide remedies, and an act to regulate the transportation of passengers by sea was adopted in 1819. In compliance with this act (which has been from time to time amended and improved) collectors of customs have since then reported the members of immigrants arriving in their districts from foreign countries, with age, sex, occupation and country where born. We have records, therefore, for about 80 years, but these were not made and kept with proper care until the establishment of the Commission on Emigration in New York city. In the previous returns aliens were sometimes confounded with citizens and the sexes not fully discriminated between. The early records are, therefore, imperfect, but those for 50 years past have been generally accurate. Before 1856 the whole number of aliens arriving was recorded; afterward only those intending to settle in the U. S. Since July 1, 1885, immigrants from Canada and Mexico have not been included in the record. The arrivals have averaged by decades as follows: For the decade ending 1830, 143,439; 1840, 599,128; 1850, 1,713,215; 1860, 2,598,214; 1870, 2,314,824; 1880, 2,812,191; 1890, 5,246,613. The large arrivals in the 1850–60 decade were due to the famines and political disturbances in Europe from 1847 onward. Since 1890 the arrivals have been; 1891, 560,319; 1892, 623,084; 1893, 502,917; 1894, 314,467; 1895, 279,948; 1896, 343,267; 1897, 230,832; 1898, 229,299; 1899, 311,715; 1900, 448,572; making a total for the decade ending 1900 of 3,844,420; total, 1820-1900, 20,675,628. Great Britain and Ireland, Germany and Scandinavia contributed the bulk until recently, when immigration from Southern and Eastern Europe gained the supremacy.—*Legislation.* In 1882 Congress passed an act levying a duty of 50 cts. on every alien passenger entering a U. S. port. This was to be paid into the Treasury, and form an "immigrant fund" for the care of distressed immigrants. All passengers were to be examined, and convicts, lunatics, idiots, paupers, and persons not likely to be able to support themselves were to be sent back to the ports whence they came, at the expense of the owners of the vessels that had brought them. In 1885 the Alien Contract Labor Law was passed, with the purpose of preventing the bringing of foreigners into this country under contract for labor or service. Such a custom had given rise to evils which it was necessary to bring to an end. In 1891 a new law was passed, more clearly defining the classes that were to be excluded, and requiring the return of any alien who became a public charge within a year after his entering the U. S., if from causes that existed before his entrance.—*Chinese Exclusion.* In 1869 a treaty with China was ratified that gave Chinese subjects the right to enter the U. S. for the purpose of commerce or residence. The result was that they came in such numbers and under such undesirable conditions that a widespread demand for their exclusion arose. In 1882 a bill was passed by Congress prohibiting for 10 years the entrance of any new immigrants from China, and in 1888 an act was passed prohibiting for 10 years the return of any Chinese laborer who had left the country. The act of 1882 expired in 1892, but in that year a new and more severe act was passed, completely prohibiting for 10 years the entrance of Chinese into the country, including those who had previously been here.—*Undesirable Immigrants.* Within recent years great numbers of ignorant and undesirable immigrants, from southern and south-eastern Europe, have entered the U. S., and congested the centers of labor by settling in the great cities and their vicinity. This has given rise to a vigorous demand for the exclusion of immigrants of this class, and a bill for this purpose was passed by Congress in the session of 1896–97, but was vetoed by the President. The demand, however, continues insistent, and will probably be met by stringent laws during the ensuing sessions of Congress.

Im'minence, *n.* [Fr.] Any ill impending; immediate or near danger. (R.)

Im'minent, *a.* [Lat. *imminens*, from *immineo—in*, and *mineo*, to jut, to project.] Hanging over; impending; threatening; near; appearing as if about to fall on, as some evil or calamity.

Im'minently, *adv.* In an imminent manner or degree.

Immingle, (*im-ming'gl,*) *v. a.* [*In*, and *mingle.*] To mingle together; to mix; to unite with.

Imminu'tion, *n.* [From Lat. *imminutio.*] Diminution; decrease.

Immiscibil'ity, *n.* [Fr. *immiscibilité.*] Incapacity of being mingled.

Immis'cible, *a.* Not capable of being mingled.

Immis'sion, *n.* [Lat. *immissio—in*, and *missio*, from *mitto, missus*, to send.] Act of sending or thrusting in; injection.

Immit', *v. a.* [Lat. *immitto.*] To send in.

Immit'igable, *a.* That cannot be mitigated.

Immit'igably, *adv.* Without mitigation.

Immix', *v. a.* [*In*, and *mix.*] To mingle.

Immix'able, *a.* That cannot be mingled.

Immixed', [part. of *immix.*] Mingled; mixed. —*a.* Unmixed.

Immixt'ure, *n.* Freedom from mixture.

Immobil'ity, *n.* [Fr. *immobilité*; Lat. *in*, and *mobilitas*, from *moveo*, to move.] State or quality of being immovable; fixedness in place or state; resistance to motion.

Immod'erate, *a.* [Lat. *immoderatus—in*, and *moderatus*, from *moderor*, to moderate.] Without due measure or bounds; not confined to suitable limits; excessive; unreasonable; extravagant; intemperate.

Immod'erately, *adv.* Excessively; to an undue degree; unreasonably.

Immod'erateness, Immodera'tion, *n.* Want of moderation.

Immod'est, *a.* [Lat. *immodestus—in*, and *modestus*, from *modus*, measure. See MODESTY.] Unrestrained; excessive; immoderate; exorbitant; unreasonable; arrogant. — Wanting in decency and delicacy; indecorous; indecent; indelicate; unchaste; impure; lewd; obscene.

Immod'estly, *adv.* Without due restraint or reserve; indecently; unchastely; obscenely.

Immod'esty, *n.* [Lat. *immodestia.*] Intemperate conduct; excess; licentiousness; want of modesty; indecency; unchastity; want of delicacy or decent reserve.

Im'molate, *v. a.* [Lat. *immolo, immolatus—in*, and *mola*, a mill, sacrificial meal.] To sacrifice. — To kill in sacrifice.

"They *immolate* their desires to their vanity." — *Boyle.*

—To offer in sacrifice, as a victim.

Im'molated, *p. a.* Sacrificed; offered in sacrifice.

Immola'tion, *n.* [Lat. *immolatio.*] Act of immolating or of sacrificing; a sacrifice offered.

(*Antiq.*) A ceremony used among the Romans with regard to their sacrifices. It consisted in throwing frankincense, wine, and a species of cake, on the head of the victim, before it was sacrificed; consequently, when *immolation* was performed, the victim was already doomed, and the term became applied to the sacrifice itself.

Im'molator, *n.* One who immolates.

Immoment'ous, *a.* Unimportant.

Immor'al, *a.* Not moral, contrary to morality; inconsistent with moral rectitude; of a life contrary to the moral or divine law; wicked; vicious; unjust; dishonest; depraved.

Immoral'ity, *n.* [Fr. *immoralité.*] Dishonesty; want of virtue; contrariety to virtue.

Immor'ally, *adv.* Wickedly; viciously; in violation of law or duty.

Immor'tal, *a.* [Fr. *immortel*; Lat. *immortalis—in*, and *mortalis.*] Never dying or perishing; having no principle of alteration or corruption; exempt from death. — Having life or being that shall never end; never to cease; never ending or coming to an end; eternal; everlasting; perpetual; imperishable. — Not liable to perish or fall into oblivion while the world lasts.

—*n.* One who is exempt from death.

Immortal'ity, *n.* [Fr. *immortalité*; Lat. *immortalitas.*] Quality of being immortal, or of never ceasing to live or exist; exemption from death and annihilation; life destined to endure without end. (See SOUL.) — Exemption from oblivion; perpetuity; existence not limited.

Immor'talize, *v. a.* [Fr. *immortaliser.*] To render immortal; to make perpetual; to cause to live or exist while the world shall endure; to exempt from oblivion; to make perpetual.

—*v. n.* To become immortal.

Immor'tally, *adv.* With endless existence; with exemption from death.

Immortelle', *n.* [Fr.] (*Bot.*) See HELICHRYSUM.

Immortifica'tion, *n.* Want of mortification.

Immovabil'ity, *n.* State or quality of being immovable; steadfastness; that cannot be moved or shaken.

Immov'able, *a.* [*In*, and *movable.*] That cannot be moved from its place. — Not to be moved from a purpose. — Steadfast; fixed; that cannot be altered or shaken. — Unalterable; unchangeable, as a purpose. — That cannot be affected or moved; unfeeling. — Permanent in place. — Not to be shaken or agitated.

(*Law.*) Not liable to be removed.

Immov'ableness, *n.* State or quality of being immovable.

Immov'ables, *n. pl.* (*Civil Law.*) Property which, by its nature, destination, or the object to which it is applied, cannot move itself or be removed.

Immov'ably, *adv.* In a manner not to be moved from its place or purpose, or in a manner not to be shaken; unalterably; unchangeably.

Immun'ity, *n.* [Fr. *immunité*; Lat. *immunitas—in*, and *munus*, service, office, duty. See MUNIFICENT.] Freedom or exemption from any public service, office, burden, or charge; freedom or exemption from obligation; a particular privilege or prerogative; freedom.

Ecclesiastical Immunities. That portion of the rights of the Church, in different countries, which consists in the freedom of its members, or of its property, from burdens thrown by law on other classes.

Immure', *v. a.* [O. Fr. *emmurer*; Lat. *in*, and *murus*, a wall.] To inclose within walls; to shut up; to confine; to imprison.

Immun'sical, *a.* Unmusical.

Immutabil'ity, *n.* [Fr. *immutabilité*; Lat. *immutabilitas.*] Unchangeableness; the quality that renders change or alteration impossible; invariableness.

Immu'table, *a.* [Lat. *immutabilis—in*, and *mutabilis*, changeable, from *muto*, to move, to alter, to change.] Unchangeable; invariable; unalterable; not capable or susceptible of change.

Immu'tableness, *n.* Unchangeableness; immutability.

Immu'tably, *adv.* Unchangeably; unalterably; invariably; in a manner that admits of no change.

Immu'tate, *a.* Unchanged.

Immuta'tion, *n.* [Lat. *immutatio.*] Change; mutation. (R.)

Imola (*e-mo'la*), a fortified town of Italy, on a small island formed by the Santerno, 25 m. from Ravenna. *Pop.* (1897) about 28,500.

Imp, *n.* [A. S. *impan*, to engraft, to plant; Ger. *impfen*; W. *imp*; probably from Gr. *emphuteuo*, to plant in, to graft one plant on another — *en*, and *phuton*, a plant, from *phuo*, to grow.] A subaltern or puny devil; a mischievous child; a child of the devil. — An addition to a bee-hive.

—*v. a.* To lengthen; to extend or enlarge by something inserted or added.

Im'pact, *n.* [From Lat. *impactus*, from *impingo — in*, and *pango*, to fasten, to drive or fix in. See IMPINGE.] A pushing, thrusting, throwing, or dashing at or against anything; collision; impression.

(*Mech.*) The single instantaneous blow or stroke communicated from one body in motion, to another body, which may be either in motion or at rest. If the body moves in the direction of the stroke, the impact is said to be direct; if in a different direction, it is said to be oblique. The theory of direct impact, or collision, is as follows: — Let the masses of two balls, or material particles, be m and m', and let them move with uniform velocities, v and v', in the same direction along a straight line; v being greater than v', so that m overtakes m'. Let u be the common velocity of the two balls when the compression at the moment of impact is at a maximum degree; also, let P be the momentum expended in order to produce this compression, and e P the momentum acquired during the restitution of the force of the bodies, e being the coefficient of elasticity. Let V and V′ be the velocities of the balls when collision ceases. Hence, we have the three following cases:

(1) $m\,v$ = momentum of m at the beginning of collision.
P = momentum spent in producing compression.
$m\,u$ = momentum of m when compression is a maximum.

(2) $m'\,v'$ = momentum of m' at the beginning of collision.
$m'\,u$ = momentum of m' when compression is *max.*
$\therefore m'\,v' = m'\,u - \mathrm{P}$.

(3) At the instant when collision ceases, we have similarly—

$$m\mathrm{V} = m\,u - e\,\mathrm{P}$$
$$m'\mathrm{V}' = m'\,u + e\,\mathrm{P}$$

From which equations we shall get—

$$u = \frac{mv + m'v'}{m+m'} = \frac{m\mathrm{V} + m'\mathrm{V}'}{m+m'}$$

$$\mathrm{P} = \frac{m.m'}{m+m'}(v - v')$$

$$\mathrm{V} = \frac{mv + m'v'}{m+m'} - \frac{em}{m+m}(v - v'); \text{ and}$$

$$\mathrm{V}' = \frac{mv + m'v'}{m+m'} + \frac{em}{m+m,}(v - v').$$

In oblique impact, it must be assumed that the mutual action of the balls during collision is along the line which joins their centres at the instant when compres-

dion is at a maximum, and along that line only: that is, we assume the balls to be perfectly smooth. Hence, if a smooth ball impinges obliquely on a smooth plane, the line of reaction of the plane will be perpendicular to its surface, and the momentum of the impinging ball will be affected along that line only. For further information, the reader had better consult Professor Walker's treatise on Mechanics, where he will find the subject treated on at length.

Impa'ges, *n. pl.* [Lat.] (*Arch.*) The border of framework which surrounds the panel of a door.

Impair', *v. a.* [Fr. *empirer*, from Lat. *pejor.*] To make worse; to lessen in quantity, value, or excellence; to lessen in power; to make more feeble; to diminish; to decrease; to injure; to weaken.

—*v. n.* To be lessened or grow worse.

Impal'atable, *a.* Unpalatable.

Impale, Impalement. See EMPALE, EMPALEMENT.

Impalm, (*im-päm'*,) *v. a.* [Lat. *in*, and *palma*, the palm.] To seize, or take into the hands; to lay hands upon; to grasp. (R.)

Impalpabil'ity, *n.* [Fr. *impalpabilité.*] State or quality of being impalpable.

Impal'pable, *a.* [Fr., from Lat. *in*, and *palpo*, to stroke, to touch lightly.] Not to be felt; so fine as not to be perceived by the touch; not coarse or gross.

Impal'pably, *adv.* In a manner not to be felt.

Impal'sy, *v. a.* [*In*, and *palsy.*] To strike with palsy; to paralyze: to deaden.

Impana'tion, *n.* [From Lat. *panis*, bread.] (*Theol.*) The substantial union of the body and blood of Christ with the elements of the eucharist without a *change* in their nature. The word appears to have been first used in the controversy about the real presence in the 11th century, and to have been applied, by the supporters of transubstantiation, to the less material doctrine of Berengarius and his followers. It has since been objected by Roman Catholics, to the Lutheran theory, that it revived the old error of impanation.

Impan'el, *v. a.* [*In*, and *pinel*, q. v.] To write or enter the names of a jury in a list or on a piece of parchment, called a panel; to form, complete, or enroll, as a list of jurors.

Impar'adise, *v. a.* [It. *imparadisare.*] To put in a place or state resembling paradise in felicity.

"*Imparadised* in one another's arms."—*Milton.*

Impari-pin'nate, *a.* [Lat. *impar*, unequal, and *pinna*, a feather.] (*Bot.*) Pinnate with an odd leaflet terminating the petiole. (Fig. 1369.)

Fig. 1369.

Imparisyllab'ic, *a.* Having unequal syllables.

Impar'ity, *n.* [From Lat. *impar*, *imparis* — *in*, and *par*, equal.] State of being unequal or uneven; inequality; disproportion; dissimilarity: oddness; individuality into equal parts.—Difference of degree, rank, or excellence.

Impark', *v. a.* [*In*, and *park.*] To inclose for a park; to make, as a park by inclosure; to sever from a common, as land.

Impar'l, *v. n.* [Fr. *parler.*] (*Law.*) To have time before pleading.

Impar'lance, *n.* (*Law*) Time given by the court to either party to answer the pleading of his opponent, as either to plead, reply, rejoin, &c.

Impart', *v. a.* [Lat. *impartio* — *in*, and *partio*, to share, to part.] To bestow on another, as a share or portion of something; to give, grant, or communicate; to bestow on another; to share: to confer.—To reveal; to disclose; to convey the knowledge of something; to make known: to show by words or tokens.

Impar'tance, *n.* Communication of a part, portion, or share; a grant.

Imparta'tion, *n.* The act of imparting.

Impart'er, *n.* One who imparts.

Impar'tial, *a.* Not partial; not biassed in favor of one party more than another; indifferent; unprejudiced; disinterested; not favoring one party more than another; equitable; just.

Impar'tialist, *n.* One who is impartial.

Impartial'ity, *n.* State or quality of being impartial; indifference of opinion or judgment; freedom from bias in favor of one side or party more than another; disinterestedness; equitableness: justice.

Impar'tially, *adv.* Without bias of judgment; without prejudice; equitably, justly.

Impar'tialness, *n.* The state of being impartial; impartiality.

Impartibil'ity, *n.* Quality of being impartible, or of not being subject to partition.—Quality of being capable of being communicated.

Impart'ible, *a.* [Fr. *impartible.*] Not partible, or subject to partition.—That may be imparted, conferred, bestowed, or communicated.

Impart'ing, *p. a.* Communicating; granting; bestowing.

Impass'able, *a.* Not passable; that cannot be passed; not admitting a passage; impervious; impenetrable; pathless.

Impass'ableness, *n.* State of being impassable.

Impass'ably, *adv.* In a manner or degree that prevents passing, or the power of passing.

Impassibil'ity, *n* State or quality of being impassible; exemption from pain or suffering; insusceptibility of injury from external things.

Impas'sible, *a.* [Fr., from Lat. *impassibilis* — *in*, and *passibilis*, from Lat. *patior*, *passus*, to suffer.] Incapable of pain, passion, or suffering; that cannot be affected with pain or uneasiness.

Impas'sibleness, *n.* Impassibility; state of being impassible.

Impas'sion, *v. a.* [*Im* and *passion.*] To affect or move deeply; to express with emotion and strong feeling.

Impas'sionable, *a.* Susceptible of deep feeling; emotional: easily disturbed in mind.

Impas'sionate, *v. a.* [Lat., from prefix *im* for *in*, and *passio*, a suffering, passion; It. *impassionare.*] To move deeply; to affect strongly.

—*a.* Strongly affected.—Without passion or feeling.

Impas'sioned, *a.* [*In* and *passion.*] Actuated or agitated by passion; animated; excited; having the feelings warmed, as a speaker; expressive of passion or ardor, as an harangue.

Impas'sive, *a.* [Lat. *in*, and *passus*, from *patior*, to suffer.] Not susceptible of pain or suffering.

Impas'sively, *adv.* Deprived of sensibility to pain or suffering.

Impas'siveness, *n.* State of being impassive, or insusceptible of pain.

Impassiv'ity, *n.* The state of being insusceptible of suffering pain, or feeling.

Impasta'tion, *n.* [Fr. See below.] The act of making into a paste; that which is formed into a paste or mixture, especially by combining different substances with cement, which are capable of resisting the action of fire or air.

Impaste', *v. a.* [O. Fr. *empaster*; Fr. *empâter.*] To knead into paste; to paste.—To lay on colors thick and bold.

Impast'ing, *n.* (*Paint.*) The laying on of colors thickly. (*Engraving*) An intermixture of points and lines to represent depth or thickness of coloring.—The work so executed.

Impas'to, *n.* [It. See IMPASTE.] (*Painting.*) A term applied to the substance or thickness of the colors, as they are laid on the canvas; as thin, solid, heavy, &c.

Impat'ible, *a.* [Lat. *impatibilis.*] Impossible; incapable of suffering.

Impa'tience, *n.* [Fr.; Lat *impatientia* — *in*, and *patientia*, from *patior*, to bear, to suffer, to endure. See PATIENT.] Unwillingness or inability to bear, endure, or suffer; uneasiness under pain or suffering; the not enduring pain with composure; restlessness.

Impatiens, (*im-pa'shens,*) *n.* [Lat. *impatiens*, with respect to the irritable capsules.] (*Bot.*) A genus of plants, order *Balsaminaceæ*. They are annual plants, having smooth, succulent, tender, sub-pellucid stems, with tumid joints. *I. balsamina*, the Garden Balsam, a native of the E. Indies, is one of the most beautiful of garden annuals, forming a showy pyramid of finely variegated carnation-like flowers; leaves lanceolate, serrate, upper ones alternate; peduncle clustered; spur shorter than the flower; the prevailing colors of the petals are red and white, but the former varies in every possible shade of crimson, scarlet, purple, pink, and flesh-color. *I. pallida*, the Touch-me-not (Fig. 277), is also a beautiful and familiar species of this variety.

Impa'tient, *a.* [Fr.; from Lat. *impatiens.*] Destitute of patience; uneasy or fretful under suffering; not bearing pain with composure; not enduring evil without fretfulness and uneasiness, and a desire or effort to get rid of the evil; not suffering quietly; not enduring; hasty; eager; not permitting delay.

Impa'tiently, *adv.* With uneasiness or restlessness; with eager desire; causing uneasiness; passionately; ardently.

Impawn', *v. a.* To pawn; to pledge; to deposit as security.

Impeach', *v. a.* [Fr. *empêcher*, from Lat. *impedire* — *in*, and *pes*, *pedis*, the foot; Gr. *empodizō*, to put the feet in bonds.] To detain on a charge; to accuse; to charge with a crime or misdemeanor; to bring an accusation against a member of any state officer for treason, or other crimes or misdemeanors; to call in question; to charge with impropriety; to call to account; to charge as answerable.

Impeach'able, *a.* Liable to be impeached, or to accusation; chargeable with a crime: accusable; censurable; liable to be called into question; accountable.

Impeach'er, *n.* An accuser; one who prefers charges.

Impeach'ing, *p. a.* Accusing by authority; calling in question the rectitude of conduct.

Impeach'ment, *n.* [Fr. *empêchement*, hindrance, obstruction.] An accusation and prosecution by a legislative body, of a person for treason or other crimes or misdemeanors;—especially, in the U. States, a written charge and accusation by the House of Representatives of the U. States (Constitution, Art 1, sec. 2), made to the Senate of the U. States against some person who is an officer thereof; or, in a State, it is such an accusation of an officer, by the representatives of the State, before the Senate. The proceedings, rules, and practice in cases of *I.* in this country are borrowed from the common law of England. The method of procedure is substantially as follows: A resolution is offered by some member of the House, charging the party to be impeached with his supposed offence, demanding at once his *I.*, or, what is more common, providing for a committee of inquiry. If the resolution is passed by the House, and if a committee of inquiry be ordered, who report adversely to the accused, and their report is adopted, a committee is appointed to impeach the accused before the Senate, and demand that that body make due provision for the trial. The same or another committee is instructed to prepare *articles of I.*, which, being reported to the House, and approved by them, are transmitted to the Senate, by a committee who are appointed to conduct the trial on the part of the House, and who are usually styled the *Managers of the I.* Due process summoning the accused then issues from the Senate, and is served by their sergeant-at-arms; and on the day therein appointed, the Senate resolves itself into a court of *I.*, all the Senators being sworn to do justice according to the Constitution and the laws. The person thus impeached is then called upon to appear and answer. If he makes default, the Senate proceeds *ex parte*. If he appears and denies the charges, and puts himself on trial (and he may appear by attorney), an issue is found, and a time is appointed for the trial, which thereafter proceeds according to law and usage, and much in the same way as in common judicial trials. If any questions arise among the senators, who now act as judges, they are considered with closed doors, and are decided by yeas or nays, and only the decision is made public. Art. 1, sec. 2, of the Constitution provides, "that no person shall be convicted without the concurrence of two-thirds of the members. When the President is tried, the Chief-Justice shall preside. The judgment, in cases of *I.*, shall not extend further than the removal from office, and disqualification to hold or enjoy any office or honor, trust, or profit under the U. States." The last and most memorable example of *I* is the case of Andrew Johnson, then President of the U. States. On Feb. 24, 1868, and on the original proposition of Mr. James M. Ashley of Ohio, the House of Representatives resolved to impeach the President of high crimes, of treason and misdemeanor. On the 3d of March, articles of *I.* were agreed upon by the House of Representatives, and presented on the 5th to the Senate. Of the eleven articles of accusation, we give the substance of the only three on which a vote was subsequently taken. By arts. 2 and 3, Mr. Johnson was impeached of high misdemeanor in office, for having delivered a letter of authority as Secretary for the Department of War, when there was not a vacancy in said office, without the advice and consent of the Senate then in session, in violation of the Constitution, and contrary to the Act entitled "An Act regulating the tenure of certain civil offices," passed March 2, 1867,—art. 11, for having, "on August 18, 1866, at the city of Washington, by public speech, declared and affirmed, in substance, that the 39th Congress of the U. States was not a congress of the United States authorized by the Constitution to exercise legislative power under the same, but, on the contrary, was a congress of only part of the States, thereby denying, and intending to deny, that the legislation of said Congress was valid or obligatory upon him, except in so far as he saw fit to approve the same; and also thereby denying, and intending to deny, the power of said Congress to propose amendments to the Constitution of the United States;" and for, on Feb. 21, 1868, "unlawfully, and in disregard of the requirement of the Constitution, that he should take care that the laws be faithfully executed, attempting to prevent the execution of an Act entitled 'An Act regulating the tenure of certain civil offices,' by unlawfully devising and contriving, and attempting to devise and contrive, means by which he should prevent Edwin M. Stanton from forthwith resuming the functions of the office of Secretary for the Department of War, notwithstanding the refusal of the Senate to concur in the suspension theretofore made by said Andrew Johnson of said Edwin M. Stanton from said office of Secretary for the Department of War; and, also, by further unlawfully devising and contriving, and attempting to devise and contrive, means, then and there, to prevent the execution of an Act entitled 'An Act making appropriations for the support of the army for the fiscal year ending June 30, 1868, and for other purposes,' approved March 2, 1867; and, also, to prevent the execution of an Act entitled 'An Act to provide for the more efficient government of the rebel States,' passed March 2, 1867." The Senate having constituted itself in high court of justice under the presidence of Chief-Justice Chase, it was agreed, May 16, to take up the 11th article first. The vote stood: *guilty* 35, *not guilty* 19. The President being therefore acquitted on this article, the court adjourned till the 26th, when the President was acquitted on the 2d and 3d articles by the same vote as that on the 11th, and the court adjourned *sine die* by a vote of 36 to 16.

Impearl', *v. a.* [*In* and *pearl.*] To decorate with pearls, or with things resembling pearls; to form in the semblance of pearls.

Impeccabil'ity, Impec'cancy, *n.* Quality of being impeccable, or of not being liable to sin; exemption from sin, error, or offence.

Impec'cable, *a.* [Fr., from Lat. *in*, and *pecco*, to do amiss, to transgress, to sin. See PECCABLE.] Not peccable, or liable to sin: not subject to sin; exempt from the possibility of sinning.

Impec'cant, *a.* Free from sin; sinless.

Impecu'nious, *a.* [Lat. *im* for *in*, not, and *pecunia.*] Not having money; in need; poor; fundless.

Impecuniosity, *n.* State of being impecunious. *W. Scott.*

Impede', *v. a.* [Lat. *impedio* — *in*, and *pes*, *pedis.*] To entangle; to shackle; to hamper; to hinder; to retard; to stop in progress; to obstruct.

Imped'ible, *a.* [It. *impedibile.*] Capable of being impeded or hindered.

Imped'iment, *n.* [Lat. *impedimentum.*] Hindrance; let; impeachment; obstruction; opposition.

"Free from th' *impediments* of light and noise,
Man, thus retir'd, his nobler thoughts employs."—*Waller.*

Imped'itive, Impedimen'tal, *a.* That causes obstruction; impeding.

Impel', *v. a.* [Lat. *impello.*] To drive on towards a point; to urge forward; to press on; — used in the literal or in a figurative sense.

"Attend thy voyage, and *impel* thy sails." — *Pope.*

"To Myrrha's mind, *impell'd* on either side." — *Dryden.*

Impel'lent, *a.* That has power to impel.

—*n.* An impulsive power; a power that drives forward.

Impel'ler, *n.* He who, or that which, impels.

Impel'ling, *a.* That drives forward, or urges on.

Impen', *v. a.* To inclose in a pen; to shut up.

Impend', *v. a.* [Lat. *impendio.*] To hang over; to be at hand; to press nearly; — used in an ill sense; as, "God's *impending* wrath."

Impend'ence, Impend'ency, *n.* The state of hanging over; near approach.

Impend'ent, *a.* Imminent; hanging over; pressing closely.

Impend'ing, *p. a.* Impendent; as, "*Impending* danger."

Impenetrabil'ity, Impen'etrableness, *n.* [Fr. *impénétrabilité.*] Quality of not being pierceable. — Insusceptibility of intellectual impression.

(*Physics.*) One of the essential properties of matter or body. It is a property inferred from invariable experience, and resting on this incontrovertible fact, that no two bodies can occupy the same portion of space in the same instant of time. Impenetrability, as respects solid bodies, requires no proof; it is obvious to the touch. With regard to liquids, the property may be proved by very simple experiments. Let a vessel be filled to the brim with water, and a solid incapable of solution in water be plunged into it; a portion of the water will overflow exactly equal in bulk to the body immersed. If a cork be rammed hard into the neck of a phial full of water, the phial will burst, while its neck remains entire. The disposition of air to resist penetration may be illustrated in the following way: Let a tall glass vessel be nearly filled with water, on the surface of which a lighted taper is set to float. If over this glass a small cylindrical vessel, likewise of glass, be inverted and pressed downwards, the contained air maintaining its place, the internal body of the water will descend, while the rest will rise up at the sides, and the taper will continue to burn for some seconds, encompassed by the whole mass of liquid.

Impen'etrable, *a.* [Fr., from Lat. *impenetrabilis.*] Not to be pierced; not to be entered by any external form; as, an *impenetrable* shield. (*Dryden.*) — Impervious; not admitting entrance.

"A thick covert . . . *impenetrable* . . . to sun." — *Dryden.*

— Not to be taught; not to be informed. — Not to be affected; not to be moved.

(*Physics.*) Occupying exclusively a certain space, according to the law of impenetrability.

Impen'etrably, *adv.* With solidity or hardness that admits not of being penetrated; with density or hardness not admitting of impression.

"A skull of solid proof, *impenetrably* dull." — *Pope.*

Impen'itence, Impen'itency, *n.* [Fr. *impénitence*; Lat. *im* for *in*, and *pœnitentia* — *pœnileo*, to repent, to be penitent. See PENITENT.] Want of penitence or repentance; absence of contrition or sorrow for sin; obduracy; hardness of heart.

Impen'itent, *a.* [Fr.; Lat. *in*, and *pœnitens*, from *pœniteo.*] Not penitent; feeling no repentance for sin; not contrite; hard and obdurate of heart.

"They died *impenitent*, and left a race behind like to themselves." *Milton.*

—*n.* One who repents not; a confirmed sinner; a hardened reprobate.

Impen'itently, *adv.* Without repentance for sin; not contrite; obdurate.

Impen'nate, *a.* [Fr. *impenné.*] (*Zoöl.*) Having no wings, or feathers; impennous.

Impen'nates, Impen'nes, *n. pl.* [Lat. *in*, and *penna*, a wing.] (*Zoöl.*) The name of a tribe of swimming-birds, having short wings covered with feathers resembling scales. The Penguin (*Aptenodytes*) and the Great Awk (*Alca impennis*) are examples of this group, which, however, is not a natural one.

Impen'nous, *a.* [Lat. *im* for *in*, and *penna*, a wing.] Wingless, or featherless.

Imper'ador, (Villa do,) ("City of the Emperor,") a town of Brazil, province Parahiba.

Imper'ative, *a.* [Fr. *impératif*; Lat. *imperativus* — *impero*, to command — *in*, and *paro*, to prepare, to order. See PREPARE.] Of or proceeding from a command; commanding; authoritative; expressive of command; containing positive command; as, to receive *imperative* orders. — Obligatory; binding; not to be avoided, evaded, or shirked; as, an *imperative* duty.

(*Gram.*) Designating a form of the verb which expresses command, exhortation, &c.; as, the *imperative* mood.

Imper'atively, *adv.* In an imperative or authoritative manner; in a style not admitting of question.

Impera'tor, *n.* [Lat., from *imperare*, to command.] See EMPEROR.

Imperato'ria, *n.* (*Bot.*) A name of the genus PEUCEDANUM, *q. v.*

Imperato'rial, Imper'atory, *a.* Commanding; authoritative. — Relating or belonging to the Roman title of imperator.

Imperatriz, (Villa da,) ("City of the Empress,") a town of Brazil, province of Ceara.

Imperceiv'able, *a.* Imperceptible. (R.)

Imperceiv'ableness, *n.* Imperceptibleness. (R.)

Imperceptibil'ity, *n.* State or quality of being imperceptible; imperceptibleness; imperceivableness.

Imperceptible, *a.* [Fr.; Lat. prefix *in*, and Eng. *perceptible.*] Not perceptible; not to be perceived; not to be known or discovered by the senses; impalpable; not easily discernible or apprehended by the faculties.

"Washing his hands with invisible soap, in *imperceptible* water." *Hood.*

—Very small; fine; very slow in motion or progress; so minute as to elude observation.

"The alterations in the globe are very slight, and almost *imperceptible*." — *Wood.*

—That which is too minute to attract observation.

Imperceptibleness, *n.* [Fr. *imperceptibilité.*] State or quality of being imperceptible.

Imperceptibly, *adv.* In a manner not to be perceived.

Imperception, *n.* Want of perception or observation.

Imperceptive, *a.* Without the perceptive faculty.

Imperfect, *a.* [Lat. *imperfectus* — *in*, and *perfectus*, *perficio.* See PERFECT.] Not perfect or complete; unfinished; defective; not entire, sound, or whole; wanting a part.

"Opinion is a light, vain, crude, and *imperfect* thing." *Ben Jonson.*

—Impaired; not perfect or complete in intellect; deficient in some elementary organ of the senses.

"Obscure and *imperfect* ideas often involve our reason." — *Locke.*

—Faulty; not according to the laws of God, or the rules of right; liable to evil or moral defects.

"Something he left *imperfect* in the state." — *Shaks.*

—Not conformed to model, standard, or rule; deficient in semblance to an ideal; inferior to pattern or design; not according to the demands of taste; incomplete in an æsthetic or moral sense.

"The *imperfect* offices of prayer and praise." — *Wordsworth.*

(*Gram.*) Designating a tense of the verb which denotes an action in times past, then present, but not finished.

I. concords. (*Mus.*) Such as are liable to change from major to minor, or the contrary, as are thirds and sixths; still, however, not losing their consonancy.

I. flower. (*Bot.*) A flower wanting either stamens or pistils.

I. guards. (*Mil.*) See GUARDS.

I. number. (*Math.*) A number, the sum of whose aliquot parts or divisions is not equal to itself. It is the reverse of a perfect number, whose parts, when added together, are equal to it. Thus, for example, 12 is an imperfect number, as its divisors, 1, 2, 3, 4, 6, amount to 16, which is over 12, — which latter number is therefore deemed imperfect.

Imperfection, *n.* [Fr.; Lat. *imperfectio.*] Want of perfection or completeness; defect; fault; deficiency; failing; frailty; blemish; want of a part or of something necessary to complete a whole.

"*Imperfections* would not be half so much taken notice of, if vanity did not make proclamation of them." — *L'Estrange.*

Imperfectly, *adv.* Not fully or completely; in an imperfect degree or manner; not entirely or thoroughly.

Imperfectness, *n.* State of being imperfect.

Imperforable, *a.* That may not be perforated or bored through.

Imperforate, *a.* Not perforated, bored, or pierced; without a hole or opening.

"Sometimes children are born *imperforate*." — *Sharp.*

Imperforated, *a.* [Lat. *in*, and *perforatus* — *perforo*, to perforate. See PERFORATE.] Not perforated; not bored or pierced through. — Having no openings or pores.

Imperfora'tion, *n.* [Fr.] State of being without perforation or opening.

Imperial, *a.* [Fr.; Lat. *imperialis.* See EMPIRE.] Relating or pertaining to an empire, or to an emperor; as, an *imperial* throne, *imperial* government, *imperial* parliament, &c.

"The last that wore the *imperial* diadem of Rome." — *Shaks.*

—Belonging to a monarch, or to sovereign authority; denoting royal or supreme rule.

Imperial, *n.* (*Arch.*) A species of dome, whose profile is pointed toward the top, and widens toward the base, thus forming a curve of contrary flexure. The domes executed in Persia present the most striking illustrations of this system; in them the stability is owing entirely to the adhesion of the cement employed in their construction.

(*Drinks.*) A beverage formed by dissolving 2 drachms of cream of tartar in a pint of boiling water, and flavoring it, when cold, with lemon-peel and sugar.

—The outside of a dillgence. — A tuft of hair hanging from the lower lip over the chin. — A dried plum. — Anything large, as a large kind of drawing-paper, a large kind of slate, a large portmanteau, &c.

Imperial, in *Nebraska* a post-village, cap. of Chase co., on C., B. & Q. R. R., 120 miles W. of Hastings.

Imperial, in *Pennsylvania*, a P. O. of Allegheny co.

Imperialism, *n.* Imperial power or authority.

Imperialist, *n.* One who belongs to an emperor; a subject or soldier of an emperor, — especially of the German emperor in former times.

Imperial'ity, *n.* Same as IMPERIALISM, *q. v.*

Imperialized, *a.* That is made imperial.

Imperially, (*im-pē'ri-al-le.*) *adv.* In the manner of an emperor; in a royal or august manner.

Imperil, *v. a.* To bring into peril; to expose to danger; to risk; to hazard; to endanger.

Imperilment, *n.* State of being in peril.

Imperious, *a.* [Fr. *impérieux*; Lat. *imperiosus*, from *imperium*, command.] Having the air or spirit of dictation, haughtiness, or arrogance; commanding; dictatorial; haughty; domineering; overbearing; arrogant; springing from, or indicating a spirit of arrogance and dictation, as language or commands. — Urgent; not capable of being resisted; authoritative; commanding with rightful authority.

Imperiously, *adv.* In an imperious manner; with arrogance of command; with a haughty air of authority; in a domineering manner. — With urgency, or force not to be opposed.

Imperiousness, *n.* Quality of being imperious; authority; air of command; arrogance of command; haughtiness.

Imperishabil'ity, *n.* Quality of being imperishable; indestructibility.

Imperishable, *a.* [Fr. *impérissable.*] Not subject to decay; not liable to perish; indestructible; enduring permanently; everlasting.

Imperishableness, *n.* Quality of being imperishable.

Imperishably, *adv.* In an imperishable manner.

Imperiwigged, *a.* Wearing a periwig.

Impermanence, Impermaneney, *n.* Instability.

Impermanent, *a.* That is not permanent; unstable.

Impermeabil'ity, *n.* [Fr. *imperméabilité.*] (*Physics.*) That property by which some substances resist the passage of other substances through their mass. Thus glass is impermeable, for its pores are so small that no pressure hitherto applied has been able to drive fluids through them. Gold, however, is permeable, as was proved in the experiment of the Florentine Academicians. In endeavoring to determine whether water was compressible, they filled a hollow sphere of gold with it and then applied great pressure to the surface; the consequence of which was, that the water was forced out through the pores of the gold. Some substances are impermeable on account of their repulsion to other bodies; thus oil-skin, or water-proof cloth, is impermeable to water.

Impermeable, *a.* [Fr. *imperméable*; Lat. *in*, and *permeo*, to pass through.] Not permeable; noting bodies which do not permit fluids to pass through them.

Impermeableness, *n.* Quality of being impermeable.

Impermeably, *adv.* In an impermeable manner.

Impermissible, *a.* That is not to be permitted or allowed.

Impersonal, *a.* [*In* and *personal*; Fr. *impersonnel.*] Not personal.

I. verb. (*Gram.*) A verb which is used only with the termination of the third person, with *it* for a nominative; as, *it* rains.

Impersonal, *n.* That which wants personality; an impersonal verb.

Impersonal'ity, *n.* Want, or indistinctness of personality.

Impersonally, *adv.* In the manner of an impersonal verb.

Impersonate, *v. a.* [*In*, and *personate*, which see.] To invest with personality, or the bodily substance of a living being; to ascribe the qualities of a person to; to personify.

Impersonation, Personifica'tion, *n.* The act of impersonating; personification.

Impersonator, *n.* One who impersonates.

Imperspicu'ity, *n.* Want of clearness or perspicuity; unintelligibility.

Imperspic'uous, *a.* Not perspicuous; obscure.

Impersuadable, *a.* That cannot be persuaded. (R.)

Impersuadableness, *n.* Quality of being impersuadable. (R.)

Impersuasible, *a.* That cannot be persuaded.

Impertinence, Impertinency, *n.* [Fr. *impertinence*; L. Lat. *impertinentia*, from Lat. *in*, and *pertineo*, to belong or pertaining to.] That which is not pertinent; that which does not belong to the subject in hand; that which is irrelevant, unimportant, or frivolous; state of not being pertinent. — Rudeness; pertness; improper intrusion; interference by word or conduct, which is not consistent with the age or station of the person.

Impertinent, *a.* [Fr., from L. *impertinens* — *in*, and *pertineo.* See PERTINENT, PERTAIN.] Not pertinent; not pertaining to the matter in hand; of no weight; having no bearing on the subject; irrelevant; meddling with that which does not belong to the person. — Trifling; foolish; negligent of the present purpose. — Rude; pert; officious; intrusive.

—*n.* An unmannerly or impudent person.

Impertinently, *adv.* Without relation to the matter in hand; officiously; intrusively; rudely.

Imperturbabil'ity, *n.* [Fr. *imperturbabilité.*] Quality of being imperturbable.

Imperturbable, *a.* [L. Lat. *imperturbabilis* — *in*, *perturbabilis*, from Lat. *perturbo*, to throw into confusion or disorder; to disturb.] That cannot be disturbed or agitated; permanently quiet.

Imperturba'tion, *n.* Calmness; quietude; tranquillity.

Impervlabil'ity, *n.* Quality of being impervious; impenetrability.

Imperviable, *a.* Impervious.

Imperviableness, *n.* Quality of being impervious.

Impervious, *a.* [Lat. *impervius.* See PERVIOUS.] Not pervious; not to be penetrated or passed through; impassable; impenetrable; not to be pierced by a pointed instrument; not penetrable by light; not permeable to fluids.

Imperviously, *adv.* In a manner to prevent passage or penetration.

Imperviousness, *n.* State or quality of being impervious, or of not admitting a passage.

Impetig'inous, [See IMPETIGO.] Scurfy; covered with scabs.

Impet'igo, *n.* [Lat., from *impetire*, to infest.] (*Med.*) An eruption of yellow, itching pustules, appearing in clusters, and terminating in a yellow, thin, scaly crust. It is also known as humid or moist tetter, and discharges a thin acrid ichor. It occurs on all parts of the body, and most commonly on the extremities. A variety of it is produced by the action of certain irritants upon the skin, as on the hands of those who work among sugar, known as the *grocer's itch*: also on the hands of bricklayers, known as the *bricklayer's itch*. The eruption is not contagious. Cleanliness, cooling ointments, and mild aperients, are recommended by way of cure.

Impetuos'ity, *n.* [Fr. *impétuosité*; L. Lat. *impetuositas*.] Quality of being impetuous; a rushing with violence and great force; fury; violeuce; vehemeuce; furiousness of temper.

Impet'uous, *a.* [Fr. *impetueux*; L. Lat. *impetuosus* — *in*, and *peto*, to fall or rush upon. See PETITION.] Rushing upon; assailing; rushing with great force and violence; moving rapidly; furious; forcible; fierce; raging; precipitate; vehement of mind; moving with precipitancy or violence; violeut; hasty; passionate.

Impet'uously, *adv.* Violently; fiercely; forcibly; with haste and force.

Impet'uousness, *n.* Impetuosity.

Im'petus, *n.* [Lat. *in*, and *petus*. See IMPETUOUS.] (*Mech.*) A term which signifies the same thing as *momentum*, or quantity of motion; and is generally estimated by the product of the velocity and mass of the body. This subject, however, has led to considerable controversy among philosophers, some estimating it by the mass Into the velocity, while others maintain that it varies as the mass iuto the square of the velocity. This difference seems to have arisen from a misconception of the term rather than from any other cause; those who maiutain the former opinion consider impetus, or momentum, to signify the momentary impact, and the latter the sum of all the impulses till the motiou of the body ceases.

(*Gun.*) The altitude through which a body must fall in order to gain a velocity equal to that with which the ball is discharged from the gun.

Im'plee, *n.* (*Bot.*) See HOLCUS.

Impierce', *v. a.* To pierce through.

Impierce'able, *a.* Impenetrablo.

Impi'ety, *n.* [Fr. *impiété*; Lat. *impietas*, from *impius* — *in*, and *pius*, pious.] Want of piety; irreverence toward the Supreme Being; contempt of the divine character and authority; neglect of the divine precepts; ungodliness; irreligion; any act of wickedness: blasphemy; profaneness; unrighteousness; wickedness.

Impinge', *v. n.* [Lat. *impingo* — *in*, and *pango*, to fasten, to drive in. See PACTION.] To push, strike, thrust, or dash against, into, or upon; to fall against; to strike; to dash against; to clash upon.

Impinge'ment, *n.* Act of impinging.

Impin'gent, *a.* [Lat. *impingens*.] Falling against or upon; striking against.

Impinging, *p. a.* Striking against.

Im'pious, *a.* [Lat. *impius*—*in* and *pius*; Fr. *impié*.] Destitute of piety; irreverent toward the Supreme Being; wauting in veneration for God and his authority; irreligious; profane; proceeding from, or manifesting a contempt for the Supreme Beiug; tending to dishouor God or his laws, and bring them into contempt.

Im'piously, *adv.* With irreverence for God, or contempt for his authority; profanely; wickedly.

Im'piousness, *n.* Impiety.

Imp'ish, *a.* Having the quality of an imp.

Implacabil'ity, *n.* [Fr. *implacabilité*; L. Lat. *implacabilitas*.] Quality of being implacable, or of not being appeasablo; iuexorableness; irreconcilable eumity or auger.

Impla'cable, *a.* [Fr., from Lat. *implacabilis*. Seo PLACABLE.] Not placable; not to be appeased; that cannot be pacified and rendered peaceable: inexorable; stubborn, or constaut in enmity; irreconcilable; unrelenting.

Impla'cableness, *n.* State or quality of heing implacable.

Impla'cably, *adv.* With enmity; not to be pacified or subdued; inexorably.

Implacen'tal, *a.* Having no placenta, as the marsupial auimals.

Implant', *v. a.* [Fr. *implanter*.] To set or fix a plant or plants into; to insert; to set, plant, or infix for the purpose of growth, as feelings or ideas in the miud; to instil; to infuse.

Implant'ed, *p. a.* Set In; infixed in the mind, as principlcs or rudiments.

Implanta'tion, *n.* [Fr.] The act of implanting, setting, or infixiug in the miud or heart, as principles or rudiments.

Implansibil'ity, *n.* Stato of being implausible.

Implan'sible, *a.* Not plansible; not specious; not likely to seduce or persuade; unplausible.

Implan'sibleness, *n.* Want of plausibility.

Implan'sibly, *adv.* Without show of probability.

Implead', *v. a.* [*in* and *plead*.] To bring a plea against; to sue; to institute and prosecute a suit agaiust one in court: to sue at law.

Implead'ed, *pp.* Prosecutcd; sued; subject to answer to a suit in court.

Implead'er, *n.* One who prosecutes another.

Im'plement, *n.* [L. Lat. *implementum*, from *impleo*, to fill up—*in*, and *pleo*, to fill.] Whatever fills up; a tool; a utensil; an instrument.—*pl.* Tools; utensils; vessels; instruments; the tools or instruments of labor.

—*v. a.* To supply, furnish, or provide with implements. (R.)

Im'plementing, *n.* The act of furnishing with implements.

Imple'tion, *n.* [Lat. *impleo*.] The act of filling; the state of being full.

Implex', *a.* [Fr. *implexe*; Lat. *implexus*, from *implico* —*in*, and *plico*, to fold.] Infolded; iutricate; entangled; complicated.

Implex'ion, *n.* The act of involving or infolding; the state of being involved.

Impli'able, *a.* Not pliable; unyielding.

Im'plicate, *v. a.* [Lat. *implico*, *implicatus*.] To infold; to involve; to eutangle; to involve or bring into conuection with; to show or prove to be conuected or concerned. as in an offence.

Im'plicating, *p. a.* Iufolding; involving; proving to be concerned.

Implica'tion, *n.* [Fr.; Lat. *implicatio*.] Act of infolding or involving; involution; entanglement; an implying, or that which is implied, but not expressed; a tacit inference, or something to be fairly understood, though not expressed in words.

Im'plicative, *a.* Tending to implicate.

Im'plicatively, *adv.* By implicatiou.

Implic'it, *a.* [Fr. *implicité*; Lat. *implicitus*, from *implico* — *in*, and *plico*, to fold.] Infolded; entangled; implied; fairly to be understood, though not expressed in words; resting on another; trusting to the word or authority of another, without doubting or reserve, or without examining into the truth of the thing itself.

Implic'itly, *adv.* In an implicit manner; by inference; virtually; in reality, but not in name; by connection with something else; dependently; with unreserved confidence.

Implic'itness, *n.* State of being Implicit; the state of trusting without reserve.

Implied', *p. a.* Involved; contained virtually, though not expressed.

Implore', *v. a.* [Fr. *implorer*; Lnt. *imploro* — *in*, and *ploro*, to cry out, to bewail.] To be for aid or succor from with cries or tears; to invoke earnestly; to call upon, or for, in supplication; to pray earnestly to; to petition with urgency; to supplicate; to beseech; to entreat; to beg.

—*v. n.* To entreat; to beg.

Implor'er, *n.* One who implores; a solicitor.

Implor'ing, *p. a.* Beseeching; entreating; praying earnestly.

Implor'ingly, *adv.* In the manner of entreaty.

Implumed', *a.* [From Lat. *in*, priv., and *pluma*, a plume.] Without feathers; implnmous.

Implunge', *v. a.* To plunge; to hurry Into.

Impluvium, *n.* [Lat.] (*Arch.*) A tank or cistern in the centro of the hall or atrium (Fig. 231) of a Roman house. In the examples which remain at Pompeii, the *I.* is generally formed of marble. It is placed immediately under the unroofed part of the atrium, and is intended to receive the rain which runs down from the roof through tho opening. The *I.* was frequently adorned with fountains, and formed a very peculiar and interesting feature in the dwellings of the Romans.

Imply', *v. a.* [Lat. *implico* — *in*, and *plico*, to fold.] To invoke or contain in substance or essence, or by fair inferenco when not expressed In words; to include; to comprise; to import; to signify.

Imply'ing, *p. a.* Involving; containing in substance or by fair inference.

Impock'et, *v. a.* To pocket. (R.)

Impoi'son, *v. a.* See EMPOISON.

Impoi'sonment, *n.* See EMPOISONMENT.

Impol'icy, *n.* [*In* and *policy*.] Bad policy; want of government or management; inexpedience; unsuitableness to the end proposed; defect of wisdom.

Impolite', *a.* [Lat. *impolitus*.] Not polite; uot of polished manners: unpolite; uncivil.

Impolite'ly, *adv.* With impoliteness.

Impolite'ness, *n.* Want of politeness; incivility; want of good manners.

Impol'itic, *a.* [*In*, and *politic*; Fr. *impolitique*.] Not politic; wanting policy or prudence; devising and pursuing measures adapted to injnro the public interest; unwise; adapted to injure the public iuterest; indiscreet; imprudent; incautious; inexpedient.

Impol'iticly, *adv.* Without policy or prudence, art or forecast.

Impol'iticness, *n.* Quality of being impolitic; want of policy.

Imponderabil'ity, *n.* [Fr. *imponderabilité*.] Quality of being imponderable; destitntion of sensible weight.

Impon'derable, *a.* [Fr., from Lat. *in*, and *ponderabilis*, from *pondero*, to weigh.] That cannot be weighed; not having sensible weight.

Impon'derableness, *n.* State of being imponderable.

Impon'derables, *n. pl.* (*Physics.*) An epithet formerly applied to light, heat, electricity, aml magnetism, which were universally considered as matter, in contradistinction to those substances which possessed sensible weight.

Impon'derons, *a.* Same as IMPONDERABLE, *q. v.*

Imporos'ity, *n.* Compactness; closeness; solidity; want of porosity.

Impo'rous, *a.* [Fr. *imporeux*.] Free from vacuities; close of texture; solid.

Import', *v. a.* [Fr. *importer*; Lat. *importo* — *in*, and *porto*, to bear or carry along.] To bring, carry, or convey into; to bring from a foreign country or jurisdiction, or from another state. — To bear or convey, as signification or meaniug; to denote; to signify; to imply; to be of weight, moment, or of consequence to. — To bear on the interest of, or to have a bearing on; to interest; to concern.

Im'port, *n.* That which is Imported or brought into a country from abroad.—That which is borne or conveyed in words; meaning; signification; drift; tendency. — The sense which words are intended to couvey. — Importance; weight; consequence.

Import'able, *a.* That may be imported.

Impor'tance, *n.* [Fr.; L. Lat. *importantia*.] Quality of being important; weight; consequence; magnitude; moment; a bearing on some interest: that quality of anything by which it may affect a measure, interest, or result; weight or consequence in the scale of being; weight or consequence in self-estimation.

Impor'tant, *a.* [Fr., from Lat. *importans*.] Weighty; momentous; of great consequence, having a bearing on some interest, measure, or result; stately; solemn.—Affectedly grave.

Impor'tantly, *adv.* Weightily: forcibly.

Importa'tion, *n.* [Fr.] Act or practice of importing, or of bringing from another country or state; conveyance into; the wares or commodities imported.

Import'ed, *p.a.* Brought from another country or state.

Import'er, *n.* He who imports; the merchant who, by himself or his agent, brings goods from another country or state.

Import'ing, *p. a.* Bringing goods, &c., into one's own country or state from a foreign or distant state. — Bearing as a signification; meauing. — Having weight or consequence.

Import'unacy, *n.* The act of importuning; importunity.

Import'unate, *a.* [Lat. *importunus* — *in*, and *portus*, a port, a harbor.] Troublesome; pressing; urgent in request or demand; urgent and pertinacious in solicitation, as a suitor; urgent, as a request; inciting urgently for gratification, as the appetites.

Import'unately, *adv.* With urgent request; with pressing solicitntion.

Import'unateness, *n.* Incessant solicitation; importunncy.

Import'unator, *n.* One who importunes; an importuner.

Importune', *v. a.* [Fr. *importuner*, from Lat. *importunus*.] To beg or solicit unsultably, inconveniently, unseasonably, or vexatiously; to request with urgency; to press with solicitation; to urge with frequent or unceasing application.

Importun'er, *n.* One who importunes, or solicits.

Importun'ity, *n.* [Fr. *importunité*; Lat. *importunitas*.] Unsuitableness; unfitness; pressing solicitation; urgent request; application for a claim or favor which is urged with troublesome frequency or pertinacity.

Impos'able, *a.* That may be imposed or laid on.

Impos'ableness, *n.* State of being imposable.

Impose', *v. a.* [Fr. *imposer*; Lat. *impono*, *impositus*, *in*, and *pono*, to place, put, set, or lay.] To place, put, set, or lay into, upon, or in; to lay on, as a burden, tax, toll, duty, or penalty; to place over by authority or by force; to lay on, as a command; to enjoin, as a duty; to lay on, as hands in the ceremony of ordination or of confirmation; to obtrude fallaciously.

Impos'er, *n.* One who enjoins, as a law; one who lays anything on another, as a hardship.

Impos'ing, *p. a.* Laying on; enjoining; deceiving.

—*a.* Commanding; adapted to impress forcibly.

—*n.* The act of one who imposes.

(*Printing.*) The arrangement of the pages of a sheet, or form, upon the imposing-stone, in their proper order, so that when they are printed, and the sheet folded, they will follow each other consecutively. The furniture is then put about them, with the chase, and they are wedged up with quoins, so as to be ready for the press.

Impos'ingly, *adv.* In an imposing manner.

Impos'ingness, *n.* The quality of being imposing.

Impos'ing-stone, *n.* (*Print.*) The stone on which the pages or columns of types are imposed and made into forms.

Imposi'tion, *n.* [Fr., from Lat. *impositio*.] Act of laying on; act of laying on hands in the ceremony of ordination.—That which is imposed; a tax, toll, duty, &c.—Constraint; oppression; burden.—Deception; imposture.

Impossibil'ity, *n.* [Fr. *impossibilité*.] State of being impossible; that which cannot be; state of being not possible to exist. — Unpracticability; the state or quality of being not feasible or possible to be done.

Impos'sible, *a.* [Fr.; Lat. *impossibilis* — *in*, and *possibilis*.] Not possible; that cannot be; impracticable; not feasible; that cannot be done.

Im'post, *n.* [O. Fr.; Fr. *impôt*; Lat. *impositus*, from *impono* — *in*, and *pono*, to place.] That which is laid or set on; any tax imposed by authority, particularly a tax levied on imported goods; tribute; excise; customs; duty.

(*Arch.*) The capital of a pier, or pilaster, that receives the thrust of an arch. (*C*, Fig. 177.) The impost varies in the character of its mouldings with the order to which it is applied. Sometimes the whole of the entablature serves as an impost to an arch. The term is applicable to any supporting, or springing piece.

Impost'humate, *v. n.* [See IMPOSTHUME.] To gather, to collect pus or purulent matter in any part of an animal body; to form an abscess.

—*v. a.* To affect with an imposthume or abscess.

—*a.* Imposthumated; swolleu or bloated with purulent or corrupt matter.

Impost'humating, *p. a.* Forming into an abscess.

Imposthuma'tion, *n.* Act of forming au abscess; also, an abscess; an imposthume.

Impost'hume, *n.* [A corruption of Lat. *apostema*; Gr. *apostema*, from *aphistemi*, to separate — *apo*, and *histemi*, to stand.] The separation of pus or purulent matter into an ulcer; an abscess; a collection of pus or purulent matter in any part of an animal body.

Impos'tor, *n.* [Fr. *imposteur;* L. Lat. *impostor*, from *impono.*] One who imposes on others; a person who assumes a character for the purpose of deception; a deceiver under a false character.

Impost'ure, *n.* [Fr.; Lat. *impostura.*] Imposition or fraud practised by a false pretender; deception practised under a false or assumed character; cheat; fraud; deception.

Im'potence, or **Im'potency,** *n.* [Lat. *impotentia*, from *impotens — in*, and *potens*, able, potent. See POTENT.] Want of ability, strength, or power, animal or intellectual; weakness; feebleness; inability; imbecility; defect of power; want of power or inclination to resist or overcome habits and natural propensities; inability to beget; want of moderation or self-restraint; ungovernable passion.

(*Law.*) Masculine incapacity. Should this defect exist at the time of the marriage, and be incurable, by the ecclesiastical law and the law of several of the American States, the marriage may be declared void *ab initio.*

Im'potent, *a.* [Fr., from Lat. *impotens, in — potens.*] Unable; powerless; weak; feeble; wanting strength or power; unable by nature, or disabled by disease or accident, to perform any act; wanting the power of propagation, as males; wanting the power of restraint; unbridled; uncontrollable.

—*n.* One who is feeble, infirm, or languishing under disease.

Im'potently, *adv.* In an impotent manner; feebly; weakly.

Impound', *v. a.* [*In* and *pound.*] To put, shut, or confine in, or as in, a pound or close pen; to confine; to restrain within limits.

Impound'age, *n.* Act of impounding cattle.

Impound'er, *n.* One who impounds the beasts of another.

Impound'ing, *p. a.* Confining in a pound: restraining.

Impov'erish, *v. a.* [Fr. *appauvrir;* Lat. *ad*, and *pauper*, poor.] To make poor; to reduce to poverty or indigence, as persons. — To exhaust strength, richness, or fertility, as of land or soil.

Impov'erished, *p. a.* Reduced to poverty. — Exhausted.

Impov'erishing, *p. a.* Making poor. — Exhausting.

Impov'erishment, *n.* [Fr. *appauvrissement.*] A reducing to indigence; exhaustion; drain of wealth, richness, or fertility.

Impow'er, *v. a.* See EMPOWER.

Impracti'cabil'ity, *n.* State or quality of being impracticable, or beyond human power, or the means proposed; impossibility; infeasibility; untractableness; stubborn.

Imprac'ticable, *a.* [Fr. *impraticable.*] That cannot be done or performed; impossible; infeasible; not to be effected by the means proposed; untractable; unmanageable; stubborn.

Impracticableness, *n.* Impossibility; untractableness; stubbornness.

Impracticably, *adv.* In a manner or degree that hinders practice.

Im'precate, *v. a.* [Lat. *imprecor, imprecātus — in*, and *precor*, to beg, pray, or beseech.] To pray that evil may fall, as on any one; to pray that a curse or calamity may fall, as on one's self, or on another person.

Impreca'tion, *n.* [Fr. *imprécation;* Lat. *imprecatio.*] Act of imprecating, or invoking evil on any one; a prayer that a curse or calamity may fall on any one; execration; malediction.

(*Rhet.* and *Poetry.*) A form of speech in which the superior powers are invoked to destroy or injure the objects of the speaker's enmity. In Shakspeare, Lear's imprecation against his daughters, and that of Timon against the Athenians, furnish noble instances.

Im'precatory, *a.* [Fr. *imprécatoire.*] Containing a prayer for evil to befall a person.

Impregnabil'ity, *n.* State of being impregnable.

Impreg'nable, *a.* [Fr. *imprenable — in*, and Lat. *prehendo*, to take or seize.] That cannot be seized or taken; not to be stormed or taken by assault; that cannot be reduced by force; able to resist attack. — Not to be moved, impressed, or shaken; invincible, as affection.

Impreg'nableness, *n.* The state of being impregnable; impregnability.

Impreg'nably, *adv.* In a manner to resist penetration or assault; in a manner to defy force.

Impreg'nate, *v. a.* [L. Lat. *impregnare;* Lat. *in, præ*, and *gigno*, to beget.] To make pregnant; to infuse the principle of conception, as into a female animal; to render prolific; to fecundate; to infuse particles of one thing into another; to communicate the virtues of one thing to another; to fill; to saturate.

—*a.* [L. Lat. *imprægnatus*, pp. of *impragnare;* It. *impregnato;* Sp. *impregnado, emprénado;* Fr. *imprégné.*] Rendered prolific or fruitful; impregnated.

Impregna'tion, *n.* [Fr. *imprégnation.*] The act of fecundating and rendering fruitful; communication of the particles or virtues of one thing to another; fecundation; fertilization; saturation.

(*Animal Physiol.*) See REPRODUCTION.

(*Vegetable Physiol.*) The *I.*, fertilization, or fecundation in plants takes place according to laws similar to those which prevail in the animal kingdom. In plants, however, the organs of reproduction are not permanent as in animals, but fall off — the male organs generally soon after fecundation, the female after the ripening of the seed. The male seminal substance, called *pollen*, never exists in a fluid state, but always in that of granules of various forms (*pollen grains*), which consist each of one cell, whose covering is of various thickness, and contains the impregnating substance. After the dehiscence of the anthers, the pollen gets into contact with the stigma of the pistil, which in its lowest and thickest part (the ovary or *germen*) contains the rudiments of the future seeds (*ovules*). The inner layer of the cell-covering of the pollen-grain separates from the outer and thicker layer, as if it came out of a bag, and continuing to be elongated by growth, is carried down through the *style* to the germen, where it reaches the *foramen* or small opening of the embryo sac, and comes into contact with the ovule, or even in many cases penetrates into the ovule itself between its cells. By this time, one or other of the cells of the ovule has become considerably more enlarged than the other cells, and what is called the *amnion* has been formed, in the mucilaginous fluid of which (*protoblasma*), after the contact of the pollen-bag, through the dynamic operation of its contents, a *cell-germ* or *cytoblast* is soon developed. This cytoblast is the first commencement of a new and distinct cell, which divides into two cells. These increase, by continually repeated separation of new cells, into a cellular body, which forms the more or less perfect *embryo* of a new plant. If the organ from which the pollen has proceeded, and the organ which contained the ovule, belong to the same plant or to plants of the same species, the embryo arising from this fecundation becomes a plant of the same species. But if the pollen by which the fecundation is effected comes from a plant of another species than that to which the plant belongs in whose germen the embryo is formed, the seed resulting from this fecundation will not, when it grows, produce plants of the same species, but *hybrids*, intermediate between the parent plants, and with various degrees of resemblance to one or other of them, but not perfectly corresponding with either. Hence the production of hybrids, and multiplication of varieties of plants in gardens, by what is called the artificial impregnation of the stigma of one plant with the pollen of another, which, however, must be of an allied species, hybridization being confined by the laws of nature within very narrow limits.

Impresciptibil'ity, *n.* [Fr. *imprescriptibilité.*] The quality of being imprescriptible.

Imprescrip'tible, *a.* [Fr. and Sp. *imprescriptible.*] Not capable of being lost or impaired: self-evidencing.

Imprescrip'tibly, *adv.* In an imprescriptible manner.

Impresc', *n.* A device, as on a shield. (Written also IMPRESA and IMPRESS.)

Im'press, *n.* That which is impressed; a mark or indentation made by pressure; the figure or image of anything made by pressure; stamp; likeness; mark of distinction; character; device; motto.—Act of compelling to enter into the public service, as practised in England.

Impress', *v. a.* [O. Fr. *empresser;* Lat. *imprimo, impressus — in*, and *premo, pressus*, to press.] To press upon or into; to imprint; to stamp; to make a mark or figure on anything by pressure; to print, as books. — To mark; to indent; to fix deep. — To compel to enter into public service, as seamen in England; to seize and take into service by compulsion.

Impressed', *p. a.* Pressed into; imprinted; stamped; marked by pressure. — Compelled to enter the public service; seized for public use. — Fixed in the mind; made sensible; convinced.

Impressibil'ity, *n.* Quality of being impressible.

Impres'sible, *a.* That may be impressed; that yields to an impression; that may receive impressions; that may have its figure stamped on another body.

Impres'siblenss, *n.* Quality of being impressible.

Impres'sibly, *adv.* In a manner to make impression.

Impress'ing, *p. a.* Pressing into; imprinting; stamping. — Fixing in the mind. — Compelling into service.

Impres'sion, *n.* [Fr.; Lat. *impressio.*] Act of impressing, as one body on another; mark; indentation; stamp made by pressure. — The effect which objects produce on the mind; image in the mind; idea; sensible effect; a single edition of a book; the books printed at once. — Slight, indistinct remembrance.

Impressionabil'ity, *n.* The quality of being impressionable; impressibility.

Impres'sionable, *n.* Susceptible of impression; capable of being moulded.

Impres'sionableness, *n.* Impressionability; quality of being impressionable.

Impres'sionless, *a.* Having the quality of not being impressed.

Impres'sive, *a.* Making or tending to make an impression; having the power of affecting, or of exciting attention and feeling; adapted to touch sensibility or the conscience; solemn.

Impres'sively, *adv.* In an impressive manner; in a manner to produce a powerful effect on the mind.

Impres'siveness, *n.* Quality of being impressive.

Impress'ment, *n.* (*Eng. Law.*) The forcible levying of seamen for service in the British navy. The practice of impressing and granting powers to the Admiralty for that purpose is of very ancient date; though no statute has expressly declared this power to be in the Crown, yet many of them very strongly imply it. The statute 2 Rich. II., c. 4, speaks of mariners being arrested and retained for the king's service, as of a thing well known and practised without dispute, and provides a remedy against their running away.

Impress'ure, *n.* Impression.

Im'prest, *n.* [It. *impresto, imprestito*; L. Lat. *impræstitum.*] A kind of earnest-money; loan; money advanced.

—*v. a.* [It. *imprestare.*] To advance on loan.

Imprevent'able, *a.* Not capable of being prevented; inevitable; certain. (R.)

Imprima'tur, *n.* [Lat., let it be printed.] A license which, in countries subjected to the censorship of the press, must be granted by a public functionary appointed for the purpose before any book can be printed.

Impri'mis, *adv.* [Lat., for *in primis*, among the first, chiefly; *in*, in, and *primus*, first.] In the first place; first in order.

Imprint', *v. a.* [*In*, and *print.*] To impress; to mark by pressure; to stamp, as letters and words on paper; to print; to fix on the mind or memory; to impress.

Im'print, *n.* The name of the publisher of a book, newspaper, &c., with the place and time of publication printed on the first page. By the early printers it was inserted at the end of the book, and was styled the *colophon.*

Impris'on, *v. a.* [Fr. *emprisonner.*] To put into a prison; to keep in a prison or jail, or to arrest and detain in custody in any place; to incarcerate; to confine; to shut up; to restrain from escape; to deprive of the liberty to move from place to place.

Impris'oner, *n.* One who imprisons another.

Imprisonment, (*im-priz'n-ment,*) *n.* [Fr. *emprisonnement.*] The restraint of a man's liberty under the custody, charge, or keeping of another. Imprisonment extends not only to a jail, but to a house, stocks, or where a man is held in the street, &c., for in all these cases the party so restrained is said to be a prisoner so long as he hath not his liberty freely to go about his business as at other times. No man can be imprisoned except by the lawful judgment of his peers, or by the law of the land, and no man can be imprisoned except as the law directs, either by command and order of a court of record, or by lawful warrant. — See ARREST, BAIL, CONSTABLE, HABEAS CORPUS.

Improbabil'ity, *n.* [Fr. *improbabilité.*] Quality of being improbable, or not likely to be true; unlikelihood.

Improb'able, *a.* [Fr.; Lat. *improbabilis — in*, and *probabilis.* See PROBABLE.] Not probable; not likely to be true: not to be expected under the circumstances of the case.

Improb'ably, *adv.* In a manner not likely to be true.

Improb'ity, *n.* [Fr. *improbité;* Lat. *improbitas*, from *improbo.* See PROBITY.] That which is disapproved or disallowed; want of integrity or rectitude of principle; dishonesty.

Impromp'tu, *n.* [Lat. *impromptu*, in readiness — *in*, in, and *promptus*, readiness.] (*Lit.*) A piece made off-hand, at the moment, or without previous study; an extemporaneous, and often merry or witty composition.

—*a.* or *adv.* Off-hand; extemporaneous; on the spur of the moment; without forethought or previous study; as, an *impromptu* stanza.

Impro'per, *a.* [*In*, and *proper;* Fr. *impropre;* Lat. *improprius.*] Not proper; not suitable; not adapted to its end. — Unfit; not becoming; not decent; unsuitable. — Inaccurate; incorrect; erroneous; wrong; ungrammatical.

Improp'erly, *adv.* In an improper manner; not fitly or suitably; unsuitably; incongruously; erroneously; inaccurately; ungrammatical.

Impro'priate, *v. a.* [Lat. *in*, and *proprio, propriatus*, to appropriate, from *proprius*, one's own, peculiar, proper.] To place the profits of ecclesiastical property in the hands of a layman.

—*a.* Devolved into the hands of a layman; impropriated.

Impropria'tion, *n.* (*Eng. Eccl. Law.*) Act of putting an ecclesiastical benefice into the hands of a layman; the benefice impropriated.

Impro'priator, *n.* One who impropriates; especially a layman who has possession of the lands of the Church, or an ecclesiastical living.

Impro'priatrix, *n.* A woman who impropriates, or who holds possession of Church lands.

Impropri'ety, *n.* That which is improper; unfitness; unsuitableness to character, time, place, or circumstances; inaccuracy in language.

Improvabil'ity, *n.* State or quality of being improvable or capable of improvement; susceptibility of being made better.

Improv'able, *a.* [See IMPROVE.] That may be improved; susceptible of improvement; capable of growing or being made better; that may be used to advantage, or to the increase of anything valuable, as hints; capable of tillage or cultivation, as land.

Improv'ableness, *n.* Susceptibility of improvement; capableness of being made better, or of being used to advantage.

Improv'ably, *adv.* In a manner that admits of melioration.

Improve', *v. a.* [O. Fr. *emprover*, to improve; Lat. *in*, and *probo*, to try, to consider good.] To make better; to advance in value or good qualities; to better; to ameliorate; to heighten; to mend; to correct; to rectify; to use or employ to good purpose; to turn to profitable account; to use for advantage; to apply to practical purposes.

—*v. n.* To grow better or wiser; to advance in goodness, knowledge, wisdom, or other excellence; to increase; to be enhanced; to rise, as the market-price.

Improve'ment, *n.* Act of improving; advancement in moral worth, learning, wisdom, skill, or other excellence; melioration; valuable addition; a change for the better; advance or progress from any state to a better instruction; growth in knowledge or refinement; edification; use or employment to beneficial purposes; practical application; the part of a discourse intended to enforce and apply the doctrines.

(*Patent Law.*) An addition of some useful thing to a machine, manufacture, or composition of matter. The patent-law of July 4, 1836, authorizes the granting of a patent for any new and useful improvement on any art, machine, manufacture, or composition of matter. But it is often difficult to say what is a new and useful improvement, the cases frequently approaching very near to each other. In the present improved state of machinery, it is almost impracticable not to employ the

same elements of motion, and in some particulars, the same means of operation, to produce any new effect.

Improv'er, *n.* One who improves; one who makes himself, or anything else, better; that which improves, enriches, or meliorates.

Improv'idence, *n.* [Lat. *improvidentia* — *in*, and *providens*. See PROVIDE.] Want of providence, foresight, or forecast; neglect of foresight, or of the measures which foresight might dictate for safety or advantage.

Improv'ident, *a.* [Lat. *in*, and *providens*, from *provideo* — *pro*, and *video*, to see.] Wanting providence; foresight, forethought, or forecast; wanting care to make provision for future exigencies; inconsiderate; negligent; careless.

Improviden'tially, *adv.* With improvidence; carelessly.

Improv'identiy, *adv.* In an improvident manner; without care to provide against future wants; without forecast or foresight.

Improv'ingly, *adv.* In a manner to improve.

Improvi'sate, *a.* [From It. *improvisato.*] Impromptu; off-hand; unpremeditated.

Improv'isate, Improvis'atize, *v. a.* or *n.* To compose in an impromptu manner; to utter extemporaneously; to improvise.

Improvisa'tion, *n.* Art of extemporaneous composition, whether in words or music. — That which is improvised; anything uttered impromptu.

Improvis'atize, *v. a.* or *n.* See IMPROVISATE.

Improvis'ator, *n.* One who writes or speaks impromptu; one who improvises.

Improvisato're, *n.* Same as IMPROVVISATORE.

Improvisato'rial, Improvis'atory, *a.* Having reference or pertaining to extemporaneous poetical composition.

Improvis'atrice, *n.* Same as IMPROVVISATRICE.

Improvise', *v. a.* [Fr. *improviser*, from Lat. *improvisus.*] To express one's self in an extemporary manner, particularly in verse. — To arrange or bring to pass without preliminary preparations; as, to *improvise* a dancing-party.

— *v. n.* To utter versification extemporaneously; — hence, by implication, to do anything off-hand or on the spur of the moment.

Improvis'er, *n.* An improvisator; one who improvises.

Improvvisato're, Improvisato're, *n.* [It.; Fr. *improvisateur.*] One who composes and recites or sings extemporaneous or impromptu verses upon any given subject without premeditation. The Italians particularly excel in this species of composition, owing, no doubt, in great measure, to the richness and flexibility of their language. The poetry, however, so produced, is of no very high character, being chiefly remarkable for its natural flow of language and quick adaptation of ideas and images to the main subject. None of the poems so produced have acquired any permanent reputation. The improvvisatore generally accompanies himself on the guitar while he is giving forth his verses. Several females have likewise distinguished themselves in this art, and are styled *improvvisatrici.*

Improvvisatrice, Improvisatrice, (*im-prŏv-ve-sa-trē'chā.*) [It.] A female composer or reciter of impromptu versification.

Impru'dence, *n.* [Fr.; from Lat. *imprudentia.* See PRUDENT.] Want of prudence; indiscretion; want of caution, circumspection, or a due regard to consequences; heedlessness; inconsiderateness; rashness.

Impru'dent, *a.* [Fr.; Lat. *imprudens* — *in*, and *prudens*, contracted from *providens* — *provideo*, to provide. See PROVIDE.] Wanting prudence, foresight, or discretion; not attentive to the consequences of words or actions; indiscreet; injudicious; heedless; rash; thoughtless.

"There is no such *imprudent* person as he that neglects God and his soul." — *Tillotson.*

Imprn'dently, *adv.* Without the exercise of prudence; rashly; indiscreetly.

Impu'beral, *a.* [From Lat. prefix *in*, and *pubes*, puberty.] Immature; not having reached puberty; as, "*impuberal* animals." — *Sir W. Hamilton.*

Impu'berty, *n.* Absence of puberty or legal marriageable age.

Im'pudence, *n.* [Fr.; Lat. *impudentia*, from *impudens.*] State or quality of being impudent; want of shame; absence of modesty; shamelessness; assurance, accompanied with a disregard of the presence, or contempt for the opinions, of others; audacity; effrontery; barefacedness; impertinence; insolence.

Im'pudent, *a.* [Fr.; Lat. *impudens* — *in*, and *pudens*, *pudeo*, to be ashamed; probably allied to Hind. *purda*, shame, disgrace.] Wanting shame or modesty; shameless; audacious; bold and defiant with contempt of others; brazen; barefaced; immodest; saucy; impertinent; insolent.

Im'pudently, *adv.* In an impudent manner; shamelessly; with effrontery or indecent assurance.

"Why should soft Fabius *impudently* bear
Names gained by conquest in the Gallic war?" — *Dryden.*

Impudicity, (*im-pu-dĭs'i-te,*) *n.* [From Lat. *impudicus*, immodest.] Immodesty; shamelessness.

Impugn, (*im-pūn',*) *v. a.* [Fr. *impugner*; Lat. *impugno* — *in*, and *pugno*, to fight. See PUGNACIOUS.] To oppose; to attack or assail by words or arguments; to contradict; to rebut; to gainsay; to challenge controversially; as, to *impugn* another person's testimony.

Impugn'able, *a.* Susceptible of being impugned.

Impugn'er, *n.* One who impugns, gainsays, or contradicts.

Impugn'ment, *n.* Act of impugning or assailing.

Im'pulse, *n.* [Lat. *impulsus.*] (*Physics.*) The force of one body communicated to another in a continuance of motion after the force has been withdrawn. When a body rolls down a gently-inclined plane, it is possible to see the gradual changes in its velocity, and it is apparent that between the instants at which the body has two different velocities it takes in all intermediate velocity, or that the change of velocity is perfectly gradual. But when a body is violently struck, as in the case of a ball by a cricket-bat, no gradations of velocity are seen; but the ball appears to change from a point of rest, as it were, to a state of rapid motion, without passing through any of the intermediate states. In this case it is said to receive an impulse, which may, therefore, be said to be any cause by which velocity is communicated suddenly and without gradations.

— Influence acting on the mind; motive; impression; supposed supernatural influence on the mind.

"These were my natural *impulses* for the undertaking." — *Dryden.*

Impul'sion, *n.* [Fr.; Lat. *impulsio.*] Act of impelling, or of striking, or of driving against; act of urging forward; sudden or momentary action of a body in motion upon another body; as, "*impulsion* of the air." (*Bacon.*) — Influence operating suddenly on the mind, whether from external or internal causes; impulse.

"Thou didst plead divine *impulsion* prompting." — *Milton.*

Impul'sive, *a.* [Fr. *impulsif.*] Having the power of driving, urging, or impelling; moving; impellent. — Governed or actuated by impulse; as, an *impulsive* person.

(*Mech.*) Moving momentarily; not continuous; — applied to forces.

— *n.* Impulse; impelling cause; impulsive agency.

Impul'sively, *adv.* By impulse; with force.

Impul'siveness, *n.* State or quality of being impulsive.

Impunc'tate, *a.* Not dotted or punctate.

Impunct'ual, *a.* Not punctual; after the appointed time. (R.)

Impunctual'ity, *n.* Want of punctuality. (R.)

Impu'nity, *n.* [Fr. *impunité*; Lat. *impunitas* — *in*, and *pœna*, punishment. See PUNISH.] Safety, security, or freedom from punishment or penalty. — Freedom or exemption from injury.

Impure', *a.* [Fr. *impur*; Lat. *impurus* — *in*, and *purus*, pure. See PURE.] Not pure; foul; feculent; impregnated with extraneous or deleterious matter; tinctured; as, *impure* water. — Defiled by sin; stained with guilt; unholy; — applied to persons. — Unsanctified; unhallowed; unholy; — applied to things.

"Hypocrites austerely talk, condemning as *impure* what God has made pure." — *Milton.*

— Lewd; unchaste; unclean; as, *impure* practices. — Obscene; as, *impure* thoughts.

(*Script.*) Without purification, according to the Mosaic law; unclean.

Impure'ly, *adv.* In an impure manner; with stain or uncleanness.

Impure'ness, Impu'rity, *n.* [Fr. *impurité*; Lat. *impuritas.*] Want of purity; uncleanness: foulness; feculence; obscenity; defilement; pollution — That which is impure; any foul matter; — hence, lewdness; unchastity. — Admixture of an extraneous or foreign mixture in anything; feculent ingredients; as, *impurities* of the blood.

(*Script.*) Lack of purity according to the Mosaic law; defilement; uncleanness.

Impur'ple, *v. a.* Same as EMPURPLE, *q. v.*

Imputabil'ity, *n.* State or quality of being imputable or chargeable.

Impu'table, *a.* [Fr.] That may be imputed or charged to a person; that may be ascribed to, or set to the account of another; chargeable; as, his errors were *imputable* to want of reflection. — Accusable; chargeable with a fault. (R.)

Impu'tableness, *n.* Imputability; state or quality of being imputable.

"'Tis necessary to the *imputableness* of an action that it be avoidable." — *Norris.*

Imputa'tion, *n.* [Fr.: Lat. *imputatio.* See IMPUTE.] Act of imputing or charging: attribution, as of crimes, faults, or errors; also, that which is charged or imputed. — Censure; reproach; charge or attribution of evil.

(*Theol.*) The charging of something to the account of one which belongs to another; or, the attributing any matter, quality, or character, whether good or evil, to any person as his own.

Impu'tative, *a.* That may be imputed.

Impu'tatively, *adv.* By imputation.

Impute', *v. a.* [Lat. *imputo* — *in*, and *pŭto*, to clean, to clear up, to hold a reckoning. See COMPUTE.] To charge; to attribute; to set to the account of; to ascribe.

(*Theol.*) To reckon to one what does not belong to him.

"It was *imputed* to him for righteousness." — *Rom.* iv. 22.

— To ascribe to one as the author, producer, or possessor of; — commonly applied in a bad sense.

"I have read a book, *imputed* to Lord Bathurst, called a dissertation on parties." — *Swift.*

— To regard; to reckon; to take account of. (R.)

Imput'er, *n.* One who imputes, attributes, or charges.

Imputres'cible, *a.* [Fr.] Impervious to corruption or putrescence.

In-. A prefix from the Lat. *in*, not, used commonly in composition in a negative or privative sense, like the English *un*; as, *active* denotes that which *acts*, *inactive* which does *not act*. *In* before *r* takes the form of *ir*, as in *irregular*, *irrelevant*; before *l*, it is converted into *il*, as in *illumine*; and before a labial into *im*, as in *impenetrable*.

In, *prep.* [A. S., Ger., and Goth. *in*; Lat. *in*; Gr. *en*; W. *yn*; Armor. *enn.* The Lat. *in*, in composition, sometimes represents the Sansk. negative participle *a* or *an*, Ger. *un.*] Noting the place where anything is present, or the state present at any time; within; inside of; surrounded by; — used in opposition to *out of* or *from*; as, *in* the city, *in* health, *in* doors.

"However it be *in* knowledge, I may truly say it is of no use at all *in* probabilities." — *Locke.*

— Noting time, power, proportion; in the midst of; on account of; in possession of; by means of; through; according to; as, it is not *in* his nature to commit so base an act, it is not *in* my power to assist you. — Noting entrance into a new condition of life or sphere of action; — used for *into*; as, he has started *in* business on his own account.

In blank. (*Law.*) With the name of the indorser only; said of a note of hand, cheque, or bill of exchange.

In that, because; for the cause or reason that.

"He cannot brook disgrace well . . . *in that* it is a thing of his own search." — *Shaks.*

In the name of, by authority of; on the part of; in behalf of; as, it was done *in the name of* the king; — used in invocations, protestations, and the like. — *To be in with*, *to keep in with*, to be on good terms with; to enjoy and retain the favor of; to be on a footing of friendship or intimacy with; as, he *keeps in with* the government. (Used colloquially.) Also, to be close to or in the vicinity of; as, the ship *kept in with* the land.

NOTE. — *In* is very frequently substituted for *into*, and unaccompanied with its proper noun; as, come *in*, that is, *into* the house; the Radicals have got *in*, that is, *into* power; my ship has come *in*, or, in other words, *into* port.

In, *adv.* Within; not out; close; near; inside; as, a ship's sails are *in*, that is, they are furled and not in present use.

In, *n.* One in possession of official duty; — opposed to *out.* — A nook, corner, or winding turn; a re-entrant angle; — generally in the plural; as, the *ins* and *outs* of a garden.

Inabil'ity, *n.* Want of ability, force, strength, or power, whether physical, mental, or moral; want of adequate means; impotence; incapacity; incompetence.

Inab'stinence, *n.* Want of power to abstain; intemperance of appetite; sensual indulgence.

"That may'st know what misery the *inabstinence* of Eve shall bring on man." — *Milton.*

Inabstract'ed, *a.* Not abstracted.

Inabu'sively, *adv.* Without abuse.

Inaccessibil'ity, Inacces'sibleness, *n.* State or quality of being inaccessible or not to be reached.

Inacces'sible, *a.* [L. Lat. *inaccessibilis* — *in*, and *accessibilis*, accessible.] Not accessible; unapproachable; not to be reached; not to be obtained; forbidding access; as, an *inaccessible* position in society, an *inaccessible* mountain.

Inacces'sibly, *adv.* In an inaccessible manner; so as not to be approached.

Inaccord'ant, *a.* Without accordance.

Inac'curacy, *n.* Want of accuracy or exactness; mistake; fault; defect; blunder; error; as, a verbal *inaccuracy.*

Inac'curate, *a.* Not accurate; not exact or correct; faulty; erroneous; not according to truth or fact; as, an *inaccurate* account.

Inac'curately, *a.* Not according to truth; incorrectly; erroneously.

Inacquaint'ance, *n.* Unacquaintance.

Inacquies'cent, *a.* Not acquiescing; not agreeing.

Inac'tion, *n.* [Fr.] Want of action; forbearance of labor or exertion; rest; idleness; cessation from motion.

Inac'tive, *a.* [Fr. *inactif*, and *inactive.*] Inert; not active; having no power to move, as matter. — Indisposed to effort: not diligent, active, busy, or industrious; as, an *inactive* army.

(*Chem.*) Deficient in active properties; inert.

Inac'tively, *adv.* In an inactive manner; inertly; sluggishly; idly.

Inactiv'ity, *n.* [Fr. *inactivité.*] Want of activity; inertness; as, the *inactivity* of matter. — Idleness, or habitual sluggishness; want of action or exertion; indisposition to effort; lack of energy.

Inadapta'tion, *n.* State or quality of not being adapted or fitted.

Inad'equacy, *n.* Quality of being inadequate, unequal, or insufficient for a purpose; inequality; incompleteness; defectiveness; as, *inadequacy* of means. — Improper or injurious drawback or defect; as, *inadequacy* of electoral representation.

Inad'equate, *a.* [Lat. *in*, *ad*, and *æquatus* — *æquo*, to make level. See ADEQUATE.] Not adequate or equal to the purpose; not sufficient to effect the object; incompetent; unequal; disproportionate; not just or in due proportion; partial; incomplete; defective; as, an *inadequate* income.

Inad'equately, *adv.* In an inadequate manner; not fully, sufficiently, or completely.

Inad'equateness, *n.* State or quality of being inadequate; inadequacy; insufficiency; incompleteness.

Inadhe'rent, *a.* Not adhering.

(*Bot.*) Free; detached from the other organs.

Inadhesion, (*in-ad-he'zhun.*) *n.* Want of adhesion: state or quality of not adhering or attaching.

Inadmissibil'ity, *n.* Quality of being inadmissible, or not proper to be received; as, the *inadmissibility* of a plea in court.

Inadmis'sible, *a.* Not admissible; not proper to be admitted, allowed, or received; as, *inadmissible* evidence.

Inadmis'sibly, *adv.* In a manner to forbid admission.

Inadver'tence, Inadver'tency, *n.* [Fr. *inad-*

ce.] Want of advertence; a not turning the mind to; inattention; negligence; heedlessness; oversight; as, the misfortune happened through *inadvertency*. — Effect of inattention or carelessness; any error, oversight, mistake, or fault caused by negligence of attention or want of thought.

Inadver'tent, *a.* [Lat. *in*, and *advertens* — *adverto* to turn to, to advert. See ADVERT.] Not advertent; not turning the mind to; heedless; careless; negligent.

Inadver'tently, *adv.* Heedlessly; carelessly; from want of attention; negligently; inconsiderately.

Inadver'tisement, *n.* Inadvertence; negligence. (R.)

Inaffabil'ity, *n.* Lack of affability; reservedness in social intercourse; reticence in conversation; stiffness of demeanor.

Inaffecta'tion, *n.* Freedom from affectation in speech or manner.

Inagh, a parish of Ireland, in prov. Munster, co. Cork.

Inagua, (*ē-nä'gwa,*) or HENEAGUA, (GREAT,) an island in the W. Indies, the largest and most S. of the Bahama Group. Lat. (N.E. point) 21° 18′ N., Lon. 73° 40′ W.; *area*, about 1 000 sq. m. Chief town, Mortimer. — (LITTLE,) about 12 m. N. of the above; *area*, about 75 sq. m.

Inalienabil'ity, *n.* State or quality of being inalienable.

Inalienable, (*in-āl'yan-a-bl,*) *a.* [Fr.] Unalienable; incapable of being lawfully transferred from one person to another. — Public highways, rivers, &c., are inalienable.

Inal'ienableness, *n.* Inallenability; state of being inalienable.

Inal'ienably, *adv.* In a manner which prevents alienation; as, a charter *inalienably* granted.

Inalterabil'ity, *n.* State or quality of being inalterable, fixed, or unchangeable.

Inamora'ta, Inamora'to, *n.* [It. *innamorata*, from *innamorare*, to enamor, to inspire with love.] An enamored person; a lover.

In-and-in, *n.* (*Games.*) A game at dice formerly played.

—*a.* Raised from the same stock or parentage; — said of animals; as, a race-horse bred *in-and-in*. — See BREEDING.

Inane, (*in-ān',*) *a.* [Lat. *inanis*, from Gr. *inēō*, to empty.] Empty; void; without definite comprehension; dull; stupid; blockish; as, an *inane* talker.

—*n.* Vacuity; that which is void or empty; infinite space.

"The great *inane* beyond the confines of the world." — *Locke.*

Inanil'oquent, Inanil'oquous, *a.* [Lat. *inanis*, empty, and *loqui*, to speak.] Loquacious; garrulous; exceedingly and turgidly talkative. (R.)

Inan'imate, *a.* [Lat. *inanimatus* — *in*, and *animatus*, animated. See ANIMATION.] Lifeless; dead; destitute of animation or life; inert; inactive; dull; soulless; spiritless; as, *inanimate* bodies.

Inan'imated, *a.* Wanting life or animation; spiritless; dull; as, an *inanimated* conversation.

Inan'imateness, *n.* State or condition of being inanimate.

Inanima'tion, *n.* Want of animation; lifelessness; torpidity; listlessness; dulness. — Animation; infusion of life, spirit, or vigor.

"The *inanimation* of Christ living and breathing within us." *Bishop Hall.*

Inanition, (*in-an-ish'un,*) *n.* [Fr.; L. Lat. *inanitio.*] Emptiness; vacuity; want of fulness; emptiness for want of food; exhaustion, &c.

"Feeble from *inanition*, inert from weariness." — *Landor.*

Inan'ity, *n.* [Lat. *inanitas.*] Emptiness; void space; vacuity; inanition. — Mental deficiency; senselessness; frivolity; absence of definite object.

In antis. [Lat.] (*Arch.*) See ANTA.

Inap'athy, *n.* Sensibility; quickness; liveliness; — in contradistinction to *apathy*.

Inappeal'able, *a.* Not allowing or admitting of appeal.

Inappeas'able, *a.* Unappeasable; that may not be appeased.

Inappellabil'ity, *n.* Incapability of being appealed from.

Inap'petence, Inap'petency, *n.* [It. *inappetenza.*] Want of appetence, or disposition to seek and relish food. — Lack of natural carnal desire or inclination.

Inapplicabil'ity, *n.* State or quality of not being applicable; unfitness; unsuitableness.

Inap'plicable, *a.* [*In* and *applicable.*] Not applicable; that cannot be applied; not fitted or suitable to the purpose; unsuitable; unadapted; inappropriate; inapposite; as, the plea is *inapplicable* to the facts elicited.

Inap'plicableness, *n.* State or quality of being inapplicable.

Inap'plicably, *adv.* In an inapplicable manner; unsuitably.

Inapplica'tion, *n.* Want of application; deficiency of attention or assiduity; negligence; indolence; neglect of active pursuits.

Inapposite, (*in-ap'pō-zit,*) *a.* Not apposite; not fit or suitable; not pertinent; inappropriate; as, an *inapposite* simile.

Inap'positely, *adv.* In a manner not apposite or pertinent; inappropriately.

Inappreciable, (*-prē'shi-a-bl,*) *a.* Not to be appreciated; that cannot be duly valued; that cannot be estimated.

Inappreci'ation, *n.* Want of appreciation or estimation.

Inapprehen'sible, *a.* [Lat. *inapprehensibilis.*] Not apprehensible; not to be understood.

Inapprehen'sion, *n.* Lack of apprehension.

Inapprehen'sive, *a.* Not apprehensive.

Inapproach'able, *a.* Not approachable; without accessibility.

Inapproach'ably, *adv.* In a manner not admitting of access or approach.

Inappro'priate, *a.* [*In* and *appropriate.*] Not appropriate; unsuited, not proper; not belonging to; not becoming; as, an *inappropriate* remark.

Inappro'priately, *adv.* Not appropriately; unsuitably.

Inappro'priateness, *n.* Want of appropriateness or suitableness.

Inapt', *a.* [Fr. *inapte.*] Unapt; unfit; unsuitable; inappropriate.

Inap'titude, *n.* Want of aptitude; unfitness; unsuitableness; inappropriateness.

Inapt'ly, *adv.* Unsuitably; inappropriately; unfitly.

Inapt'ness, *n.* Inaptitude; want of fitness or suitability.

Inar'able, *a.* Not arable; not fitted for purposes of tillage.

Inarch', *v. a.* To graft by uniting to a parent stock, without separation; as, to *inarch* the scion of a tree.

Inarch'ing, *n.* (*Horticulture.*) A grafting by approach, that is to say, the uniting a scion to a stock without severing its connection with the parent until it has become united to the stock; the branches being brought together in an archiug manner. *I.* is practised in cases in which the ordinary modes of grafting are not found readily to succeed, as with camellias. Tbo stocks to be grafted upon are planted, or placed in pots, around tbe plant from which the grafts are to be taken. Four or 5 months are generally sufficieut to complete the union, but sometimes even two years are necessary. When the union is complete, the scion is separated by a sloping cut from its parent plant. Care must always be taken that the parts to be joined together be cut so as to fit one another pretty exactly, and they are then firmly tied together, and so covered that neither air nor water may penetrate. It is desirable that they be branches of nearly the same thickness. They should be cut almost down to the pith, but the pith must not be injured. *I.* is performed in spring, after the sap has begun to circulate. Tho accompanying figure illustrates several ways of *I.* For example, two branches of a tree, *a*,

Fig. 1370.

may be bent so as to meet and strike upon a wound in tbe main stem, by which a gap will be filled up; one growing tree, *b*, either from the ground or a pot, may be led to unite with another; or several suckers, *c*, may be led from the ground archwise to strike upon a point in the stem, thus bringing fresh air to the productive part of the tree. By means such as these, quickset-hedges are sometimes thickened like a net-work, so as greatly to improve their appearance and protective qualities.

Inartic'ulate, *a.* [*In*, and *articulate.*] Not articulated; not uttered with distinct and proper junction of the organs of speech; not marked by distinctive syllabic sounds; disjointed in speech; not accordant with the natural voice of the human tongue.

"Solemn music which is *inarticulate* poesy." — *Dryden.*

—Destitute of the power of articulation. (R.)

(*Zoöl.*) Not jointed or articulated; Inarticulated.

Inartic'ulated, *a.* (*Zoöl.*) Inarticulate; not jointed.

Inartic'ulately, *adv.* Indistinctly; without distinct or jointed utterance.

Inartic'ulateness, *n.* Want of distinct articulation; confusion of utterance.

Inarticula'tion, *n.* Indistinctness of sounds in speaking.

In artic'ulo mor'tis. [Lat., at the point of death.] (*Scot. Law.*) A phrase used to denote a deed executed on a death-bed. As a general rule, such a deed, operating as a will, may be set aside by the heir-at-law.

Inartificial, (*in-är-ti-fish'al,*) *a.* Not artificial; not performed by art; formed without art; simple; artless; natural. — Characterized by natural and simple influences or effects; as, "*inartificial* gratitude." *Evelyn.*

Inartifi'cially, *adv.* Without art; contrary to the rules of art; in a simple, artless, or natural manner.

Inartifi'cialness, *n.* State or quality of being natural or inartificial.

Inasmuch', *adv.* [*In*, *as*, and *much.*] Seeing that; this being a fact; since; for as much: — preceding *as*, as, *inasmuch as* you have repented, you are forgiven.

Inatten'tion, *n.* Want of attention; not having the mind fixed steadily on one object; neglect; heedlessness; carelessness.

"Old (lays) the mind with *inattention* hears."—*Pope.*

Inatten'tive, *a.* Not attentive; not fixing the mind on an object; careless; heedless; regardless; thoughtless; negligent; as, an *inattentive* listener.

Inatten'tively, *adv.* Without attention; carelessly; heedlessly; negligently; indifferently.

Inatten'tiveness, *n.* State of being inattentive; inattention.

Inaudibil'ity, Inau'dibleness, *n.* State or quality of being inaudible.

Inau'dible, *a.* Not audible; that cannot be heard; as, an *inaudible* voice. — Noiseless; silent; moving without sound.

"Th' *inaudible* and noiseless foot of time." — *Shaks.*

Inau'dibly, *adv.* In a manner not to be heard; noiselessly.

Inau'gural, *a.* [Lat. *in*, and *auguralis.* See AUGUR.] Pertaining to an inauguration; made or pronounced at an inauguration; as, an *inaugural* speech, an *inaugural* ode.

—*n.* An inaugural address. (U. States.)

Inau'gurate, *v. a.* [Lat. *inauguro, inauguratus.*] To induct into an office with solemnity, or appropriate ceremonies; to invest with an office in a formal manner; to install in a public or official position; as, to *inaugurate* the President of the United States. — To start in motion; to open; to cause to begin; to set in action or progress; as, to *inaugurate* a new political system, to *inaugurate* a new style of dress, to *inaugurate* a public exhibition.

—*a.* Inducted into office.

Inauguration, (*in-awg-u-rā'shun,*) *n.* [Lat. *inauguratio*, a beginning.] A word borrowed from the ceremonies used by the Romans when they were received into the College of Augurs, and applied to the act of inducting into office with ceremony. Kings and emperors are *inaugurated* by coronation, prelates by consecration; and the heads of colleges and other important offices by such ceremonies and forms as give weight and authority to the transaction. — Formal opening or beginning of any course of action, or popular movement, or public building, and the like; as, the *inauguration* of imperialism.

Inau'gurator, *n.* One who, or that which, inaugurates.

Inau'guratory, *a.* Relating or pertaining to inauguration; appropriate to induction into public honors or place; as, *inauguratory* ceremonies.

Inau'rate, *v. a.* [Lat. *inaurare*, from prefix *in*, and *aurum*, gold.] To gild; to cover or ornament with gold.

—*a.* (*Zoöl.*) Applied to striæ or other impressed parts having a metallic splendor.

Inaura'tion, *n.* [Fr.] Act or process of gilding, or coating with gold.

Inauspicious, (*in-aws-pish'us.*) *a.* Ill omened; not auspicious; unfavorable; unlucky; unfortunate; evil; foreshadowing ill; as, an *inauspicious* event.

"With *inauspicious* love a wretched swain
Pursued the fairest nymph of all the plain." — *Dryden.*

Inauspi'ciously, *adv.* With ill omens; unfortunately; unfavorably; in an inauspicious manner.

Inauspi'ciousness, *n.* State or quality of being inauspicious; unfavorableness; unluckiness.

Inbeam'ing, *n.* Entrance of a beam of light.

Inbe'ing, *n.* Inherence; inseparableness; innate existence.

In'board, *a.* Stowed or conveyed in a ship's hold; as, *inboard* ballast.

In'board, *adv.* On board of a vessel; within or below decks.

In'bond-stone, *n.* (*Arch.*) A header, or stone placed lengthwise across a wall.

In'born, *a.* Born in or with; innate; inherent; natural.

"Thy *inborn* worth her consolous eyes shall see." — *Dryden.*

Inbreak'ing, *a.* Aggressive; breaking into.

—*n.* Act of breaking in; invasion; inroad; aggression.

Inbreathe', *v. a.* To infuse by respiration.

Inbred', *a.* Bred within; inherent; native; innate; generated naturally; as, *inbred* politeness.

"My *inbred* enemy forth issued." —*Milton.*

Inbreed', *v. a.* To germinate or generate within; to make inherent.

Inburn'ing, *a.* Burning strongly within; as, "*inburning* wrath."—*Spenser.*

Inburnt', *a.* Burning or raging within.

Inburst', *a.* A bursting inwardly.

Inca, (*in'ka,*) a Peruvian or rather Quichua title, signifying chief, applied to the imperial head of the Peruvian empire, and also to the governing caste or race from which he sprung, and which had a prescriptive right to the highest sacerdotal and civil dignities of the empire. The empire of the Incas, founded, according to tradition, in the 11th century, by the celebrated Manco Capac, extended over the table-land of the Andes, from Pasto to the neighborhood of Chili, as well as the low lands on the coast. It was destroyed by the Spaniards under Pizarro and Almagro. The authority of the ruling Inca was absolute; his will was the supreme law. Considered as the son of the sun, and descendant in right line from Manco Capac, he was also the high-priest and oracle of religion; his body after death was the object of divine honors. The blood royal of the Incas is preserved, or believed to be so, among Indians of the present day, and Tupac Amaru, who carried on a long and nearly successful insurrection against Spain in the latter part of the last century, professed to be descended from them. See PERU.

In'ca, a town of the island of Majorca, standing on a low hill, 17 m. from Palma.

In'ca, *n.* (*Zoöl.*) A genus of coleopterous insects, family *Scarabæidæ*, by many authors placed among the Goliath-beetles, but whose situation in the system, according to more modern views, is nearer *Trichius*. They are natives of South America. The *Inca Weberi* (Fig. 1371) is of a violet black; the thorax edged with white; three-banded, the outer bands connected with the white edge of the thorax; the elytra have a reddish tinge, spotted with small palish marks.

Fig. 1371. — INCA WEBERI.

Incage, (*-kāj'*,) *v. a.* Same as ENCAGE, *q. v.*

Incal'culable, *a.* [Fr.] Beyond calculation; that cannot be computed or estimated; as, the *incalculable* blessings of liberty.

Incal'culableness, *n.* State or quality of being beyond calculation or measure.

Incal'culably, *a.* In an incalculable manner.

Incales'cence, Incales'cency, *n.* Calefaction; incipient heat.

Incales'cent, *a.* [From Lat. *incalescere*, to become hot.] Growing warmth; increasing in heat.

Incamera'tion, *n.* [From Lat. *in*, and *camera*, chamber.] Act or formula of annexing lands, fiscal rights, &c., to the Pope's territorial sovereignty.

Incandes'cence, *n.* [Lat. *incandescens.*] The lumi- [illegible] substance when [illegible]ly ignited. [illegible] and incandescence are properties belonging to some bodies by which they give out light when raised to certain high temperatures, the quantity of light in[illegible] with the temperature. The light at first is of a dull red, then bright, and indicating what is called *cherry-red heat*; it becomes orange-colored or yellow at a higher temperature; and, lastly, a white heat, when the light becomes painful to the eye. The degree at which incandescence begins to be visible in the dark was placed by Sir Humphry Davy's experiments at 810° Fahr.; but a dull red heat, visible at daylight, is probably about 1,000°; a cherry-red heat, 1,200°; an orange-heat, 1,700°; and a white-heat, 3,000°. According to Daniell's pyrometer, the high white-heat of a good wind-furnace is 3,300°.

Incandes'cent, *a.* White with heat.

Inca'nous, *a.* [From Lat. *in*, and *canus*, hoary.] (*Bot.*) Having pubescent hoariness.

Incanta'tion, *n.* [Fr., from Lat. *incantatia*, from *incanto* — *in*, and *canto*, to sing, to chant. See ENCHANT.] The act of enchanting; enchantment; act of performing certain occult ceremonies, and uttering mysterious formulæ, for the purpose of raising spirits, and for other tricks of diablerie. — See MAGIC.

Incan'tatory, *a.* Dealing in incantations; magical; as, "*incantatory* impostors." — *Sir T. Browne.*

Incan'ton, *v. a.* To unite to a canton or separate community; to form into a canton.

Incapabil'ity, *n.* Quality of being incapable; natural incapacity, or want of power.

(*Law.*) Want of legal qualifications or of legal power; incapacity.

Inca'pable, *a.* [Fr.] Wanting sufficient capacity or largeness; not having room enough to contain or hold; preceding *of*; as, a quart measure is *incapable of* holding more than two pints. — Wanting natural power or capacity to learn, know, understand, or comprehend; mentally incompetent or insufficient; as, an *incapable* general. — Not in a state to receive or support; not susceptible of.

"Wilmot . . . thought himself *incapable* of reparation." — *Clarendon.*

—Lacking or deficient in physical power to produce certain results or effects; as, a man *incapable* of severe fatigue. — Wanting moral power or disposition; as, *incapable* of refusing a bribe. — Not capable of yielding to evil or vicious promptings or temptations; as, he is *incapable* of falsehood.

(*Law.*) Not possessing the necessary legal qualifications; as, a foreigner by birth is *incapable* of filling the office of President of the U. States.

—*n.* A weak-minded, inert, inefficient person; one who is not capable of mental effort; — sometimes applied to one laboring under physical impotency or infirmity.

Inca'pableness, *n.* Incapability; state, condition, or quality of being incapable or inefficient.

Inca'pably, *adv.* In a weak or incapable manner.

Incapacious, (*-ka-pā'shus*,) *a.* Without space or extent; not spacious or roomy; insufficient; of inferior content or capacity; narrow; as, "Souls . . . little and *incapacious*." — *Bp. Burnet.*

Incapa'ciousness, *n.* Narrowness; confined limits; want of containing space.

Incapacitate, (*in-ka-păs'i-tāt*,) *v. a.* To deprive of capacity or natural power; to make or cause to be incapable.

—To disable; to weaken; to disqualify; to render ineligible or unfit.

"Nothing of consequence should be left to be done in the last *incapacitating* hours of life." — *Richardson.*

(*Law.*) To deprive of legal status; to render incompetent for the performance of certain civil duties; to disqualify.

Incapacita'tion, *n.* Disqualification; want of power or capacity.

Incapac'ity, *n.* Want of power; lack of mental or physical capacity; functional deficiency; disability by deprivation of power.

(*Law.*) Want of qualification or legal requisites; incapability of exercising certain civil rights and privileges; as, the *incapacity* of a woman to exercise the electoral franchise.

Incar'cerate, *v. a.* [Fr. *incarcerer*, from rare Lat. *incarcero* — *in*, and *carcer*, a prison: akin to Gr. *gorgûra*, an underground cell, and to *karkâras*, a prison.] To imprison; to hold in durance or confinement. — To confine; to shut up; to inclose; to immure.

—*a.* Confined; immured; imprisoned.

Incarcera'tion, *n.* Imprisonment; act of incarcerating or confining in prison.

(*Surg.*) A term generally applied to ruptures or herniæ, with the same meaning as *strangulation*; but, according to Scarpa, an *incarcerated* hernia is that in which the course of the intestinal matter is interrupted without any considerable injury of the bowel itself; whereas in *strangulated* hernia the vitality of the bowel is affected, or there is organic injury of its coats. The functions of the merely incarcerated intestine are healthily resumed upon its return into the abdomen, which is not the case where true strangulation has taken place.

Incarn', *v. a.* [Fr. *incarner*. See INCARNATE.] To incarnate; to invest or embody with flesh.

—*v. n.* To breed flesh.

Incar'nadine, *v. a.* [From It. *incarnadino*, pale-red.] To tint or stain of a flesh-color, or carnation-red. (R.)

Incar'nate, *v. a.* [L. Lat. *incarna*, *incarnatus* — in, and *cara*, *carnis*, flesh. See CARNAL.] To clothe in flesh; to embody with flesh.

—*v. n.* To incarn; to form flesh; to granulate or cover with new flesh, as a wound.

"My uncle Toby's wound was . . . just beginning to *incarnate*." *Sterne.*

—*a.* Invested with flesh; embodied or personified in flesh.

Incarna'tion, *n.* [Fr., from L. Lat. *incarnatio*.] The union of the Godhead with the Manhood in Jesus Christ. What the nature of this union of the human and the divine was, we have no means of knowing; that such a union actually did take place, we have the evidence in Scripture; for St. John says: "The word was made flesh, and dwelt among us." Yet many sects have arisen, who have maintained the contrary, and held that the Son of God did not take human nature upon him; as the Arians, Socinians, Nestorians, &c.

—An incarnate form; an embodiment; a reduction to apparent form.—A striking personification of anything; a human manifestation or exemplification of some special attribute, property, or quality.

(*Surg.*) The growth of flesh, or granulation. — *Dunglison.*

Incar'native, *a.* Healing; producing new flesh.

—*n.* A medicine serving to promote the healing of wounds, and the generation of new flesh.

Incarnifica'tion, *n.* Incarnation; act of assuming flesh.

Incase', *v. a.* To inclose in a case; to cover with something solid; to enwrap.

"Rich plates of gold the folding-doors *incase*." — *Pope.*

Incase'ment, *n.* Act of inclosing or protecting with a casement. — That which forms an outside case or covering.

Incask', *v. a.* To place or inclose within a cask.

Incas'tellated, *a.* [L. Lat. *incastellatus*.] Immured or inclosed in a castle.

Incas'telled, (*-teld*,) *a.* Hoof-bound,—said of a horse.

Incatena'tion, *n.* [Lat. *in*, and *catena*, chain.] The act of linking together, as the pieces or links of a chain.

Incaution, (*-kaw'shon*,) *n.* Want of caution; heedlessness.

Incau'tious, *a.* Without caution or circumspection; heedless of consequences; inattention to things or circumstances on which security or advantage depends; inconsiderate; imprudent; negligent; careless; as, an *incautious* remark, an *incautious* step.

Incau'tiously, *adv.* In an incautious manner; without wariness, circumspection, or proper heed.

Incau'tiousness, *n.* Want of wariness or caution; absence of care or circumspection; heedlessness; imprudence.

In'cavated, *a.* [From Lat. *incavare*, to make hollow.] Having a hollow form; incurvated; concaved.

Incava'tion, *n.* Act of making hollow or concave.

—A hollow; a depression or concavity of surface.

Incaved, (*-kavd'*,) *a.* Domiciled in a cave.

Incavern'd, (*-kăv'ernd*,) *a.* Immured or inclosed, as in a cavern.

Inceleb'rity, *n.* Absence of celebrity; obscurity; mediocrity.

Incendiarism, (*in-sen'di-a-rizm*,) *n.* Act of an incendiary; act or practice of committing arson, or wilfully and feloniously setting fire to buildings, &c.

Incen'diary, *n.* [Fr. *incendiaire*, from Lat. *incendiarius*, from *incendo*, to set fire to.] A person who maliciously sets fire to another man's dwelling-house; one guilty of the crime of ARSON, *q. v.* — A person who exerts or inflames factions and promotes quarrels. — He or that which excites; a firebrand; one who foments sedition.

—*a.* Relating to incendiarism, or to the malicious burning of a dwelling. — Tending to excite or influence factions, seditions, or quarrels.

In'cense, *n.* [Lat. *incensum*, from *incendo*, to set on fire.] Anything set on fire, kindled, or burned; perfume exhaled by fire; the odors of spices and gums, burned in religious rites or as an offering to some deity; the materials burned for making perfumes; acceptable prayers and praises. — See FRANKINCENSE.

—*v. a.* To perfume with incense.

Incense', *v. a.* [L. *incendo*, *incensus*.] To enkindle or inflame to violent anger; to excite angry passions; to enrage, exasperate, provoke, irritate, heat, or fire.

"*Incens'd* with indignation, Satan stood unterrified." — *Milton.*

Incen'tive, *a.* [L. Lat. *incentivus*, from *incendo*.] That kindles or excites; inciting, encouraging, or moving.

—*n.* That which kindles or inflames; that which moves the mind or operates on the passions; that which prompts to good or ill; motive; stimulus; incitement; encouragement.

Incen'tively, *adv.* Incitingly; encouragingly.

Incep'tion, *n.* [Lat. *inceptio*, from *incipio*, to begin.] A beginning; a commencement.

Incep'tive, *a.* Noting the beginning of an action.

(*Math.*) Applied to such *moments* or first principles as, though possessed of no magnitude themselves, have yet the power of producing it by being extended or enlarged. Thus a point or a line, though the former has no proper magnitude and the latter no breadth, are both said to be *inceptive* of enlargement.

(*Gram.*) In the Latin language, *inceptive* or *inchoative* verbs (the latter term being derived from the Lat. *inchoare*, to begin) are those which, according to grammarians, are characterized by the termination *sco* or *scor* added to their primitives, to express the augmentation of the qualities indicated by the words from which they are derived; as *augere*, to increase; *augescere*, to begin to increase; *pallere*, to be pale; *pallescere*, to grow pale.

—*n.* That which begins.

Incep'tively, *adv.* In an inceptive manner.

Incep'tor, *n.* [Lat.] A beginner; one in the rudiments.

—A person who is on the point of taking a degree of M. A. at an English university.

Incera'tion, *n.* [From Lat. *incerare*.] Act of coating or covering with wax.

Incer'ative, *a.* Adhering or cleaving, like wax.

Incer'titude, *n.* [L. Lat. *incertituda*.] Uncertainty; doubtfulness; doubt.

Incer'tum, *a.* [Lat.] (*Archæol.*) Old rubble-work.

Inces'sancy, *n.* Unceasingness; state or quality of being incessant.

Inces'sant, *a.* [Lat. *in*, and *cessans*, from *cessa*, to cease, *q. v.*] Unceasing; having no intermission or cessation; uninterrupted; unintermitted; ceaseless; continual; constant; perpetual.

Inces'santly, *adv.* Without ceasing; continually.

In'cest, *n.* [Lat. *incestum*—*in*, and *castus*, pure, chaste.] Unchastity; lewdness; criminal intercourse between persons related within the degrees wherein marriage is prohibited by the dictates of religion; marriage within proscribed degrees of blood or family relationship.

(*Law.*) In almost, if not all, the States of the American Union, *I.* is punished by fine and imprisonment. In continental Europe, the laws against *I.* are also generally very severe. In England only, though incestuous marriages are utterly void in England, still it is not a criminal offence to marry incestuously; not even in those cases in which the connection is most abhorrent to the moral sense of mankind, and the remedy in the ecclesiastical courts may be considered obsolete. In Scotland, *I.*, which is calculated on the same grounds, not only makes a marriage void, but the better opinion is, that to marry incestuously, as well as to commit *I.*, is a capital offence.

Incest'uous, *a.* Guilty of incest; partaking of the crime of incest; as, an *incestuous* connection.

Incest'uously, *adv.* In an incestuous manner.

Incest'uousness, *n.* State or quality of being incestuous.

Inch, *n.* [A. S. *ince*; Lat. *uncia* = Sic. and Etrus.-Gr *ounkia*, a twelfth part.] The twelfth part of a foot in length, commonly divided decimally for mechanical purposes.

—A small quantity, distance, or degree, — proverbially used; also, a nice or critical moment or point of time.

"Every *inch* of him that is not fool is rogue." — *Dryden.*

By inches, gradually; by slow degrees.

"They 'll give him death *by inches*." — *Shaks.*

Inch of candle. See CANDLE.

Inch of water. See WATER-INCH.

—*v. a.* To drive by inches or by small degrees. (R.)

"He . . . *inches* out my master." — *Dryden.*

—To deal out by inches; to give or grant sparingly.

—*v. n.* To advance or retire gradually or slowly.

Inch, Inched, (*incht*,) *a.* Measuring an inch in any dimension; — used in composition: as, two-*inch* plank.

Inch stuff, deal boards measuring one inch in thickness.

Inch, *n.* [Gael. and Ir. *inis*, island.] An island; — extensively used as a prefix to names of small islands off the coast of Scotland; as, *Inch*keith, *Inch*tay, &c.

Incham'ber, *v. a.* To chamber; to lodge in a chamber.

Inchant', *v. a.* Same as ENCHANT, *q. v.*

Inchase', *v. a.* See ENCHASE.

Inchas'tity, *n.* [It. *incastità*.] Want of chastity; lewdness; impurity.

Inch'bald, ELIZABETH, an English novelist and dramatic author, B. 1753, was the daughter of a Suffolk farmer. At the age of 16 she eloped from home, with no more blameable design than the foolish one of seeking her fortune. Miss Simpson very soon became the wife of Mr. Inchbald, a respectable London actor, by whom she was brought on the stage, and played for a good many

years. After 1784 she wrote plays, amounting to nineteen, several of which were very successful: her comedy of *Wives as they Were and Maids as they Are*, is still acted. She edited three collections of plays. Her best literary works are her two novels — *A Simple Story*, 1791; and *Nature and Art*, 1796. She lived prudently and irreproachably, and accumulated several thousand pounds, which she bequeathed chiefly to the Roman Catholic poor. D. at Keusington, 1821.

Inchest', *v. a.* To inclose in a chest.

Inch'ipin, Inch'pin, *n.* The sweetbread of a deer.

Inch'-meal, *n.* A piece an inch long.

By inch-meal, gradually; by small degrees.

—*adv.* Little by little; by small degrees.

In'choate, *a.* [Lat. *inchoatus.*] Rudimentary; incipient; incomplete; newly begun; not yet completed or finished.

"It is neither a substance perfect, nor a substance *inchoate.*" *Raleigh.*

In'choately, *adv.* In an incipient degree.

Incho'ation, *n.* [Lat. *inchoatio.*] Inception; commencement.

Incho'ative, *a.* [Lat. *inchoativus.*] Denoting a beginning; inceptive: as, an *inchoative* verb.

Inch'pin, *n.* Same as INCHIPIN, *q. v.*

Incicurable, (*in-sik'ūr-a-bl,*) *a.* [From Lat. *incicur.*] Untamable. (R.)

In'cidence, *n.* [Fr., from L. Lat. *incidentia.*] Accident; hap; casualty; an incident; a falling on or occurring.

(*Physics.*) The direction in which one body falls upon or strikes another. — *Angles of incidence* express the angle between the direction in which a line strikes on a plane and the perpendicular to that plane. When rays of light striking a body are reflected, the angles of incidence and the angles of reflexion are said to be equal. — The *point of incidence* is that point in which a ray of light is supposed to fall on a piece of glass. — *Line of incidence*, is that line in which light is propagated from a radient point to a point in the surface of the speculum, otherwise called the *incident ray.*

In'cident, *a.* [Fr.; Lat. *incidens.*] Falling into or on. — Happening or occurring naturally; apt to happen; liable to occur.

"The studies *incident* to his profession." — *Milward.*

—Occurring fortuitously or casually; happening accidentally, or out of the ordinary course of thiugs; as, "*incident* necessities and utilities."

(*Law.*) Appertaining to or following the chief or principal.

Incident proposition. (*Logic.*) A proposition subordinate to another, and introduced by the pronouns *who*, *which*, *whose*, *whom*, &c.: as, "bodies *which* are transparent, have many powers."

—*n.* That which ordinarily occurs or takes place; casuality; event. — An episode or piece of subordinate action; that which happens aside of the main design; occurrence; circumstance; as, an *incident* in a play.

(*Law.*) Something necessarily appertaining to and depending on another, which is termed the *principal.*

Incident'al, *a.* Happening without regularity; coming without design; casual; accidental; as, an *incidental* occurrence. — Occasional; not essential to the main point, or necessary to the principal purpose.

"By some, religious duties . . . appear to be regarded . . . only as an *incidental* business." — *Rogers.*

Incident'al, *n.* An incident; a casual occurrence.

Incident'ally, *adv.* Casually; fortuitously; without intention; by accident. — Beside the main purpose or design; occasionally.

Incident'alness, *n.* State or quality of being incidental.

In'cidently, *adv.* By the way; occasionally; accidentally.

Incin'erable, *a.* That may be reduced to ashes; as, an *incinerable* substance.

Incin'erate, *v. a.* [L. Lat. *incinerare.*] To burn or reduce to ashes; to calcine.

Incinera'tion, *n.* [L. Lat. *incineratio.*] The act of incinerating; process of calciuing, or reduciug to ashes by the action of fire.

Incip'ience, Incip'iency, *n.* [L. Lat. *incipientia.*] Commencement; beginning; inception.

Incip'ient, *a.* [Lat. *incipiens*, from *incipio*, to begin — *in*, and *capio*, to take, to seize. See CAPTURE.] Beginning; commencing; sprouting; as, *incipient* whiskers, the *incipient* stage of a malady.

Incip'iently, *adv.* In an incipient manner.

Incircle, (*-ser'kl,*) *v. a.* Same as ENCIRCLE, *q. v.*

Incircumscrip'tible, *a.* [L. Lat. *incircumscriptibilis.*] Incapable of limit or circumscription; boundless.

Incircumscrip'tion, *n.* State or condition of being limitless or incircumscriptible.

Incir'cumspect, *a.* Not circumspect; incautious; heedless.

Incircumspec'tion, *n.* Want of caution or circumspection: negligence; heedlessness; unwariness.

Incise, (*in-sīz',*) *v. a.* [Fr. *inciser*; Lat. *incido, incisus* — *in*, and *cædo*, to cut. See CÆSURA.] To cut into; to carve; to chisel; to engrave.

Incised leaf. (*Bot.*) A leaf deeply and irregularly notched or indented.

Incise'ly, *adv.* In the manner of incisions, indentations, or notches.

Incision, (*in-sīzh'un.*) *n.* [Fr.; Lat. *incisio.*] A cutting into; act of cutting into or notching anything.

"The earth falls open under the *incisions* of the plough." — *South.*

—A cut; a cleft; a gash; the separation or dividing of the surface of a thing by a cutting instrument.

Inci'sive, *a.* [Fr. *incisif.*] Possessing the quality of making an incision into anything, as with a sharp instrument; — hence, acute; biting; telling; cutting; sarcastic; as, an *incisive* retort.

Inci'sor, *n.* [Lat.] A cutter — hence, one of the teeth implanted in the premaxillary bones of the upper jaw, and in the corresponding place in the lower jaw, and generally shaped for the purpose of cutting or coarsely dividing the food.

Inci'sory, *a.* [L. Lat. *incisorius.*] Having the quality of cutting into.

Incisure, (*in-sizh'ur.*) *n.* [Lat. *incisura.*] An incision; a cut; a gash; an indentatiou; an opening made by cutting.

Inci'tant, *n.* [Lat. *incitans.*] A stimulant; that which incites.

Incita'tion, *n.* [Fr.; Lat. *incitatio.*] Act of inciting or stimulating to actiou; incitement; stimulation. — That which incites or moves to action; incentive; motive; that which rouses or prompts.

Incite', *v. a.* [Fr. *inciter*; Lat. *incito* — *in*, and *cito*, from *cieo*, to move, to rouse up.] To rouse to action; to stimulate; to stir up; to instigate; to spur on; to move to action by impulse or influence.

"No blown ambition doth our arms *incite.*" — *Shaks.*

Incite'ment, *n.* Act of inciting, rousing, or stimulating.

—Motive; incentive; prompting; impulse; stimnlus; that which stirs up the mind to actiou.

"From the long records of a distant age
Derive *incitements* to renew thy rage." — *Pope.*

Incit'er, *n.* He who, or that which incites.

Incit'ingly, *adv.* In a manner to incite to action.

Incivil'ity, *n.* [Fr. *incivilité*; rare Lat. *incivilitas* — *in*, and *civilis*, civil. See CIVIL.] Want of civility; lack of courtesy or respectful manners toward others; impoliteness; uncourteousness, unmannerliness. — Any act of ill-breeding, rudeness, or disrespect; — generally in the plural.

"Dissolute laughter, uncomely jests, loud talking and jeering . . . are called ludecencies and *incivilities.*" — *Taylor.*

Inciviliza'tion, *n.* Want of civilization; barbarism.

Inciv'ism, *n.* [Fr. *incivisme.*] Want of civism; lack of patriotic feeling; bad citizenship.

Inclasp', *v. a.* Same as ENCLASP, *q. v.*

In'clavated, *a.* [L. Lat. *inclavatus.*] Firmly set or fixed.

In'cle, In'kle, *n.* A kind of broad linen tape. — *Shaks.*

Inclem'ency, *n.* [Lat. *inclementia*, from *inclemens*; Fr. *inclémence.* See CLEMENT.] State, condition, or quality of being inclement; want of clemency or mildness of temper; harshness; unmercifulness; severity. — Roughness; boisterousness; storminess; severe cold; as, the *inclemency* of the season.

Inclem'ent, *a.* [Lat., from *in*, and *clemens*, mild, gentle, merciful.] Unmerciful; rigorous; harsh; destitute of a mild, kind, forgiving temper; void of pity or tenderness; harsh; as, an *inclement* government. — Rough; stormy; boisterous; rainy; rigorously cold; as, *inclement* weather.

Inclem'ently, *adv.* In an inclement manner.

Inclin'able, *a.* [Lat. *inclinabilis.*] That readily inclines or leans to one side; leaniug; tending. (R.) — Having a propension of will; tending by disposition; somewhat inclined; — generally before *to.*

"People are not always *inclinable* to the best." — *Spenser.*

Inclin'ableness, *n.* Incliuation; state or quality of beiug inclined.

Inclina'tion, *n.* [Fr.; Lat. *inclinatio.* See INCLINE.] A leauing or bending to one side: a leaning or tendency towards; any deviation of a body or line from an upright position, or from a parallel line, toward another body; a sloping downwards or upwards; as, an *inclination* of the head. — A leaning of the mind or will; a disposition more favorable to one thing than another; tendency; bent: proneness; bias; propensity; predilection; attachment.

"How dost thou find the *inclination* of the people?" — *Shaks.*

—Desire; love; regard; affection.

(*Math.*) The angle which two lines or planes make with each other. Thus, two lines which make a very small angle are said to have a very small inclination to one another. Inclination is therefore synonymous with angle, and the *angle of incidence* is the technical term for what should properly be called the *angle of inclination.*

(*Astron.*) The *I. of the orbit of a planet* is the angle formed by the plane of the ecliptic and that of the planet's orbit.

(*Magnetism.*) The angle which the magnetic needle makes with the horizon, when the vertical plane in which it moves coincides with the magnetic meridian, is called the *I.* or *dip* of the needle. In any other plane than the magnetic meridian, the *I.* increases, and is 90° in a plane at right angles to the magnetic meridian: for the magnetic *I.* is the resultant of two forces, one acting in a horizontal, and the other in a vertical plane.

Incline, (*in-klīn'.*) *v. a.* [Fr. *incliner*; Lat. *inclino* — *in*, and *clino*: Gr. *klinō*, to lean, to bend. See CLINIC.] To lean or bend towards or away from; to deviate from an erect or parallel line toward any object; to slope; to bend; to tend; as, the road *inclines* to the left. — To have a propension of mind; to be disposed; to have some wish or desire.

—*v. a.* To cause to deviate from an erect, parallel, or perpendicular line; to give a leaning to: as, *incline* your head to the right. — To give a tendency or propension, as to the will or affections; to turn; to dispose; to bend.

"*Incline* our hearts to keep this law." — *Book Com. Prayer.*

—To cause to stoop or bow.

"With due respect my body I *inclin'd*,
As to some being of superior kind." — *Dryden.*

—*n.* An inclined plane; a grade; as, a railroad *incline.*

Inclined', *p. a.* That has inclination; bent towards or away from some point. — Disposed; moved by some wish or desire.

(*Mech.*) An *Inclined Plane* is one of the five simple mechanical powers in statics, the theory of which can be easily deduced from the proposition termed "the decomposition of forces." If a body be placed on an horizontal plane on which there is no friction, it stands to reason that the body will be entirely supported, and that any horizontal pressure, however small, will cause motion. If the same plane be made vertical instead of horizontal, the weight cannot be placed upon it; for if the heavy body were made to touch the plane, and then left to itself, it would fall down the plane, exactly in the same manner as it would fall if there were no plane, — that is, if it be supposed that no friction exist. It follows, consequently, that if the plane be made to assume an oblique or inclined position, the effect produced will be intermediate between those of the two preceding cases; for the weight will not rest, nor will it acquire velocity as rapidly as when it falls freely. The inclined plane, then, is a plane which forms an angle with the horizon. The force which accelerates the motion of a heavy body on an inclined plane is to the force of gravity as the sine of the inclination of the plane to the radius, or as the height of the plane to its length. If f = force accelerating the body on an inclined plane, of which the inclination is i, and if z = force of gravity, it will be found that $f = g \times \text{sine } i$: hence, the motion of a body on an inclined plane is accelerated in a uniform manner. If two bodies begin to descend from rest, and from the same point, the one on an inclined plane, and the other falling freely to the ground, their velocities at equal heights above the earth's surface will be equal; — hence, the velocity acquired by a body in falling from a rest through a given height is the same, whether it fall freely or descend on a plane with any inclination whatever. The force required to lift a body, (viz. its weight,) bears to the force required to keep it from rolling down an inclined plane, the same proportion that the length of the inclined plane bears to its height; also, the weight of the body bears to the weight which tends to bend or break the inclined plane, the same proportion that the length of the plane bears to its

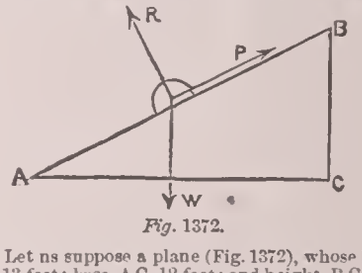


Fig. 1372.

base. Let us suppose a plane (Fig. 1372), whose length, A B, is 13 feet; base, A C, 12 feet; and height, B C, 5 feet; and let the weight be 780 pounds. Then the force P, which can sustain 780 pounds on the inclined plane, is $\frac{5}{13}$ths of 780, or 300 pounds, *i. e.*, a force which could just lift 300 pounds; also the force R, which presses perpendicularly on the plane, is $1\frac{2}{3}$ths of 780, or 720 pounds. When the weight has not only to be sustained on the plane, but drawn up it, the resistance of FRICTION (*q. v.*) has to be added to the power necessary to sustain the weight. In common roads, engineers are agreed that the height of an incline should not exceed $\frac{1}{20}$th of the length, or, as they phrase it, the *gradient* should not be greater than 1 in 20. — See STATICS.

Inclin'er, *n.* One who or that which inclines. — An inclined dial.

Inclinom'eter, *n.* [Lat. *inclino*, to incline, and *metron*, measure.] An apparatus for determining the vertical element of the magnetic force.

Inclip', *v. a.* To grasp; to inclose; to surround.

Inclose', *v. a.* [Fr. *enclos*, to inclose; Lat. *includo, inclusus* — *in*, and *claudo, clousus*, to shut.] To shut up, confine, or keep in; to surround; to shut in; to confine on all sides; to include; to environ: to encompass; to cover with a wrapper or envelope; to cover under seal, as a letter. (Also written *Enclose.*)

Inclos'er, *n.* He who or that which incloses.

Inclos'ure, *n.* [Fr. *enclos*; L. Lat. *inclusura.*] Act of inclosing; state of being inclosed, shut up, or encompassed; that which incloses. — A fence; a space inclosed or fenced: ground inclosed or separated from common land. — That which is inclosed or contained in an envelope, as a paper.

Inclou'd', *v. a.* To darken; to surround as with a cloud. (R.)

Include', *v. a.* [Lat. *includo.*] To shut up, confine, or keep in; to confine within; to inclose; to embrace within limits; to comprise; to comprehend; to contain.

Includ'ed, *p. a.* Not projecting beyond; inclosed.

Inclu'sion, *n.* [Lat. *inclusio.*] Act of including.

Inclu'sive, *a.* [Fr. *inclusif.*] Inclosing; encircling. — Comprehended in the number or sum; as, "From Wednesday to Saturday *inclusive.*"

Inclu'sively, *adv.* Comprehending the thing mentioned, so as to include the last or first particular or both particulars bounding the series.

Incoag'ulable, *n.* [*In* and *coagulable.*] Incapable of concretion or coagulation.

Incoales'cence, *n.* Want of coalescence.
Incoer'cible, *a.* That cannot be coerced.
(*Chem.*) Applied to gases that cannot be liquefied.
Incoexist'ence, *n.* The state of not existing together.
Incog', *a.* and *adv.* See INCOGNITO.
Incog'itable, *a.* Not to be thought of.
Incog'itance, Incog'itancy, *n.* Want of thought; thoughtlessness.
Incog'itant, *a.* Thoughtless; inconsiderate. (R.)
Incog'itantly, *adv.* Thoughtlessly.
Incog'itative, *a.* Wanting the power of thought.
Incogitativ'ity, *n.* Quality of being incogitative.
Incog'nita, *n.* [Lat. and It.] A female unknown or in disguise.
Incog'nito, *a.* and *adv.* [It., from Lat. *incognitus* — *in,* and *cognosco,* to know.] Unknown, or so disguised as not to be recognized; a mode of travelling without any mark of distinction, which is sometimes adopted by princes and great people who do not wish to be recognized; — often abbreviated into *incog.*
Incog'nizable, *a.* Not cognizable; that cannot be recognized, known, or distinguished.
Incog'nizance, *n.* Unconsciousness.
Incog'nizant, *n.* Not cognizant.
Incognos'cible, *a.* Incognizable.
Incoher'ence, Incoher'ency, *n.* [Fr. *incohérence.*] Want of coherence; want of cohesion, or adherence; want of connection. — Incongruity; inconsistency. — Want of agreement or dependence of one part upon another; that which does not agree with other parts of the same thing.
Incoher'ent, *a.* [Fr. *incohérent.*] Wanting coherence or cohesion; loose; unconnected; not fixed to each other. — Wanting agreement; incongruous; inconsistent; having no dependence of one part on another.
Incoherentif'ic, *a.* Causing incoherence.
Incohe'rently, *adv.* Inconsistently; without coherence of parts.
Incohe'rentness, *n.* Incoherence.
Incoin'cidence, *n.* Want of coincidence or agreement.
Incoin'cident, *a.* Not coincident, not agreeing.
Incombustibil'ity, *n.* [Fr. *incombustibilité.*] Quality of being incombustible, or incapable of being burned or consumed.
Incombus'tible, *a.* [Fr.] Not combustible; not to be burned; decomposed or consumed by fire.
I. substances, are those which have been so prepared as to be incapable of being kindled or of being consumed by fire. Cloth made of the fibres of asbestos, by weaving, will bear a considerable heat without injury. Incombustible cloth is also made by preparing cotton and linen fabrics with solutions of borax, phosphate of soda, phosphate of ammonia, or sal-ammoniac. Cloth so prepared may be placed in contact with ignited bodies without suffering active combustion or bursting into flames. Tungstates of the alkalies have also been successfully used for similar purposes. All these substances act by forming a species of glaze on the surface of the fibres, which excludes them from the air. They do not, however, prevent carbonization from taking place when the temperature is very high. Solutions of alum and common salt have also been used for similar purposes; and latterly, a starch mixed with sulphate of zinc and sulphate of ammonia.
Incombus'tibleness, *n.* Incombustibility.
Incombus'tibly, *adv.* So as to resist combustion.
In'come, *n.* [*In* and *come.*] That which comes in, as emolument, revenue, payment, wages, &c. — That gain which proceeds from labor, business, property, or possession of any kind. — See TAXATION.
In'coming, *n.* Income; revenue.
—*a.* Coming in.
Incommensurabil'ity, *n.* [Fr. *incommensurabilité.*] Quality or state of being incommensurable.
Incommens'urable, *a.* [*In,* and *commensurable,* which see.] Not commensurable; having no common measure.
I. Magnitudes of Quantities. (*Math.*) Are those which have no common measure, *i. e.,* are not, both of them, multiples of the same unit, however small that unit be taken. Examples of incommensurable magnitudes are abundant in mathematical science. Thus, the side and diagonal of a square; the diameter and circumference, or diameter and area of a circle, &c.; 2 and $\sqrt{3}$; $\sqrt{5}$ and $\sqrt{7}$, &c. The term incommensurable magnitudes is used in arithmetic to denote two numbers which have no common measure greater than unity.
—*n.* That which has no common measure.
Incommens'urableness, *n.* State of being incommensurable.
Incommens'urably, *adv.* So as not to be measured.
Incommens'urate, *a.* Not commensurate; not admitting of a common measure; not of equal measure or extent; not adequate; unequal; inadequate; insufficient.
Incommens'urately, *adv.* Not in equal or due measure or proportion.
Incommens'urateness, *n.* State of being incommensurate.
Incommis'cible, *a.* That cannot be mixed.
Incommixt'ure, *n.* State of being unmixed.
Incommode', *v. a.* [Fr. *incommoder;* Lat. *incommodo,* to make fit, suitable, proper, or convenient.] To give inconvenience or trouble to; to annoy; to molest; to trouble; to inconvenience; to disquiet; to embarrass; to vex.
Incommo'dious, *a.* [Lat. *incommodus* — *in,* and *commodus.*] Inconvenient; unsuitable; not affording ease or advantage; giving trouble without much injury.
Incommo'diously, *adv.* In a manner to create inconvenience; inconveniently; unsuitably.
Incommo'diousness, *n.* State of being incommodious.
Incommunicabil'ity, Incommu'nicableness, *n.* [Fr. *incommunicabilité.*] Quality of not being communicable.
Incommu'nicable, *a.* [Fr.] That cannot be communicated or imparted to others.
Incommu'nically, *adv.* In a manner not to be imparted or communicated.
Incommu'nicative, *a.* [*In,* and *communicative,* q. v.] Not communicative; unsocial; not disposed to hold communion, fellowship, or intercourse with.
Incommu'nicatively, *adv.* Not communicatively.
Incommutabil'ity, *n.* [Fr. *incommutabilité.*] State of being unchangeable.
Incommut'able, *a.* Not commutable; not to be exchanged or commuted with another.
Incompact', Incompact'ed, *a.* Not compact; not joined; not dense.
Incom'parable, *a.* Not comparable; that admits of no comparison with others; matchless.
Incom'parableness, *n.* State or quality of being incomparable; excellence beyond comparison.
Incom'parably, *adv.* Beyond comparison; in an incomparable manner; without competition.
Incompassionate, (*-pāsh'un-āte,*) *a.* Void of compassion, pity, or tenderness.
Incompas'sionately, *adv.* Without pity, compassion, or tenderness.
Incompas'sionateness, *n.* Want of pity or compassion.
Incompatibil'ity, *n.* [Fr. *incompatibilité.*] State or quality of being incompatible; inconsistency; that quality or state of a thing which renders it impossible that it should subsist or be consistent with something else; irreconcilable disagreement.
Incompat'ible, *a.* [Fr.] Not compatible; inconsistent; that cannot subsist with something else; irreconcilably different or disagreeing; incongruous; as, *incompatible* tempers.
"Fortune and love have ever been *incompatible.*" *Sir J. Suckling.*
(*Chem.*) Salts and other substances are said to be *incompatible* which cannot exist together in solution without mutual decomposition. Thus the soluble salts of lead and of baryta are incompatible with sulphuric acid and the sulphates, because the sulphates of lead and of baryta are insoluble, and consequently thrown down in the form of precipitates.
(*Med.*) Applied to a substance which cannot be presented with another, without interfering with its chemical composition or medicinal activity.
Incompat'ibleness, *n.* State or quality of being incompatible; incongruousness.
Incompat'ibles, *n. pl.* Things which cannot coexist.
Incompat'ibly, *adv.* In an incompatible manner; incongruously.
Incompen'sable, *a.* That is without compensation; unable to be recompensed.
Incom'petence, Incom'petency, *n.* [Fr. *incompétence;* Lat. *in,* and *competentia* — *com* for *con,* and *peto.* See COMPETENCE.] State or quality of being incompetent; insufficiency; inadequacy; inability; want of sufficient power or strength; want of suitable faculties or adequate means.
(*Law.*) Lack of ability or fitness to discharge the required duty. Judges and jurors are said to be incompetent from having an interest in the subject-matter. A judge is also incompetent to give judgment in a matter not within his jurisdiction.
Incom'petent, *a.* [Fr. *incompétent;* Lat. *in,* and *competens.*] Not competent; insufficient; unfit; unsuited; disproportioned; inadequate; not having sufficient power, strength, or faculties; destitute of means; unable.
"He was *incompetent* to perform the duties of the place." *Macaulay.*
—Lacking the proper and legal qualifications; as, an *incompetent* juror. — Not comprised within one's capacity or authorized power; improper; unfit.
Incom'petently, *adv.* Insufficiently; inadequately; not suitably.
Incomplete', *a.* [Fr. *incomplet.*] Not complete; unfinished; imperfect; defective.
(*Bot.*) Applied to a flower which wants a calyx or corolla.
Incomplete'ly, *adv.* Imperfectly; in an incomplete manner.
Incomplete'ness, *n.* State of being incomplete; an unfinished state; imperfectness; incompletion.
Incomple'tion, *n.* State of being incomplete or unfinished.
Incom'plex, *a.* [Fr. *incomplexe.*] That is not complex; single.
Incompli'able, *a.* Not compliable.
Incompli'ance, *n.* Want of compliance; impracticableness; resistance; unobservance. — Refusal of compliance.
Incompli'ant, *a.* Not disposed to comply.
Incompli'antly, *adv.* Not compliantly; stubbornly.
Incompos'ite, *a.* That is not composite; unmixed; single.
Incomprehensibil'ity, Incomprehen'sibleness, *n.* [Fr. *incomprehensibilité.*] Quality of being incomprehensible; unconceivableness; superiority to human understanding.
Incomprehen'sible, *a.* [Fr.] Not to be conceived; not to be fully understood.
Incomprehen'sibly, *adv.* Inconceivably.
Incomprehen'sion, *n.* Want of comprehension.
Incomprehen'sive, *a.* That is not comprehensive; limited.
Incomprehen'siveness, *n.* Quality of being incomprehensive.
Incompressibil'ity, *n.* [Fr. *incompressibilité.*] State or quality of being incompressible.
(*Physics.*) That quality of bodies in virtue of which their volumes cannot be diminished. There are no substances, perhaps, absolutely incompressible. Liquids, however, resist compression with great force; but the experiments of Oersted, Perkins, and Canton have proved that water has its bulk sensibly diminished by increasing the pressure upon it. Nevertheless, the extent to which the compression can be carried is very small. On inclosing water with an iron cannon, the sides of which were three inches in thickness, and applying a very great force of pressure, the cannon burst before the volume of water had been reduced to 19-20ths of its original dimensions. A pressure equal to that of the atmosphere reduces the bulk of water only about forty-five parts in one million.
Incompres'sible, *a.* [Fr.] Not capable of being compressed into less space.
Incompres'sibleness, *n.* Quality of being incompressible.
Incomput'able, *a.* That cannot be computed.
Inconceal'able, *n.* Not to be hid; not to be kept secret.
Inconceiv'able, *a.* [Fr. *inconcevable.*] Incomprehensible; not to be conceived by the mind.
Inconceiv'ableness, *n.* Quality of being inconceivable.
Inconceiv'ably, *adv.* In a manner beyond comprehension.
Inconclu'dent, Inconclud'ing, *a.* Inferring no consequence or conclusion.
Inconclu'sive, *a.* Not enforcing any determination of the mind; not exhibiting cogent evidence.
Inconclu'sively, *adv.* Without any such evidence as determines the understanding.
Inconclu'siveness, *n.* State of being inconclusive.
Inconcoc'tion, *n.* Want of concoction; unripeness.
Inconcur'ring, *a.* Not concurring; not agreeing. (R.)
Incon'cussible, *a.* Not to be shaken.
Incondensabil'ity, *n.* Quality of being not condensable.
Inconden'sable, *a.* That cannot be condensed.
Incon'dite, *a.* Irregular; rude; unpolished; as, "*incondite* rhymes." — *Philips.*
Incongeal'able, *a.* That cannot be congealed or frozen.
Incongeal'ableness, *n.* Quality of being incongealable.
Incongе'nial, *a.* Not congenial; uncongenial.
Incongenial'ity, *n.* Want of congeniality; uncongeniality.
Incon'gruence, *n.* Unsuitableness; want of adaptation.
Incon'gruent, *a.* [Lat. *incongruens.*] Incongruous; unfit.
Incongru'ity, *n.* Unsuitableness of one thing to another. — Inconsistency; inconsequence; absurdity; impropriety. — Disagreement of parts; want of symmetry.
Incon'gruous, *a.* Unsuitable; not fitting. — Inconsistent; absurd.
(*Math.*) In the theory of numbers, two numbers are said to be *I.* with respect to a *modulus,* or third number, when the difference between those two numbers is not divisible by the modulus. Thus 15 and 3 are incongruous with respect to the modulus 7, but congruous with respect to the modulus 4. The *incongruous roots* of a congruence are the incongruous numbers which satisfy that congruence. Thus 8 and 16 are incongruous roots of $x^4 - 1$ (mod. 5).
Incon'gruously, *adv.* Improperly; unfitly.
Inconnect'ed, *a.* Unconnected.
Inconnec'tion, *n.* Want of connection.
Inconsequence, (*in-kŏn'se-kwĕns,*) *n.* [Fr. *inconséquence.*] Inconclusiveness; want of just inference.
Incon'sequent, *a.* [Fr. *inconséquent.*] Without just conclusion; without regular inference.
Inconsequen'tial, *a.* Not leading to consequences; unimportant.
Inconsequential'ity, *n.* State of being inconsequential.
Inconsequen'tially, *adv.* In an inconsequential manner.
Incon'sequentness, *n.* State of being inconsequent.
Inconsid'erable, *a.* Unworthy of notice; unimportant; mean; of little value.
Inconsid'erableness, *n.* Quality or state of being inconsiderable.
Inconsid'erably, *adv.* In a small degree.
Inconsid'erate, *a.* [Lat. *inconsideratus.*] Careless; thoughtless; negligent; inattention; inadvertent; — used both of men and things. — Wanting due regard; — with *of* before the subject.
Inconsid'erately, *adv.* Negligently; thoughtlessly; inattentively.
Inconsid'erateness, *n.* Carelessness; thoughtlessness; negligence; want of thought; inadvertence; inattention.
Inconsidera'tion, *n.* [Fr. *inconsidération.*] Want of thought; inattention; inadvertence.
Inconsist'ence, Inconsist'ency, Inconsist'encies, *n.* Want of consistency; such opposi-

tion as that one proposition infers the negation of the other; such contrariety that both cannot be together. Absurdity in argument or narration, where one part destroys the other; self-contradiction; unsteadiness.

"Mutability of temper, and *inconsistency* with ourselves, is the greatest weakness of human nature." — *Addison.*

"Such were the strange *inconsistencies.*"—*Baird's Henry IV.*

Inconsist'ent, *a.* [Lat. *in*, and *consistens.*] Not consistent; not suitable, accordant, or congruous; incompatible; discordant; absolutely opposed; so contrary as to imply the destruction of something else; repugnant; contradictory; not uniform; being contrary at different times.

Inconsist'ently, *adv.* With absurdity; incongruously; with self-contradiction; without steadiness or uniformity.

Inconsist'entness, *n.* Want of consistency. (R.)

Inconsol'able, *a.* [Fr., from Lat. *inconsolabilis.*] Not to be consoled, grieved beyond the susceptibility of comfort.

Inconsol'ableness, *n.* State of being inconsolable.

Inconsol'ably, *adv.* In a manner or degree that does not admit of consolation.

Incon'sonance, Incon'sonancy, *n.* Disagreement with itself, inconsistency.

(*Mus.*) Discordance; discord.

Incon'sonant, *a.* Not consonant; not agreeing; inconsistent; discordant.

Incon'sonantly, *adv.* Not accordantly; not consistently.

Inconspic'uous, *adv.* [L. Lat. *inconspicuus.*] Not conspicuous; not discernible; not to be perceived by the sight.

Inconspic'uously, *adv.* Not conspicuously.

Inconspic'uousness, *n.* Want of conspicuousness; obscurity.

Incon'stancy, *n.* [Fr. *inconstance*; Lat. *inconstantia.*] Want of constancy; mutability or instability of temper or affection; unsteadiness; fickleness; want of uniformity; dissimilitude.

Incon'stant, *a.* [Fr.; Lat. *inconstans.*] Not constant; mutable; subject to change of opinion, inclination, or purpose; not firm in resolution, as persons; unsteady; fickle; capricious; subject to change, as things; unstable; changeable; variable.

Incon'stantly, *adv.* In an inconstant manner.

Inconsum'able, *a.* [Lat. *inconsumabile.*] Not to be wasted or consumed.

Inconsum'ably, *adv.* So as not to be consumed.

Inconsum'mate, *a.* Not consummated; not complete; incomplete.

Inconsum'mateness, *n.* State of being incomplete.

Incontam'inate, *a.* Not contaminated; pure.

Incontest'able, *a.* [Fr.] Not contestable; not to be disputed; not admitting debate; too clear to be controverted; incontrovertible; indisputable; undeniable; unquestionable; indubitable.

Incontes'tableness, *n.* Quality of being incontestable.

Incontest'ably, *adv.* In a manner to preclude debate; indisputably; incontrovertibly; indubitably.

Incontig'nous, *a.* Not meeting each other; not joined together; not contiguous.

Incontig'nously, *adv.* Not contiguously; separately.

Incon'tinence, Incon'tinency, *n.* [Fr.; Lat. *incontinentia.*] Want of continence; inability of containing or retaining; want of restraint of the passions or appetites, or the sexual appetite; free or illegal indulgence of lust; lewdness.

(*Med.*) Inability of any of the animal organs to restrain discharges of their contents.

Incon'tinent, *a.* [Fr.; Lat. *incontinens* — *in*, and *contineo*, to contain.] Not containing or retaining; not restraining the passions or appetites; particularly the sexual appetite; unchaste; lewd.

(*Med.*) Unable to restrain natural discharges.

Incon'tinently, *adv.* Without due restraint of the passions or appetites; unchastely.

Incontract'ed, *a.* Not contracted; not shortened; uncontracted.

Incontrol'lable, *a.* Not to be controlled; uncontrollable.

Incontrol'lably, *adv.* Uncontrollably.

Incontrovert'ibility, *n.* State or quality of being incontrovertible.

Incontrovert'ible, *a.* Not to be controverted; too clear or certain to admit of dispute; incontestable; indisputable; undeniable; indubitable.

Incontrovert'ibly, *adv.* In a manner or to a degree that precludes debate or controversy.

Inconven'ience, *n.* [Lat. *inconvenientia* — *in*, and *convenio.*] Unfitness; unsuitableness; inexpedience; anything that disturbs quiet, impedes prosperity, or increases the difficulty of action or success; incommodiousness; disquiet; disturbance; annoyance; molestation; trouble.

—*v. a.* To put to inconvenience; to trouble.

Inconven'ient, *a.* [Fr. *inconvénient.*] Not convenient; not accordant; unfit; unsuitable; inexpedient; incommodious; disadvantageous; giving trouble or uneasiness; increasing the difficulty of progress or success; disturbing; molesting; annoying.

Inconven'iently, *adv.* Unsuitably; incommodiously; in a manner to give trouble; unseasonably.

Inconvers'able, *a.* [Sp.] Incommunicative; unconversable.

Inconver'sant, *a.* Not conversant; not acquainted.

Inconvertibil'ity, *n.* Quality of not being convertible, or of not being changeable into something else.

Inconvert'ible, *a.* [Fr. *in*, and *convertible.*] That cannot be transmitted or changed into something else.

Inconvert'ibleness, *n.* Quality of being inconvertible.

Inconvert'ibly, *adv.* In an inconvertible manner.

Inconvinc'ible, *a.* [It. *inconvincibile.*] That cannot be convinced; not capable of conviction.

Inconvinc'ibly, *adv.* In a manner not admitting of conviction.

Incor'porate, *a.* [L. Lat. *incorporatus*, from Lat. *incorporo* — *in*, and *corporo*, from *corpus*, *corporis*, a body. See CORPORATE.] United in one body; embodied; associated; mixed.

—*v. a.* To unite to, or ingraft upon a body; to furnish with a body; to embody; to mix and embody one substance in another; to unite; to blend; to work into another mass or body; to associate in another government or empire; to form into a legal body, or body politic, as a bank.—To mix different ingredients in one mass or body.

—*v. n.* To unite so as to make a part of another body; to be mixed or blended together; to grow into or coalesce.

Incor'porated, *p. a.* Mixed or united in one body; associated in the same political body; united in a legal body.

Incorpora'tion, *n.* [Fr.; L. Lat. *in—corporatio.*] Act of incorporating; union of different ingredients in one mass. — Association in the same political body; formation of a legal or political body by the union of individuals. — See CORPORATION.

Incorpo'real, *a.* [Lat. *incorporalis*; Fr. *incorporel.*] Bodiless; not consisting of matter; not having a material body; immaterial; unsubstantial; spiritual.

Incorpo'realism, *n.* Immateriality; doctrine of the spiritual existence, or nature.

Incorpo'realist, *n.* An adherent of Incorporealism.

Incorpo'really, *adv.* Without body; immaterially.

Incorpore'ity, *n.* [Fr. *incorporeité.*] Immateriality; distinctness from body.

Incorrect', *a* [Fr.] Not correct; not exact; not according to a copy or model, or to established rules.

Incorrect'ly, *adv.* Not in accordance with truth or other standard; inaccurately; not exactly.

Incorrect'ness, *n.* Want of conformity to truth or to a standard; inaccuracy.

Incorrigible, (*in-kor'i-ji-ble.*) *a.* That cannot be corrected or amended; bad beyond correction; too depraved to be corrected or reformed.

Incor'rigibleness, Incorrigibil'ity, *n.* Quality of being incorrigible, or of being bad, erroneous, or depraved beyond correction; hopeless depravity in persons, and error in things.

Incor'rigibly, *adv.* To a degree of depravity beyond all means of amendment.

Incorrod'ible, *a.* That cannot be corroded.

Incorrupt', *a.* Not marred, impaired, or spoiled; not defiled or depraved; pure; sound, untainted; above the power of bribes.

Incorruptibil'ity, *n.* Quality of being incorruptible, or of being incapable of decay or corruption.

Incorrupt'ible, *a.* That cannot corrupt or decay; not admitting of corruption. — That cannot be bribed; inflexibly just and upright.

Incorrupt'ibly, *adv.* In a way not admitting of corruption.

Incorrupt'ibleness, *n.* Quality of being incorruptible.

Incorrup'tion, *n.* Incapability of being corrupted; incorruptibility.

Incorrupt'ness, *n.* State or quality of being exempt of corruption; purity of mind or manners; probity; integrity; honesty.

Increas'sate, *v. a.* [From Lat. *in*, and *crasso*, from *crassus*, thick.] To make thick or thicker; to thicken.

—*v. n.* To become thick or thicker.

—*a.* (*Bot.*) Applied to bodies which are thicker than usual in proportion to their area, as in the leaves of succuleuts.

Increase, (*in-krēs'*,) *v. n.* [Lat. *increscо* — *in*, and *cresco*, to grow, from *creo*, to bring forth, produce, make, or create.] To grow in anything; to become greater in bulk or quantity; to grow; to augment; to amplify; to enlarge; to become bigger and bigger. — To become more in number. — To advance in value, or in any quality, good or bad. — To swell; to rise; to extend.

—*v. a.* To cause to grow; to augment or make greater in bulk, quantity, or amount. — To advance in quality; to add to any quality or affection; to extend; to lengthen; to spread; to aggravate.

—*n.* A growing larger in size, extent, or quality, &c.; augmentation; enlargement; growth; extension; addition; accession; increment — The result of augmentation; profit; interest. — That which is added to the original stock; produce; progeny; issue; offspring.

Increased', *p. a.* Augmented; made or grown larger.

Increase'ful, *a.* Abundant of produce.

Increas'er, *n.* He who, or that which, increases or augments.

Increas'ing, *p. a.* Growing; becoming larger; advancing in any quality, good or bad.

Increas'ingly, *adv.* In the way of growing or increasing; growingly.

Incredibil'ity, *n.* [Fr. *incredibilité.*] The quality of being incredible, or of surpassing belief, or of being too extraordinary to admit of belief.

Incred'ible, *a.* That cannot be believed; not to be credited; too extraordinary and improbable to admit of belief.

Incred'ibleness, *n.* Quality of not being credible.

Incred'ibly, *adv.* In a manner to preclude belief.

Incredul'ity, *n.* Quality of being incredulous; disbelief; indisposition to believe; a withholding or refusal of belief; unbelief; scepticism.

Incred'ulous, *a.* Not believing; indisposed to admit the truth of what is related; refusing or withholding belief.

Incred'ulously, *adv.* With unbelief or incredulity.

Incred'ulousness, *n.* State of being incredulous; incredulity.

In'crement, *n.* [Lat. *incrementum*, from *increscо* — *in*, and *cresco*, to grow.] Growth; increase; a growing in bulk, quantity, number, value, or amount; augmentation; produce; production; matter added; addition; augmentation.

(*Math.*) The difference between two successive values of a variable quantity is called an *increment* or *decrement*, accordingly as the second value is greater or less than the first. A decrement being considered as a *negative increment*, we speak generally of the increment of a function which corresponds to a given increment of its independent variable. The determination and investigation of the ratio of two such increments is the primary object of contemplation in the *calculus of differences*, while the *differential calculus* is concerned chiefly with the *limit* to which this ratio approaches as the increments diminish. The *method of increments* was the name originally given to the calculus of differences by Dr. Brook Taylor, whose *Methodus Incrementorum*, published in 1715, contains the celebrated theorem which has since been made the basis of the differential calculus.

(*Rhet.*) A species of climax rising gradually from the lowest to the highest.

Incrim'inate, *v. a.* [Lat. *in*, and *criminor*, *criminatus.*] To bring an accusation against; to accuse; to charge with a crime or fault.

Incrust', *v. a.* [Lat. *incrusto.*] To cover with a crust, or with a hard coat; to form a crust on the surface of any substance.

Incrusta'tion, *n.* [Fr.; Lat. *incrustatio.*] Act of forming a crust; a crust or coat of anything on the surface of a body; a covering or inlaying of marble, mosaic, or other substance.

(*Boilers.*) When natural waters are boiled, the free carbonic acid which they contain is expelled in the gaseous state, and the carbonates of lime, magnesia, and oxide of iron are precipitated, since they are insoluble in water which does not contain carbonic acid. But, by the ebullition of the water, a portion of it has been dissipated in vapor, and if there be much sulphate of lime present, the quantity of water left may not be sufficient to retain the whole of that salt in solution; and this is the more likely to happen, because sulphate of lime requires about 400 parts of water to dissolve it; a quantity of sulphate of lime, then, is liable to be deposited, together with the carbonates of lime, magnesia, and oxide of iron, and, should the water contain much vegetable matter, this is also deposited in an insoluble condition, the whole eventually forming together a hard compact mass, composed of successive thin layers, on the bottom and sides of the vessel in which the water is boiled. The "furring" of a kettle is objectionable, chiefly in consequence of its retarding the ebullition of the water, since the deposit is a very bad conductor of heat, and therefore impedes the transmission of heat from the fire to the water; hence the common practice of introducing a round stone or marble into the kettle, in order, by its perpetual rolling, to prevent the particles of carbonate of lime from forming a compact layer. In steam-boilers, however, even more serious inconvenience than loss of time sometimes arises if this deposit be allowed to accumulate, and to form a thick layer of badly conducting material on the bottom of the boiler, since the latter is then liable to become red-hot, and should the incrustation happen to crack and allow the water to reach the red-hot metal, so violent a disengagement of steam follows, that boilers have been known to burst under the sudden pressure. But even though this calamity be escaped, the wear and tear of the boiler is very much increased in consequence of the formation of this deposit, since its hardness often renders it necessary to detach it with the hammer, much to the injury of the iron boiler-plates, which are also subject to increased oxidation and corrosion in consequence of the high temperature which the incrustation permits them to attain by preventing their contact with the water. The exigency of the case has elicited many propositions for the prevention of these incrustations; some substances have been used of which the action appears to be purely mechanical in preventing the aggregation of the deposited particles. Clay, saw-dust, and other matters have been employed with this view; but the action of sal-ammoniac, which has also been found efficacious, must be explained upon purely chemical principles. When this salt is boiled with carbonate of lime, mutual decomposition ensues, resulting in the production of chloride of calcium and carbonate of ammonia, of which salts the former is very soluble in water, while the latter passes off in vapor with the steam. — From a series of experiments, lately made, and continued for a sufficient length of time to yield a reliable result, it seems proven that the addition to the feed-water of the steam-boilers of fatty clays, especially the kind known as fuller's earth, entirely prevents boiler incrustations, even where, of necessity, very hard water has to be used as feed-water. A loose, soft mud is deposited as soon as the motion of the water, due to the boiling, ceases on cooling. This mud readily runs off on opening the sludge-valve of the boiler.

Incrust'ment, *n.* Incrustation. (R.)

Incrystalliz'able, *a.* [Fr. *incristallisable.*] That cannot be formed into crystals; uncrystallizable.

In'cubate, *v. n.* [Lat. *incubo*, *incubatum* — *in*, and *cumbo*, to lie down; allied to Gr. *kuptō*, to bend, and Heb. *shakab*, to lie down, to lie.] To lie in or upon a thing; to brood; to sit, as on eggs for hatching.—See HATCHING.

(*Med.*) Figuratively, the period that elapses between the introduction of a morbific principle into the animal economy and the invasion of the disease.— Likewise, the malaieuance of a temperature of warm air (say of 98° F.) around a diseased part.

Incuba'tion, *n.* [Fr.; Lat. *incubatio.*] A brooding: act of sittiug on eggs for the purpose of hatchiug young.

In'cubator, *n.* A machine for hatching eggs by artificial heat.

Incu'batory, *a.* That serves for incubation.

In'cubus, *n.;* Lat. *pl.* INCUBI; Eng. *pl.* INCUBUSES. [Lat., from *in* and *cumbo.*] A demon; an imaginary spirit or fairy. — An incumbrance; a heavy weight.

(*Med.*) The nightmare, a disease which consists in a spasmodic contraction of the muscles of the breast, usually happening in the night, and attended with a very painful difficulty of respiration and great anxiety. The most obvious symptom of this disease is a sensation of some great weight laid upon the breast. Sometimes the sufferer finds himself in some inextricable difficulty, endeavoring to escape from a monster, or, perhaps, in immineat danger of falling from a precipice, while his limbs refuse to do their office, until he suddenly awakens himself by startiag from his recumbent posture, or by a cry of terror. The name *Incubus* is derived from imaginary fiends or spectres. Many noble families were supposed to have their origin from the connection of incubi with females, as in the well-known instance of Robert of Normandy, called *the Diable.* For the theories of the intercourse of Incubi and saccubi with human beings, see Lecky, *Hist. of Rationalism,* ch. i.

Incul'cate, *v. a.* [Lat. *inculco, inculcatus* — *in,* and *calco,* to tread upon, from *calx, calcis,* the heel.] To tread in or dowu; to stuff, press, or cram in; to press or urge forcibly and repeatedly; to impress by frequent admonitions; to enforce by frequeut repetitions; to teach; to instil; to iaplant; to infuse.

Inculca'tion, *n.* [Lat. *inculcatio.*] The act of impressing by frequent admonitions.

Inculca'tor, *n.* One who inculcates.

Incul'pable, *a.* Not culpable; unblamable; blameless; that cannot be accused.

Incul'pableness, *n.* Unblamableness.

Incul'pably, *adv.* Unblamably; without blame.

Incul'pate, *v. a.* [Lat. *inculpo, inculpatus* — *in,* and *culpo,* to reproach or blame.] To blame; to censure; to accuse of a crime; to iucrimiuate; — opposed to *exculpate.*

Inculpa'tion, *n.* [Fr.; Lat. *in* and *culpa.*] Act of inculpating; blaae; censure; eriminatlon; charge.

Inculpa'tory, *a.* Imputing blame; accusatory.

Incum'bency, *n.* State of being iacumbent; a lying, recliaing, or resting on something.

(*Eccl.*) The state of holding or being in possession of a benefice, or of an office.

Incum'bent, *a.* [Lat. *incumbens,* from *incumbo* — *in,* and *cumbo,* to lie down.] Lying, reclining, or resting on; leaning on or resting against. — Lying on, as duty or obligatiou; imposed aud emphatically urging or pressing to performance; indispeusable.

(*Bot.*) Said of an embryo when its radicle is folded down upon the back of the cotyledons.

—*n.* The person who is in preseut possession of a benefice or of any office.

Incum'bently, *adv.* In an incnmbent manner.

Incum'ber, *v. a.* See ENCUMBER.

Incum'brance, *n.* See ENCUMBRANCE.

Incunab'ula, *n. pl.* [Lat., cradle.] (*Bibliog.*) Books printed duriag the early period of the art; in general, confined to those which appeared before the year 1500.

Incur', *v. a.* [Lat. *incurro* — *in,* and *curro,* to run.] To become liable to; to become snbject to, as a penalty; to bring on, as expense.

—*v. n.* To enter; to pass; to occur.

Incurabil'ity, *n.* [Fr. *incurabilité.*] State of beiag incurable; impossibility of cure; insnsceptibility of cure or remedy.

Incur'able, *a.* [Fr.; Lat. *incurabilis* — *in,* and *curo.*] That cannot be cured; not admitting of cure; beyond the power of skill or medicine. — Not admitting remedy or correction; lrremediablo; remediless; irretrievable.

—*n.* A person diseased beyond the reach of cure.

Incur'ableness, *n.* The state of not admitting cure or remedy.

Incur'ably, *adv.* In a manner or degree that renders cure impracticable.

Incurios'ity, *n.* [Lat. *incuriositas.*] Want of cnriosity.

Incu'rious, *a.* [Lat. *incuriosus.*] Not curious; negligent; inattentive.

Incu'riously, *adv.* Without care or curiosity.

Incu'riousness, *n.* Want of cnriosity; negligence; carelessness.

Incur'rence, *n.* Act of incurring, bringing on, or of subjecting one's self to.

Incur'sion, *n.* [Fr.; Lat. *incursio.*] An entering into a territory with hostile intention; an lrruptioa; an inroad; — applied to the expeditions o. small parties of detachments of an enemy's army.

Incur'sive, *a.* Of the nature of an incursion; hostile; making an attack or incursion.

Incur'vate, *v. a.* [Lat. *incurvo, incurvatus* — *in,* and *curvo,* to bend, to bow. See CURVE.] To bend, bow, crook, or cnrve; to turn from a right llne or straight course.

—*a.* (*Bot.*) Incnrved; bent inwards; curved.

Incurva'tion, *n.* [Fr.] A bending or eurving; state of being bent or turned from a rectilinear course; curvity; crookedness. — Act of bowing or bending the body in revereace or respect.

Incurve', *v. a.* To bend; to incurvate.

Incur'vity, *n.* [From Lat. *incurvus.*] Crookedness; the state of beuding inwards.

Incur'vo-recurved', *a.* (*Bot.* and *Zoöl.*) Bending inwards and then backwards.

In'cus, *n.* [Lat, an anvil.] A smith's anvil.

(*Anat.*) One of the small bones of the ear conneeted with the *malleus* and *stapis,* or hammer and stirrup, completing the bony chain which conveys to the tympanum the tremors of sound brought to the ear.

Incuse', or INCUSS, *v. a.* [Lat. *incutio,* to strike upon.] To strike, as a coin.

Incus'sion, *n.* Act of shaking; concnssion. (R.)

Indaja, *n.* See ATTALEA.

Indam'age, *v. a.* See ENDAMAGE.

Indart', *v. a.* To dart in; to strike in.

Indear', *v. a.* See ENDEAR.

Indebt', *v. a.* To put into debt. — To oblige; to put into obligation.

"Forgive us our sins, as we forgive every one that is *indebted* to us." — *Luke* xi. 4.

Indebted, *(in-det'ed,) a.* [It. *indebitato,* from Lat. *in,* and *debeo, debitum,* to owe.] Having or holding anything from another: being in debt; having incurred a debt; held or obliged to pay; obliged by something received, for which restitution or gratitude is due.

Indebt'edness, *n.* State of being indebted.

Indebt'ment *n.* State of being in debt. (R.)

Inde'cence, *n.* See INDECENCY.

Inde'ency, *n.* [Lat. *in,* and *decentia,* from *decens;* Fr. *indécence.*] That which is unbecoming in language or manners; any action or behavior which is deemed a violation of modesty or an offence to delicacy; indelicacy; indecorum; immodesty; impurity; obscenity.

Inde'cent, *a.* [F. *indécent;* Lat. *indecens.*] Unbecoming; unfit to be seen or heard; offensive to modesty aud delicacy; indecorous; indelicate; inmodest; impure; unchaste; obscene; filthy.

Inde'cently, *adv.* In a manner to offend modesty or delicacy.

Indecid'uous, *a.* (*Bot.*) Not falling off; lasting; evergreen.

Indec'imable, *a.* Not liable to be decimated.

Indeci'pherable, *a.* That cannot be deciphered or interpreted.

Indeci'pherably, *adv.* So as not to be deciphered.

Indecis'ion, *n.* [*in,* and *decision,* q. v.] Want of decision; want of settled purpose, or of firmness in the determination of the will; a wavering of mind; irresolution; hesitation.

Indeci'sive, *a.* Not decisive; not bringing to a final close or ultimate issue; unsettled; wavering; vacillating; hesitating.

Indeci'sively, *adv.* Without decision.

Indeci'siveness, *n.* State of being undecided; indecision.

Indeclin'able, *a.* (*Gram.*) Not declinable; not declensive or inflexive. Adverbs, prepositions, particles, conjunctions, are all *indeclinable.*

—*n.* (*Gram.*) A word that is not declined.

Indeclin'ably, *adv.* (*Gram*) Without variation.

Indecompos'able, *a.* Not capable of decomposition, or of being resolved into the primary constituent elements.

Indecompos'ableness, *n.* Qnality of being indecomposable.

Indeco'rous, *a.* [*in,* and *decorous.*] Unbecoming; unseemly; unfit; violating good manners; contrary to the established rules of good breeding, or to the forms of respect which age aad station require; rude; coarse; uncivil.

Indeco'rously, *adv.* In an unbecoming manner.

Indeco'rousness, *n.* Qnality of being indecorous; violation of good manners in words or behavior.

Indeco'rum, *n.* [Lat.] Unbecoming or unseemly conduct; impropriety of behavior; that in behavior or manners which violates the established ruie of civility, or the duties of respect which age or station requires; an unbecoming action.

Indeed', *adv.* In reality; in truth; in fact; really.

"A thing *indeed* very pitiful and horrible." — *Spenser.*

—Above common rate, and emphatically.

'I were a beast, *indeed,* to do you wrong."— *Dryden.*

—This is to be granted that; — a particle of connection.

"Some sons *indeed,* some very few we see,
Who keep themselves from this infection free." — *Dryden.*

Indeed is nsed sometimes as a slight assertion or recapitulation in a sense not perceptible or explicable, aud though some degree of obscure power is perceived, might, even when it is properly enough inserted, be omitted without miss.

"There is *indeed* no great pleasure in visiting these magazines." *Addison.*

—It is used to note concession in comparisons.

"Vessels . . . not so great of bulk *indeed,* but of more nimble motion." — *Bacon.*

—It is also sometimes nsed as nearly synonymous with *nay.*

"I think, *indeed* I am sure, it is so." — *Worcester.*

Indefatigabil'ity, Indefat'igableness, *n.* State of being indefatigable, or incapable of being wearied.

Indefat'igable, *a.* [Lat. *indefatigabilis* — *in, de,* and *fatigo, fatigatus,* to weary.] That cannot be wearied or fatigued; nntiring; nnwearied; persevering; not tired; not exhausted by labor; not yielding to fatigue.

Indefat'igably, *adv.* Without weariness; without yielding to fatigue.

Indefeasibil'ity, *n.* Quality or state of being indefeasible, or not subject to be made void.

Indefeas'ible, *a.* Not defeasible; not to be defeated; that cannot be made vold.

Indefeas'ibly, *adv.* In a manner not to be defeated or made void.

Indefectibil'ity, *n.* [Fr. *indéfectibilité.*] The quality of suffering no decay; of beiug subjeet to no defect.

Indefect'ible, *a.* Not defectible; nnfailing; not liable to defect, failure, or decay.

Indefensibil'ity, *n.* Quality or state of being indefensible.

Indefens'ible, *a.* That cannot be defended or maintained; untenable; not to be vindicated or justified.

Indefens'ibly, *adv.* In an indefensible manner.

Indef'inite, *a.* [Lat. *indefinitus.*] Not definite; not limited or defined; not determinate; not precise or certain; uncertain; vague; that has no certain limits, or to which the human mind can affix none; not given or defined in magnitnde, as a line.

(*Bot.*) Applied to stamens when they are above twenty in number. The word is also applied to all other parts when their number is greater than can be readily counted. It refers only to number, and never to form.

(*Gram.*) Applied to nouns, pronouns, verbs, participles, &c. which are left in an uncertain indeterminate sense, and not fixed to any particular time, thing, or other circumstance.

I. Integral. (*Math.*) The general form of the sum of an infinite series of infinitesimal elements whose initial and final terms are undetermined

I. Propositium. (*Logic.*) A proposition which has for its snbject a common term, without any sign to indicate whether it is distributed or undistributed.

Indef'initely, *adv.* Without any settled limitation; not precisely: not with certainty or precision.

Indef'initeness, *n.* Quality of being indefinite, or of being undefined, unlimited, or not precise and certain.

Indelib'erate, *a.* Not deliberate; done or performed without deliberation or consideration; sudden; unpremeditated.

Indelib'erately, *adv.* Without deliberation or premeditation.

Indelibil'ity, *n.* Quality of being indelible.

Indel'ible, *a.* [Lat. *indelibilis.*] Not to be blotted out; that cannot be effaced or cancelled; that cannot be effaced or lost.

Indel'ibly, *adv.* In a manner not to be blotted out or effaced; too deeply imprinted to be effaced.

Indel'icacy, *n.* [Fr. *indélicatesse.*] Want of delicacy; want of decency in language or behavior; want of a nice sense of propriety, or nice regard to refinement in manners or in the treatment of others; rudeness: coarseness of manners or language.

Indel'icate, *a.* Wanting delicacy; indecorous; unbecoming; unseemly; offensive to good manners, or to purity of mind; rude; coarse; gross; indecent.

Indel'icately, *adv.* Indecently; in a manner to offend against good manners or purity of mind.

Indemnifica'tion *n.* [Fr. *indemnisation.*] Act of indemnifying, saving harmless, or securing against loss, damage, or penalty; security against loss; reimbursement of loss, damage, or penalty.

Indem'nify, *v. a.* [Lat. *damnum,* and *facio,* to make.] To make safe from loss or harm; to save harmless; to secnre against loss, damage, or penalty; to make good; to reimburse, or compensate for loss or injury.

Indem'nity, *n.* [Fr. *indemnité;* L. Lat. *indemnitas.*] Security or exemption from damage, loss, injnry, or punishment. — Compensation for loss sustained: remuneration; indemnification; reimbnrsement.

Acts of Indemnification. (*Eng. Law.*) Decrees passed for the relief of those who have neglected to take the necessary oaths, or perform other acts required to qualify them for certain offices and employmeuts; also, for quieting the minds of the public after a rebellion, or other serious demonstration against the constituted law and authorities, and such as have been implicated or compromised therein, by pardoning and throwing all former offences into oblivion.

Indemonstrabil'ity, *n.* Qnality of being indemonstrable.

Indemon'strable, *a.* That cannot be demonstrated.

Indemon'strableness, *n.* State of being indemonstrable.

Indeniza'tion, *n.* The act of making free, or the patent by which one is naturalized.

Inden'ize, Inden'izen, *v. a.* To make free; to naturalize.

Indent', *v. a.* [*In,* and Fr. *dent;* Lat. *dens, dentis,* a tooth.] To form into the resemblance of teeth; to notch; to jag; to cut any margin into points or inequalities, like a row of teeth; to bind out by indentures or contract. — See INDENTATION.

—*v. n.* To be cut or notched; hence, to crook or turn; to contract; to bargain or covenant.

—*n.* A cnt or notch in the margin of anything; an indentation.

Indenta'tion, *n.* Act of indenting; a notch; a cut in the margin of paper or other things; a recess or depression in any border.

Indent'ed, *p. a.* Cnt in the edge into points like teeth; marked with inequalities like a row of teeth; notched. — Bound out by writings or covenants in writiag.

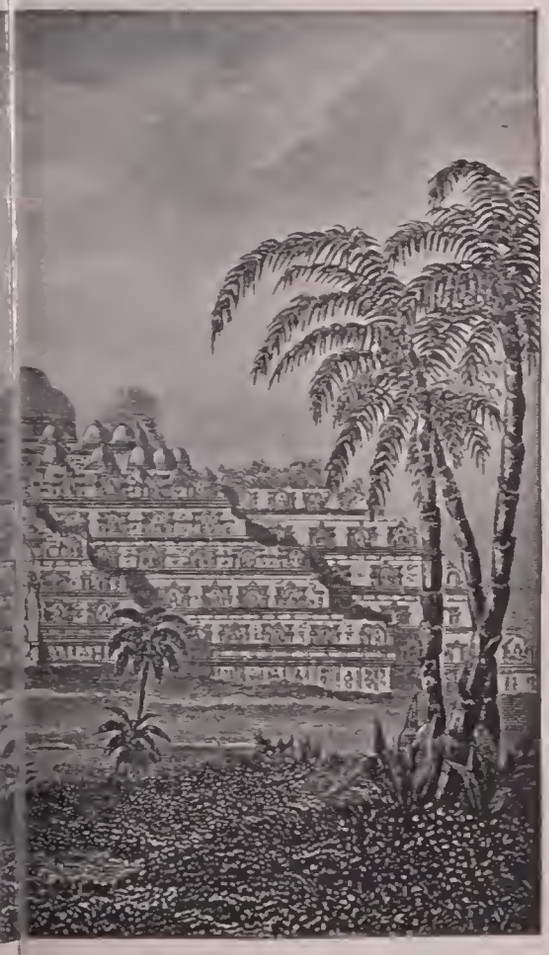
(*Conchol.*) Applied to a series of small cavities, such as might be formed by the entrance of teeth; — the reverse of *dentated.*

(*Her.*) One of the partition lines of the shield, similarly notched to *dancette,* but with the notches much smaller, and not limited in number.

Indent'edly, *adv.* With indentations.

Indent'ure, *n.* [Fr., from Lat. *indentura.*] (*Law*) A writing or deed comprising some contract between

INDO-CHINESE ARCHITECTURE. 1. Great Pagoda at Madura, India. 2. Grotto of the T
of the Star of Hope; Dwelling of a Mandarin in Tong-Chou,



ple of Indra. 3. Entrance to Temple of Confucius, Shanghai, China. 4. Boro-Budor Temple, Java. 5. Pavilion
ina.

or more parties. The name is derived from the ancient practice, according to which the original and counterpart original (to be retained by each party respectively) were written on the same skin of parchment, and then the two parts were separated by a notched or indented cut, so that when applied to each other, they would appear to match.

Indepen'dence, *n.* State of being not dependent; complete; exemption from control or the power of others. — A state of mind in which a person acts without bias or influence from others; self-direction; self-reliance. — Political freedom. — Ability to support one's self.

I., (Declaration of.) See DECLARATION OF INDEPENDENCE.

Indepen'dence, in *Alabama*, a post-village of Autanga co., about 90 miles S.E. of Tuscaloosa.

Independence, in *Arkansas*, a N.E. co.; *area*, about 736 sq. m. *Rivers.* Black and White rivers. *Surface*, undulating and hilly; *soil*, fertile. *Cap.* Batesville. *Pop.* (1890) 21,961.

Independence, in *California*, a post-village, cap. of Inyo co. *Pop.* (1897) about 500.

Independence, in *Illinois*, a village and township of Saline co.

—A village of Fulton co., about 9 m .N.E. of Lewistown.

Independence, in *Indiana*, a village on the boundary line between Grant and Madison co.'s, about 15 miles S.S.W. of Marion.

—A post-village of Warren co., on the Wabash river, about 9 miles above Williamsport.

Independence, in *Iowa*, a township of Appanoose co.

—A city, cap. of Buchanan co., on the B., C. R. & N. and Ill. Cen. R. Rs., 40 m. N.N.W. of Cedar Rapids; has large flour mill and other industries. *Pop.* (1895) 5,142.

Independence, in *Kentucky*, a post-village, cap. of Kenton co., about 11 m. S. of Cincinnati, O.

Independence, in *Louisiana*, a post-village of Tangipahoa parish, on Ill. Cent. R. R.

Independence, in *Michigan*, a township of Oakland co.

Independence, in *Minnesota*, a township of Hennepin co.

Independence, in *Mississippi*, a post-village of Tate county.

Independence, in *Missouri*, a township of Dunklin county.

—A city, cap. of Jackson co., 10 miles E. of Kansas City, on Chicago & Alton and Missouri Pacific, and 2 other R. R. lines, has large woollen mill, a large elevator, flour and cider mills, iron and brass foundry, machine shops, etc. *Pop.* (1897) 7,000.

—A township of Nodaway co.

Independence, in *New Jersey*, a township of Warren co.

Independence, in *New York*, a post-town of Allegany co., 56 m. W. of Elmira. *Pop.* (1890) 1,249.

Independence, in *Ohio*, a post-township of Cuyahoga co.

—A village of Defiance co., on the Maumee river, about 53 miles above Toledo.

—A village of Richland co., about 20 miles S. by E. of Mansfield.

—A township of Washington co.

Independence, in *Oklahoma*, a P. O. of "G" co.

Independence, in *Oregon*, a post-village of Polk co., on the Willamette river, about 10 miles S.E. of Dallas. *Pop.* (1890) 1,061.

—A village of York co.

Independence, in *Pennsylvania*, a village and township of Beaver co., about 10 miles S. of Beaver.

—A post-village of Washington co., about 200 miles W. of Harrisburg.

Independence, in *Texas*, a post-village of Washington co., about 90 miles E. of Austin City.

Independence, in *Virginia*, a post-village, cap. of Grayson co., 56 miles E. by S. of Abingdon. Its former name was GRAYSON COURT-HOUSE.

Independence, in *West Virginia*, a post-village of Preston county.

Independence Creek, in *New York*, enters Black river in Lewis co.

Independence Flat, in *California*, a village of Calaveras co., about 30 miles N. by E. of Sonora.

Independence Hall. See PHILADELPHIA.

Indepen'dency, *n.* State of being independent; independence.

Indepen'dent, *a.* [Fr. *indépendant.*] Not dependent; not subject to the control of others; not subordinate; not relying or depending on others; affording the means of independence; not subject to bias or influence; self-directing; not connected with; free; easy; self-commanding. — Bold; unconstrained. — Separate from; exclusive.

(*Math.*) Applied to a quantity which does not depend upon another for its value.

Indepen'dent Tartary. See TURKESTAN.

Indepen'dents, *n. pl.* (*Eccl. Hist.*) See CONGREGATIONALISTS.

Indepen'dently, *adv.* Without depending or relying on others; without control; without undue bias or influence; not obsequiously; without connection with other things.

Indep'recable, *a.* [Lat. *indeprecabilis.*] That cannot be entreated.

Indeprehen'sible, *a.* [Lat. *indeprehensibilis.*] That cannot be found out.

Indepriv'able, *a.* That cannot be deprived.

Indescrib'able, *a.* That cannot be described.

Indescrip'tive, *a.* Not descriptive, or not containing just description.

In'desert, *n.* [*In* and *desert.*] Want of merit.

Indes'inent, *a.* Incessant.

Indes'inently, *adv.* Without cessation.

Indesir'able, *a.* Undesirable.

Indestructibil'ity, *n.* [Fr. *indestructibilité.*] Quality of being indestructible, or of resisting decomposition, or of being incapable of destruction.

Indestruc'tible, *a.* [Fr.] That cannot be destroyed; incapable of decomposition; imperishable.

In'destruc'tibly, *adv.* In an indestructible manner.

In'desville, in *N. Carolina*, a village of Surry co.

Indeter'minable, *a.* That cannot be determined, ascertained, or fixed; not to be determined or ended.

Indeter'minably, *adv.* In a determinate manner.

Indeter'minate, *a.* Not determinate; not settled or fixed; not definite; uncertain; not precise or certain.

(*Math.*) A term employed in various ways, and sometimes loosely. An *I. problem*, for instance, denotes one which has an *infinite* number of solutions, not arbitrary but correlated; the indetermination arising, in fact, not from a *total*, but from a certain *degree of insufficiency* in the data; if the data were such as to render the problem capable of receiving a *finite* number of solutions, that problem would no longer be considered as indeterminate. *I. coefficients*, again, simply denote *unknown* coefficients.

I. Analysis. (*Algebra.*) That branch of the science whose object is the determination of all possible solutions, in positive (or negative) integers, of a system of equations involving more unknown terms than there are equations. The general form of an *indeterminate equation* of the first degree is $ax+by=c$, where a, b, and c are positive or negative integers. If a and b have a common measure which will not divide c, the equation can, obviously, have no integral solutions. If a and b are prime to one another, however, then an integral solution may be found by converting $\frac{a}{b}$ into a continued fraction, and finding the convergent $\frac{p}{q}$ immediately preceding $\frac{a}{b}$. We shall then have $aq-bp=\pm 1$, or $a(\pm q)+b(\mp p)=c$; so that $x=qc$ and $y=-pc$, or else $x=-qc$ and $y=pc$, will be an integral solution of the given equation. One such solution (α, β) being found, an infinite number can be at once determined. They are all included, however, in the formula $x=\alpha+bt$, $y=\beta-at$, where t is any integer whatever. The solution of a system of indeterminate equations of the first degree is reduced to that of the case just described. In systems of equations of higher degrees, the difficulties are immensely increased. The theory of indeterminate equations is closely connected with that of *congruences*, and thus forms a branch of the general *theory of numbers*; the works on the latter subject, therefore, may be consulted for further details.

I. Coefficients. (*Math.*) A method of analysis invented by Descartes, and of very extensive application in the higher mathematics. The principle of the method of indeterminate coefficients consists in this, that if we have an equation of this form,

$$A+Bx+C^2x+D^2x+\&c=0,$$

in which the coefficients A, B, C are constant quantities, and x a variable which may be supposed as small as ever we please, each of these coefficients, taken separately, is necessarily equal to zero; that is to say, we must always have $A=0$, $B=0$, $C=0$, &c., whatever may be the number of terms of the given equation.

Indeter'minately, *adv.* Not in any settled manner; indefinitely; not with precise limits; not with certainty or precision of signification.

Indeter'minateness, *n.* State of being indeterminate.

Indetermina'tion, *n.* [Fr. *indétermination.* See DETERMINATION.] Want of determination; an unsettled or wavering state; vacillation; want of fixed or stated direction.

Indeter'mined, *a.* Unsettled; unfixed.

Indevote', *a.* [Fr. *indévot.*] Not much devoted; indifferent.

Indevot'ed, *a.* Undevoted.

Indevo'tion, *n.* [Fr.] Want of devotion; irreligion.

Indevout', *a.* Not devout; not religious; irreligious.

Indevout'ly, *adv.* In an indevout manner; without devotion.

In'dex, *n.*; *pl.* INDEXES, in *Math.* INDICES. [Lat., from *indico*, to point out — *in*, and *dico*, to proclaim or make known.] That which points out; that which shows or manifests; the hand that points to anything, as the hour of the day, the road to a place, &c. — A table of the contents of a book, or of references in an alphabetical order; an exponent. See "*What is an I.*," Wheatley (London, 1878).

(*Anat.*) The fore-finger.

(*Math.*) The number that shows to what power the quantity is to be raised; the exponent.

—*v. a.* To provide with an index or table of contents; to place in an index; to reduce to an index: as, to *index* a book.

In'dex, LIBRORUM PROHIBITORUM. (*Eccl. Hist.*) In the Roman Catholic Church, a catalogue published by authority of the Pope, of books the reading of which is prohibited to members of that Church, whether on doctrinal, moral, or religious grounds. As a natural consequence of the claim of the Catholic Church to authority in matters of religion and to infallibility, that Church also claims the right or the duty of watching over the faith of its members, and of guarding it against every danger of corruption, the chief among which is held to be the circulation of books believed to be injurious to faith or to morality. The earliest recorded exercise of this restrictive authority is the prohibition of the writings of Arius; and a council of Carthage, in the year 398, issued, even for bishops, a similar prohibition of Gentile books, although it permitted to them the reading of the works of heretics. The earliest example of a prohibitory catalogue is found in the decree of a council held at Rome (494) under Pope Gelatius (*Labbe Conc.*, ii. col. 938–941), which, having enumerated the canonical books of Scripture and other approved works, recites also the apocryphal books, together with a long list of heretical authors, whose writings it prohibits, and orders to be eliminated from the churches. The mediæval popes and councils pursued the same course as to the heterodox or dangerous writings of their respective periods, and the multiplication of such books after the invention of printing led to a more stringent as well as more systematic procedure. The university press of Louvain issued in 1546, and again in 1550, a catalogue of prohibited books. Similar lists appeared by authority, at Venice, Paris, and Cologne; and Pius IV. issued in 1557 and 1559 what may be regarded as properly the first Roman Index. One of the gravest undertakings of the council of Trent was a more complete and authoritative enumeration of all those books, the use of which it was expedient to prohibit to the faithful. A committee was appointed for the purpose, and had made great progress in the work; but it was found impossible to bring the examination of the books to an end before the close of the council; and the entire papers of the committee were handed over by the council to the Pope, with instructions that the work should be completed, and the result published by his own authority, which was accordingly done by Pius IV. in 1564. Further additions and certain modifications of its rules were made by Sixtus V. and Clement VII. It was republished in 1595, and with the addition of such books as from time to time it was deemed expedient to prohibit, in several subsequent editions, the most remarkable of which are those of Brasichelli (Rome, 1607); Quiroga, *Index Librorum Expurgandorum* (Salamanca, 1601); and Sotomayor, *Novissimus Index* (Madrid, 1648). The edition best known to modern theological readers is that of Rome, 1819. In the intervals between the editions, the decrees by which further additions to the Index are made, are made public at Rome, and circulated in the various countries.

In'dexer, *n.* One who makes an index.

Index'-hand, *n.* A hand pointing to something; the pointer of a watch, clock, &c.

Index'ical, *a.* Having the form of an index; pertaining to an index.

Index'ically, *adv.* In the manner of an index.

Index'ing, *p. a.* Furnishing with an index, or table of references.

Indexter'ity, *n.* Want of dexterity or readiness in the use of one's hands; clumsiness; awkwardness; want of skill or readiness in any art or occupation.

In'dia, or THE INDIES. This name has been very vaguely applied, at different periods, to different extents of country, and is still used in different applications. The name is derived from the Greeks, who seem to have borrowed it from the Persians, as it is unknown to the natives. It was at first used by the Grecian writers to signify an indefinite extent of country, lying beyond the Indus, with which they were acquainted only through meagre and vague accounts obtained from the Persians. Darius crossed the Indus (B. C. 500), and conquered Cashmere and part of the Punjab. Alexander, 200 years later, pushed his conquests a little farther, and the narratives given by his officers supplied Eratosthenes, Strabo, and Pliny with the materials which they arranged and abridged. Ptolemy, who flourished at a later period (A. D. 150), when commerce had made his countrymen acquainted with the southern parts of India, has given a more accurate account of it. He divides India into *India within* and *India beyond the Ganges*. The former was bounded on the west by the people of Paropamisus, Arachosia, and Gedrosia; on the north by Mount Imaus, the Sogdiæans and Sacæ; on the east by the Ganges, and on the south by the Indian Ocean. Other writers, as Arrian and Pliny, make the Indus its western limit. Strabo calls the southern and eastern boundary the Atlantic Ocean. Of the two great rivers, the Indus and Ganges, the latter was not reached by Alexander, and was seen by very few of his followers. The Indus and its five great tributaries were known to all of them. A more accurate acquaintance with Upper India, obtained within the last 30 years, has proved the general correctness of the ancient accounts, and settled many doubtful points. Of the Deccan they knew nothing but the coasts, and of India beyond the Ganges they knew very little. The decline of the Roman empire, the rise of the Parthian empire, and particularly the extension of the Mohammedan power over Western Asia, broke off all direct intercourse between Europe and India. Religious hatred and commercial jealousy contributed to shut up the road to India against Europeans. Caravans were then the medium of Indian commerce, and through them the productions of the East were brought to the Mediterranean shores. Not until the Portuguese had doubled the Cape of Good Hope (1498) were the Europeans able to visit that region of wealth. The islands of Java, Sumatra, Borneo, Celebes, the Philippines, the Moluccas, &c., were discovered, and have often been included under the general name of *India*, which comprised, on the continent, all that vast tract of country lying south of China, Thibet, and Persia. These regions have been divided by modern geographers into three parts: — 1. *The Islands*, or the INDIAN OR EASTERN ARCHIPELAGO, *q. v.*: 2. *India West of the Ganges*, or HINDOSTAN, *q. v.*; and *India beyond the Ganges*, called also *Chin-India*, or *Indo-China*, including the Birman Empire or BURMAH, SIAM, the empire of ANAM or COCHIN-CHINA, and some other territories of secondary

importance, all of which are described under their respective heads. When America was discovered, it is well known that Columbus supposed it to be the eastern coast of Asia, of which he was in search. These regions were, therefore, at first called *India*, and when the error was discovered, the name was retained, with the distinctive appellation of *West*, the proper India being called *East Indies*. The Spanish kings assumed the title of *King of the Indies*, and the council for the colonies was styled the *Supreme Council of the Indies*. The name of West Indies was afterwards restricted to the islands, also called *Antilles*, lying between N. and S. America.—See HINDOSTAN, ANTILLES, and WEST INDIES.

India. (ARCHITECTURE OF.) See HINDOO ARCHITECTURE.

Indi'adem, *v. a.* To place or set in a diadem.

In'diaman, *n.* (*Naut.*) A large ship employed in the India trade.

In'dia-mat'ting, *n.* Mats made in the East from the *Papyrus cory nbosus*.

In'dian, *a.* Pertaining to either of the Indies, East or West, or to the aborigines of America.

—*n.* An aboriginal American. (See INDIANS.) — A native of India or of the West Indies.

Indian'a, in *Iowa*, a township of Marion co.

Indian'a, in *Pennsylvania*, a S.W. central co.; *area*, about 830 sq. m. *Rivers.* Conemaugh river, and Black Lick, Crooked, Little Mahoning, and Two Lick creeks. *Surface*, hilly; *soil*, moderately fertile. *Min.* Bituminous coal and iron ore; besides numerous salt springs. *Cap.* Indiana. *Pop.* (1890) 42,175.

—A township of Allegheny co. *Pop.* (1890) 1,057.

—A post-borough, cap. of Indiana co., about 50 m. E.N.E. of Pittsburg, on P. R. R. *Pop.* (1897) about 2,050.

Indian'a, a village of Ontario, co. of Haldimand, on the Grand river, about 28 miles S.S.E. of Brantford.

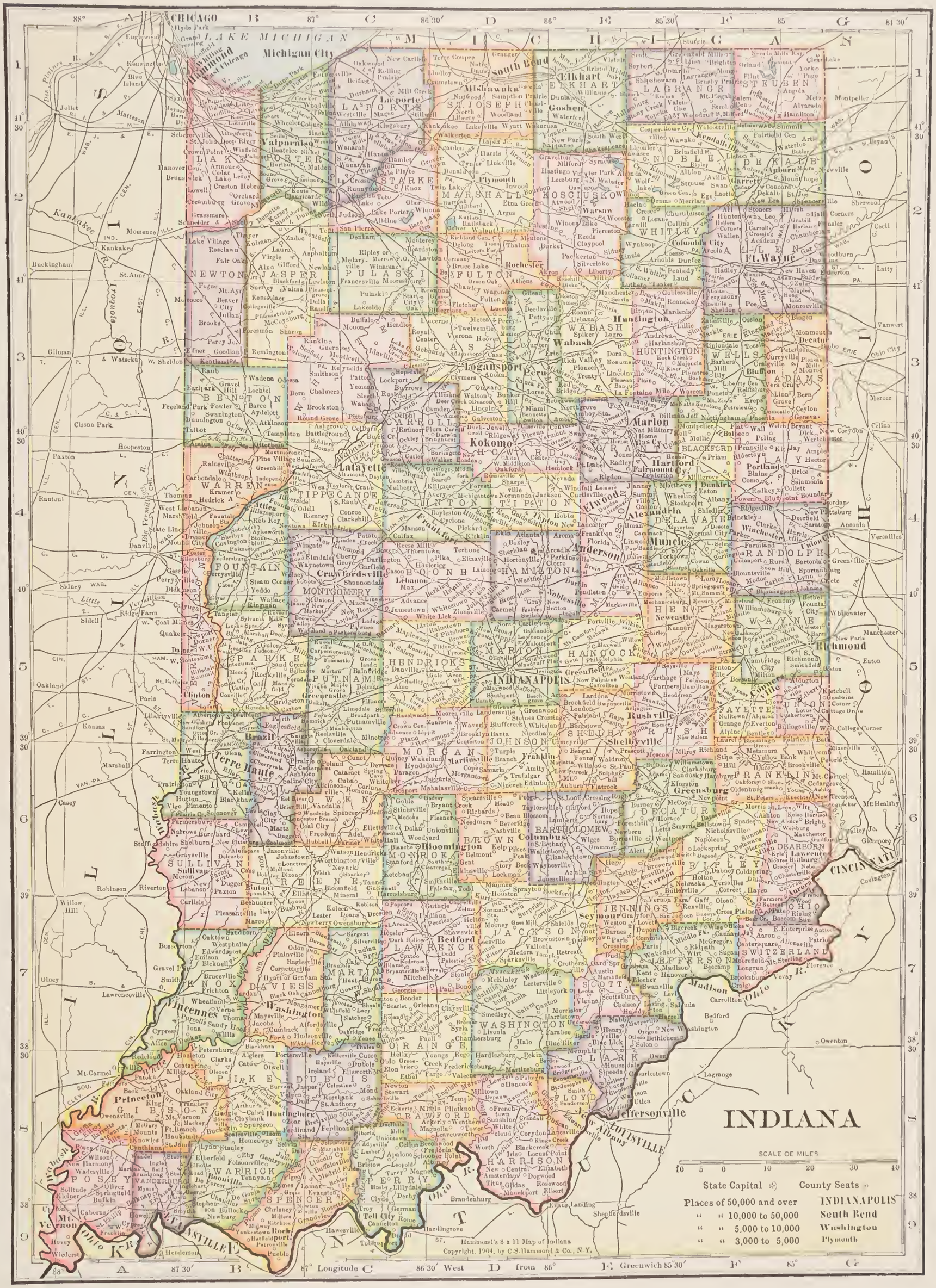
Indian'a, one of the Central States of the United States of America, bounded on the N. by the State of Michigan and Lake Michigan, E. by Ohio and Kentucky, S. by Kentucky, and W. by Illinois. It lies between Lat. 37° 40′ and 41° 40′ N., and Lon. 84° 40′ and 87° 40′ W., extending 275 m. in length from N. to S., with an average breadth of 135 m., and containing an area of 33,809 sq. m. — *Desc.* The outline of this State is an almost perfect parallelogram, lying for the most part within that immense region of fertility known as the Great Mississippi Valley, and occupying a prominent position in the agricultural division, designated the *Region of Cereals*. The surface is generally level, or gently undulating though somewhat broken and hilly along the borders of the Ohio River. — *Lakes, Rivers, &c.* Excepting Lake Michigan, whose waters wash about 45 miles of its N. border, and Beaver Lake in Newton county, which covers an area of abt. 50 sq. m., the lakes of *I.* are few and inconsiderable. The principal rivers are, the Ohio, which forms the entire S. boundary, and the Wabash, which, with its large and numerous tributaries, intersect nearly every co. in the State. — *Soil.* The soil of *I.* is uniformly fertile, the part known as the valley of the Ohio, and also that of the Whitewater on the S.E., contains 5,500 sq. m., of which about two-thirds is excellent farming land, and the greater part of the residue, though hilly, is valuable for grazing. The White River Valley, extending from the Wabash on the S.W. to the State of Ohio on the N.E., embraces an area of about 9,000 sq. m., the surface of which is almost level, the soil is deep vegetable mould, free from rock or stone, and of the richest quality. This magnificent valley covers more than one-fourth the whole State. The Wabash Valley is still more extensive, covering 12,000 sq. m. of territory. It extends 150 m. along the W. border of the State from the Ohio River N.; thence inclining to the N.E., it reaches the borders of Ohio N. of the White River Valley. It has large prairies in the W., heavy forests in the E.; and abundant water-power in the centre. With the exception of some of the highest bluffs in the lower parts of these valleys, every acre of their surface is susceptible of cultivation. The Wabash Valley, within this State alone, is 600 sq. m. larger than the kingdom of Belgium, and contains a less quantity of inferior land. — *Vegetation.* The valley of the Ohio was originally heavily timbered, but most of it has been felled to supply fuel to the boats on the river, and for shipment as lumber. In the central, eastern, and northern parts, many heavily timbered forests still exist, principally of walnut, poplar, beech, oak, buckeye, maple, ash, elm, sycamore, dogwood, hickory, and basswood. *Climate.* The climate is mild, and the ground is seldom covered with snow more than a few days at a time. The prevailing winds of winter produce severe spells of cold, seldom, however, of long duration. The summers are warm but salubrious. — *Min.* The great coal-field of Illinois extends into this State, covering in the W. part an area of about 7,700 sq. m., or one-fifth the entire surface. On White River the coal-veins are 6 feet, and in other localities 8 feet, in thickness. Some of the coal measures are estimated to yield 50,000,000 bushels to the sq. m. Cannel and Block coal are found, of the former the bed being five feet in thickness and 70 feet above the river. Besides coal, an excellent quality of iron is found, as well as copper, slate of several varieties, marble, gypsum, grindstones, limestone, freestone, and clays useful in the arts.—Among the mineral products of *I.* petroleum ranks high, and natural gas occurs in abundance. The main oil area is in the counties of the east central region of the State, but the area is steadily increasing. The oil product, which was 33,375 barrels in 1889, had made the great increase, by 1896, to 4,380,000 barrels. The natural gas area covers about 5,000 sq. m., in which there are about 1,500 wells with a daily capacity of over 3,000,000,000 cubic feet. The coal product is over 4,000,000 tons annually.—*Agriculture.* The leading agricultural products of the state are corn, wheat, and oats; while potatoes, rye, barley, and tobacco are cultivated, and sorghum, flax, hemp, and hops succeed well. Large quantities of maple and sorghum sugar and molasses are produced, together with honey and beeswax. Considerable attention is given to grape culture. The 1900 output of the leading grains was as follows: corn, 178,967,020; wheat, 34,986,280; oats, 34,565,070 bushels. There were 221,897 farms, embracing about 16,000,000 acres of improved land, and valued at $687,633,460, with buildings and implements valued at $131,440,000, and live stock at $109,550,731.—*Counties, towns, &c.* The State is divided into the 92 following counties:

Adams,	Franklin,	Lawrence,	Rush,
Allen,	Fulton,	Madison,	Scott,
Bartholomew,	Gibson,	Marion,	Shelby,
Benton,	Grant,	Marshall,	Spencer,
Blackford,	Greene,	Martin,	Starke,
Boone,	Hamilton,	Miami,	Steuben,
Brown,	Hancock,	Monroe,	St. Joseph,
Carroll,	Harrison,	Montgomery,	Sullivan,
Cass,	Hendricks,	Morgan,	Switzerland,
Clarke,	Henry,	Newton,	Tippecanoe,
Clay,	Howard,	Noble,	Tipton,
Clinton,	Huntington,	Ohio,	Union,
Crawford,	Jackson,	Orange,	Vanderburgh
Daviess,	Jasper,	Owen,	Vermillion,
Dearborn,	Jay,	Parke,	Vigo,
Decatur,	Jefferson,	Perry,	Wabash,
De Kalb,	Jennings,	Pike,	Warren,
Delaware,	Johnson,	Porter,	Warrick,
Dubois,	Knox,	Posey,	Washington,
Elkhart,	Kosciusko,	Pulaski,	Wayne,
Fayette,	La Grange,	Putnam,	Wells,
Floyd,	Lake,	Randolph,	White,
Fountain,	La Porte,	Ripley,	Whitley.

Fig. 1373. — SEAL OF THE STATE.

The principal cities and towns are Indianapolis (the capital), Evansville, Fort Wayne, Terre Haute, South Bend, New Albany, Richmond, Lafayette, Logansport, Elkhart, Muncie, Michigan City, Anderson, Jeffersonville, Elwood, Madison, Vincennes, Marion, Kokomo, Huntington, La Porte, Peru, &c.—*Public Institutions.* *I.* possesses hospitals for the insane at Indianapolis, Evansville, Richmond and Logansport. At Fort Wayne is a school for feeble-minded children (including departments for idiots and epileptics). Indianapolis has asylums for the blind and the deaf, and at Knightstown is a Home for the orphans of those who took part in the Civil War. A reform school for boys exists at Plainfield and one for girls at Indianapolis. Penal servitude is provided for by a prison for women in Indianapolis and penitentiaries for men in Jeffersonville and Michigan City. These institutions are under State control, each being in charge of a Board of control of three members, appointed by the Governor, while in each of the schools there is an industrial department. A Board of State Charities was created in 1889, which has supervision over all the institutions above named. This board consists of six members, with the Governor for *ex-officio* president. A tax of 6 cts. on every $100 of taxable property in the State is applied to the support of these institutions, about $1,000,000 annually being applied to this purpose.—*Education.* *I.* possesses a State University at Bloomington, a State Institute of Technology at Lafayette, a State Normal School at Terre Haute, and more than 100 High Schools, in all of which instruction is free. The number of children on the rolls of the public schools are 556,731, with a daily attendance of 420,276, the number of teachers being 15,976. In addition to the above there are 13 universities and colleges of liberal arts, and a considerable number of academies, public and private normal schools schools of law, medicine, theology, &c. In most of the colleges co-education of the sexes exists.—*Industry.* The abundant water power, the cheapness of fuel, and the existence of excellent iron ore and other valuable minerals have greatly stimulated manufacture in *I.*, and rapid progress has been made. The leading industries are iron and steel production, railway-car building, wooden ware, woollens, tiles, wagons, and glass, with coal mining and quarrying. *I.* is the largest furniture-producing state in the Union, while the wagon and plough factories at South Bend are among the largest of their class in the world. Other extensive industries are those of flour-mill machinery and carriages at Indianapolis, plate glass at New Albany, and encaustic tile works at Indianapolis. The State is amply supplied with railroads, having over 6,000 miles. Its navigable streams consist of the Ohio and a portion of the Wabash and White rivers. Small streams intersect the State in every direction and in the northern part there are numerous small lakes. Much of the N.W. section of the State is annually inundated, but a system of drainage is reclaiming much of this swampy territory. —*Finance.* In the early period of her history *I.* incurred heavy liabilities for internal improvements, but these are being reduced at a satisfactory rate. In 1901 the debt of the State aggregated the amount of $3,887,615, foreign and domestic, while the valuation of taxable property was $1,360,445,139. The debts of the principal cities aggregated about $8,500,000. There were about 150 national banks, 166 state banks, and 282 private banks, with a total capital of $32,297,325, while the average deposits amounted to about $150,000,000.—*Government.* The governor and lieutenant-governor are elected by the people for four years. The former, who receives $3,000 per annum, can be elected only once in eight years. The latter is ex-officio president of the Senate and receives $5 per day during the sessions of the legislature. The Senate consists of 50, and the House of Representatives of 100 members, both elected by the people, the former for four and the latter for two years. The Secretary of State, Auditor, Superintendent of Public Schools, and Treasurer, are each chosen by the people for two years. The Judiciary consists of a supreme court composed of not less than 3 or more than 5 judges, elected by the people for 6 years; and 15 circuit courts, presided over by judges elected by the people of each district, for 6 years. The judges of the supreme court receive $3,000 per annum. Justices of the peace are chosen by the people of each township for 4 years. Any voter of good moral character may practice law, and any male person of 21 years of age, born in the U. S., or any foreigner, resident in the U. S. one year, and who has declared his intention, according to law, of becoming a citizen, may vote after 6 months' residence in the State. *I.* is entitled to 2 U. S. Senators, 13 Representatives, and 15 electoral votes for President of the U. S.—*Religion.* *I.* contains about 5,000 churches of all denominations, the principal of which are Baptists, Christians, Lutherans, Methodists and Roman Catholics. Many of these churches possess educational institutions of great excellence, with large and important libraries; indeed, the religious wants of the State are well provided for by a zealous clergy and a well conducted and popular religious press.—*History.* In 1702, a party of French Canadians descended the Wabash, and established several posts on its banks, and among others Vincennes, but nothing is known of their first settlements, till 1763, when the country was ceded to the English. The treaty of 1783 included *I.* in the United States. In 1788 an Indian war broke out, which caused great distress at Vincennes. In 1791 the Indians were attacked at the month of the Tippecanoe by Gen. Wilkinson, and by the subsequent victories of Gen. Wayne a dangerous confederacy was broken up, and the tribes were obliged to submit. On May 7, 1800, Ohio was erected into a separate territory, while all the country W. and N. was included in the new government of *I.* The U. States census of this year found in *I.* 4,875 inhabitants. In 1805 Michigan, and in 1809, Illinois, were divided off, leaving *I.* with its present limits. In 1811, the general government determined to exert its power against the savages, who, excited by the eloquence of Tecumseh, a leader of the Shawnees, had committed grievous depredations. A force of regulars and militia, under the command of the governor, W. H. Harrison, appeared before Prophet's-town or Tippecanoe, on the Wabash, and the Indians, completely defeated in a short but severe combat, in which they fought with desperate courage, were obliged to sue for peace. The war with England gave a fresh impetus to Indian hostility; but the savages were again overwhelmed, and on the conclusion of peace, in 1815, finally ceased to trouble the settlers. On Dec. 11, 1816, the State was admitted as a sovereign member of the U. States; and a new constitution was adopted in 1851. In 1832, the legislature incorporated 8 stock companies for constructing railroads; in 1833 the middle section of the Wabash and Erie Canal was commenced, and in 1834, the State bank with 10 branches was incorporated, to which were subsequently added 3 other branches. The result of these undertakings, and others into which the State entered, was a debt amounting to $14,057,000, and a general bankruptcy. In 1846, the State debt, on which no interest had been paid since 1839, was consolidated and arranged into two classes, the State debt proper, and the canal debt; and means were devised for paying interest on the former. In 1853 the legislature passed a free banking law. Prosperity then returned, and till the present time has been annually increasing. The Wabash and Erie canal, the longest in the U. S. (476 miles), has 374 miles of its length in *I.* But this and the Whitewater canal (75 miles), which formerly did a large traffic, are now entirely abandoned, and in many places have been filled up, the superior advantages of railroad traffic having robbed them of business. Among the interesting items of local history may be mentioned the famous community of New Harmony, founded by the Harmonists or Rappites in 1815 and maintained until 1824, when it was purchased by Robert Owen for his communistic society, which failed after three years. This place was distinguished as the home of William Maclure, Thomas Say, Lesueur, and others of note. *I.* made a noteworthy record in the Civil War, not only providing her quota of troops in the field, but suppressing a dangerous conspiracy at home. The population numbered 988,416 in 1850, 1,350,428 in 1860, 1,680,737 in 1870, 1,978,382 in 1880, and 2,192,404 in 1890. In 1900 the population was 2,516,462.

Indianap'olis, in *Indiana*, an important city, cap. of the State, and the seat of justice of Marion co., on the West Fork of White river, about 86 m. N.N.W. of Madison, and about 500 m. W. by N. of Washington D. C.; Lat. 39° 46′ N., Lon. 86° 5′ W. The Enabling Act of Congress, donating 4 sections of unsold land for a State Capital of Indiana, was passed April 19, 1816.—On Jan. 11, 1820, the State Legislature elected commissioners to locate the same, which resulted in the choice of the present site of Indianapolis. The principal retail street of this city is


INDIANA
LAKE MICHIGAN
CHICAGO
Michigan City
Hammond
Whiting
East Chicago
South Bend
Elkhart
Goshen
Mishawaka
Laporte
Valparaiso
Plymouth
Kendallville
Ft. Wayne
Columbia City
Huntington
Wabash
Logansport
Peru
Kokomo
Marion
Muncie
Anderson
Hartford City
Dunkirk
Portland
Decatur
Greenfield
Rushville
Shelbyville
Greensburg
Richmond
Connersville
Terre Haute
Brazil
Crawfordsville
Lafayette
Bloomington
Bedford
Vincennes
Washington
Princeton
Jeffersonville
New Albany
Madison
Ohio
CINCINNATI
LOUISVILLE
EVANSVILLE
Mt. Vernon
Rockport
Tell City
Hammond's 8 x 11 Map of Indiana
Copyright, 1904, by C.S. Hammond & Co., N.Y.
SCALE OF MILES
10 5 0 10 20 30 40
State Capital
County Seats
Places of 50,000 and over INDIANAPOLIS
" " 10,000 to 50,000 South Bend
" " 5,000 to 10,000 Washington
" " 3,000 to 5,000 Plymouth
Longitude West from Greenwich
87° 86°30′ 86° 85°30′ 85°

INDIANA.

Land surface, Sq. m. 35,910
Water surface, Sq. m. 440
Pop. 1900..2,516,462
White...2,458,502
African....57,505
Indian.....243
Chinese.....207
Japanese..... 5
Native-born, 2,374,341
Foreign-born, 142,121
Males...1,285,404
Females1,231,058

COUNTIES.

Adams.....G 3
Allen.....F 2
Bartholomew..E 6
Benton.....B 3
Blackford.....F 4
Boone.....D 4
Brown.....D 6
Carroll.....C 3
Cass.....D 3
Clark.....E 3
Clay.....B 6
Clinton.....D 4
Crawford.....D 8
Daviess.....B 7
Dearborn.....G 6
Decatur.....E 6
Dekalb.....F 2
Delaware.....F 4
Dubois.....C 8
Elkhart.....E 1
Fayette.....F 5
Floyd.....E 8
Fountain.....B 4
Franklin.....F 6
Fulton.....D 2
Gibson.....A 8
Grant.....E 4
Green.....C 6
Hamilton.....D 4
Hancock.....E 5
Harrison.....D 3
Hendricks....C 5
Henry.....F 5
Howard.....D 4
Huntington..E 3
Jackson.....D 7
Jasper.....B 2
Jay.....F 4
Jefferson.....F 7
Jennings.....E 7
Johnson.....D 5
Knox.....B 7
Kosiusko....E 2
Lagrange.....F 1
Lake.....B 2
Laporte.....C 1
Lawrence.....C 7
Madison.....E 4
Marion.....D 5
Marshall.....D 2
Martin.....C 7
Miami.....D 3
Monroe.....C 6
Montgomery..C 4
Morgan.....D 6
Newton.....B 3
Noble.....F 2
Ohio.....G 7
Orange.....C 7
Owen.....C 6
Park.....B 5
Perry.....C 8
Pike.....B 8
Porter.....B 2
Posey.....A 8
Pulaski.....C 2
Putnam.....C 5
Randolph.....F 4
Ripley.....F 6
Rush.....F 5
St. Joseph.....D 1
Scott.....E 7
Shelby.....E 5
Spencer.....B 8
Starke.....C 2
Steuben.....F 1
Sullivan.....B 6
Switzerland...F 7
Tippecanoe....C 4
Tipton.....D 4
Union.....G 5
Vanderburg..A 8
Vermillon.....B 5
Vigo.....B 6
Wabash.....E 3
Warren.....B 4
Warrick.....B 8
Washington..D 7
Wayne.....G 5
Wells.....F 3
White.....C 3
Whitley.....E 2

CITIES-TOWNS

Pop. Thousands.	
169	Indianapolis D 5
59	Evansville..A 9
45	Ft. Wayne..F 2
36	Terre Hante B6
35	South Bend D 1
20	Muncie.....F 4
20	New Albany E 8
20	Anderson...E 4
18	Richmond..F 5
18	Lafayette..C 4
17	Marion.....E 3
16	Logansport D 3
15	Elkhart....E 1
14	Michigan City C 1
12	Elwood.....E 4
12	Hammond B 1
10	Jeffersonville E 8
10	Kokomo...D 4
10	Vincennes..A 7
9	Huntington F 3
8	Wabash.....E 3
8	Washington B 7
8	Peru.....D 3
8	Columbus...E 6
7	Madison....F 7
7	Gosheu.....E 1
7	Brazil.....B 5
7	Alexandria E 4
7	Shelbyville E 5
7	Laporte.....C 1
7	Frankfort...C 4
6	Connersville F 5
6	Crawfordsville C 4
6	Bloomington C 6
6	Seymour....E 7
6	Valparaiso..B 2
6	Bedford.....C 7
6	Princeton...A 8
6	Hartford Cy F12
5	Mishawaka..D 1
5	Mt Vernon A 9
5	Greensburg E 6
4	Portland....F 4
4	Noblesville. D 4
4	Rushville...F 5
4	Greenfield..E 5
4	Bluffton....F 3
4	Lebanon....D 4
4	Lawrenceburg G 6
4	Decatur.....G 3
4	Martinsville D 6
4	Franklin...D 6
3	Warsaw....E 2
3	Whiting.....B 1
3	Garrett.....F 2
3	Tipton.....D 4
3	Winchester..F 4
3	Greencastle C 5
3	Plymouth..D 2
3	Aurora.....G 6
3	Gas Cy.....E 4
3	Rochester...D 2
3	East ChicagoB 1
3	Newcastle...F 5
3	Montpelier..F 3
3	Kendall.....F 2
3	Fairmount..E 4
3	Dunkirk.....F 4
3	Sullivan.....B 6
3	Liuton.....B 6
3	Attica.....B 4
2	Columbia...E 2
2	Clinton.....B 5
2	Rockport....B 9
2	Boonville...B 8
2	N. Vernon...F 6
2	Miami.....L 1
2	Union City..G 4
2	Tell City....C 9
2	HuntingburgC 8
2	N. Manchester E 3
2	Crown Point B 2
2	West Lafayette C 4
2	Rensselaer..B 3
2	Ligonier....E 2
2	Covington..B 4
2	Nappanee...D 2
2	Redkey....F 4
2	Cannelton...C 9
2	Angola.....F 1
2	Delphi.....C 3
2	Albany.....F 4
2	Monticello..C 3
2	Butler.....G 2
2	Rockville...B 5
2	Brookville..G 6
2	Speucer.....C 6
1	Salem.....D 7
1	Oakland City B3
1	KnightstownE 5
1	Jasper.....C 8
1	Jonesboro...E 4
1	Edinburg...E 6
1	Danville....C 5
1	Middletown E 4
1	Irvington...D 5
1	Sheridan...D 4
1	Mitchell.....C 7
1	Cambridge City F 5
1	Petersburg B 8
1	Lagrange....F 1
1	Brownstown D 7
1	Winamac....C 2
1	Veedersburg B 4
1	Corydon....D 8
1	Cicero.....D 4
1	Bloomfield..C 6
1	Yevay.....F 7
1	Eaton.....F 4
1	Rising Sun..G 7
1	Warren....F 3
1	Pendleton...E 4
1	Thorntown..C 4
1	Greenwood D 5
1	Clay City....B 6
1	Knox.....C 2
1	Frankton...E 4
1	Liberty.....G 5
1	Worthington C6
1	Summitville E 4
1	Fowler.....B 3
1	Howell.....A 9
1	Converse....E 3
1	Arcadia.....D 4
1	Hobart.....B 1
1	Batesville....F 6
1	Loogootee...C 7
1	Newburg....B 9
1	New Harmony A 8
1	Albion.....F 2
1	Argos.....D 2
1	Greentown..E 4
1	Lowell.....B 2
1	Scottsburg..E 7
1	Williamsport B4
1	Waterloo...F 2
1	Orleans....D 7
1	Flora.....C 3
1	Upland.....E 4
1	Goodland...B 3
1	Bourbon....D 2
1	Paoli.....D 7
1	Ladoga.....C 5
1	Montezuma B 5
1	Knightsville B 5
1	Swayzee.....E 4
1	Monon.....C 3
1	Remington..B 3
1	S. Whitley...E 2
1	Ridgeville...F 4
1	Hope.....E 6
1	Geneva.....G 3
1	Ashley.....F 1
1	Bern.....G 3
1	Walkerton..D 2
1	Osgood.....F 6
1	Carthage...E 5
1	Owensville..A 8
1	Kentland....B 3
1	Fortville...E 5
1	Atlanta.....D 4

Pop. Hundreds.	
9	Mooresville D 5
9	Van Buren..E 3
9	Windfall....E 4
9	Oldenburg..F 6
9	New Haven F 2
9	Oxford.....B 3
9	Brookston...C 3
9	North JudsonC 2
9	Roachdale..C 5
9	Syracuse....E 2
9	Odon.....B 7
9	Morocco....B 3
9	Wakarusa..D 1
9	CharlestownE 8
9	Parker.....F 4
9	Elnora.....B 7
9	Milford....E 2
8	Dana.....B 5
8	Pierceton...E 2
8	Churubusco F 2
8	Farmland...F 4
8	Lapel.....E 4
8	Normal City F 4
8	Rosedale....B 5
8	Hagerstown F 5
8	Cochran.....G 6
8	Ft. Branch..A 8
8	Cayuga.....B 5
8	Wolcott.....B 3
8	Boswell.....B 3
8	Grandview..C 9
7	Hebron.....B 2
7	Chesterton..B 1
7	Centerville .F 5
7	Orestes.....E 4
7	Pennville....F 4
7	Colfax.....C 4
7	Zionsville...D 5
7	CrothersvilleE 7
7	Sellersburg E 8
7	Hazelton....A 8
7	Waynetown B 4
7	Mentone....D 2
7	Notre Dame D 1
7	Andrews....E 3
7	Markle.....F 3
7	Darlington..C 4
7	Gosport.....C 6
7	Patoka.....A 8
7	Fremont....G 1

120 ft. wide; the other principal streets are about 90 ft. wide, and cross each other at right angles, except 4 broad avenues radiating from the Circle Park, located in the center of the city. These avenues traverse the city diagonally. Eleven railroads enter the city, all having access to the Union Depot, while a belt of railroad, 15 miles long, encircles the city, except on the north, and connects all railroads entering the city. In connection with the Belt R. R., located S. W. of the city, are large union stock yards. *I.* is one of the largest stock markets in the West. The city has large manufacturing interests in machinery, agricultural implements, woollen mills, rolling-mills, glue-works, soap-works, varnish factories, starch factory, pork-packing houses, and some of the finest flour mills in the world. The new court house, built of gray limestone, with Italian marble pillars, is one of the finest in the U. S., and cost $1,650,000. The interior decorations, in common with the whole building, are especially fine. *I.* has 65 churches. The new asylum for the insane, completed in 1878, can accommodate 700 patients. Asylums for the blind and the deaf and dumb are located in the city; also the National Surgical Institute, Orphan Asylum, Home for the Friendless, &c. The State Law Library has over 10,000 volumes; the State Library about 20,000 volumes; the Public Library of Indianapolis, 30,000 volumes; there are 7 other public and society libraries, and 4 medical colleges. *I.* has 4 public parks. Woodruff Place is a delightful suburb. A new State capitol was completed in 1888, at a cost of $2,000,000. Its dimensions are 492 by 185 feet, and it is crowned with a dome 234 feet high. Other notable buildings include the U. S. Post-office and Court House, the Masonic Temple, Odd Fellows' Hall, &c. In Circle Park stands a statue of Governor Morton, and a soldiers' and sailors' monument, 285 feet high. *Pop.* (1900) 169,164.

Indianapolis, in *Iowa*, a post-village of Mahaska co.

In'dian Bay, in *Arkansas*, a post-village of Monroe co.

In'dian Bay, *n.* (*Bot.*) See LAURUS.

In'dian Berry, *n.* (*Bot.*) See COCCULUS INDICUS.

In'dian Bread, *n.* (*Bot.*) See JATROPHA and PACHYMA.

In'dian Corn, *n.* (*Bot.*) See CORN and ZEA.

In'dian Creek, in *Cal.*, enters Dry creek in Yuba co. Gold in considerable quantities has been found.—In *Ga.*, enters Little river in Colquitt co.—In *Ind.*, enters the Ohio river in Harrison co.—Enters the E. fork of White river in Martin co.—Enters the W. fork of White river in Morgan co.—Enters the Ohio river in Switzerland co.—In *Miss.*, enters the Tennessee river in Tishemingo co.—In *Mo.*, enters the Maramee river from Franklin co.

In'dian Creek, in *Illinois*, township of Lawrence co.
—A township of Monroe co.
—A township of Pulaski co.
—A township of White co.

In'dian Creek, in *Iowa*, a township of Mills co.
—A township of Story co.

In'dian Creek, in *Michigan*, a village of Kent co.
—A post-township of Monroe co., about 8 m. N. N. E. of Jefferson City.
—A village of Newton co.

In'dian Creek, in *Pennsylvania*, a post-village of McKean county.

In'dian Creek, in *W. Va.*, a village of Monroe co.

In'dian Cress. See TROPÆOLUM.

In'dian Cucumber, *n.* (*Bot.*) See MEDEOLA.

In'dian Currant, *n.* (*Bot.*) See SYMPHORICARPUS.

In'dian Fig, *n.* (*Bot.*) See BANYAN and OPUNTIA.

In'dian Figtree, *n.* (*Bot.*) See FICUS.

In'dian File, *n.* The manner in which the American Indians travel in the woods or proceed to battle; single file.

In'dian Fire, *n.* (*Chem.*) A compound used for giving a bright white signal light. It is composed of 7 parts sulphur, 2 of realgar (*q. v.*) and 24 of niter.

In'dian Grove, in *Illinois*, a vill. of Livingstone co.

In'dian Head. A mountain in Utah.—A mountain of the Catskills, N. Y.—In *Pa.*, a post-hamlet of Fayette county.

In'dian Hemp, *n.* (*Bot.*) See HEMP.

In'dianite, *n.* (*Min.*) A variety of Anorthite (*q. v.*), from India.

In'dian Kentucky Creek, in *Indiana*, enters the Ohio river in Jefferson co.

In'dian Key, in *Florida*, a village of Monroe co., on a small island in the Atlantic Ocean, abt. 75 m. E.N.E. of Key West.

In'dian Lake, in *New York*, a small lake in the E. part of Hamilton co. It covers an area of abt. 19 sq. m. Its principal outlet, Indian River, enters the Hudson River.

In'dian Millet, *n.* (*Bot.*) See PANICUM.

In'dian Ocean, that great body of water which has Asia on the N., the Sunda Isles and Australia on the E., Africa on the W., and the Antarctic Ocean on the S. The Cape of Good Hope, in 21° 27′ E. Lon., and the southern extremity of Van Diemen's Land, 147° 20′ E. Lon., may be considered its extreme limits from E. to W. Its length, from N. to S., is about 6,500 m.; its breadth varies from 4,000 to 6,000 m. Its principal gulfs are the Red Sea, the Arabian Sea, and the Bay of Bengal. Its islands are Ceylon, Madagascar, the Laccadives, Maldives, Socotra, Andaman, Nicobar, the Isles of France and of Bourbon, Kerguelen's Land, &c. Numerous rocks, and coral reefs, render the navigation dangerous. The Ganges, Brahmapootra, Irawaddy, Indus, Euphrates, empty the accumulated waters of Southern Asia into the Indian Ocean. The trade-winds prevail here between the Tropic of Capricorn and the 10th degree of S. latitude; to the N. of this region the monsoons are felt.

In'dian Oak, *n.* (*Bot.*) See TECTONA.

Indiano'la, in *Illinois*, a post-village of Vermilion co.

Indianola, in *Iowa*, a city, cap. of Warren co., on the C., B. & Q. and C., R. I. & P. R. Rs., about 18 m. S. of Des Moines. *Pop.* (1895) 2,825.

Indianola, in *Kansas*, a post-town of Shawnee co.
—A post-office of Butler co.

Indianola, in *Mississippi*, a post-village, cap. of Sunflower co., on the Southern R. R.

Indianola, in *Nebraska*, a city, cap. of Red Willow co., on the B. & M. R. R. *Pop.* (1890) 579.

In'dian Orchard, in *Massachusetts*, a post-office of Hamptou co.

Indian Orchard, in *Pennsylvania*, a post-office of Wayne co.

In'dian Physic, *n.* (*Bot.*) See GILLENIA.

In'dian Pipe, *n.* (*Bot.*) See MONOTROPA.

In'dian Plantain, *n.* (*Bot.*) The common name of several species of plants, genus *Cacalia* (*q. v.*).

In'dian Point, in *Illinois*, a township of Knox co.

In'dian Poke, or WHITE HELLEBORE. (*Bot.*) See HELLEBORUS.

In'dian-red, *n.* A species of Ocher, the red HEMATITE (*q. v.*).

In'dian Rice, or WATER OAT, or CANADIAN WILD RICE. (*Bot.*) See ZIZANIA.

In'dian River, in *Delaware*, enters the Atlantic Ocean in Sussex co.
—A Hundred of Sussex co.

In'dian River, in *Florida*, enters the Atlantic Ocean in Volusia co.

In'dian River, in *Maine*, a P. O. of Washington co.

In'dian River, in *New Hampshire*. See INDIAN STREAM.

In'dian River, in *New York*, enters Black Lake in St. Lawrence co.
—A post-village of Lewis co.

In'dian Run, in *Penna.*, a post-village of Mercer co.

In'dians, a name common to the aborigines of America, north and south. We can give no opinion respecting their origin. The only hypothesis on this subject founded on any better evidence than conjecture, is that America was peopled by way of Behring's Strait. It is certain that an easy communication has existed between the two continents at this point for several centuries. However, arguing merely from this fact, it is as easy to prove that the Old World received its inhabitants from the New, as the contrary. With the exception, perhaps, of the Esquimaux, all the Indians have the same physical characteristics: a square head, low, broad forehead, full face, and powerful jaws; cheek-bones prominent; lips full; dark, and deeply-set eyes; hair long and wavy; little or no beard,—where it does appear, carefully eradicated with tweezers; color of the skin, reddish or copper, though some are comparatively white, some brown or yellow, and others black; height of the

Fig. 1374.—THE NORTH-AMERICAN INDIAN.

men about the average,—figure erect and slender. The women are rather shorter and more inclined to obesity, but many of them with symmetrical figure and countenance pleasing; the hands and feet of both men and women are small. The native American Indians are not all hunters, there being many fishing tribes among them; some are nomadic; others cultivate the earth, living in settled habitations, of the last of which a part were agriculturists before the arrival of the Europeans; others have learned of their conquerors to cultivate the soil, thus changing the ancient habits of the race, which—as it is warrantable to infer—were not the inevitable result of organization or congenital and instinctive propensity. Reliable authorities concur in adopting the test of language as a proof of one common origin for the various native tribes of both North and South America. The linguistic conclusion generally acquiesced in, is thus stated by Mr. Albert Gallatin: "Amid that great diversity of American languages, considered only in reference to their vocabularies, the similarity of their structure and grammatical forms has been observed and pointed out by the American philologists. The result appears to confirm the opinions already entertained on that subject by Mr. Du Ponceau, Mr. Pickering, and others; and to prove that all languages, not only of our own Indians, but of the native inhabitants of America, from the Arctic Ocean to Cape Horn, have, as far as they have been investigated, a distinct character common to all, and apparently differing from any of those of the other continents with which we are most familiar." The next question that arises is why, with all this similarity of physical conformation and language, there should have been but two nations, the Mexicans and Peruvians, who attained to any high degree of civilization? Upon the entry of Mexico the Spaniards found in it a rich, powerful, and warlike nation under the rule of an emperor, who had fixed laws, an organized hierarchy, and worshipped the sun. The nation thus discovered was that of Aztecs, and claimed to possess evidences of antiquity as far back as the year 554 of our æra. A few years later, another nation was found by the Spaniards in Peru, whose strength, possessions, and civilization equalled that of the Aztecs. This was the nation of Quichuas, often termed Incas and Peruvian, who had associated with them another nation, the Aymaris, whose

Fig. 1375.—FUEGIAN.
(Tierra del Fuego, South America.)

country had been subjugated by the Incas two or three centuries before the arrival of Pizarro in Peru. Each of these nations—the Mexicans and Peruvians—is supposed to have gradually developed, during a long process of ages, its own civilization. In every other part of America, explorers have found only complete or semi-barbarism. In Central America, however, there have been found extensive remains of architecture, and traces of civilization which apparently date back to a yet more remote period than that of the Mexican or Peruvian empires. Immense artificial mounds also exist in the valley of the Mississippi and elsewhere, supposed to have been erected by the ancestors of the present nomadic tribes. These contain many relics which seem to show a former more advanced degree of culture, though it is now believed that the arts of the Mound Builders were the same as those possessed by the Indians of the southern United States at the time of their discovery, and do not indicate a higher civilization in the past. Dr. Pritchard says that "attentive observers have been struck with manifestations of greater energy and mental vigor; of more intense or deeper feeling; of a more reflective mind; of greater fortitude and more constant perseverance in enterprises and all pursuits, when they have compared the natives of the New World with the sensual and almost animalized savages who are still to be found in some quarters of the old continent." The Indians of North America have been classified by Mr. Schoolcraft, one of the best authorities, as follows: "I. Northern, extending from the Atlantic Ocean to the Pacific Ocean; II. East of the Mississippi; III. Between the Mississippi and the Rocky Mountains; IV. West of the Rocky Mountains." These embrace altogether thirty-seven distinct families, under which, however, there are numerous subdivisions. The names of these families are: "1. Esquimaux; 2. Athabascas; 3. Algonquins; 4. Iroquois; 5. Catawbas; 6. Cherokees; 7. Choctaws, (Muskhogs); 8. Utchees; 9. Natchez; 10. Sionx (Fig. 1376); 11. Gros Ventres; 12. Pawnees; 13. Kioways; 14. Kaskasklas; 15. Comanches; 16. Pani, Towiacks; 17. Caddoes; 18. Adaize; 19. Chetimaches; 20. Attakapas; 21. Natchitoches; 22. Jelish; 23. Sahaptin; 24. Wailatpu; 25. Tshinook; 26. Kalapuya; 27. Jakon; 28. Lnturim; 29. Sasti, 30. Pulairih; 31. Shoshonees; 32. Kitnanaha; 33. Ugaljachmutzi; 34. Konlischen; 35. Naass; 36. Skidegattz; 37. Wakash."—Again, M. d'Orbigny has classified the Indians of S. America under three great groups, viz., the Andian group, the Mediterranean group, and the Brasilio-Guarani group; and these he subdivides into thirty-nine distinct nations; viz., "1. Quichua; 2. Aymara; 3. Chango; 4. Atacama; 5. Yuracares; 6. Mocetenes; 7. Tacana; 8. Maropa; 9. Apolista; 10. Arancanian; 11. Fuegian (Fig. 1375); 12. Patagonian; 13. Puelche; 14. Charrua; 15. Mbocobi; 16. Mataguayo; 17. Abipones; 18. Leugua; 19. Samucu; 20. Chiquito; 21. Saraveca; 22. Otuke; 23. Curuminaca; 24. Covareca, 25. Curaves; 26. Tapiis; 27. Curucaneca; 28. Paiconeca;

29. Corabeca; 30. Moxo; 31. Chapacura; 32. Itonama; 33. Canichana; 34. Movima; 35. Cayuvava; 36. Pacaguara; 37. Iteucs; 38. Guarani; 39. Botocudo. Other classifica-

Fig. 1376. — MANDANS, A TRIBE OF THE SIOUX.
(Located near Fort Clarke, Dakota Territory.)

tions have been attempted, but all are more or less arbitrary. Morton is content with two grand divisions, viz., the *Toltecan Nations* and the *Barbarous Tribes*, the former embracing the ancient Mexicans and Peruvians, and the latter all the uncivilized or semi-civilized tribes from the extreme N. to the extreme S. Of the Toltecans, whom he supposes to have been the builders of the remarkable series of mounds found throughout N. America, Dr. Morton collected as many as 213 skulls, taken from the oldest burial-grounds; and of the Barbarous Tribes, 211 skulls, partly modern and partly ancient. Accurate admeasurements of these, together with many curious particulars, are given in his celebrated work the *Crania Americana*. — No perfectly accurate statistics with respect to the numbers of the Indian nations and tribes as at present existing, can be given. Those in N. America, however, may be fairly set down as amounting to between 5,000,000 and 6,000,000; and those in S. America as reaching about 9,000,000. Of the former, there were in the U. S. exclusive of Alaska, in 1900 a total of 266,760, of whom 86,265 were in the Indian Territory, and nearly all the others in the Western States and Territories. The census of 1900 gives no returns for Alaska.—The records of our colonial history give evidence of frequent conflict between the natives and the whites, except in the commonwealth established by William Penn, to which we might add Maryland. From the foundation of the republic, it must be said, the policy adopted toward the Indians has proved most disastrous to them and injurious to the nation. Forced or persuaded to cede their lands to the national government or to those of States for almost nothing, in comparison with their value, the Indians were refused citizenship, and held to be foreigners in their own country. In the treaties for the cession of lands the government has guaranteed the payment of stipulated annuities of money or merchandise, or both, to the Indians, and also protection. It has, from time to time, placed them on reservations on wild lands, and so enabling them to continue in the hunter state, on the borders of civilization, instead of becoming agriculturists or artificers within its folds. The system of Indian reservations and annuities, under the general superintendence of government agents, has been productive of a vast amount of evil, and of almost continual warfare between the pale and dusky races. A host of contractors and traders, hovering like vultures around the agents, spreading demoralization among all the tribes by the sale of intoxicating drinks, managing to cheat both the government and the Indians, having accumulated so vast an amount of evil that the Indians, smarting under a sense of these wrongs, have been made implacable enemies of their oppressors. At length the distressing hostilities with the Indians, that had been going on since the close of the Civil War, caused Congress first to appoint a commission to inquire into the condition of the Indian tribes, and then a peace commission for their pacification. A board of commissioners was created to superintend the disbursement of appropriations, and inspect goods furnished to the Indians. The care of the Indians is now reposed in the Commissioner of Indian Affairs, whose bureau is under the direction of the Secretary of the Interior. During the period since the Civil War the conflicts with the Indians, which formerly prevailed east of the Mississippi, have been transferred to the West, the wars which occurred being in a large measure due to the encroachments and ill-treatment of the whites. This condition of things seems now fairly at an end, and future Indian outbreaks are very unlikely to occur they being strictly under government control, while they are making some progress in industry and the arts of civilization. Efforts are being made to break up their tribal organizations and induce them to accept individual farms, with the hope that this may lead them into habits of industry and make them self-supporting

In'dian Sarsaparil'la, *n.* (*Bot.*) See HEMIDESMUS.

Indian Shot, *n.* (*Bot.*) See CANNA.

Indian Springs, in *California*, a village of Nevada co., about 10 m. S. of Nevada City; in *Geo.*, a p.-vill. of Butts co., about 50 m. N.W. of Milledgeville; in *Md.*, a p.-village of Washington co.

Indian Springs, in *North Carolina* a township of Wayne co.

Indian Stream, in *New Hampshire*, joins the E. Branch to form the Connecticut river in Coos co. It is sometimes called INDIAN RIVER.

Indian Teak, *n.* (*Bot.*) See TECTONA.

Indian Territory, in the *United States*, a tract of country allotted by the government to be the residence of the Indian tribes removed thither from east of the Mississippi. As originally constituted, it was bounded N. by Kansas, S. by Texas, E. by Missouri and Arkansas, and W. by Texas and New Mexico, but in 1889 its western section, embracing more than half of its original area, was opened to white settlement and organized as Oklahoma Territory. Its former area of about 71,500 sq. m. was thus reduced to 31,400. In 1907 the remaining section was admitted to statehood as a portion of the new State of Oklahoma (*q. v.*). The surface of the Territory, as it existed after 1889, consisted mainly of rolling prairie, broken in the S. E. by the low Ozark mountains, and in the S. W. by the Arbuckle mountains. The N. E. portion is well wooded, and from the Arkansas River to the Brazos, in Texas, extends a belt of forest known as the "Cross Timbers." The *I. T.* was originally set aside for occupancy by the Creek, Choctaw, Cherokee, Chickasaw, and Seminole Indians. These now number about 50,000, and have attained some degree of civilization, having long conducted a government of their own under U. S. supervision. In addition to the tribes named, the Sacs and Foxes, Comanches, Modocs, Nez Percés, and various other tribes have been placed on reservations there. The surface is well watered by the Red and Arkansas rivers and their many tributaries. The river bottoms are wide and fertile, the area under cultivation being estimated at about 400,000 acres, the crops comprising wheat, corn, oats, potatoes, sweet potatoes, and cotton, while the small fruits thrive well.

Indian Tobac'co, *n.* (*Bot.*) See LOBELIA.

Indian Town, in *North Carolina*, a P. O. of Camden co. —A village of Currituck co., about 165 miles E.N.E. of Raleigh.

In'dian Yellow, or PURREE, *n.* (*Painting.*) A coloring matter highly esteemed by painters. It is imported from India in the form of balls, is of a fetid odor, and is produced from the urine of the camel. It has also been ascribed, in like manner, to the buffalo, or Indian cow, after feeding on mangoes; but the latter statement is incorrect. Indian yellow resists the sun's rays with singular power in water-painting.

India-rubber, CAOUTCHOUC, or GUM-ELASTIC, *n.* (*Chem.*) A substance closely allied to the gum-resins, of an extraordinary elasticity, and called *I. R.*, because it has been first employed to rub out pencil marks on paper. *Formula*, C_5H_4. It is procured from a milky exudation of several tropical plants, particularly in South America, by various species of *Hevea*. Incisions are made in the tree, and the milky liquid thus obtained is spread upon a clay bottle-shaped mould, which is then suspended over a fire; a layer of caoutchouc is thus deposited upon the mould, and its thickness is afterwards increased by repeated applications of the milky liquid, the mould being eventually broken out of the *I. R.* bottle thus formed. The dark color of the *I. R.* found in commerce is believed to be due to the smoke from the fire over which it is dried, for pure *I. R.* is white, and may be obtained in this state by dissolving in washed ether and precipitating it by the addition of alcohol, in which it is insoluble. The *I. R.* of commerce contains a small quantity of albumen, derived from the original milky liquid, this being really a solution of albumen holding in suspension about 30 per cent. of *I. R.*, which rises to the surface like cream, when the juice is diluted with water, and allowed to stand, becoming coherent and elastic when exposed to air. It will be remembered that many of the chief uses of *I. R.* depend upon its physical rather than its chemical properties, its lightness (sp. gr. 0·93) and impermeability to water adapting it for the fabrication of waterproof articles of clothing, of life-buoys, &c., whilst its remarkable elasticity gives rise to a still greater variety of applications. For the manufacture of *waterproof cloth*, *I. R.* is dissolved in rectified turpentine, and the solution is spread, in a viscid state, over the surfaces of two pieces of cloth of the same size, which are then laid face to face and passed between rollers, the pressure of which causes perfect adhesion between the two surfaces. Bisulphide of carbon, benzole, and coal naphtha, petroleum, the oils, both fixed and volatile, are also capable of dissolving *I. R.* — *Marine glue* is a solution of *I. R.* with a little shell-lac in coal-tar naphtha. — *Waterproof felt* is made by matting together fibres of cotton impregnated with a solution of *I. R.* in naphtha, and passing the felt between rollers. When kept for a length of time, its strength and waterproof qualities are deteriorated, in consequence of the oxidation of the caoutchouc, which is thus converted into a resinous substance resembling shell-lac, and easily dissolved by alcohol. — The alkalies and diluted acids are without effect upon *I. R.* When gently warmed it becomes far more soft and pliable; it fuses at about 250° F., and is converted into an oily liquid which becomes viscid on cooling, but will not again solidify, and is useful for lubricating stop-cocks. When further heated in air, it burns with a bright smoky flame. Heated in a retort, *I. R.* is decomposed into several hydrocarbons, one of which, called *isoprene*, boils at about 100° F., and has the composition $C_{10}H_8$, while *caoutchine* has the same composition as oil of turpentine, and boils at 340° F.; they are well adapted for dissolving caoutchouc. — *Vulcanized I. R.*, first discovered in this country by Mr. Goodyear, is produced by incorporating this substance with 2 or 3 per cent. of sulphur, which not only increases in a remarkable manner its elasticity, but prevents it from cohering under pressure, and from adhering to other surfaces unless strongly heated. The vulcanized caoutchouc is also insoluble in turpentine and naphtha. Ordinary vulcanized *I. R.* generally contains more sulphur than is stated above, which causes it to become inelastic and brittle after it has been some time in use; and for some purposes, such as the manufacture of overshoes, it is found advantageous to add some carbonate of lead, as well as sulphur. When a sheet of *I. R.* is allowed to remain for some time in fused sulphur at 250° F., it absorbs 12 or 15 per cent. of that element without suffering any material alteration; but if it be heated for a short time to 300° F., it becomes vulcanized; and when still further heated, is converted into the black heavy substance called *Vulcanite*, or *ebonite*, and used for the manufacture of combs, &c. By treating the vulcanized *I. R.* with sulphide of soda, the excess of sulphur above 2 or 3 per cent. may be dissolved out. There are several processes employed for the manufacture of vulcanized *I. R.*; sometimes the sulphur is singly incorporated with it by mechanical means. Another process consists in immersing the *I. R.* in a mixture of 100 parts of bisulphids of carbon with 2·5 parts of chloride of sulphur, (S_2Cl), or in dissolving the sulphur in oil of turpentine, which is afterwards used to dissolve the *I. R.* When the turpentine has evaporated, a mixture of *I. R.* and sulphur is left, which may easily be moulded into any desired form, and afterwards vulcanized by exposure to high-pressured steam, having a temperature of about 280° F. The true chemical composition of vulcanized *I. R.* is not yet well known; it has been suggested that the sulphur has been substituted for a portion of the hydrogen in the original *I. R.*, but it does not seem improbable that this hydrocarbon may combine directly with sulphur. *I. R.* is by no means rare in the vegetable kingdom, being found in the vegetable juices of the poppy (and hence in opium), of the lettuce, of the euphorbium, and asclepia genera.

Xelton. The great demand for India Rubber and the decrease in supply have set inventors at work in search of a substitute. An acceptable one has been found in the waste of glucose factories, about 5 per cent. of the whole. This consists of the germ of the corn, which yields corn-oil (*q. v.*). From this refuse an excellent substitute for hard rubber, known as Xelton, is made, adapted to nearly all uses of rubber, from bicycle tires to linoleum. It is claimed to be much cheaper than rubber, lighter in weight, unaffected by heat or cold, and capable of being made fire-proof.

In'dicant, *a.* [Lat. *indicans.*] Showing; pointing out; directing what is to be done in any disease.

—*n.* (*Med.*) Anything which, in the course of a disease, or in what precedes or accompanies it, concurs in pointing out the means to be used for its cure.

In'dicate, *v. a.* [Lat. *indico, indicatus.*] To point out; to direct, as the mind to a knowledge of something; to discover; to show; to mark; to denote; to signify; to tell; to disclose.

(*Med.*) To manifest by symptoms; to point to as the proper remedies.

Indica'tion, *n.* [Fr.; Lat. *indicatio.*] Act of pointing out; mark; token; sign; discovery made; intelligence given.

(*Med.*) Symptom; any symptom or occurrence in a disease which serves to direct to suitable remedies.

Indic'ative, *a.* [Fr. *indicatif*; Lat. *indicativus.*] That serves to point out or indicate; showing; giving intimation or knowledge of something not visible or obvious.

(*Gram.*) That particular form or state of a verb which simply indicates or declares a thing; as, I love, he is feared.

Indic'atively, *adv.* In a manner to show or signify.

In'dicator, *n.* [Fr. *indicateur*; Lat. *indicator.*] He or that which indicates, shows, or points out.

(*Anat.*) A muscle of the forearm which points or extends the forefinger.

(*Mach.*) An instrument for ascertaining the amount of the pressure of steam, and the state of the vacuum throughout the stroke of a steam-engine.

(*Zoöl.*) See HONEY-GUIDE.

Indic'atory, *a.* [L. Lat. *indicatorius.*] Showing; serving to show or make known.

Indica'vit, *n.* (*Law.*) A writ of prohibition.

In'dices, *n.*; *pl.* of INDEX. (*Math.*) See INDEX.

Indicia, (*in-dish'e-a,*) *n. pl.* [Lat.] Discriminating marks.

Indic'olite, *n.* [Lat. *indicum*, indigo, and Gr. *lithos*, a stone; so called from its color.] (*Min.*) A blue, or sometimes bluish-black var. of TOURMALINE, *q. v.*

Indict, (*in-dite',*) *v. a.* [Lat. *indico, indictus* — *in*, and *dico*, to proclaim or make known. See DICTATE.] (*Law.*) To declare publicly; to proclaim; to publish; to announce; to enjoin; to charge or accuse in an enjoined or prescribed form of words; to accuse or charge with a crime or misdemeanor, in writing, by a grand jury under oath.

Indict'able, *a.* That may be indicted; subject to be presented by a grand jury; subject to indictment.

Indictee', *n.* (*Law.*) One who is indicted; — opposed to *indicter.*

Indicter, (*in-dit'er,*) *n.* One who indicts.

Indiction, (*in-dik'shun,*) *n.* [Lat. *indictio*, establish-

OKLAHOMA AND INDIAN TERRITORY

Places of 5,000 and over OKLAHOMA
" " 3,000 to 5,000 Muskogee
" " 1,000 to 3,000 Pawnee
" " 500 to 1,000 Altus

State Capitals ⊛ County Seats ⊙
Capitals of Indian Nations ⊛
Indian Reservation boundary line
Military " " " —.—.—

SCALE OF MILES
10 5 0 10 20

Hammond's 8 x 11 Map of Oklahoma and Ind. Ter.

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98° Longitude E West F from 97° Greenwich G

INDIAN TERRITORY.

Land surface, Sq. m. 31,000
Water surface, Sq. m. 400
Pop. 1900 ...392,060
White ... 302,680
African ...36,853
Indian 52,500
Chinese 27
Native-born, 387,202
Foreign-born, 4,858
Males 208,952
Females..183,108

DISTRICTS.

District 1.....L 1
District 2 ....K 1
District 3.....J 1
District 4.....J 2
District 5 ....K 2
District 6.....L 3
District 7.....J 2
District 8 ....H 3
District 9 ....H 3
District 10 .....J 3
District 11.. ..L 3
District 12 .....J 4
District 13 ....H 4
District 14 .....L 5
District 15 .....J 5
District 16 ....G 6
District 17 ....F 5
District 18 ....E 5
District 19 ....E 5
District 20.... E 6
District 21 ....F 6
District 22 ... G 6
District 23 ... H 6
District 24 ....K 6
District 25 ....H 6

CITIES-TOWNS

Pop. Thousands.	
7 Ardmore	...F 6
6 South McAlester	J 5
4 Durant	.....H 7
4 Muskogee	...K 3
3 Wagoner	...K 3
3 Tulsa	..... J 2
3 Chickasha	..E 4
3 Wilburton	..K 5
3 Vinita	.....K 1
3 Holdenville	H 4
2 Okmulgee	...J 3
2 Tahlequah	..L 3
2 Coalgate	....H 5
2 Duncan	.....E 6
2 Lehigh	.....H 5
2 Krebs	.....J 5
2 Purcell	.....F 4
2 Sapulpa	....H 3
1 Comanche	..E 6
1 Eufaula	.....J 4
1 Claremore	..J 2
1 Sulphur	.....F 5
1 Checotah	...K 4
1 Pauls Valley	F 5
1 Poteau	.....L 4
1 Davis	.....F 6
1 Ryan	.....E 6
1 Howe	.....L 5
1 Afton	.....L 1
1 Antlers	.....J 6
1 Atoka	.... .H 6
1 McAlester	...J 5
1 Rush Springs	E 5
1 Sallisaw	.....L 4
1 Marlow	.....E 5

Pop. Hundreds.	
9 Alderson	....J 5
8 Spiro	.....L 4
8 Marietta	....F 7
7 Oakland	....G 6
6 Fairland	....L 1
6 Nowata	.....J 1
6 Bristow	....H 3
5 Sterrett	....H 7
5 Canadian	....J 4
4 Nowata	.....J 1
4 Pryorcreek	K 2
4 Muldrow	....L 4
4 Dougherty	..F 6
3 Collinsville	..J 2
3 Pontotoc	...G 5
3 Emet	.....G 6
3 Welch	.....K 1
3 Cameron	....L 4
3 Grove	.....L 1
3 Wister	.....L 5
3 Cornish	.....E 6
3 Bluejacket	.K 1
2 Vian	.....L 3
2 Westville	....L 3
2 Berwyn	....F 6
2 Cowlington	.L 4
2 Adair	.....K 2
2 Hickory	....G 5
2 Silo	.....G 6
2 Tamaha	....L 4
2 Heavener	..L 5
2 Wyandotte	.L 1
2 Orr	.....E 6
2 Kemp	.....H 7
2 Leon	.....F 7
2 Lonegrove	..F 6
2 McGee	.....G 5
2 Webbers Falls	K 3
2 Johnson	... F 5
2 Purdy	.....E 5
1 Mannsville	..F 6
1 Elmore	.....F 5
1 Lenapan	....J 1
1 Thackerville	F 7
1 Bokoshe	....L 4
1 Ravia	.....G 6

OKLAHOMA.

Land surface, Sq. m. 38,830
Water surface, Sq. m. 200
Pop. 1900...398,331
White....367,524
African ...18,831
Indian.... 11,945
Chinese.....31
Native-born, 382,651
Foreign-born, 15,680
Males.....214,359
Females..183,972

COUNTIES.

Beaver.....A 1
Blaine .....D 3
Caddo.....D 4
Canadian .....D 4
Cleveland.....F 4
Comanche.....C 6
Custer .....B 3
Day.....A 3
Dewey .....B 3
Garfield.....E 2
Grant .....E 1
Greer.....A 5
Kansas.....G 1
Kay.....F 1
Kingfisher....D 3
Kiowa .....B 5
Lincoln.....G 3
Logan.....E 3
Noble... .....F 2
Oklahoma.....E 3
Osage Nation.G 1
Pawnee.....G 2
Payne.....F 2
Pottawatomie F 4
Roger Mills ...A 4
Washita.....B 4
Woods.....C 2
Woodward ...A 1

CITIES-TOWNS

Pop. Thousands.	
10 Oklahoma	..F 3
10 Guthrie	....F 3
9 Lawton	.....D 5
3 Anadarko	...D 4
3 Shawnee	....G 4
3 Enid	.....E 2
3 El Reno	.....E 3
3 Perry	.....F 2
2 Ponca	.....F 1
2 Stillwater	...F 2
2 Kingfisher	..E 3
2 Blackwell	...F 1
1 Newkirk	.... F 1
1 Hobart	..... B 4
1 Cordell	.....B 4
1 Mangum	... B 5
1 Alva	.....C 1
1 Pawnee	.....G 2
1 Chandler	....G 3
1 Hennessey	..E 2
1 Tecumseh	...G 4
1 Watonga	....D 3
1 Woodward	...B 2
1 Weatherford	C 3

Pop. Hundreds.	
9 Edmond	.....F 3
8 Lexington	..F 4
8 Pondcreek	..E 1
8 Yukon	.....E 3
8 Stroud	.....G 3
7 Perkins	..... F 2
7 Tonkawa	....F 1
6 Waukomis	..E 2
6 Osage	.....G 2
5 Mulhall	.....F 2
5 Medford	....E 1
4 Grand	..... A 3
4 Ripley	.....F 2
4 Cheyenne	...A 4
4 Billings	.....F 2
3 Wellston	....F 3
3 Noble	.....F 4
3 Jefferson	....E 1
3 Orlando	...F 2
2 Orapahoe	...C 3
2 Langstan	...F 3
2 Braman	.....F 1
2 Cushing	.....G 3
2 North Enid	.E 2
1 Manchester	D 1
1 Crescent	....E 3
1 Renfrow	....E 1
1 Moore	.....F 4
1 Beaver	.....C 7
1 Bornett	....F 4

ment, order.] In chronology, a period of 15 years; different from other cycles in the fact of its having no reference to astronomical phenomena. The indiction is supposed to relate to certain judicial acts, as tariffs of the taxes, and such like decrees, at stated intervals, under the old Greek emperors. The Cæsarean indiction fell on the 8th of the calends of October (24th September); the Constantinopolitan indiction on the 1st of September; and the Pontifical indiction on the 1st of January. The year of indiction may be computed by the following formula, to correspond with the year of our æra: Add 3 to the date, divide the sum by 15, and the remainder will be the year of the indiction. If the remainder be 0, it will signify the 15th of the cycle. The reader will find the subject fully discussed in Gibbon's *Decline and Fall of the Roman Empire.*

Indic'tive, *a.* [Lat. *indictivus.*] Proclaimed; declared. (R.)

Indictment, (*in-dite'ment,*) *n.* [Lat. *in,* and *dico,* I speak against.] (*Law.*) A written accusation of one or more persons, of a crime or misdemeanor, preferred to, and presented upon oath by a grand jury. Indictments must have a precise and sufficient certainty. They should set forth the Christian name and surname, with the addition of the state and degree, town or place, and country, of the offender; but mistakes on these points are not generally held to be material. The time and place in which the fact was committed are also usually given; but neither is a mistake here generally held to be material. The offence itself must also be set forth with clearness and certainty. The grand jury sit and receive indictments; and their duty is only to hear evidence on behalf of the prosecution; for the finding of an indictment is only in the nature of an inquiry or accusation. They ought, however, to be thoroughly persuaded of the truth of an indictment, so far as their evidence goes, and not rest satisfied with mere probabilities. When, having heard the evidence, they think it a groundless accusation, they used formerly to indorse on the back of the bill *Ignoramus,* or "We know nothing of it." Now they write, "Not a true bill," or "Not found," and then the party is discharged without further answer. A new bill may, however, be preferred against him before the same or another grand jury. If satisfied of the truth of the accusation, they then indorse upon it "A true bill," anciently *Billa vera.* The indictment is then said to be found, and the party stands indicted. In finding a true bill, twelve, at least, of the grand jury must concur.

In'dies, (East,) a collective name vaguely applied to Hindostan, Farther India and the Indian Archipelago. See ARCHIPELAGO (EASTERN), HINDOSTAN, and INDIA.

In'dies, (West.) See ANTILLES and WEST INDIES.

In'dictor, *a.* (*Law.*) One who indicts; an indicter.

Indif'ference, *n.* [Fr., Lat. *indifferentia.*] Want of difference of distinction; similarity; equivalence; equipoise or neutrality of mind between different persons or things; a state in which the mind is not inclined to one side more than the other; impartiality; freedom from prejudice, propossession, or bias; unconcernedness; carelessness; unconcern; apathy.

Indif'ferency, *n.* Indifference. (R.)

Indif'ferent, *a.* [Fr., Lat. *indifferens.*] Showing or having no distinction or difference; neutral; not inclined to one side, party, or thing, more than to another; unconcerned; careless; feeling no interest, anxiety, or care respecting anything; having no influence or preponderating weight; having no difference that gives a preference; impartial; disinterested; passable; of a middling state or quality; neither good nor the worst.

Indif'ferentism, *n.* State of being indifferent; indifference.

Indif'ferentist, *n.* One who is indifferent or neutral.

Indif'ferently, *adv.* In an indifferent manner; without distinction or preference; equally; impartially; without concern; without wish or aversion; not well; tolerably; passably.

In'digence, In'digency, *n.* [Fr. *indigence;* Lat. *indigentia.*] State of being indigent; need; want; penury; poverty; want of estate or means of comfortable subsistence.

Indigenous, (*in-dij'en-us,*) *a.* [L. Lat. *indigenus,* native, from Lat. *indigena,* native — *indu* = Gr. *endon,* in, within, and *gen,* root of *gigno,* to beget, to bear.] Born in a country; native, as persons, animals, or plants; produced naturally in a country; not exotic, as plants.

In'digent, *a.* [Fr.; Lat. *indigens,* from *indigeo* — *in,* or *indu,* and *egeo,* to need, to want.] Being in want or need of anything: destitute of property or means of subsistence; needy; poor.

In'digently, *adv.* With indigence or destitution.

Indigest'ed, *a.* [Lat. *indigestus* — *in,* and *digestus.*] Not digested; not arranged; without order; confused; not regularly disposed, not methodized; not reduced to due form.

(*Med.*) Not digested or concocted in the stomach; not changed or prepared for nourishing the body; undigested; crude; not prepared by heat.

Indigest'edness, *n.* State of being indigested.

Indigestibil'ity, *n.* Quality of being indigestible.

Indiges'tible *a.* Not digestible; not easily converted into chyme, or prepared in the stomach for nourishing the body. — Not to be received or patiently endured.

Indiges'tibleness, *n.* Quality of being indigestible; indigestibility.

Indiges'tibly, *adv.* Not digestibly.

Indiges'tion, *n.* [Fr.] See DYSPEPSIA.

Indig'nant, *a.* [Lat. *indignans,* from *indignor* — *in,* and *dignor,* to deem worthy, from *dignus,* worthy. See DEIGN.] Affected with a sense of unworthiness, ill-treatment, ill-conduct, &c.; disdaining; affected at once with anger and disdain; feeling the mingled emotions of wrath and scorn or contempt.

Indig'nantly, *adv.* With indignation.

Indigna'tion, *n.* [Fr.; Lat. *indignatio.*] State of being indignant; a strong and elevated disapprobation of what is flagitious in character or conduct; anger or extreme anger, mingled with contempt, disgust, or abhorrence; ire; wrath; resentment; fury; rage; the anger of a superior.

(*Script.*) Extreme anger, particularly of the Supreme Being; effects of anger; the dreadful effects of anger; the dreadful effects of God's displeasure; terrible judgments; holy displeasure at one's self for sin.

Indig'nity, *n.* [Fr. *indignité;* Lat. *indignitas,* from *indignus* — *in,* and *dignus,* worthy.] Unmerited contemptuous conduct towards another; any action towards another which manifests contempt for him; incivility or injury, accompanied with insult; contumely; affront; abuse.

Indigo, (*in'di-go,*) *n.* [Fr., It., and Sp. *indigo.*] (*Chem.*) A blue dye-stuff, extracted from a variety of plants, growing principally in India and America, especially from species of *Indigofera,* q. v. The common woad, or *Isatis tinctoria,* also yields indigo. It has been found in minute quantities in the milk of cows and in human urine. It is one of our most important dye-stuffs, both from the beauty and permanence of the color it yields, and from the ease with which it is applied to fabrics of all materials. The juices of the plants from which indigo is obtained give no evidence of its presence while in their natural state, but require to undergo a process of fermentation before the dark-blue coloring-matter known in commerce as indigo, is precipitated. The method of manufacture consists in steeping the plant in water until fermentation sets in, the coloring-matter dissolves in the water, forming a yellow solution, which is drawn off from the rest of the vegetable matter. This solution, by agitation and continual exposure to the air, gradually deposits indigo as a blue precipitate, which is dried, and pressed into the form in which it is sold to customers. India and the islands of the Indian Archipelago produce four-fifths of the indigo consumed, the remainder being furnished principally by Central America, only a very small proportion being found in other parts of the world. The indigo of commerce contains *indigotine,* or indigo-blue, its most important constituent, indigo-brown, and indigo-red; besides many other substances, in varying proportions, which must be looked on as accidental impurities or adulterations. Indigotine, or indigo-blue, may be obtained in crystals from the red or brown coloring-matter, by sublimation between two watch-glasses; but as this process is attended with considerable loss, the following method is usually adopted in commerce: — Four ounces of commercial indigo in fine powder, and four ounces of grape-sugar, are placed in a flask capable of holding, at least, ten pints of liquid; and six ounces of a saturated solution of caustic soda is added to them, and the flask filled up with boiling alcohol. The mixture is shaken, the flask being first closed, so as to exclude the air, and set aside. In a few hours it becomes clear, and the yellowish-red solution is drawn off, and exposed to the air. It becomes brown, and deposits crystals of indigotine, which are rendered perfectly pure by the treatment with boiling alcohol and hot water. Pure indigotine is not soluble either in water, weak acid, or alkalies. In order, therefore, to use it as a dye-stuff, it has to be reduced to the state of white indigo, which is readily soluble by means of copperas and potash, or some other deoxidizing agent. White indigo contains one equivalent more of hydrogen than blue indigo, and is soluble in alkaline liquids. The processes for dyeing fabrics with indigo are consequently all found on the same principle — the use of a deoxidizing agent for reducing the blue indigo to white, and an alkaline solution for dissolving it when formed. The indigo is, therefore, fixed in the fibre in its white and soluble condition, the blue color being afterwards developed by exposure to the air. Indigotine dissolves readily in sulphuric acid, forming *sulphindylic acid,* known in dyeing as sulphate of indigo, or Saxony blue. Schunck supposes that the indigo obtained from woad is the result of the decomposition of a yellow, transparent, amorphous, deliquescent substance, which he has extracted from the juice, and which he names *indican.* When heated with sulphuric acid, it forms indigo-blue, indigo-red, and a species of sugar. This appears to be exactly what happens during the fermentation of the indigo-plants; a strong acid is developed, which converts the indican into indigo-blue, indigo-red and sugar. See Fig. 1377 — Artificial *I.* has been produced since 1878. Articles dyed with it are said to resist wear and washing better and possesses a livelier color than those dyed with natural indigo.

In'digo Copper, *n.* (*Min.*) Native sulphuret of copper, occurring sometimes in hexagonal crystal but generally uncrystallized. It is of an indigo-blue color, and contains sulphur 33·5, copper 66·5. *Sp. gr.* 4·6. Found at Vesuvius on lava, at Algodon Bay, Bolivia, and in Chili. Called also COVELLITE.

Indigof'era, *n.* [*indigo,* and Lat. *fero,* I bear.] (*Bot.*) A genus of plants sub-order *Papilionaceæ.* The species *I. tinctoria, cærulea,* and probably some others, yield commercial indigo, one of the most important of dyeing materials. Indigo is very poisonous: but in proper doses it has been employed in epilepsy and erysipelas; its value in such diseases is by no means well established. See INDIGO.

In'digogen, or **In'digogene,** *n.* (*Chem.*) White indigo; colorless indigotine.

In'digolite, *n.* [Eng. *indigo,* and Gr. *lithos,* a stone] (*Min.*) Blue tourmaline.

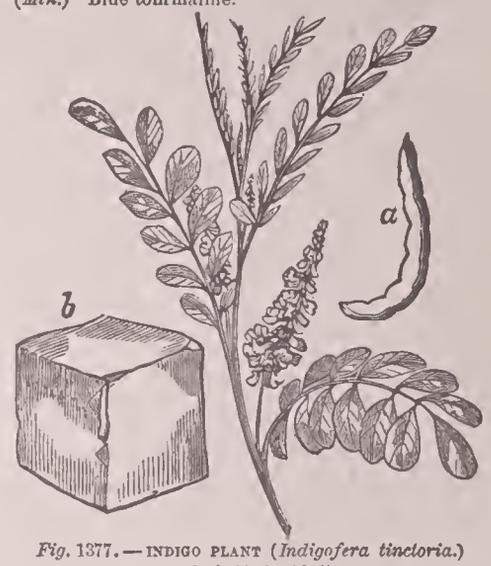

Fig. 1377. — INDIGO PLANT (*Indigofera tinctoria.*)
a pod; *b,* block of indigo.

Indigom'eter, *n.* [Eng. *indigo,* and Gr. *metron,* measure.] An instrument for measuring the strength of indigo.

Indigom'etry, *n.* (*Chem.*) Method of ascertaining the coloring power of indigo.

In'digo-plant, *n.* (*Bot.*) See INDIGOFERA.

Indigot'ic Acid, *n.* (*Chem.*) An acid formed when indigo is dissolved in nitric acid considerably diluted. See BENZOIC SERIES.

In'digotine, *n.* (*Chem.*) On heating indigo, it evolves purple vapors, which condense in prismatic crystals of a coppery lustre, consisting of pure *indigotine* or indigo-blue, which may be obtained in large quantities by digesting indigo with grape-sugar, caustic soda, and weak alcohol, when a solution of white indigo is obtained which deposits the crystallized indigotine on exposure to air.

In'dine, *n.* (*Chem.*) A crystallized rose-colored substance, obtained from indigo.

In'dio, in *California,* a post-office of Riverside co., on the So. Pac. R. R., about 110 m. S.E. of San Bernardino.

Indio (*een'de-o*), a river of the Republic of Columbia, on the Isthmus of Panama, unites with the Pacora, and enters the Pacific Ocean near Panama.

Indirect', *a.* [Fr.] Not straight or rectilinear; deviating from a direct line or course; circuitous; not direct; not tending to a purpose by the shortest or plainest course, or by the obvious ordinary means, but obliquely or consequentially; not fair; not honest; tending to mislead or deceive.

(*Logic & Math.*) Not arriving at an end by the shortest method.

Indirec'tion, *n.* Oblique means; tending not in a straight line.

Indirect'ly, *adv.* Not in a straight line or course; obliquely; not by direct means; not in express terms; unfairly.

Indirect'ness, *n.* State or quality of being indirect; obliquity; devious course. — Unfairness; dishonesty.

Indiscern'ible, *a.* [Fr. *indiscernable.*] Not perceptible; not discoverable; undiscernible.

Indiscern'ibleness, *n.* State of being undiscernible.

Indiscern'ibly, *adv.* Undiscernibly.

Indiscerp'tible, *a.* [*in,* and *discerptible.*] Not to be separated; incapable of being broken or destroyed.

Indiscerp'tibly, *adv.* In an indiscerptible manner.

Indis'ciplinable, *a.* [Fr.] That cannot be disciplined; undisciplinable.

Indis'cipline, *n.* Want of discipline.

Indiscov'erable, *a.* That cannot be discovered.

Indiscreet', *a.* [Fr. *indiscret.*] Without distinction or discrimination; wanting discretion; imprudent; injudicious; inconsiderate; incautious; rash; hasty; not according to discretion or sound judgment, as conduct.

Indiscreet'ly, *adv.* Not discreetly; without prudence; inconsiderately; without judgment.

Indiscreet'ness, *n.* Want of discretion.

Indiscreet', *a.* [Lat. *indiscretus.*] Not discreet.

Indiscre'tion, *n.* [Fr. *indiscretion.*] Want of discretion; imprudence.

Indiscrim'inate, *a.* [L. Lat. *indiscriminatus.*] Not making any distinction; not having discrimination; confused; undistinguished or undistinguishable; promiscuous.

Indiscrim'inately, *adv.* Without distinction; in confusion.

Indiscrim'inating, *a.* Not making any distinction.

Indiscrimina'tion, *n.* Want of discrimination.

Indiscrim'inative, *a.* That makes no distinction; undiscriminating.

Indispen'sable, *a.* Not to be dispensed with: that cannot be omitted, remitted, or spared; absolutely necessary or requisite.

Indispen'sableness, *n.* State or quality of being indispensable, or absolutely necessary.

Indispen'sably, *adv.* Necessarily; in a manner or degree that forbids dispensation, omission, or want.

Indispersed', *a.* Undispersed.
Indispose', *v. a.* To put ont of order; to disarrange; to displace; to render unfit; to disqualify for its proper functions; to disorder slightly; to disincline; to alienate the mind and render it averse or unfavorable to anything; to make unfavorable or disinclined.
Indisposed', *p. a.* Disordered; disqualified for its functions; unfit; slightly disordered; not in perfect health; disinclined; averse; unwilling; unfavorable.
Indispos'edness, *n.* State of being indisposed; disordered state; unfitness; disinclination; slight aversion; unwillingness; unfavorableness.
Indisposi'tion, *n.* State of being indisposed; slight disorder of the healthy functions of the body; illness; tendency to disease; disinclination; aversion; unwillingness; dislike; want of tendency or natural appetency nr affinity.
Indis'putable, *a.* Not to he disputed; too evident to admit of dispute; incontestable; unquestionable; undeniable; indubitable; certain; positive.
Indis'putableness, *n.* State of being indisputable; uncertainty; evidence.
Indis'putably, *adv.* Without dispute; in a manner or degree not admitting of controversy; unquestionably; without opposition.
Indissolubil'ity, *n.* Quality of being indissoluble, or not capable of being dissolved, melted, or liquefied; quality of being incapable of a breach; perpetuity of union.
Indis'soluble, *a.* Not capable of being dissolved, melted, or liquefied. — That cannot be broken or rightfully violated; perpetually binding or obligatory; not to be broken; firm; stable.
Indis'solubleness, *n.* Indissolubility; resistance to separation of parts.
Indis'solubly, *adv.* In a manner resisting separation; in a manner not to be dissolved or broken.
Indis'solvable, *a.* That cannot be dissolved; not capable of being melted or liquefied; indissoluble.
Indissolv'ableness, *n.* State of being indissolvable.
Indistinct', *a.* Not distinct or distinguishable; not separate in such a manner as to be perceptible by itself; not clear or distinct, intellectually considered; obscure; confused; imperfect; faint; not presenting clear and well defined images, as a prospect.
Indistinc'tion, *n.* Confusion; uncertainty. — Omission of discrimination; indiscrimination. — Want of distinctness; dimness.
Indistinct'ly, *adv.* Confusedly; uncertainly; without definiteness or discrimination.
Indistinct'ness, *n.* State or quality of being indistinct; want of distinction or discrimination; confusion; uncertainty; obscurity; faintness.
Indistin'guishable, *a.* That cannot be distinguished; undistinguishable.
Indistin'guishably, *adv.* In a manner as to not be distinguishable.
Indisturb'ance, *n.* Calmness; freedom from disturbance.
Indite', *v. a.* [Lat. *indico, indictum* — *in*, and *dico*, to declare.] To declare; to set forth in writing; to compose; to write; to commit to words in writing; to direct or dictate what is to be written or uttered.
Indite'ment, *n.* Act of inditing.
Indit'er, *n.* One who indites.
In'dium, *n.* (*Chem.*) A metal discovered in 1863 by Richter, professor of the School of Mines in Freiburg, in the zinc-blendes of that region. This metal, still little known, is white, brighter than tin, approaching the lustre of silver; soft, ductile, and not sensibly oxidized in the air, or even in boiling water. Its melting point is the same as lead, and its oxide does not impart color to glass. It is soluble in hydro-chloric and sulphuric acids, with evolution of hydrogen gas, and is also easily soluble in nitric acid; completely precipitated from acid solutions as a hydrated oxide by ammonia, and is insoluble in an excess of this reagent, which reaction at once suggests a method of separation from zinc. The hydrated oxide is pure white, and peculiarly slimy, on which account it adheres to the sides of the vessel; after heating and cooling, this oxide assumes a straw yellow color. Tartaric acid prevents the precipitation of the oxide. Sulphuretted hydrogen does not precipitate any material amount of the metal from strongly acid solutions, a behavior similar to that of zinc. From solutions in acetic acid, sulphuretted hydrogen precipitates a beautiful yellow sulphide of indium, closely resembling sulphide of cadmium; this affords a method of separation from iron and manganese. The chloride of indium resembles chloride of aluminum, and can be prepared in the same way by passing chlorine gas over the oxide, mixed with charcoal. It is very hygroscopic, and can be driven from one place to another in the tube. Although more easily fusible, the metal is more difficultly volatilized than zinc and cadmium, so that it cannot be distilled in glass vessels. Heated in the air, it volatilizes and burns with a violet light, and the oxide thus produced rises in brown vapors, which being heavier than the corresponding zinc oxide rapidly fall to the ground. Indium has not been discovered in the American ores of zinc. Atomic weight, 35·9 (?); *Sp. gr.* 7·17 to 7·36; *Symbol* In.
Individ'ual, *a.* [Fr. *individuel*; Lat. *individuus* — *in*, and *divido*, to divide, *q. v.*) Not divided, or not to be divided; single; one; pertaining to one only, as, individual efforts.
—*n.* A single person or human being; a single animal or thing of a kind; an object which is, in the strict and primary sense, one, and consequently cannot be logically divided.
Individ'ualism, *n.* [Fr.] Quality of being distinct; individuality. — The quality which primarily regards self or self interest; selfishness.
Individual'ity, *n.* [Fr. *individualité.*] Quality of being individual; separate or distinct existence; a state of oneness.
Individualiza'tion, *n.* The act of individualizing.
Individ'ualize, *v. a.* To single out; to distinguish; to select or mark as an individual.
Individ'ualizer, *n.* One who individualizes.
Individ'ually, *adv.* Separately; by itself; to the exclusion of others; with separate or distinct existence; inseparably; incommunicably.
Individ'uate, *v. a.* To distinguish from others of the same species; to make single.
" Life is *individuated* into infinite numbers." — *More.*
Individua'tion, *n.* The act of endowing with individuality.
Individibil'ity, *n.* [Fr.] State or quality of being indivisible.
Indivis'ible, *a.* That cannot be divided, separated, or broken.
(*Math.*) Not separable into parts; immensurable.
—*n.* An elementary part.
—*n. pl.* (*Math.*) A peculiar method of the calculus invented by Cavalieri, a disciple of Galileo, which was much used by mathematicians before the invention of fluxions and the differential and integral calculus. In this theory, lines are considered to be composed of an infinite series of points, surfaces of an infinite number of lines, and solids of an infinite number of surfaces. The purpose, therefore, of the method is to give an infinite series of successive approximations, and it is extremely useful in discovering the contents and areas of innumerable plane and solid figures. (See FLUXIONS, INTEGRAL CALCULUS.)
Indivis'ibleness, *n.* Indivisibility.
Indivis'ibly, *adv.* So as not to be capable of division.
Indocibil'ity, Indocible'ness, *n.* [Lat. *indocibilitas.*] State of being indocible.
Indoc'ible, *a.* Unteachable; insusceptible of instruction.
Indoc'ile, *a.* [Lat. *indocilis* — *in*, and *doceo*, to teach. See DOCTRINE.] Not docile or teachable; not easily instructed; dull; intractable, as a beast.
Indocil'ity, *n.* [Fr. *indocilité.*] Quality of being indocile; unteachableness; dullness of intellect; intractableness.
Indoc'trinate, *v. a.* [L. Lat. *in*, and *doctrino, doctrinatus.* See DOCTRINE.] To instill doctrine or learning into; to imbue with any doctrine or science; to teach; to instruct in rudiments or principles.
Indoctrina'tion, *n.* Act of indoctrinating; instruction in the rudiments and principles of any science; information.
In'do-German'ic, or **In'do-Europe'an Language.** See ARYAN LANGUAGES.
In'dolence, In'dolency, *n.* [Fr.; Lat. *indolentia.*] Freedom from labor; ease; repose; habitual love of ease; habitual indolence; indisposition to labor; laziness; inaction, or want of exertion of body or mind, proceeding from love of ease or aversion to toil.
In'dolent, *a.* [Fr.; Lat. *indolens* — *in*, and *doleo*, to feel or suffer pain, to grieve.] Free from labor; slothful; inactive; idle; habitually idle or indisposed to labor; lazy; listless; sluggish; indulging in ease.
In'dolently, *adv.* In habitual idleness and ease; without action, activity, or exertion; lazily.
Indom'itable, *a.* [Fr. *indomptable*; Lat. *in*, and *domo, domitus*, to tame or subdue.] That cannot be tamed or subdued; irrepressible; untamable.
In'door, *a.* Being within doors; being within the house.
Indore, (*in-dor'*,) a city of Hindostan, in the province of Malwa, and the capital of the Mahratta chief, Mulhar Row Holkar, 32 miles S. of Oojein. The city is extensive, but contains few good houses, most of which are of two stories, built of mud and burnt bricks. It has some mosques, and a new palace constructed of granite; but its handsomest edifice is that of the British Residency, which is one of the finest in Hindostan. *Pop.* (1895) 94,500. Lat. 22° 42′ N., Lon. 75° 50′ E.—The STATE of Indore is under the protection of the British, and consists principally of a territory comprised in the table-land of Malwa. It is inclosed by the territories of the Bombay presidency, Scinde, and the rajahships of Dhar and Dewas. *Area*, estimated at 8,075 square miles. *Pop.* 635,450. Lat. between 21° 20′ and 24° N., Lon. between 74° 50′ and 77° E.
Indors'able, *a.* That may be indorsed, assigned, and made payable to order.
Indorsa'tion, *n.* Indorsement.
Indorse', *v. a.* [Fr. *endosser*; Lat. *in* and *dorsum*, the back.] To back; to put a back to; to put on the back of a paper or written instrument; to assign by writing an order on the back of a note or bill; to assign or transfer by indorsement; to give sanction or currency to.
Indorsed', *pa.* Written on the back; assigned; sanctioned.
(*Her.*) Applied to two animals placed back to back.
Indorsee', *n.* The person in whose favor an indorsement is made.
Indorse'ment, *n.* (*Law.*) Act of indorsing or writing on the back of a note, bill, or other negotiable instrument; that which is written on the back of a note, bill, or other paper. — An *I.* is generally made primarily, for the purpose of transferring the rights of the holder of the instrument to some other person. It has, however, various results, such as rendering the indorser liable in certain events; and hence an *I.* is sometimes made merely for the purpose of additional security. This is called an *accommodation I.* when done without consideration other than an exchange of indorsements. A *blank I.* is one in which the name of the indorser only is written upon the instrument. It is commonly made by writing the name of the indorser on the back; but a writing across the face may answer the same purpose. A *qualified I.* is one which restrains, or limits, or qualifies, or enlarges the liability of the indorser in any manner different from what the law generally imparts as his true liability, deducible from the nature of the instrument. The words generally used are *sans recours*, (without recourse.) Unless the *I.* be qualified, the indorser becomes liable to pay the amount demanded by the instrument upon the failure of the principal, or *maker* of the *note.*
Indor'ser, or Indors'or, *n.* The person who indorses a note, &c. See INDORSEMENT.
Indors'ing, *n.* Act of making an indorsement.
Indow', *v. a.* See ENDOW.
Indragiri, (*in-dra-geer'e,*) The largest river in the island of Sumatra; *length*, 200 m.
Indraught, (*in'draft,*) *n.* An opening from the sea into the land; an inlet; a passage inwards.
In'drawn, *a.* Drawn in.
In'dre, (*ăndr,*) a river of France, rising near the frontier of the department of Indre, and after a course of 140 m., falling into the Loire between Saumur and Tours.
In'dre, a town of France, department Loire-Inférieure, 5 m. from Nantes. In its neighborhood are extensive works belonging to the government, at which cannon and steam-engines are manufactured. *Pop.* 4,000.
In'dre, a department of France, lying S. of the department of Loir-et-Cher: Lat. between 46° 22′ and 47° 10′ N., Lon. between 0° 52′ and 2° 10′ E.; *area*, 2,679 sq. m. It is watered by the Indre, the Creuse, and its tributary the Anglin. The surface is generally flat, and the land fertile, producing large crops of wheat and barley. The two principal resources of the department, however, are its vineyards and its flocks. *Manuf.* Woollen and linen cloths, paper, porcelain, &c. *Chief towns.* Châteauroux, the capital, Le Blanc, Issoudun, and La Châtre. *Pop.* 277,860.
Indre-et-Loire, a department of France, lying N.W. of the department of Indre: Lat. between 46° 46′ and 47° 43′ N., Lon. between 0° 3′ and 1° 18′ E. It is watered by the Loire, and by its tributaries, the Cher, the Indre, and the Vienne, all of them navigable. In the *I.*, the surface is hilly, and either watered or wooded, but in the other parts it is generally flat, and very fertile. Of the products, which includes an abundant yield of the ordinary bread-stuffs, wine is the most important. *Manuf.* Bar-iron, powder, files, woollen cloths, silks, &c. *Chief towns.* Tours, the capital, Chinon, and Loches. *Pop.* 325,193.
In'ri, *n.* (*Zoöl.*) See LEMURINÆ.
Indu'bious, *a.* Not dubious; not doubtful.
Indu'bitable, *a.* [Fr.; Lat. *indubitabilis.* See DOUBT.] Not to be doubted; apparently certain; too plain to admit of doubt; unquestionable; evident; incontestable; undeniable.
—*n.* A thing undoubted.
Indu'bitableness, *n.* State of being indubitable.
Indu'bitably, *adv.* Undoubtedly; unquestionably; in a manner to remove all doubt.
Induce', *v. a.* [Lat. *induco* — *in*, and *duco*, to lead, to bring.] To lead, bring, or conduct in or into; to lead to or into anything; to lead, as by persuasion or argument; to prevail on; to influence by motives; to persuade; to actuate; to incite; to instigate; to produce by influence; to bring on; to cause, as changes; to introduce; to bring into view.
Induce'ment, *n.* That which induces; anything that leads the mind to will or to act; incitement; motive; reason.
(*Law.*) The statement of matter which is introductory to the principal subject of the declaration of plea, and which is necessary to explain or elucidate it. Such matter as is not introductory to, or necessary to elucidate the substance or gist of, the declaration, plea, &c., nor collaterally applicable to it, is surplusage.
Induc'er, *n.* One who induces; a persuader.
Indu'cible, *a.* That may be induced; that may be offered by induction; that may be caused.
Induct', *v. a.* [Lat. *inductus*, from *induco.*] To lead or bring in or into.
(*Eccl.*) To introduce, as to a benefice or office; to put in actual possession of an ecclesiastical living, or of any other office, with the customary forms and ceremonies.
Indu'cteous, *a.* (*Elec.*) Electro-polarized by induction, or brought into the opposite electrical state by the influence of inductive bodies.
Indu'ctile, *a.* Not ductile; not capable of being drawn into threads, as metal.
Inductil'ity, *n.* Quality of being inductive, or not easily drawn out.
Induc'tion, *n.* [Fr.; Lat. *inductio.*] A leading or bringing in; introduction; entrance.
(*Phil.*) The bringing forward of particulars, or individual cases, with a view to establish some general conclusion; a kind of argument which infers respecting a whole class what has been ascertained respecting one or more individuals of that class. — See INDUCTIVE PHILOSOPHY.
(*Logic.*) The legitimate inference of some general truth from all the particulars embraced under it; the conclusion or inference drawn from a number of particular facts or phenomena.
(*Eccl.*) The introduction of a person into an office by the usual forms and ceremonies.
(*Math.*) A method of reasoning generally known under the name of *successive induction*; as it collates truth from a demonstration, and this demonstration implies

the examination of every particular case of which it is formed, it follows that the mathematical sense of the word is truly logical in its expression. For example: The sum of any number of successive odd numbers, beginning from unity, is a square number, namely, the square of half the even number which follows the last odd number. Let this proposition be true in any one single instance, that is, n being some whole number, let 1, 3, 5, up to $2n+1$ put together, give $(n+1)^2$; then the next odd number being $2n+3$, the sum of all the odd numbers up to $2n+3$ will be $(n+1)^2+2n+3$, or n^2+4n+4, or $(n+2)^2$. But $n+2$ is the half of the even number next following $2n+3$; consequently, if the proposition be true of any one set of odd numbers, it is true of one more. But it is true of the first odd number 1, for this is the square of half the even number next following; consequently, being true of 1, it is true of 1+3; being true of 1+3, it is true of 1+3+5; and so on *ad infinitum*. Next, the formula, $x^n - a^n$, n being a whole number, is always algebraically diversible by $x-a$

$$x^n-a^n=x^n-ax^{n-1}+ax^{n-1}-a^n$$
$$=x(x^{n-1}-a^{n-1})+a^{n-1}(x-a).$$

In this last expression the second term $a^{n-1}(x-a)$ is obviously divisible by $x-a$; if then, $x^{n-1}-a^{n-1}$ be divisible by $x-a$, the whole of the second side of the last equation will be divisible by $x-a$; and, therefore, x^n-a^n will be divisible by $x-a$. If, then, any one of the successive

$$x-a,\ x^2-a^2,\ x^3-a^3,\ x^4-a^4,\ \&c.$$

be divisible by $x-a$, so is the next. But this is obviously true of the first; therefore it is true of the second: being true of the second, it is true of the third; and so on *ad infinitum*. It will be readily seen by the reader from the foregoing examples, that hypothesis is one of the strongest proofs used in reasoning by induction.

(*Elect.*) If an insulated copper ball be connected with the prime conductor when charged, and a small insulated conductor be placed near it (Fig. 1378), opposite electrical forces will be developed upon the ends of the insulated conductor. On the end next the ball, negative force will be found; on the end farthest from the ball, positive force. This action of a charged body upon a body near it is called *induction*. [See p. 1354.]

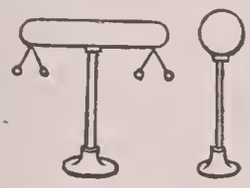

Fig.—1378.

Induction coil. (*Magnet.*) The term applied originally to an apparatus, by which Faraday, in 1832, showed that an electric current, or a magnet, is able, by induction, to develop at a distance, electric currents in a conducting wire; just as a body charged with static electricity electrizes an insulated conductor by induction. The method by which this remarkable result is obtained, is as follows:—Two silk-covered wires are bound round a wooden cylinder, so as to make two perfectly similar helices, the spirals of which are parallel, and as near to each other as possible. The two ends of one of the wires are made to communicate with a delicate galvanometer, and the two ends of the other with the two poles of a voltaic pile. Whenever this latter communication is established, the first having been established previously, the needles of the galvanometer is seen to deviate; but this deviation immediately ceases, even though the current of the pile continues to circulate. As soon as the current is interrupted, the needle of the galvanometer experiences, a second time, a sudden and non-permanent deviation. This time, however, the deviation occurs in a contrary direction to that in which the former had occurred. The voltaic current that traverses one of the wires, determines, in the other, an instantaneous current, at the moment when it commences to pass, and determines it, in a second, at the instant it ceases to pass. These two currents are called *induced currents*, and the current of the pile the *inducing current*. A similar experiment may also be made thus:—About a wooden or glass tube a single silk-covered wire is wound, and its two ends placed in communication with a galvanometer. Into the hollow of the tube is then inserted an electro-dynamic cylinder, namely a helix, traversed by an electric current. At the moment of introduction, an induced current is shown in the outer coil, the movement of which is in a contrary direction to that passing through the inner helix; and upon withdrawing the cylinder, a second induced current is shown, the movement of which is in a direction similar to its own. These two experiments equally show that when a conductor traversed by a current is suddenly brought near to a conductor forming a closed circuit, an instantaneous current is determined in the latter, moving in a direction contrary to that of the current brought near it; and that, on removing it, a second current is determined moving in the same direction as the current removed. On account of the analogy existing between the properties of magnets and those of electro-dynamic cylinders, Faraday supposed that the same results would be obtained by introducing a magnet into the interior of the hollow helix of the second experiment. His supposition proved correct. Two induced currents are instantaneously produced, which are much more intense than those produced by inducing currents. By those and similar means, very considerable effects can be produced. Experiment has also shown that the phenomenon of induction may be manifested with a single conductor, in which the inducing current is transmitted, and at the same time the induced current is perceived. When a soft iron rod is introduced into the helical coil, then, as observed by Mr. Jenkins, the volta-electrical effect becomes wonderfully increased. If the ends of the secondary coil are grasped through metallic cylinders, and contact made or broken with the battery, a smart shock is immediately felt through the animal frame, and is of such a nature as to be, with powerful arrangements of the apparatus, perfectly insupportable. Bright, vivid sparks can also be obtained from the secondary wire, and an amount of ordinary electricity developed, quite unprecedented. In this modification of the induction coil, the effects of electro-dynamic are combined with those of magno-electrical induction. In the *I. coil* shown in Fig. 1379, the primary coil is of coarse wire wound with wool, and is attached to the wooden base of the instrument. The secondary coil is of fine silk-wound wire, much larger than the primary wire. Within the primary coil is a bundle of iron wires, which are sufficiently insulated by the rust that gathers on them. The developing of magnetism in these wires is the chief aim of the primary coil, and, as this requires a *strong* current, *coarse wire* is used in that coil. In the secondary coil, the aim is to increase the *tension* of the induced current, and *fine wire* is used, so that as many turns as possible may be brought within the influence of the primary coil and its core; for it is found that *the tension of the induced current is proportional to the strength of the primary current, and to the square of the resistance in the secondary coil*. In order to obtain the greatest

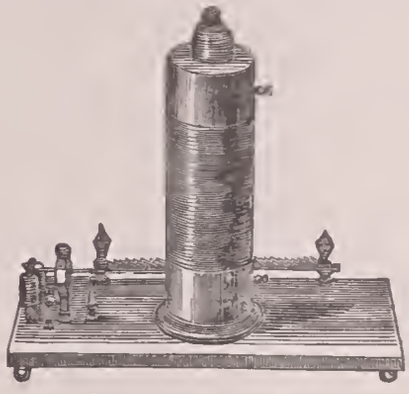

Fig. 1379.—INDUCTION COIL.

effect from the secondary coil, *it is necessary to have some means of rapidly completing and breaking the primary current*. This is done either by means of the rasp seen behind the coils, or by the self-acting *rheotome* at the left hand. In the *Inductorium* or *Ruhmkorff's I. coil*, the essential parts of the apparatus, like those of the one just described, are a primary coil, with its core of iron wire, and a secondary coil ontside the primary, and insulated from it. The primary coil is connected with a galvanic battery, and a rheotome is used to interrupt the current, as explained. See ELECTRICITY.

Induc'tive, *a.* [Lat. *inductivus.*] Leading or bringing in; persuasive; drawing to; —preceding *to*.

"A brutish vice,
Inductive mainly *to* the sin of Eve"—*Milton.*

—Tending to induce; having causative power. [R.]—Leading to inferences; proceeding by induction; employed in drawing conclusions from premises; as, the *inductive* philosophy.

I. power. (*Elect.*) The name given by Faraday to the property which bodies possess of transmitting the electric influence.

Induc'tively, *adv.* By induction or inference.

Inductive Philos'ophy, (*in-duk'tiv.*) [Lat. *in*, and *duco*, I lead.] That process of reasoning which raises individual cases into general, and those again into still higher generalities. Every deduction, properly so called, must rest on a prior induction. As this would necessitate an impossibility, for the particulars to be observed are infinite in number, it is necessary to allow some spontaneous action of the understanding in every inductive process. "Two things," says Dr. Whewell, in his "History of the Inductive Sciences," "are requisite to the formation of science, facts, and ideas, observation of things *without*, and *inward* effort of thought; or, in other words, sense and reason. Neither of these elements by itself can constitute substantial general knowledge." It is easy to point out how a defect in this mental process has at different times retarded the advancement of science; indeed, in by far the greater part of the cause of the world, the history of most times and countries exhibits a condition thus stationary with regard to knowledge. Many facts in physical science, such as the motions of the stars and the weights of bodies, were familiar to man long before the rise of Greek astronomy and mechanics. What was wanted was the act of thought. At the present day even, tribes of uncivilized and half-civilized men, over the surface of the earth, have before them the immense body of facts, out of which the civilized world has erected the stately fabric of physical philosophy. Yet, except among European nations, the process of intellect by which these *facts* became science seems to have been unknown. Almost every part of the career of the Greek schools of philosophy, of the schoolmen of Europe in the Middle Ages, of the Arabian and Indian philosophers, shows, that extreme ingenuity and subtlety, invention and connection, demonstration and method, may exist, without the development of any physical science. Logic and metaphysics, and even geometry and algebra, may be obtained by such means, but never mechanics and optics, chemistry and physiology.

Inductom'eter, *n.* [From Lat. *inducere.*] (*Elect.*) An instrument for measuring electrical induction.

Induc'tor, *n.* [Lat.] One who inducts another into an official position or benefice.

Inducto'rium, *n.* See INDUCTION COIL.

Induc'tric, Induc'trical, *a.* (*Elect.*) Superintended by, or relating to, electrical induction.

Indue', *v. a.* [Lat. *induo*; Gr. *enduō*—*en*, and *duō*, to put on.] To put on, or draw on, as clothes or vestments—To invest; to clothe;—hence, to furnish; to endow; to supply with.

"God *indued* the waters of Bethesda with supernatural virtue." *Hooker.*

Indulge, (*-dulj'*,) *v. a.* [Lat. *indulgeo*—*in*, and *dulcis*, sweet, agreeable. See DULCET.] To be agreeable, favorable, or yielding to; to permit; to concede; to allow; to grant; to permit to be or to continue; to suffer; not to restrain or oppose; to gratify, negatively; not to check or restrain the will, appetite, or desire of: as, to *indulge* a child.—To grant something not of right, but as a favor; to grant in compliance to expressed desire; to humor; to yield to the wishes of.

"This much I will *indulge* thee for thy ease."—*Dryden.*

—*v. n.* To use self-indulgence; to give way to forbidden or questionable practices; to act without self-restraint; as, "to *indulge* in easy vices."—*Johnson.*

Indul'gence, Indul'gency, *n.* [Fr.; Lat. *indulgentia.*] Act of indulging: kindness; complaisance; free permission to the humor, desires, appetites, passions, &c., or will to act or operate; a forbearing to check, restrain, or control.

"The labour greater, as th' *indulgence* less."—*Pope.*

—A favor granted; act of gratification; liberality.

"If all these gracious *indulgencies* are without any effect on us, we must perish in our own folly."—*Rogers.*

(*Eccl.*) According to the doctrine of the Roman Catholic Church, the remission of the temporal punishment, or part of the temporal punishment, which the repentant sinner, after having duly confessed his sins and received absolution, would have still to undergo either in this world or in purgatory. The guilt (*culpa*) and the eternal punishment incurred by every mortal sin are remitted by the sacrament of confession, and the Catholic Church denies that it ever was her doctrine that indulgence could be granted for the remission of sins. As confession and absolution, or at least freedom from every mortal sin, are perquisites of every indulgence, it is also contrary to the doctrine of the Catholic Church to grant a remission of penalties to be incurred by future sins. Cases in which this distinction has not been observed are regarded by the Church as a violation of her doctrine. In the 9th century the synodal courts consented that the ecclesiastical penance should be discharged by the payment of alms, of which the Church was to be the dispenser. At the time of the Crusades, taking the cross was particularly recommended as a substitute for the ecclesiastical penalties, and Urban II. granted at the assembly of Clermont (1095) a plenary *I.* to those who should join the Crusade. The period of the Crusades marks a turning point in the history of Indulgences, for they were given more and more freely from that time onward. They were given for wars analagous to the Crusades, a plenary indulgence being offered to those who took arms against the Waldenses, Albigeuses, Moors and Turks. Indulgences were also given at the dedication of churches and on the anniversary of such dedications and at the canonization of saints, and it subsequently became customary to attach indulgences to the crucifix, the rosary, and such objects of devotion, they being at length so freely given that there is now scarcely a devotion or good work of any kind for which they may not be obtained. The conditions on which indulgences may be secured are that the person desirous of obtaining them shall be a member of the Church, that he shall perform the good work exactly as prescribed, and that he shall be, at least before the work is conducted, in a state of grace. Indulgences are either *plenary*, which remit the entire temporal punishment, or *not plenary*, which remit only a part. The doctrine of indulgences belongs exclusively to the theology of the Roman Catholic Church.

Indul'gent, *a.* [Fr.; Lat. *indulgens.*] Yielding to the desires, wishes, and appetites of those under care or supervision; not using strict restraint or control; prone to indulge or humor; compliant; mild; favorable; gratifying; as, an *indulgent* master.

"The feeble old, *indulgent* of their ease."—*Dryden.*

Indulgen'tial, *a.* Having reference to the indulgences granted in the Roman Catholic Church.

Indul'gently, *adv.* With unrestrained enjoyment; mildly; favorably; not severely.

Indulg'er, *n.* One who indulges.

Indumen'tum, *n.* [Lat., a covering.] (*Zoöl.*) The plumage of birds.

Indu'plicate, *a.* (*Bot.*) Bent or folded inwards.

Indu'rate, *v. n.* [Lat. *induro, induratus*—*in*, and *duro*, to harden, from *durus*, hard.] To grow hard; to harden or become hard.

—*v. a.* To make hard; to make unfeeling; to deprive of sensibility; to render obdurate.

Indu'rated, *p. a.* Hardened; made obdurate.

Indura'tion, *n.* [L. Lat. *induratio.*] Act of hardening, or process of growing hard; hardness of heart; obduracy.

In'dus, one of the great rivers of Asia, which rises in Thibet, on the N. of the mountain Kailas, celebrated in the mythology of the Hindoos. The geographical position of its source is defined as lying about Lat. 31° 20′

N., and Lon. 80° 30 E. After passing the city of Lahdack, in Thibet, it takes a S.W. course, and forcing its way through the mountains called the Hindoo Coosh, enters Hindostan in about the 35th degree of N. Lat. Its course is generally to the S. In Lat. 28° 20′ it is joined by the five rivers of the Punjab, united into one stream, called the *Punjnud;* whence declining to the S.E., it enters into the prov. of Scinde, between the 28th and 29th degrees of latitude. Below its confluence with the Punjnud, the *I.*, instead of increasing in volume, becomes gradually less. Its basin is here narrow, so that the affluents are insignificant, while its arid, sandy nature causes the river to suffer from absorption and evaporation. This operates still more powerfully from the circumstance, that the river here divides into numerous channels, many of which never return at all to the main stream, while others return much shrunken in volume. This wasting of the waters is, however, not very apparent to the eye, owing to the gradual slackening of the current, and the ascent of the tides. At Migani, 8 miles N. of Hyderabad, commences the *Delta Proper*, which measures 75 m. upwards, by 130 along the coast of the Arabian Sea. The area of the drainage — its extreme dimensions being respectively 900 miles and 750 — has perhaps been over-estimated at 488,000 square m. The value of the *I.* as a route of traffic is less than that of most other streams of equal magnitude. In the winter, one only of its numerous outlets is at all available for communication with the sea; and even after the melting of the spring snows, there is no passage anywhere for an ordinary sea-going vessel of more than fifty tons. Still, in another respect the river is favorable for navigation, as the fall from Atak to the sea is only 1000 feet in 940 m. The *I.* abounds with fish of excellent quality, and is infested by crocodiles. The alluvium brought down by the stream has been calculated to be sufficient for an annual formation 42 m. long, 27 m. broad, and 40 feet deep.

(*Astron.*) A constellation of the southern hemisphere. It lies to the S. of Sagittarius, being between that constellation and the S. pole. It was formed and named by Bayer. Its largest star is one of the third magnitude.

Indu'sium, *n.* [Lat.] (*Bot.*) Any peculiar membranous covering; — especially the proper covering of the fruit-dots of ferns.

Indus'trial, *a.* [Fr. *industriel.*] Consisting in industry; pertaining to industry, or to the products of industry, art, or manufacture.

Indus'trial, in *Minnesota*, a twp. of St. Louis co.

Indus'trialism, *n.* Industry; manual labor.

Indus'trially, *adv.* With reference to industry.

Industria'na, in *Minnesota*, a village of Hennepin co.

Indus'trious, *a.* [Lat. *industrius*, — perhaps from *inda*, within, and *struo*, to join together, to fabricate, to arrange: the allusion being to the female occupation of spinning.] Active; diligent; assiduous; diligent in business or study; constantly, regularly, or habitually occupied in business; laborious; diligent in a particular pursuit, or to a particular end; given to industry; characterized by diligence, as habits.

Indus'triously, *adv.* Diligently; actively; assiduously; carefully; with habitual diligence; with steady application of the powers of body or of the mind.

In'dustry, *n.* [Fr. *industrie;* Lat. *industria.*] Activity; diligence; assiduity: habitual diligence in any employment, either bodily or mental; steady attention to business.

Industry (now JOLIETTE), in Quebec, a village of Joliette co. *Pop.* (1897) 3,415.

Industry, in *Illinois*, a post-village and township of McDonough co., about 55 m. E.N.E. of the city of Quincy. *Pop.* of village, 464.

Industry, in *Maine*, a township of Franklin co., about 29 m. N.N.W. of Augusta.

Industry, in *Ohio*, a village of Belmont co., on the Ohio river, about 22 m. below Wheeling, W. Virginia.

—A post-office of Portage co.

Industry, in *Pennsylvania*, a post-township of Beaver co., on the Ohio river, about 38 m. below Pittsburg.

Industry, in *Texas*, a post-village of Austin co. *Pop.* (1897) about 560.

Indu'viæ, *n.* (*Bot.*) The withered remains of leaves, which not being articulated with the stem, cannot fall off, but decay upon it.

Indu'viate, *n.* (*Bot.*) The part covered by induviæ.

In'dwell, *v. a.* To dwell inwardly.

In'dweller, *n* An inhabitant.

In'dwelling, *a.* Dwelling within; remaining in the heart, even after it is renewed, as sin.

—*n.* Residence within, or in the heart or soul.

Ine'briant, *a.* [See INEBRIATE.] Intoxicating; tending to intoxicate.

—*n.* Anything that intoxicates; an intoxicating liquor or drug.

Ine'briate, *v. t.* [Lat. *inebrio, inebriatus* — *in*, and *ebrio*, to make drunk, from *ebrius*, that has drunk his full — *e, ex*, and *bibo*, to drink.] To make drunk; to intoxicate.

—To exhilarate; to stimulate.

—To disorder the senses of; to stupefy.

—To make furious or frantic.

Inebria'tion, *n.* Drunkenness; intoxication.

Inebri'ety, *n.* Drunkenness; inebriation.

Ined'ited, *a.* Not edited; unpublished.

Ineffabil'ity, *n.* Unspeakableness.

Ineff'able, *a.* [Fr.; Lat. *ineffabilis* — *in*, and *effabilis*, from *effor*, to speak, to cry out, to utter, from obsol. *fari*, to speak.] Unutterable; unspeakable; that cannot be expressed in words; inexpressible; indescribable. (Used almost always in a good sense.)

Ineff'ableness, *n.* The quality of being ineffable.

Ineff'ably, *adv.* Unspeakably; in a manner not to be expressed in words.

Ineffa'ceable, *a.* That cannot be effaced; indelible.

Ineffa'ceably, *adv.* So as not to be effaceable.

Ineffec'tive, *a.* Not effective; not producing any effect, or the effect intended; inefficient; useless; not able; not competent to the service intended.

Ineffect'ively, *adv.* Not effectively.

Ineffect'iveness, *n.* Quality of being ineffective; inefficiency.

Ineffect'ual, *a.* Not effectual; not producing its proper effect or not able to produce any effect; inefficient; ineffective; inefficacious; fruitless.

Ineffect'ually, *adv.* Without effect; in vain.

Ineffect'ualness, *n.* Inefficacy; want of power to perform the proper effect.

Ineffer'vescence, *n.* Want of effervescence.

Ineffer'vescent, *a.* Not effervescent.

Ineffervescib'ility, *n.* Quality of not effervescing, or of not being susceptible of effervescence.

Ineffer'vescible, *a.* Not capable of effervescence.

Inefficac'ious, *a.* [Lat. *inefficax, inefficacis.* See EFFICACIOUS.] Not efficacious; inefficient; not having power to produce the effect desired, or the proper effect; of inadequate power or force.

Inefficac'iously, *adv.* Without efficacy or effect.

Ineff'icacy, Inefficac'iousness, *n.* Want of efficacy, or power to produce the desired or proper effect; inefficiency; failure of effect.

Ineffi'ciency, *n.* Want of efficiency or power, or exertion of power, to produce the effect; inefficacy.

Ineffi'cient, *a.* Not efficient; not producing the effect; inefficacious; not active, effecting nothing.

Ineffi'ciently, *adv.* Ineffectually; without effect.

Inelab'orate, *a.* Not elaborate; not done with much care.

Inelas'tic, *a.* Not elastic; wanting elasticity.

Inelastic'ity, *n.* The absence of elasticity; the want of elastic power.

Inel'egance, Inel'egancy, *n.* [Fr. *inélégance;* Lat. *inelegantia.* See ELEGANCE.] Want of elegance; tastelessness. — Want of beauty or polish in language, composition, or manners. — Want of symmetry or ornament in building. — Want of delicacy in coloring, &c.

Inel'egant, *a.* [Fr. *inélégant;* Lat. *inelegans.*] Not choice; not elegant; tasteless: wanting beauty or polish, as language; or refinement, as manners; wanting symmetry or ornament, as an edifice.

Inel'egantly, *adv.* In an inelegant or unbecoming manner; coarsely; roughly.

Ineligibil'ity, *n.* [Fr. *inéligibilité.*] State or quality of being ineligible; incapacity of being elected to any office.

Inel'igible, *a.* [*in*, and *eligible*, q. v.; Fr. *inéligible.*] That cannot be chosen; not capable of being elected to an office; not worthy to be chosen or preferred; not expedient.

Inel'igibly, *adv.* In an ineligible manner.

Inel'oquent, *a.* Not eloquent; not speaking with propriety, fluency, grace, and pathos; not persuasive; not fluent, graceful or pathetic; not persuasive, as language or composition.

Inel'oquently, *adv.* Without eloquence.

Inelu'dible, *a.* That cannot be eluded.

Inem'bryonate, *a.* Having no embryo.

Inept', *a.* [Lat. *ineptus* — *in*, and *aptus*, apt, fit, suitable. See APT.] Not apt or fit; unfit; unsuitable; improper; unbecoming. — Foolish.

Inep'titude, *n.* [Lat. *inaptitudo.*] Inaptitude; unfitness; unsuitableness.

Inept'ly, *adv.* Unfitly; unsuitably; foolishly.

Inept'ness, *n.* Unfitness; ineptitude. (R.)

Ine'quable, *a.* Not equal; unequable.

Ine'qual, *a.* Unequal. (R.)

Inequal'ity, *n.* [Lat. *inæqualitas.*] Difference or want of equality in degree, quantity, length, or quality of any kind. — Unevenness; want of levelness; the alternate rising and falling of a surface. — Disproportion to any office or purpose; inadequacy; incompetency. — Dissimilarity; diversity; want of uniformity in different times and places. — Difference or disparity of rank, station, or condition.

Inequidis'tant, *a.* That is not equally distant; not equidistant.

Inequilat'eral, *a.* (*Bot.*, and *Conch.*) Not equilateral; unequal sided, as the leaves of certain plants, or the sides of certain bivalve shells.

Inequilib'rio. [Lat.] In an even poise or balance; in equilibrium.

Ineq'uitable, *a.* Not equitable; not just.

Ine'quivalve, Inequival'vular, *a.* Having unequal valves.

Inerad'icable, *a.* That cannot be eradicated.

Inerad'icably, *adv.* In such a manner as cannot be eradicated.

Inerget'ic, Inerget'ical, *a.* Not energetic; having no energy.

Inerget'ically, *adv.* Not energetically.

Inerm', or INER'MOUS, *a.* [Lat. *inermis*, defenceless.] (*Bot.*) Unarmed; destitute of spines or prickles. — *Craig.*

Iner'mia, *n. pl.* [Lat. *inermis*, unarmed.] (*Zoöl.*) A term applied by some naturalists to any mammiferous animal destitute of horns.

Inerrabil'ity, *n.* Exemption from error; infallibility.

Iner'rably, *adv.* With security from error; infallibly.

Iner'rancy, *n.* Freedom from error.

Inerrat'ic, *a.* Not erratic; not wandering; fixed.

Inerr'ingly, *adv.* Without error; without mistake; without deviation.

Inert', *a.* [Lat. *iners, inertis* — *in*, and *ars, artis*, art, q. v.] Without art or skill; unskilful; dull; sluggish; slothful; indisposed to move or act; destitute of the power of moving itself, or of active resistance to motion impressed; senseless; motionless.

Iner'tia, *n.* [Lat. inactivity.] Want of art or skill; unskilfulness; inactivity; sluggishness; indisposition to move.

(*Physics.*) The *vis inertiæ* of Kepler, or that indifference to a state of rest or motion which is a universal property of matter, and may be expressed by saying *that a body in motion will continue in motion, and a body at rest will remain at rest, unless acted upon by some external force.* The latter part of this principle was known to the ancients, and by them attributed to a certain repugnance to motion, which was a characteristic of all matter; but it was shown by Galileo that the former part was equally true and general.

(*Med.*) More especially applied to the diminution and even total cessation of the contraction of the uterus during labor, and to the species of languor into which it sometimes falls after the expulsion of the fœtus.

Iner'tly, *adv.* Without activity; sluggishly.

Inert'ness, *n.* Want of activity or exertion; habitual indisposition to action or motion; sluggishness.

Iner'udite, *a.* Ignorant; unlearned.

Inescutch'eon, *n.* [Her.] A small escutcheon borne in the centre of a shield.

In Es'se. [Lat.] In being; that is; actually present or existing; — correlative to *in posse*, q. v.

Inessen'tial, *a.* Not essential; not of vital importance.

Ines'timable, *a.* [*In* and *estimable.*] That cannot be estimated, valued, or computed; too valuable or estimable to be rated by a standard of value; being above all price; invaluable; too excellent to be appreciatively described; priceless; as, an *inestimable* wife, *inestimable* rights.

"*Inestimable* stones, unvalued jewels." — *Shaks.*

Ines'timably, *adv.* In a manner not admitting of being rated or estimated according to value.

Inevas'ible, *a.* [Lat. *in*, and *evadere*, to evade. See EVADE.] That cannot be evaded or eluded.

Inev'ident, *a.* [Fr.] Not evident; not palpable or clear to the understanding; without obvious force.

Inevitabil'ity, *a.* [Fr. *inevitabilité.*] Absolute certainty to be; inevitableness; impossibility to be evaded or eluded.

Inev'itable, *a.* [Fr.; Lat. *inevitabilis* — *in*, and *evitabilis*, from *evito*, to shun, to avoid — *e*, and *vito*, to shun; probably frequent. from *veo* — Sansk. *vé*, to weave, to plait.] That cannot be shunned or evaded; unavoidable; that admits of no escape or evasion.

"Fate *inevitable* subdues us." — *Milton.*

—Not to be passed by, withstood, or resisted.

"On her tender cheeks *inevitable* color." — *Mason.*

Inev'itableness, *n.* State or quality of being inevitable or unavoidable.

Inev'itably, *adv.* Without possibility of escape; preventing no means of evasion; with absolute certainty; unavoidably.

"The day. . . thou my sole command transgress,
Inevitably thou shalt die." — *Milton.*

Inexact', *a.* [Fr.] Not exact; not precisely correct; faulty.

Inexact'ness, *n.* Want of precision or exactness; faultiness.

Inexcitabil'ity, *n.* Quality or condition of being insusceptible to excitement; torpidity of the passions or feelings.

Inexcit'able, *n.* [Lat. *inexcitabilis.*] Insusceptible of excitement; dull; inanimate; torpid; insensible to passionate impulse or emotion.

Inexens'able, *a.* Not to be excused or justified; irremissible; unpardonable.

Inexens'ableness, *n.* Quality of being inexcusable, or not admitting of excuse, justification, or palliation.

Inexcus'ably, *adv.* In a manner, or to a degree, of guilt or folly beyond justification, excuse, or palliation.

Inexecut'able, *a.* [Fr.] That cannot be done, executed, or performed; impracticable: not feasible.

Inexecu'tion, *n.* Non-performance; as, the *inexecution* of a political edict.

Inexer'tion, *n.* Lack of exertion; want of effort; inertia.

Inexhaust'ed, *a.* [See EXHAUST.] Unexhausted; not spent, wholly used, or emptied; not having wasted all strength, power, or resources; as, "an *inexhausted* vein." — *Dryden.*

Inexhaust'edly, *adv.* Without emptiness or exhaustion.

Inexhaustibil'ity, *n.* State or quality of being inexhaustible.

Inexhaust'ible, *a.* That cannot be exhausted, spent, or emptied; proof against waste or failure; as, a husband of *inexhaustible* patience.

"An *inexhaustible* flow of anecdote." — *Macaulay.*

Inexhaust'ibleness, *n.* State of being inexhaustible.

Inexhaust'ibly, *adv.* In an inexhaustible manner; without failing in measure or degree.

Inexhaust'ive, *a.* That may not be exhausted or consumed.

Inexist'ence, *n.* [Fr.] Want of existence; without essential being. — Innateness; inherence.

Inexist'ent, *a.* [Fr.] Not possessing being; unexisting. — Existing in something else.

Inexorabil'ity, *n.* Quality of being inexorable; deafness to entreaty; unyieldingness; impassiveness to appeal.

Inex'orable, *a.* [Fr.; Lat. *inexorabilis* — *in*, *ex*, and *oro*, to speak, from *ōs*, *oris*, the mouth. See ORAL.] Impenetrable or immovable to entreaty, appeal, or supplication; unyielding; implacable; sternly deaf to prayers for mercy; resolute and unchangeable in will or purpose; as, an *inexorable* tyrant.

"The *inexorable* equality of the law." — *Gibbon.*

Inex'orableness, *n.* State or quality of being inexorable; Inexorability.

Inex'orably, *adv.* So as to be impenetrable to appeal or supplication; impassively; with unyielding rigor of determination.

Inexpe'dience, Inexpe'diency, *n.* Want of expedience, fitness, or convenience; heuce, unsuitableness or inadaptibility to the purpose; impropriety, with regard to a motive or object; as, the *inexpediency* of marital squabbles.

Inexpe'dient, *a.* Not expedient; inconvenient; unfit; inappropriate; — hence, not tending to promote an end or purpose; unsnitable to time and place; improper, from a rational point of view; as, it is *inexpedient* for a diplomatist to say too much.

Inexpe'diently, *adv.* Unfitly; not expediently; unsuitably.

Inexpen'sive, *a.* Of small cost; not expensive.

Inexpe'rience, *n.* Want of experience; deficiency of experimental knowledge; absence of practical appreciation.

"Prejudice and self-sufficiency naturally proceed from *inexperience* of the world, and ignorance of mankind." — *Addison.*

Inexperienced, (*in-eks-pē'rī-ensd,*) *a.* Without experience; unskilled; raw; crude; unpractised; as, an *inexperienced* yonth.

Inexpert', *a.* [Lat. *inexpertus.*] Not expert; without a proper degree of skill; deficient in knowledge acqulred by observation and practice; wanting in dexterity.

Inexpert'ness, *n.* Absence of dexterity; want of expertness.

Inex'piable, *a.* [Fr.; Lat. *inexpiabilis.* See EXPIABLE.] That cannot be expiated or atoned for; that admits of no atonement or satisfactlon; as, *inexpiable* guilt. — Implacable; inexorable; that cannot be appeased or mollified hy atonement.

"Thou took'st the way to raise in me *inexpiable* hate." — *Milton.*

Inex'piably, *adv.* To a degreo heyond atonement.

"Excursions are *inexpiably* bad." — *Roscommon.*

Inexplicabil'ity, *n.* [Fr. *inexplicabilité.*] State or qnality of being inexplicable.

Inex'plicable, *a.* [Lat. *inexplicabilis* — *in*, and *explico*, to unfold — *ex*, and *plico*, to fold.] That cannot be explained or interpreted; that is impossible to be accounted for; incapable of being elucidated, or being rendered plain or intelligible; as, an *inexplicable* feeling of terror.

Inex'plicableness, *n.* State or condition of being inexplicable.

Inex'plicably, *adv.* In an unintelligible or inexplicable manner.

Inexplicit, (*-plis'it,*) *a.* [Fr. *inexplicite.*] Not explicit; intangible; not clear in exposition or statement; as, an *inexplicit* accounnt of a battle.

Inexplor'able, *a.* Impenetrable to exploration or discovery.

Inexposure, (*-pō'zhur,*) *n.* Absence of exposure.

Inexpres'sible, *a.* Not to be expressed or conveyed in words; incapable of being uttered or described; unspeakable; ineffable; as, *inexpressible* pleasure.

Inexpres'sibly, *adv.* In a manner or degree not to be expressed in words; unspeakably; unutterably.

"A variety of tunes that were *inexpressibly* melodious."—*Addison.*

Inexpres'sive, *a.* Not expressive; not having a tendency to express; inexpressible; as, *inexpressive* emotions.

(*Painting.*) Wanting expressiou, as a pictnre.

Inexpres'siveness, *n.* State or quality of being inexpressive.

Inexpugnable, (*-pūn'a-bl,*) *a.* [Fr.; Lat. prefix *in*, and Eng. *expugnable.*] Impregnablo; indeatructible by force; that may not be subdued; as, an *inexpugnable* argument.

Inexsu'perable, *a.* [Lat. *inexsuperabilis.*] That cannot be passed over; insurmountable.

Inextend'ed, *a.* Not extended or enlarged.

Inextension, (*-tĕn'shun,*) *n.* State or condition of wanting extension.

Inexter'minable, *a.* [Lat. *inexterminabilis.*] That cannot be exterminated.

Inextinct', *a.* [Lat. *inextinctus.*] Not extinct; not snppressed or qnenched.

Inextin'guishable, *a.* That may not be extinguished; nnqnenchable; as, *inexlinguishable* desire.

Inextin'guishably, *adv.* In a manner not extinguishable.

Inextir'pable, *a.* [Lat. *inexlirpabilis.*] That cannot he extirpated; as, *inextirpable* hatred.

Inex'tricable, *a.* [Fr.; Lat. *inextricabilis.* See EXTRICATE.] Not to be extricated, disengaged, or disentangled; not to be freed from intricacy or perplexity; that cannot be nntied; as, an *inextricable* difficnlty.

Inex'tricableness, *n.* State or quality of being inextricable.

Inex'tricably, *adv.* To a degree of perplexity not to be disentangled

Ineye, (*in'ī,*) *v. a.* To inoculate, aa a tree, by the lnsertion of a bud into a foreign stock.

Inez de Cas'tro. See CASTRO (INEZ DE).

Infallibil'ity, *n.* [Fr. *infaillibilité.*] Quality of being infallible, or incapable of error or mistake; entire exemption from liability to err.

"*Infallibility* is the highest perfection of the knowing faculty." *Tillotson.*

(*Theol.*) The immunity from error, in all that regards faith and morals, which is claimed by the Roman Catholic Church The extension of the principle of *I.* being the object of the Œcumenical Council held in Rome In 1870, we refer to the word *Œcumenical*, under which tbe dogma itself will be briefly examined.

Infal'lible, *a.* [Fr. *infaillible.*] Not fallible; not capable of erring; altogether exempt from liahility to mistake; privileged from error. — Not liable to err or fail, or to deceive confidence or expectation; certaln; thoroughly reliable; as, *infallible* proof.

"Believe my words; for they are certain and *infallible.*"— *Shaks.*

Infal'libleness, *n.* Infallibility; state or quality of being infallible or inerrable.

Infal'libly, *adv.* Without a possibility of erring or mistaking; certainly; with exemption from failure.

In'famize, *v. a.* To make infamous or degraded. (R.)

In'famous, *a.* [Lat. *infamis.*] Of bad fame; of ill report; having an odious reputation; publicly branded with ignominy for vice or guilt; notoriously vile or corrupt; baso; scandalous; odious; detestable; shameful; held in abhorrence; as, an *infamous* liar, an *infamous* traitor, an *infamous* deed.

(*Law.*) Branded with infamy hy convictlon of a crime.

In'famously, *adv.* In a manner or degree to render infamous; scnndalously; disgracefnlly; odiously; shamefully; with overt or public reproach or censure.

"That poem was *infamously* bad." — *Dryden.*

In'famousness, *n.* Infamy; odious reputation.

In'famy, *n.* [Lat. *infamia* — *in*, and *fama.* See FAME.] Utter loss of reputation; public scandal or disgrace; notoriety of guilt or baseness.

"Her face defac'd with scars of *infamy.*"— *Shaks.*

—Qualities which are publicly detested and reprohated; utter vileness or odiousness.

"Ye are . . . the *infamy* of the people." — *Ezek.* xxxvi. 3.

(*Law.*) A permanent legal incapacity to which a man is subjected in consequence of a conviction and judgment for an offence, nnd which is not removed hy suffering the punishment for the offence.

In'fancy, *n.* [Lat. *infantia*; Fr. *enfance.*] State of an infant; early childhood; the first part or stage of life; infanthood.

"Heaven lies about us in our *infancy.*" — *Wordsworth.*

—Tbe first age or period of nnything; the beginning or early state of existence; as, "citizens in the *infancy* of Rome." — *Arbuthnot.*

(*Law.*) Nonage; minority; state of a minor, beginning at a person's birth, aud extending to the nge of twenty-one years. — See INFANT.

In'fant, *n.* [Fr. *enfant*; Lat. *infans* — *in*, and *fans*, from obs. *fari*, to speak.] A child in the first or early period of life, heginning at his birth; a young babe; — also sometimes applied to a child several years old, but not generally exceeding seven. — A childish or inexperienced person; — used in contempt; as, he is an *infant* in tbe ways of the world. — See INFANTA and INFANTE.

(*Law.*) A minor; a person under 21 years of age. The sex makes no difference at common law: a woman is, therefore, an infant until she has attained the age of 21 years. It is otherwise, however, in some of the U. States. In general, an infant can neither allen his lands, nor do any legal act, nor make a deed, nor indeed any manner of contract that will hind him; hut to these rnles there are exceptions. A *male* of 14 is of discretion, and may consent to marry; and at that age he may disagree to and annul a marriage he may before that time have contracted; he may then choose a guardian: and, if his discretion be proved, may, at common law, make a will of his personal estate. A *female* at 7 may be betrothed or given in marriage; at 9 she is entitled to dower; and at 12 she may consent or disagree to marriage. Considerable changes of the common law have taken place in many of the States. Contracts made with an infant may be enforced or avoided hy time on his coming of age; but a contract cannot be avoided by an adult with whom the Infant deals. Infants have thns various privileges and various disahilities; hut their very disabilities are privileges, in order to secure them from hurting themselves by their own improvident acts. An infant, when sned, appears to defend his cause by a guardian: but he may sne either by his guardian or *prochein amy*, his next friend, who is not his guardian. — See AGE.

In'fant, *a.* Pertaining to infancy, or the period of early childhood; young; tender; immature — Designed for the instruction or amusement of infants or yonng children; as, an *infant* school, an *infant* toy.

Infan'ta, *n.* [Sp. and Pg.] The title given to princesses of the Spanish and Portnguese blood-royal, other than the eldest daughter when heiress-apparent to the throne; as, the *Infanta* Doña Luisa.

Infan'te, *n.* [Sp. and Pg.] The title assnmed by princes of the blood, other than the eldest son of the sovereign; — peculiar to Spain and Portugal; as, the *Infante* Dom Miguel.

In'fanthood, *n.* Infancy. (R.)

Infan'ticidal, *a.* Relatiug or belonging to infanticide; guilty of, or implicated in, child-murder.

Infan'ticide, *n.* [Lat. *infans*, *infantis*, and *cædo*, to kill. See CÆSURA.] The murder of a new-born infant. It is thus distingnished from *abortion* and *fœticide*, which are limited to the destruction of the life of the *fœtus in utero*. *I.* has been practised from very early times. Among certain of the Greek states, it was the practice to expose or destroy weak or deformed children. In Rome also, it was common to expose or put to death children. In the present day, tbe Chinese are chiefly notorious for the extent to wbich they practise this crime; but in the islands of the Pacific, in some parts of India, in Africa, and South America, it is by no means uncommon. Unfortnnately, however, the practice is not confined to heathen countries, but prevails to a considerable extent even in onr own, notwithstandiug the deep abhorrence with which it is viewed, and the severity with which it is punished. One of the most difficult questions of medical jurisprudence is to ascertain the murder of a child newly born. It has first to be determined whether the child was born dead or alive, and next, whether its death was occasioned by violence, or was the result of natural causes. If it be proved tbat the child was born alive, and subsequently destroyed, either by violence or wilful neglect, the offence is murder, and punishable accordingly. There are several signs by which experienced surgeous can form an opinion, when shown the body of a dead infant, whether it has been born alive, or has died prior to its birth; the only reliable proofs, however, can be obtained by dissection. Of all these, tho most important, and, except when decompositlon has taken place, the most infallible, is derived from the state of the lnngs. Before breathing, the lnngs are flabby to the feel, of a pale whitish color, and lie in a small compass In the thorax. If in this state they are taken from the body, and plnced in water, they will SINK to the bottom of the vessel. If they have, on the other hand, been inflated with air, their color is of a deep red, they fill the entire cavity of the chest, feel more spongy and elastic, and, when pressed hetween the fingers, or cut into, emit a crackling sound, or *crepitating* noise, and if placed in water, or any part of them, FLOAT in that fluid. When a child has not breathed, the chest is always flatter than in those who have respired, while the body is more flabby. The diaphragm, or midriff, is arched npwards, and the *foramen ovale*, or aperture between the two sides of the heart, is open. The next question, after deciding whether the child was born dead or alive, which the surgeon is called upon to determine, is whether its death was induced by natural causes, or resulted from violence. — The principal cause which now leads to *I.* is that of *shame*, and the statistics show that the crime is less frequent in countries provided with *Foundling Hospitals*, q.v.

In'fantile, *a.* [L. Lat. *infantilis.*] Relating to infancy, or to an infant; pertaining to the first stage or period of life; infantine; as, *infantile* play.

In'fantile Diseases. (*Med.*) The period of infancy extends from the birth to the completion of the first dentition, or till the first set of what are called the *milk teeth* are cut, or have pierced through tbe gums. The tender, budding nature of the child at that time renders it particularly liable, and that on very slight provocation, to several diseases. The reason why infants are prone to so many complaints arises from the large proportion of the fluid over the solid parts of their bodies, the undeveloped state of those solids, the extreme delicacy of the skin, the great susceptibility of the nervous system, the extreme vascularity of the brain, the newness of all the organs to their functions, and the transitory state of every part of the infant's body. Though the catalogue of diseases to which infants are liable is very lengthy, it is fortunate, both for the parents and the infants themselves, that only a comparative few of their nnmber are actually attacked by the diseases appertaining to that period of existence called infancy. Some of these infantile diseases are born with the child, and are called congenital, and are either simple disfigurements of the person, such as moles marks, notches, or varicose states of the veins known as *nævi*, or MOTHER'S MARKS, *q.v.* Others are more serious, and amount to an actual deformity, such as hair-lip, and that cleft in the spine by which the spinal marrow is protruded into a bag or sac, *spina bifida*; distortion of the limbs, or a redundancy of certain members, as excess of fingers and toes, and other singularities, for which see MALFORMATION. In infancy, the skin is the organ most generally affected, on the surface of which the characters or features of the affection are, as it were, photographed. Thus we have red and white gum, various kiuds of partial or general eruptions, tetter, dandruff, *porrigo* or scabbed head, erysipelas, nettle-rash, sore ears, thrush, cow-pox, glass-pox, small-pox, measles, scarlet-fever. The other diseases of infancy, not referable to any particular organ, are water on the head, croup, whooping-cough, rickets, worms, with fits and convulsions, which last two diseases most frequently proceed from TEETHING, under which head they will be found treated on. Of the other diseases named, several have already been given; the others will be found in their proper places. Almost all the diseases and affections of infancy, whether resulting in an eruption or not, proceed from some unhealthy condition of the stomach and bowels, either caused by some impropriety of the food, an unhealthy state of the mother or nurse, affecting the milk, or from the application of cold to the sensitive and absorbent skin. Whatever may have been the cause, all these affections are certain to produce either relaxation or confinement of the bowels, and as it is not always easy to discover the cause of the disease, and so remove it, the attention of the mother or medical man must be directed to counteract the result, by attention to the state of the bowels. The nnmber of times an infant's bowels should be opened daily in a state of health, depends much on the dietary and habit of body of the mother, and the activity or torpidity of the infant's own system. When, however, the evacuations are copious, and exceed four a day, the parent should be on her guard to check a condition which, if carried

further, might degenerate into looseness or diarrhœa; in the same manner, when the infant has only one evacnation in twenty-four hours, though it should be a copious action, care must be taken to avoid constipation, which would result if the action of the bowels should be delayed beyond that time. The evacnations of the infant are sometimes of a thin, greenish color, with a strong acid odor; at others, slimy and dark, or streaked with blood. In the former case the acidity should be carried off by a teaspoonful of syrup of senna or rhubarb, or by a small quantity of magnesia and rhubarb; in the latter, by the warm bath, and a little castor-oil. For the clay-coloring motions, magnesia, rhubarb, and gray powder should be employed, and for the thin, dark green evacuation, resembling chopped spinach (sometimes the result of calomel), a little syrup of senna, and, if necessary, a powder of rhubarb, magnesia, and gray powder, is to be given. There is nothing that sooner acts on a child, or so rapidly exhausts its strength and emaciates its body, as a relaxation of the bowels; and there is no ailment of her child that a mother should sooner be on her guard to meet and correct by timely medicine or change of food. We shall have occasion, when we come to MILK, to show the necessity there is for all suckling mothers to avoid fruits, cucumbers, vinegar, or any acid substance, on account of the milk becoming rapidly influenced by the diet: the mother should, before flying off for physic for her griped and irritated infant, attempt to correct the cause in herself, by a dose of soda and ginger, or magnesia, soda, and rhubarb, and, whenever practicable, attempt to physic her child through herself.

In'fantine, *a.* [Fr. *enfantin.*] Belonging to early childhood; infantile.

In'fantly, *adv.* After the manner of an infant.

In'fantry, *n.* [Fr. *infanterie*; probably from *enfant*, for this word was used to signify not only an infant, but a youth or young man; so that *infanterie* may have originally signified a body of young men who served as foot-soldiers.] (*Mil.*) Troops, or soldiers who serve on foot; — as distinguished from *cavalry*, or horse-soldiers. The Jews, the Egyptians, and the Persians, among ancient nations, devoted considerable attention to the formation of their infantry. Cyrus (B. C. 559–529) clothed his foot-soldiers in armor. The Greek phalanx and the Roman legion first came into collision at the battle of Heraclea, B. C. 280. On the decline of the Roman empire, the barbarians relied principally upon their infantry. The Franks borrowed from the Romans the square, employed with such success at the battle of Tours, in 732. The Anglo-Saxon forces were composed chiefly of infantry. During the Middle Ages infantry was but little used. Louis VI. (1108–1137) formed the communal militia in France, and his example was followed by Frederick I. (1152–1190) of Germany, and Henry II. (1154–1189) of England. This led to the gradual re-establishment of infantry as the chief arm in war. The battle of Bovines, July 27, 1214, was the first entirely decided by modern infantry, and led to the establishment of this force in all the states of Europe. Infantry was for some time composed of irregular bands; and Charles VII. of France was the first to organize a standing army, in 1444. Francis I. increased this army to the number of 12,000. The battles of Biberach, Oct. 2, 1796, and of Caldiero, Oct. 29–30, 1806, were fought solely by infantry.

Fig. 1380. — ASSYRIAN INFANTRY. (Siege of a town.)
(From the Nimroud Palace, Nineveh.)

In'fare, *n.* [A. S. *infæra*, entrance.] A house-warming, or festive reception of a party of friends, given upon taking possession of a house. — Also, an entertainment given by a newly-married couple to inaugurate their entrance upon housekeeping. (Sometimes written *infair.*)

Infat'uate, *v. a.* [Lat. *infatuo, infatuatum* — *in*, and *fatuus*, foolish. See FATUOUS.] To befool; to make or render foolish; to affect with folly; to weaken the intellectual powers of, or to deprive or dispossess of sound discretion or cool judgment.

—To prepossess to the height of folly or absurdity; to inspire with an extravagant or senseless passion, too obstinately impulsive to be restrained by reason or reflection; as, to be *infatuated* by the fascinations of a woman, to be *infatuated* by a love of the turf.

Infat'uate, *a.* [From Lat. *infatuare.*] Infatuated; predisposed to folly beyond sense or reason.

Infatua'tion, *n.* [Fr.; L. Lat. *infatuatio.*] Act of infatuating, or affecting with folly; act of temporarily depriving of proper reason. — A state of mind in which the intellectual powers are weakened, so that the person affected acts without his usual judgment, and contrary to the dictates of reason; folly; temporary stupefaction of the faculties.

"It is just . . . the greatest abilities with the greatest *infatuations*." — *South.*

Infeasibil'ity, *n.* State or condition of being infeasible or impracticable.

Infea'sible, *a.* Impracticable; not feasible; impossible to be performed or accomplished.

Infea'sibleness, *n.* Infeasibility.

Infect', *v. a.* [Lat. *inficio, infectus* — *in*, and *facio*, to make.] To taint; to impregnate with disease, or with some pernicious quality; to infuse, as any healthy body with the virus or morbid secretions of a diseased body, or any miasmatic exhalations superinducing disease; as, *infected* with the small-pox. — To affect with some contagious, pestilential, or venomous quality, property, or matter; as, to *infect* a parcel of clothing. — To communicate bad or vicious qualities to; to taint; to corrupt; to contaminate by the administering of anything deleterious or pernicious.

"The nature of bad news *infects* the teller." — *Shake.*

(*Law.*) To contaminate with exposure to penalty, or subjection to illegality.

Infect'er, *n.* He who, or that which, infects.

Infection, (*in-fek'shun,*) *n.* [Fr.; L. Lat. *infectio.*] Act or process of infecting or communicating contagion; as, preventive measures were adopted against *infection.*

—The thing or substance which infects; hence, figuratively, that which taints, poisons, or corrupts, by communication from one to another.

"The blessed gods purge all *infections* from our air."—*Shaks*

—Epidemic; prevailing disease, resulting from contagious influence.

"The *infection* being so very violent in London." — *Defoe.*

—Communication of contagious qualities from one to another; as, the *infection* of fear.

—Contamination by illegality, as through the transmission of contraband goods. — An imparting from one to another of kindred qualities, as by influence of example.

"Mankind are gay or serious by *infection*." — *Dr. Johnson.*

(*Med.*) The manner in which diseases are propagated, or conveyed by some effluvia or noxious particles, given off by certain bodies, and through the agency of the air absorbed by the skin, or imbibed by the lungs, where, acting on the fluids of the system, they induce a diseased condition of the body. The term is almost synonymous with *contagion*, although some medical writers restrict it to the cases in which there must be *contact* of the healthy person with a patient, while they apply the term *infections* to diseases which can be conveyed by the atmosphere.

Infectious, (*-fek'shus,*) *a.* [Sp. *infectivo.*] Having qualities or properties that may infect, taint, or impart disease to; pestilential; infective; as, *infectious* air, *infectious* fashions, vices, habits, &c. — Tending to taint by communication; vitiating; imparting a corrupt or malarious influence; as, an *infectious* evil. — Capable of being communicated or diffused by near approach or ready example; as, *infectious* laughter.

Infec'tiously, *adv.* Contagiously; by infection.

Infec'tiousness, *n.* State or quality of being infectious, or capable of communicating disease, taint, or contagion, from one to another.

Infec'tive. See INFECTIOUS.

Infec'und, *a.* [Lat. *infœcundus.*] Barren; infertile; unfruitful; not bringing forth young.

Infecun'dity, *n.* [Lat. *infœcunditas.* See FECUND.] Unfruitfulness; infertility; barrenness; sterility; lack of fecundity.

Infee'ble, *v. a.* Same as ENFEEBLE, *q. v.*

Infelic'itous, *a.* Not felicitous; unhappy; not prosperous; unfortunate; miserable; as, an *infelicitous* marriage.

Infelic'ity, *n.* [Lat. *infelicitas.*] Unhappiness; absence of good fortune or felicity; misery; misfortune; as, the *infelicity* occasioned by ill-assorted tempers. — Adversity; calamity; unfavorable or unfortunate state or time.

In'felt, *a.* Felt within or acutely; heartfelt; as, *infelt* contrition.

Infeoda'tion, *n.* Same as INFEUDATION, *q. v.*

Infeoff, (*-fef',*) *v. a.* See ENFEOFF.

Infer', *v. a.* [Fr. *inférer*; Lat. *infero* — *in*, and *fero*, to bear, carry, or bring. See BEAR.] To deduce; to draw or derive, as a fact or consequence.

Infer'able, Infer'rible, *a.* That may be inferred from premises; deducible; derivable.

In'ference, *n.* [Sp. *inferencia*; L. Lat. *inferentia.*] Act of inferring or deducing from premises.

—A truth or proposition drawn from another which is supposed to have a foundation of truth; deduction; consequence; conclusion or result inferred.

Inferen'tial, *a.* Deduced by inference; drawn from a ground of inference.

Inferen'tially, *adv.* After the manner of inference; by way of inference.

Infe'riæ, *n. pl.* [Lat., from *inferus*, belonging to the nether world.] (*Antiq.*) Sacrificial oblations offered by the ancient Greeks and Romans to the manes of departed worthies.

Infe'rior, *a.* [Lat., from *inferus.* See INFERNAL.] Lower in station, ago, or rank in life; lower in excellence or value; minor in estimation; secondary; subordinate; of less quality or importance; — correlative to *superior.*

"A thousand *inferior* and particular propositions." — *Watts.*

(*Bot.*) Applied to a calyx distinct from the ovary, as in *Silene;* or to an ovary which adheres to the calyx, as in the *Myrtle.*

I. Court. (*Law.*) Any court except the Supreme Court.

I. Oölite. (*Geol.*) See OÖLITIC EPOCH.

—*n.* A person in a lower station of life than another.

Inferior'ity, *n.* [Fr. *infériorité.*] State or quality of being inferior; a lower state of age, dignity, or quality; as, *inferiority* of rank, caste, abilities, worth, &c.

Infe'riorly, *adv.* In an inferior manner or degree.

Infer'nal, *a.* [Late Lat. *infernalis*; Lat. *infernus*, strengthened form of *inferus*, from *infra*, beneath, under.] Pertaining to the lower regions, or regions of the dead, the Hades or Tartarus of the ancients. — Pertaining to, resembling, or inhabiting hell; resembling the devilish character of evil spirits; hellish; satanic; diabolical; fiendish; malicious; as, an *infernal* temper, an *infernal* plot.

I. Machine. (*Hist.*) An apparatus filled with gunpowder or other explosive materials for the destruction of human life and property. The Italian engineer Federico Gianibelli was the first to employ these engines at the siege of Antwerp in 1584–5. In modern times, infernal machines have been repeatedly used, especially in France, for the purpose of assassination. The most notorious instances of this kind are the attempts made on the lives of Napoleon I., Dec. 24, 1800; Louis Philippe, July 28, 1835: and Napoleon III. and his empress, Jan. 14, 1858. See FIESCHI, and ORSINI CONSPIRACY.

I. Stone. [Lat. *lapis infernalis.*] (*Chem.*) The name formerly applied to lunar caustic.

—*n.* A hellish being; an inhabitant of hell or of the lower region; a devil.

Inferobranchia'ta, *n. pl.* [Lat. *inferus*, lower, and Gr. *bragchia*, gills.] (*Zoöl.*) In the system of Cuvier, an order of mulluscous animals (Gasteropods), characterized by the position of the gills, which are situated beneath the produced margin of the mantle. They are incapable of swimming, and are therefore confined to the sea-shore, where they subsist upon sea-weeds and other aquatic plants.

Infer'rible, *a.* Same as INFERABLE *q. v.*

Infer'tile, *a.* [Fr.; Lato Lat. *infertilis.*] Not fertile; barren; unfruitful; unproductive; as, an *infertile* country.

Infer'tilely, *adv.* In an unprodnctive or infertile manner.

Infertil'ity, *n.* [Fr. *infertilité*; Late Lat. *infertilitas.*] State or condition of being infertile; barrenness; unproductiveness; sterility; as, *infertility* of soil.

Infest', *v. a.* [Lat. *infesto* — *infestus*, old participle of *infero*, to carry, put, or throw against — *in*, and *fero*, to bear, bring. See BEAR.] To molest; to harass; to annoy; to torment; to plague; to act in a hostile or disturbing manner against; as, a coast *infested* with pirates, a country *infested* with beggars, a person *infested* with duns, &c.

Infesta'tion, *n.* Act of infesting; state of molestation or continual annoyance.

Infest'er, *n.* He who, or that which, infests.

Infes'tive, *a.* Lacking mirth or festivity; dull; spiritless; cheerless; sad.

Infestiv'ity, *n.* Want of cheerfulness, mirth, or festivity, at a social gathering; gloominess; sadness.

Infeudation, Infeodation, (*-fū-da'shun,*) *n.* [L. Lat. *infeudatio.*] (*Law.*) Act or process of putting one in possession of an estate in fee; as, "*infeudation* of the tenant."—*Hale.*

—The bestowing of tithes on laymen.

Infibula'tion, *n.* [Fr., from Lat. *infibulare.*] Act of clasping, fastening, or holding together, as with a hasp, catch, or buckle. — Act of encircling with a ring, or otherwise restraining the genital organs in such a manner as to debar from copulative action.

Infielonado, (*een-fe-se-o-na'do.*) a village of Brazil, prov. of Minas-Geraes, about 12 m. N. of Mariana; *pop.* 4,500.

In'fidel, *a.* [Fr. *infidèle*; Lat. *infidelis* — *in*, and *fidelis*, that may be trusted or relied upon, from *fides*, faith. See FIDELITY.] Withholding trust or credit; unbelieving; sceptical; deistical; disbelieving the divine institution of Christianity; destitute of faith in the Holy Scriptures; as, an *infidel* writer.

—*n.* One who withholds trust, credit, or belief; — hence, a deist; a free-thinker; a sceptic; one who disbelieves the inspiration of the Scriptures, and the divine institution of Christianity; a Mohammedan; a heathen.

"On her white breast a sparkling cross she wore,
Which Jews might kiss, and *infidels* adore." — *Pope.*

Infidel'ity, *n.* [Fr. *infidelité*; Lat. *infidelitas.*] Want of faith or belief; a withholding of credit or confidence.

—Scepticism; deism; unbelief; free-thinking; disbelief of the divino origin of Christianity, or the inspiration of the Holy Scriptures.

—Breach of the marital contract by adultery, &c.

—Violation of trust; breach of moral obligation, or legal contract; faithlessness; treachery; deceit; as, the *infidelity* of a servant.

Infield', *v. a.* To inclose, as a field.

In'-field, *n.* In Scotland, a term applied to manured land kept under a constant succession of crops; — in opposition to *out-field*, q. v.

Infilm', *v. a.* To coat over with a film or thin integument, as of metal in gilding.

Infil'ter, *v. a.* To filter or sift in.

Infil'tered, *a.* Infiltrated.

Infil'trate, *v. n.* To enter by penetrating the pores or interstices of a substance.

Infiltra'tion, *n.* [Fr.] Act or process of entering, or the substance which has entered, the pores or cavities of a body.

(*Med.*) Same as EFFUSION, *q. v.*

In'finite, *a.* [Lat. *infinitus.*] Boundless; illimitable; endless; not circumscribed in extent, duration, attri-

butes, &c. — That has a beginning in space, but is infinitely extended; — hyperbolically, vast; immense; of great size or extent.

(*Math.*) Applied to a quantity greater than any assignable quantity of the same kind. — See INTEGRAL CALCULUS.

In'finite, *n.* The Infinite Being; the Almighty; that which is infinite.

(*Philos.*) The word *I.* may be properly used in mathematics as an abbreviation for the two extremes of the infinitely great and of the infinitely little; but, as a real notion of the mind, it merely expresses our inability to pass beyond the region of an expansion of matter or space. Finite means what has a boundary or termination, and applies strictly to body, which is always conceived by us as bounded and terminating in space. The bounded is, in fact, body (or some analogy of body, as when we fancy an inclosure which we do not actually construct); the absence of bounds is free space, which is a real conception. It means scope for movement, freedom from obstruction, and its opposite is some inert matter, standing in our way, to prevent further movement. The unbounded is thus another name for *space;* and when we arrive at a space with no further prospect of obstruction, we may call that a boundless space; but the only meaning we have thereby is a space which no longer contains material obstruction. And we can conceive of no other end of space. Our whole experience furnishes no other contrast except these two, space and body, and where the one ends, the mind must conceive the other. We may conceive the not-extended, it is true, by passing to the subject mind, with its feelings and volitions; but within the sphere of the extended, we have no choice but between space and body. We cannot conceive the end of space otherwise than by the beginning of resistance; anything else (not being the subject mind) would be non-existence, or annihilation. The infinity of God, in the perfect limitation of our faculties, cannot be better understood by us than the infinity in space. "A deity understood," says Sir W. Hamilton, "would be no deity at all; and it is blasphemy to say that God only is as we are able to think him to be. We know God according to the finitude of our faculties; the infinite God is, to use the words of Pascal, infinitely inconceivable." The Scriptures indeed declare that now we know only in part.

In'finitely, *adv.* Without bounds or limits; immensely; greatly; to a great extent or degree.

In'finiteness, *n.* Immensity; the state of being infinite.

Infinites'imal, *a.* [Fr. *infinitésmal.*] (*Math.*) Infinitely small; less than any assignable quantity.

—*n.* That which is less than any assignable quantity. See INTEGRAL CALCULUS.

Infinites'imally, *adv.* By infinitesimals; by quantities infinitely small.

Infin'itive, *a.* [Lat. *infinitivus;* Fr. *infinitif.*] (*Gram.*) Unlimited; indefinite; designating a mood of the verb, which expresses the action of the verb without any distinction of person or number; as, to love, to walk, or to be feared.

—*n.* (*Gram.*) A mood of the verb; the infinite mood.

Infin'itively, *adv.* In the manner of an infinitive mood.

Infini'to, *a.* [It.] (*Mus.*) Perpetual, as a canon whose end leads back to the beginning.

Infin'itude, *n.* [O. Fr. *infinitude.*] Infinity; the quality or state of being without limits; infinite extent; immensity; greatness; boundless number.

Infin'ituple, *a.* Infinite in degree, or in the number of times repeated. (R.)

Infin'ity, *n.* [Fr. *infinité;* Lat. *infinitas.*] Unlimited extent of time, space, or quantity; boundlessness; immensity; indefinite extent; endless or indefinite number. — See INFINITE.

Infirm', *a.* [Lat. *infirmus.*] Weak, as health or body; debilitated; sickly; enfeebled. — Weak of mind; imbecile; irresolute. — Unsteady; not stable; not solid.

Infirm'ary, *n.* [Fr. *infirmerie;* L. Lat. *infirmarium.*] An hospital or place for the reception and consequent lodging and nursing of sick and invalided poor people, or where they are simply treated as out-patients.

Infirm'ity, *n.* [Fr *infirmité;* Lat. *infirmitas.*] An unsound or unhealthy state of the body; physical weakness; particularly as manifested in the form of malady or disease.—Weakness of mind or of resolution; failing; fault; foible; defect; imperfection; as, the *infirmities* of men of genius.

A friend should bear his friend's *infirmities.*" — *Shaks.*

Infirm'ly, *adv.* In an infirm, feeble, or debilitated manner.

Infirm'ness, *n.* Weakness; debility; infirmity; failing.

'The *infirmness* and insufficiency of the peripatetic doctrine." *Boyle.*

Infix', *v. a.* [*In,* and *fix,* from Lat. *figo, fixus,* to fix.] To fix by driving, piercing, or thrusting in; as, to *infix* a spear. — To set or implant in; to fix in the mind, as good principles, &c.

"That sting *infixed* within her haughty mind." — *Dryden.*

—*n.* That which is infixed. (R.)

Inflame', *v. a.* [Lat. *inflammo* — *in,* and *flammo,* from *flamma,* flame.] To set on fire; to kindle; to make or cause to burn.

"In waves of torrent fire *inflam'd.*" — *Milton.*

—To excite or increase, as passion or appetite; to set into a glow, as desire.

"More *inflam'd* with lust than rage." — *Milton.*

—To enkindle into violent action; to heat; to increase or augment to an excessive or unnatural heat; as, to *inflame* the eyes with weeping. — To irritate; to rouse to anger; to incense; to exasperate; to provoke.

"It will *inflame* you, it will make you mad." — *Shaks.*

(*Med.*) To excite, as excessive action in the blood-vessels.

—*v. n.* To take fire; to become enkindled. — To grow hot, angry, and painful.

Inflamed', *p. a.* Set on fire; enkindled; heated; incensed; irritated.

Inflam'er, *n.* He who, or that which, inflames or enkindles.

Inflammabil'ity, *n.* [Fr. *inflammabilité.*] State or quality of being inflammable, or in a condition to readily take fire.

Inflam'mable, *a.* [Fr.] That may be inflamed or set on fire; readily susceptible of combustion; as, "*inflammable* spirits." — *Arbuthnot.*

Inflam'mableness, *n.* State or quality of being inflammable; inflammability; as, "the *inflammableness* of bodies."

Inflam'mably, *adv.* In an inflammable or combustible manner.

Inflamma'tion, *n.* [Fr.; Lat *inflammatio.* See INFLAME.] Act of enkindling, inflaming, or setting on fire. — State of being enkindled or a-flame.

"The flame extendeth not beyond the inflammable effluence, but adheres unto the original of its *inflammation.*" — *Browne.*

—Violent heat, excitement, or passion; turbulence; animosity; as, *inflammation* of religious zeal.

(*Med.*) A preternaturally hot, red, swollen, and painful condition of any portion of the body; when general, it takes the form of fever. It is usually distinguished by particular names, according to the part which is attacked, as *pleuritis, I.* of the pleura; *peritonitis,* of the *peritoneum; gastritis,* of the stomach; *hepatitis,* of the liver, &c. *I.* may be produced by various causes,—by external injury, as a cut, bruise, or burn; by the action of some chemical or other agent, as poisons, alcoholic liquors, or from exposure to cold, wet, &c. *I.* may be acute or chronic; diffuse or circumscribed; healthy, with a disposition to heal and return to the natural state; or unhealthy, when, on the contrary, there is a disposition to ulceration, &c. It may terminate in one of three ways,—in resolution, in suppuration, in mortification. The first of these is the most desirable mode of termination, being the gradual subsidence of the inflammatory action, and the return of the parts to their natural state, without any visible morbid change in their structure. In suppuration, the *I.* goes on to the formation of pus, when the swelling increases in size, becomes more red and shining, then grows soft in the centre, and at length the matter makes its escape either through a natural or an artificial opening. The most dangerous termination is in mortification, which is caused by the inflammatory action being too violent for the vital process of the part. The pain is at first very severe, then the bright red color of the part becomes livid, vesicles form on the surface, the pain abates, and the death of the part ensues. The immediate cause of inflammation is believed to be the exudation of the *liquor sanguinis* through the softened or ruptured walls of the capillary vessels of the part, in consequence of an increased flow of blood there. The mode of treatment in inflammation will of course vary according to the seat and character of the general symptoms. Commonly, when the patient is strong and of a full habit, general bleeding is recommended. Local bleeding, by means of cupping, leeches, &c., should also be had recourse to. A low diet, purgative medicines, cooling drinks, diaphorctics, and the avoidance of all excitement, are also necessary. Dr. Hughes Bennett, of Edinburgh, however, maintains that the abstraction of blood does not exert any beneficial effect upon the inflammatory state, and that its influence on the system is injurious; and hence he condemns its being resorted to for the sake of the *I.* This, however, is not the generally received opinion among medical men. — See PLEURITIS, PERITONITIS, &c.

Inflam'mative, *a.* Tending to inflame; inflammatory.

Inflam'matory, *a.* [Fr. *inflammatoire.* See INFLAME.] Having the power of inflaming; fiery; tending to excite inflammation; as, *inflammatory* medicines. — Accompanied with preternatural heat, and highly accelerated arterial action; as, an *inflammatory* disease. — Having the nature of exciting or stimulating anger, animosity, tumult, &c.; seditious; as, *inflammatory* harangues.

I. crust. (*Med.*) Same as BUFFY-COAT, *q. v.*

Inflate', *v. a.* [Lat. *inflo, inflatus* — *in,* and *flo,* to blow. See FLATULENT.] To swell or distend by injecting air; to fill with the breath; as, to *inflate* a balloon with air. — To swell, as with wind; to puff up; to elate; as, a person *inflated* with self-conceit. — To cause to be expanded, or to become temporarily or spasmodically extended by over-issue; as, an *inflated* currency.

Inflate', Inflat'ed, *a.* Swelled or distended with air; expanded. — Turgid; tumid; bombastic; stilted; puffed up; forced beyond a proper or natural state; as, an *inflated* style of speech or writing.

(*Bot.*) Swollen; turgid; bladdery.

Inflat'ingly, *adv.* In the way of inflation.

Infla'tion, *n.* [Lat. *inflatio.*] Act of inflating. — State of being distended with air—injected, or inhaled.—State of being puffed up, or unduly elated, as with vanity or conceit. — Artificial or forced expansion, from over-issue; as, *inflation* of the currency.

Infla'tus, *n.* [Lat., from *inflare,* to inject air into.] A breathing or injecting air into; inflation; — hence, by inference, inspiration; efflatus. — See AFFLATUS.

Inflect', *v. a.* [Lat. *inflecto* — *in,* and *flecto,* to bend, bow, or curve. See FLEXURE.] To bend, bow, or curve; to turn aside from a direct line or course — To modulate or intone, as the voice.

(*Gram.*) To vary in its terminations, as a noun or a verb.

Inflection, Inflexion, (*in-flek'shun,*) *n.* [Fr. *inflexion,* from Lat. *inflexio,* rarely *inflectio.*] Act of bending or turning from a direct line or course; as, "*inflections* of the understanding." (*Hale.*) — A bend; a flexure; a fold; a curve.—(*Mus.* and *Elocution.*) Modulation or intoning of the voice.

(*Gram.*) Any change which takes place in a word, from a modification of its sense between the *root* and the *termination.* The inflexion must therefore not be confounded with the termination itself. For example, the syllable *am* is the root of all the words employed in the conjugation of the Latin verb *amo,* "I love;" in the imperfect tense the inflexion is the syllable *ab.* The termination varies according to the person: *amabam, amabas, amabat.*

(*Optics.*) Same as DIFFRACTION, *q. v.*

Point of I. (*Geom.*) That point of a curve line where the curvature in relation to the axis changes from concave to convex, or from convex to concave. To find the point of inflexion in a given curve, it is only necessary to find, from the equation of the curve, the value of $\frac{d^2y}{\quad}$: this value made equal to 0, or infinity, will give d^2x, an equation by which x can be determined. In the above equation, d^2y stands for the second differential. — See INTEGRAL CALCULUS.

Inflec'tional, *a.* Relating or pertaining to inflection.

Inflec'tive, *a.* Having the power of bending.

Inflesh', *v. a.* To make flesh; to incarnate. (R.)

Inflex', *v. a.* [Lat. *inflectere,* to bend.] To bend; to make curved or crooked.

Inflexed, (*-flekst',*) *a.* Bent; curved inwardly.

(*Zoöl.*) Noting the inward acute angle that, in certain insects, the head forms with the trunk.

Inflexibil'ity, Inflex'ibleness, *n.* [Fr. *inflexibilité;* L. Lat. *inflexibilitas.*] State or quality of being inflexible or unyielding; incapacity of being bent or inflected; resistible stiffness. — Obstinacy of mind; pertinacy of will or purpose; unyielding firmness of temper or disposition.

Inflex'ible, *a.* [Fr.; Let. *inflexibilis.*] Proof against prayers, entreaties, or arguments; firm and unbending in purpose; inexorable; pertinacious in will or temper; unyielding. — Not to be changed or altered.

"The nature of things is *inflexible,* and their natural relations unalterable."— *Watts.*

—That cannot be bent; firm; impenetrable; not admitting of incurvation.

Inflex'ibleness, *n.* Inflexibility; state or quality of being inflexible.

Inflex'ibly, *adv.* With a firmness that resists all importunity or persuasion; with unyielding pertinacity; inexorably.

Inflex'ion, *n.* See INFLECTION.

Inflex'ure, *n.* A bend, fold, curve, or inflection.

Inflict', *v. a.* [Lat. *inflictus,* from *infligo* — *in,* and *fligo,* to strike. See CONFLICT.] To lay on; to throw or send on; to apply, as punishment or disgrace.

Inflict'er, *n.* One who inflicts or applies, as punishment, &c.

Inflic'tion, *n.* [Fr.; Lat. *inflictio.*] Act of inflicting, or laying on, or applying; as, the *infliction* of a fine, or of imprisonment. — That which is inflicted; the pain, penalty, or punishment applied.

"An Almighty Judge, whose power extends to eternal *inflictions.*"— *Rogers.*

Inflic'tive, *a.* [Fr. *inflictif.*] Tending or having the power to inflict.

Inflow', *v, n.* To flow in.

In'fluence, *n.* [Fr.; L. Lat. *influentia,* from Lat. *influens,* from *influo* — *in,* and *fluo,* to flow. See FLOW.] A flowing, rushing, or pressing in or into; influx; — preceding *on, upon, with,* or *into.* — Power whose operation is invisible, and known only by its effect; physical power; power that affects natural bodies by unseen operations; power acting on sensibility; spiritual power, or the immediate power of God over the mind. — Authority; sway; power arising from acknowledged ascendency, or from elevation of rank or station; authority springing from or caused by superior force of intellect, or by wealth or reputation; as, a man of *influence.*

"Unawed by *influence* and unbribed by gain." — *Story.*

—*v. a.* To move by direction or impulsive force: to move by physical power operating by unseen laws or force: to affect; to move, act on, and affect, as the mind or will in persuading or dissuading; to induce; to move or act on, as the passions; to lead, sway, or direct.

Inflores'cence, or **Anthotax'is,** *n.* [Lat. *inflorescens;* Gr. *anthos,* flower; *taxis,* a placing.] (*Bot.*) The arrangement of the flowers on the axis, or the ramification of the floral axis. The forms under which the flower-stalk is presented to our notice are described under PEDUNCLE; and many particulars relating to *I.* are noted under BRACT. Flowers are variously arranged upon the floral axis, and to each arrangement a particular name is applied. These modifications are always the same for the same species of plant, and frequently throughout entire genera, and even natural orders; and hence their discrimination is of great practical importance. All the regular forms may be arranged in two great classes, the principles of which being understood, their subordinate modifications will be readily intelligible.

CLASS I. *Indefinite, Indeterminate, or Axillary inflorescence.* — The primary floral axis is terminated by a

growing point analogous to the terminal leaf-bnd of a stem or branch; it has consequently the power of growing or elongating in an upward direction, or of dilating more or less horizontally, there being no necessary limit to its growth. Such an axis, as it continues to grow upwards, develope on its sides other buds, from which flowers are produced. The general charactere of the *I.* in this class depend, therefore, upon the indefinite growth of the primary axis; while the secondary, tertiary, or other axes which are devoloped from it, are terminated by flower-buds. The simplest kind of indefinite *I.* is that presented by such plants as the pimpernel and money-wort, in which solitary flowers are developed in the axils of the ordinary leaves of the plant, the primary axis continuing to elongate in an upward direction, and bearing other leavee and flowers. The flowere are then said to be *solitary* and *axillary*, (Fig. 1381.) When such flowers are arranged in whorls around the stem, each flower being axillary to a leaf, as in the common mare's-tail, they are said to be *whorled*. When a number of flowers are developed, instead of a single one, upon an elongated or depressed axis which is placed at the extremity of a branch or in the axil of a bract, a number of kinds of *I.* ariee, depending upon the extent to which the axis is divided, the mode in which the branching takes place, the comparative length of the flower-stalks, and other subordinate circumstances. Theee modifications may be separated into two heads: — 1. Those with an elongated primary axis; and, 2. those with a shortened or dilated primary axis.

Fig. 1381.—MONEY-WORT, (*Lysimachia nummularia.*)

1. *Kinds of Indefinite inflorescence with an elongated primary axis.* — These are as follows: — *The Spike.* An elongated axis, simply bearing sessile flowers, or flowers in which the pedicels are too short to be clearly distinguishable. Examples may he seen in the rib-grass and vervain. In this kind of *I.* the flowere at the base open first, and those at the apex last. This mode of opening is called *centripetal:* it is universal in the different kinds of indefinite *I.*, which in all cases open from the hase to the apex, if the axis is elongated, or from the circumference towards the centre, if it is deprcssed or dilated. — The *Amentum*, or *Catkin* (see AMENTUM.) — The *Spadix.* A spike with a snccnlent axis, in which the individual flowers have no bracts, but the whole *I.* is inclosed in a long bract called a *spathe.* The common arum, or cuckoo-pint, affords an excellent example. — *The Locusta*, or *Spikelet.* The partial *I.* of a grase or cyperaceous plant, consisting of a spike with a few flowers, which are destitute of calyx and corolla, bnt have, in place of thoee envelopes, membranoue bracts called *palex:* the whole *I.* is surrounded at the base by one or two empty bracts called *glumes.* The spikelets may be either arranged sessile on the primary axis, as in wheat, or placed on a more or less branched axis, as in the oat. — *The Cone.* The kind of spike found in coniferous plants, ae the pine, fir, larch, &c. It is composed of female flowers, each of which has at its base a persistent woody scale or bract. — *The Strobilus*, or *Strobile.* A kind of spike with female flowers, each of which hae a membranous bract or scale at its base. It is seen in the hop (Fig. 1330.) — *The Raceme* (Fig. 1382). In this kind of *I.* the primary axis is elongated, and bears flowere placed on pedicels of nearly equal length. It differs from the spike only in the flowers being stalked instead of sessile. Examples occur in the currant, mignonette, hyacinth, laburnum, &c. — *The Corymb.* In this, the pedicels, or flower-stalks, are of different lengths, thoso at the hase of the primary axis being longer than those towards and at the apex, so that all the flowers are nearly level. It occurs in the hawthorn, &c. When the stalks of a corymb divide, instead of bearing flowera immediately, as in some speciea of pyrus, a *branching* or compound corymb is formed. — *The Panicle*, a modification of the raceme, produced hy the subdivision of the secondary axes. Instead of producing flowers directly, those axes hranch into tertiary ones, which hear the flowere. The inflorescence of the *Gucca gloriosa*, and the general arrangement of the spikelets of the oat, are examples. — *The Thyrsus*, or *Thyrse*, a kind of panicle, in which the pedicels are generally very short, and the whole so arranged as to form a compact cluster of blossoms. Examples may be found in the grape-vine, horse-chestnut, and lilac. 2. *Kinds of Indefinite inflorescence with a shortened or dilated Primary Axis.* The principal are the following: — *The Capitulum*, *Anthodium*, or *Head.* Thia kind of inflorescence (fig. 1383) constitutes the *compound flower* of Linnæus. It is formed hy a nnmber of sessile flowers crowded together on a receptacle, the whole being surrounded hy an involucre. The heads of flowers take a variety of forms, dependent npon the shape of the receptacles which may be flattened, slightly convex, conical, or globular. In thie kind of inflorescence, the centripetal order of expansion is often very evident,

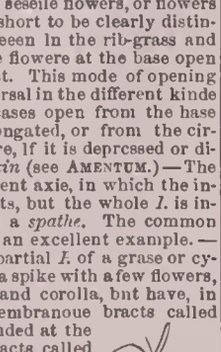

Fig. 1382. RACEME.

Fig. 1383. — HEAD OF FLOWERS OF THE BUTTON-BUSH, (*Cephalanthus Occidentalis.*)

the outer floret being fully expanded, those within them partially opened, and those in the centre in an unopened condition. Examplee are seen in the cotton-thistle, dandelion, chamomile, American button-bush, &c. — *The Hypanthodium*, a slight modification of the last, formed by a receptacle, which is usually of a fleshy nature, becoming more or less incurved, and thus partially, as in the darstenia, or entirely, ae in the fig, inclosing the flowere which it bears on its surface. — *The Umbel.* In this (fig. 1384), the primary axis is shortened, and gives off from its apex a number of secondary axee or pedicels of nearly equal length, each bearing a flower, and arranged like the ribs of an umbrolla. Examples of the single umbel are eecn in the primrose, cowslip, &c. When tho secondary axes divide and form tertiary axee, which are also arranged in an umbellate manner, a *compound umbel* is produced. Thie is seen in the carrot, fennel, fool's-pareley, hemlock, and other allied plants, which are hence called *umbelliferous.*

Fig. 1384. UMBEL.

CLASS II. *Definite, Determinate, or Terminal inflorescence.* In this class of inflorescence, the primary axis is arrested in its growth at an early age, by the development of a terminal flower-bud; and if the axis beare no other flowers, this is called a *solitary terminal* flower, and is the simplest form of definite inflorescence. It may be seen in the stemless gentian, the wood-anemone, &c. When other flowers are produced on such an axie, they must neccesarily arise from axillary buds placed below the terminal flower-bud; and if these form secondary axes, they will in like manner be arrested in their growth hy a terminal flower-bud, — hence. thie mode of inflorescence is *definite*, in contradistinction to the former, or indefinite inflorescence, where the primary axis elongatee indefinitely, unless stopped by some extraneous cause. In definite inflorescence, the order of unfolding in the flower-bude is from the apex to the base if the axis be elongated. or from the centre to the circumference if the axie he depreseed or dilated. Snch an order of expanelon is termed *centrifugal.* The general name of *Cyme* is applied to all inflorescenccs of thia claes; hut it is customary to distinguish a few by especial namea, as follows: — *The True Cyme.* A definite inflorescence, more or lese hranched, the whole being developed in a corymbose manuer. It assumes tho form of a somewhat flattened head in the laurustinus and elder, of a rounded mass of blossoms in the hydrangea, and of a moro diffuse bunch in the chickweed. By attention to tho centrifugal order of expaneion, such cymes may bo always distinguiehed from the umbel, corymb, or other indefinite kinds of inflorescence, to which, otherwise, they bear in many cases a great resemblance. — *The Spiked Cyme.* A definite Inflorescence, formed of sessile flowers, and hearing a resemblance to the spike. Example, the inflorescence of the sedum or stone-crop. — *The Racemose Cyme.* A cyme having flowers on pedlcels of nearly equal length, as in the campannla. — *The Panicled Cyme.* This is a definite Inflorecence, resembling in appearance the panicle. The privet affords a good example. — *The Helicoid* or *Scorpioid Cyme.* This kind of inflorescence hae flowers only npon one side; and its upper extremity is more or lesa coiled up in a circinate manner, so as frequently to resemble a snail or the tail of a scorpion. These cymes are especially developed in the nat. ord. *Boraginaceæ*, as in the forget-me-not. It is extremely difficult to distinguish thls kind of cyme from the raceme, as the order of expansion *appears* to he *centripetal.* — *The Fascicle* or *Contracted Cyme.* In this, he flowers are placed on short pedicels of nearly equal length, and consequently crowded together. It is seen in the sweet-william. — *The Glomerule.* A cyme consisting of a number of sessile flowers, or flowers with very short pedicels, collected into a rounded head or short spike. It beare nearly the same relation to the true cyme as the capitulum does to the umbel. It is seen in species of nettle and in the box. — *The Verticillaster.* This kind of cyme le seen in the white dead-nettle and other plants of the labiate tribe. In it the flowers appear at first slght to be arranged in a whorl round the stem; but upon examination, it will be readily seen that there are two clusters axillary to the opposite leaves, the central flowers of which open firet, proving the mode of expansion to be centrifngal. To each of these clustere, the name of *verticillaster* is applied. — Examples of *mixed inflorescence* are by no means uncommon. Thus, in flowers of the natural order *Compositæ*, the terminal capitulum is the firet to expand; and the capitula, as a whole, are therefore developed in a centrifugal manner. The individual capitula, however, open their small flowers or florets centripetally; hence, here the general inflorescence is definite, and the partial inflorescence indefinite.

In'fluencer, *n.* One who, or that which, influences.

Influen'cive, (*-sĭv,*) *a.* Influential; exercising influence.

In'fluent, *a.* [Lat. *influens.*]—Inflowing; flowing inwards.

"*Influent* fluids and vascular solids." —*Arbuthnot.*

Influen'tial, *a.* Exerting influence, authority, or power over by invieible operation; — especially ueed in reference to the working of moral causes, and the results accrning therefrom; as, an *influential* politician, an *influential* character.

Influen'tially, *adv.* By means of influence; acting by influence, as to urge, direct, control, or incline.

Influenz'a. See SECTION II.

In'flux, *n.* [Lat. *influxus*, from *influo.*] Act of flowing, rushing, or pressing in or into, as the tide into a bay or river. — Infusion; intromission; as, "the *influx* of the knowledge of God." (*Hale.*) — A coming-in; an entering; introduction; importation in large quantities; as, an *influx* of bullion.

Influx'ively, *adv.* By Influxion.

Infold', *v. a.* To fold, lay, or wrap over; to inclose; to wrap up or inwrap; to involve.

"*Infold* his limbs in bands." — *Blackmore.*

—To embrace; to hug; to clasp with the arms.

"Noble Banquo, let me *infold* thee . . . to my heart." —*Shak.*

Infold'ment, *n.* Act of infolding; state or condition of being infolded.

Info'liate, *v. a.* [From Lat. prefix *in*, and *folium*, leaf.] To cover with leavee, or with forms or objects resembling leaves.

Inform', *v. a.* [Fr. *informer;* Lat. *informo* — *in*, and *formo* — *forma*, form, shape. See FORM.] To give form or shape to a thing. (R.) — To animate; to give life to, in a poetical sense; to present or convey to one the form or idea of a thing; to vitalize. — To communicate knowledge to; to impart intelligence; to make known to, hy word or writing; to tell to; to acquaint; to teach; to instruct; — generally preceding *of;* as, I *informed* you *of* the fact. — To communicate a knowledge of facts or circumstances to, by way of accusation.

"Tertellus *informed* the governor against Paul." —*Acts* xxiv. 1.

—*v. n.* To give intelligence; to impart information.

To inform against, to impart a knowledge of facts by way of accusation against; to tell of an illegal act having been committed by a person; as, to *inform against* a conspirator.

Infor'mal, *a.* Not in the regular, usual, or common mode or method; not according to established, conventional, or customary manner of procedure; — hence, without etiquette or ceremony; as, an *informal* visit.

Informal'ity, *n.* [*In*, and *formality.*] State or quality of being informal; want of regular or customary form, mode, rule, or order.

Infor'mally, *adv.* In an irregular or informal manner; without the usual or customary forms or ceremonies.

Inform'ant, *n.* [Lat. *informans, informantis*, from *informo.*] One who instructs; one who informs or gives intelligence; one who imparts news or tidings. — One who advances or offers an accusation: an informer; an accuser.

In For'ma Pau'peris. [*Lat.* In the character of a poor person.] (*Law.*) Persons are said to sue *in forma pauperis* when they are allowed by law to conduct suits without being obliged to pay costs to court officers or legal advisers. According to the common law of England (which is the basis of American law), anyone who would swear that he was not worth £5, his wearing apparel, and the claim in disputo being excepted, was exempted from the payment of court fees when plaintiff (but not when defendant), and was entitled to have counsel and attorney assigned to him by the court without fee. If unsuccessful in the suit, such persons are excused from the payment of costs. In former times, according to Blackstone, such persons had the uncomfortable alternative of choosing hetween paying and being whipped. This indulgence, at first confined to plaintiffs, was afterward extended to defendants. It was at first restricted to the courts of common law, but afterward a similar privilege was granted in the practice of the Equity, Probate, and Divorce courts. A suitor *in forma pauperis* is not entitled to costs except by order of the court. No one can bring suit *in forma pauperis* unless the opinion of counsel on his case, and an affidavit that a full statement of the material facts has been given, shall be duly presented to the court. A similar privilege was established in Scotland by an act of 1424.

Informa'tion, *n.* [Fr.; Lat. *informatio.*] Act of informing, or of imparting intelligence, or communicating knowledge. — Intelligence received; news; tidings; notice or advice communicated by word or writing; knowledge received from reading or instruction, or from the senses, or from the operation of the intellectual faculties.

(*Law.*) A complaint or accusation exhibited against a person for some criminal offence. It differs in no respect from an indictment, except that it is filed at the mere discretion of the proper law officer of the government, *ex-officio*, without the intervention of a grand jury The process has not been put in motion by Congress for misdemeanor, but is common in civil prosecutions for penalties and forfeitures. The information is usually made upon knowledge given by some other person than the officer, called the *relator.*

Inform'er, *n.* One who informs or gives instruction or intelligence.

(*Law.*) A person who informs or prefers an accusation against another, whom he suspects of the violation of some penal statute. When the informer is entitled to the penalty or part of the penalty, upon the conviction of an offender, he is or be is not a competent witness, according as the statute creating the penalty has or has not made him so.

In'fra, *adv.* [Lat.] Beneath; under; below, after; — frequently employed as a prefix.

Infra-ax'illary, *a.* [Lat. *infra*, under, and *axilla*, axil.] (*Bot.*) Placed below the axil, as a bud.

Infract', *v. a.* [See INFRACTION.] To violate; to infringe; to break. (R.)

Infract'ible, *a.* Susceptible of being broken.

Infraction, (*-frăk'shun,*) *n.* [Fr.; Lat. *infractio*, from *infringo* — *in*, and *frango*, to break. See FRACTURE.] A breaking, or breaking in upon; breach; violation; infringement; non-observance; as, an *infraction* of the law.

Infrac'tor, *n.* [Fr. *infracteur.*] One who infracts; a violator; an infringer; a breaker.

Infra'grant, *a.* Inodorous; without fragrance or aroma.

Infralapsa'rian, *a.* (*Theol.*) Relating or pertaining to the Infralapsarians, or to their tenets.

Infralapsa'rians, *n. pl.* [Lat. *infra*, after, and *lapsus*, fall.] (*Eccl. Hist.*) A sect of Presbyterians who maintain that God has created a certain number of human beings only to be damned, without allowing them the opportunity of salvation even if they choose to embrace it. They are thus designated because they hold that the decrees of God were formed *infra lapsum*, after His knowledge of the fall, and in consequence of it. See SUPRALAPSARIANS.

Infralapsa'rianism, *n.* (*Theol.*) The faith, doctrine, or tenets held by the Infralapsarians.

Infra-max'illary, *a.* [Lat. *infra*, and *maxilla*, jaw.] (*Anat.*) See SUBMAXILLARY.

Infra-mun'dane, *a.* [Lat. *infra*, and *mundanus*, mundane, worldly.] Situate or being beneath the world.

Infran'chise, *v. a.* Same as ENFRANCHISE, *q. v.*

Infrangibil'ity, *n.* State or quality of being infrangible.

Infran'gible, *a.* [Lat. prefix *in*, and Eng. *frangible.*] That cannot be broken or separated into parts.

"The primitive atoms are supposed *infrangible.*" — *Cheyne.*

—Not to be violated.

Infran'gibleness, *n.* Infrangibility; state or quality of being infrangible.

Infra-or'bital, *a.* [Lat. *infra*, and *orbitus*, orbit.] Lying below the orbit.

Infra-position, (*-po-zish'n,*) *n.* [Lat. *infra*, and *positio*, place, position.] A place or position below or beneath.

Infra-scap'ular, *a.* [Lat. *infra*, and *scapula*, *q. v.*] Relating or pertaining to, or situated beneath, the scapula.

Infra-spi'nate, *a.* [Lat. *infra*, and Eng. *spinate.*] Having reference to parts under the spine; placed beneath the spine.

Infra-territo'rial, *a.* [Lat. *infra*, and *territorialis*, territory.] Inside the territory.

Infre'quence, Infre'quency, *n.* [Lat. *infrequentia.*] Rarity; state of being uncommon, or seldom occurring; rareness.

Infre'quent, *a.* [Lat. *infrequens.*] That does not often or frequently take place; rare; uncommon; seldom happening or occurring; rarely coming under notice; unfrequent.

Infre'quently, *adv.* Not frequently; rarely.

Infringe, (*-frinj',*) *v. a.* [Lat. *infringo* — *in*, and *frango*, to break. See FRACTURE.] To violate, to break, as a stipulated condition or contract, — whether positively by contravention, or negatively by non-fulfilment. — To transgress; to break; to infract; to violate; to neglect to attend, fulfil, or obey.

"Having *infringed* the law, I waive my right." — *Waller.*

—*v. n.* To transgress or break some rule or regulation; to commit some evil, injury, or misdeed. — To encroach; to trespass; to invade; — before *on* or *upon*; as, to *infringe on* another's patent.

Infringe'ment, *n.* Act of infringing or violating; breach; non-fulfilment; infraction; non-observance; transgression; invasion; encroachment.

(*Patent Law.*) The act of trespassing upon the incorporeal right secured by a patent. Any person who, without legal permission, shall make, use, or sell to another to be used, the thing which is the subject-matter of any existing patent, is guilty of an infringement, for which damage may be received at law by an action on the case, or which may be remedied by a bill in equity for an injunction and an account. — See PATENT.

Infring'er, *n.* One who violates, infracts, or infringes.

Infruc'tuous, *a.* Unfruitful; unyielding of fruit; barren; unprofitable.

Infru'gal, *a.* Wanting frugality; prodigal; extravagant.

Infrugif'erous, *a.* [Prefix *in*, and *frugiferous.*] Not producing fruit.

In'fucate, *v. a.* [Lat. *infucare.*] To daub, dye, stain, or paint.

Infuca'tion, *n.* Act or art of painting, staining, or dyeing, — more particularly of painting or enamelling the face.

In'fumate, *v. a.* To smoke-dry; to cure in smoke.

Infuma'tion, *n.* [From Lat. prefix *in*, and *fumare*, from *fumus*, smoke.] The act of drying or curing in smoke.

Infumed', *a.* Smoked; smoke-dried.

Infundib'ular, Infundib'ulate, *a.* [From Lat. *infundibulum*, a funnel.] Possessing the form of a funnel or tundish.

Infundibu'liform, *a.* [From Lat. *infundibulum.*] Funnel-shaped; having the form of a tundish; infundibular.

(*Bot.*) Applied to a gamopetalous corolla, when the tube enlarges very gradually below, but expands widely at the summit, as that of Tobacco, *Nicotiana tabacum* (Fig. 1385).

(*Conch.*) Noting a shell whose horizontal sections are circular, at first equal and then progressing larger and larger.

Fig. 1385.
FLOWER OF TOBACCO.

Infurca'tion, *n.* [Lat. prefix *in*, and *furca*, fork.] A forked divergence.

Infu'riate, *a.* [L. Lat. *infuriatus.*] Enraged; mad; raging; furiously wrathful; raving with anger.

—*v. a* [Lat. *in*, and *furiatus*, pp. of *furio*, to madden, from *furo*, to rave.] To madden; to enrage; to render furious or madly excited: as, an *infuriated* man, an *infuriated* bull.

Infus'cate, *v. a.* [Lat. *in*, and *fuscare*, to make dark.] To darken; to make obscure or gloomy; to blacken.

Infusca'tion, *n.* The act or process of darkening or blackening.

Infuse, (*-fūz',*) *v. a.* [Fr. *infuser*; Lat. *infundo*, *infusus* — *in*, and *fundo*, to pour. See FUSE.] To pour in or into, as a liquid. — To instil, as principles, qualities, or properties; to pour in or instil, as into the mind; to inspire with; to introduce. — To inspirit: to animate; to enliven or inspire with. — To steep in any liquor with a gentle, simmering heat; to macerate so as to extract the virtues or medicinal properties of, without boiling.

Infus'er, *n.* One who infuses.

Infusibil'ity, *n.* [See INFUSE.] State or quality of being infusible.

—[Prefix *in*, and *fusibility*, q. v.] Quality of incapability of being infused or dissolved.

Infus'ible, *a.* [From *infuse.*] That may be infused; as, *infusible* doctrines.

—[Prefix *in*, and *fusible.*] Not fusible; that cannot be infused, dissolved, or melted; proof against fusion; as, an *infusible* crucible.

Infusion, (*-fū'zhun,*) *n.* [Fr.; Lat. *infusio.*] A pouring in or into; act of pouring in or instilling; instillation; inspiration; as, the *infusion* of correct principles into the mind of youth. — That which is infused or introduced; suggestion.

"Here his folly and his wisdom are of his own growth, not the echo or *infusion* of other men."—*Swift.*

(*Pharmacy.*) A solution of some of the principles of vegetables, generally in water, but sometimes in other vehicles. Either hot or cold water may be employed, according to the particular infusion required. The digestion, however, must be longer when cold water is used. The vegetable substances may be either fresh or dried. When fresh, they must be cut in pieces; and when dry, bruised or coarsely powdered. Water is then poured on the substance employed, and allowed to stand in a covered vessel for a space of time varying with the nature of the vegetable matter. It is afterwards strained, and is then fit for use. Infusions are liable to spoil soon, especially when made with warm water, or if the substance be of a fermentable nature. To assist in keeping the infusion, or to increase its powers, alcohol is sometimes added after straining. Wholesale chemists are now accustomed to prepare concentrated infusions for the use of general practitioners. These can be diluted to the ordinary strength at the time of using them, and not only possess the advantage of keeping better, but save much trouble and loss of time.

(*Med.*) Act of introducing medicinal substances by injection with a kind of syringe; as, to *infuse* new blood into the veins.

Infu'sive, *a.* Having the quality or capacity of infusion. (R.)

Infuso'ria, *n. pl.* [Fr. *infusoires*, from N. Lat. *infundere.*] (*Zoöl.*) A group of very minute animalcules (Fig. 131), inhabiting stagnant water, fresh or salt, in which plants are growing, or in which an abundance of decayed animal or vegetable matter is contained. The invention of the microscope revealed the existence of myriads of living creatures, whose presence, up to that time, was unsuspected; and by its means we are able to perceive that a drop of water, though apparently perfectly clear to the naked eye, is really swarming with living beings. Species have been described from $\frac{1}{500}$ to $\frac{1}{2000}$ of a line in length. They are, indeed so extremely minute in size, that it is calculated that a moderate-sized drop of water may contain 500,000,000 of them. The *I.* are of very simple organization, as they have neither vessels nor nerves, are not symmetrical, have no distinct sexes, have no visible eggs, and are without determined or apparent digestive cavities. Their chief organs seem to be internal spherical cavities, frequently containing foreign particles derived from the surrounding water, and supposed to serve as food. Some of them, instead of swimming freely, like most of this class, are found adhering together in masses, sometimes affecting the most beautiful forms (Fig. 1386); others have either cilia or changeable processes, as they are called — expansions of the substance of the body. In most cases, the substance of the bodies of *I.* consists of a glutinous, homogeneous, or slightly granular, transparent mass. Red specks, resembling eyes, have been observed in some varieties; and by many zoölogists they are so considered, while others deny it, on account of the absence of any nervous system, and no appearance of any cornea or lens. The food of *I.* consists of decomposing vegetable and animal matter; and they frequently devour each other. They are the prey of other aquatic animals, and as soon as they accumulate in large quantities, contribute largely to the nourishment of more highly organized beings which are useful to man. This has been particularly observed in cold climates, where vegetable life ceases to exist in the ocean. *I.* are found to exist in these latitudes in inconceivable numbers, and form the principal nourishment of the fishes inhabiting those parts. Their mode of propagation is very remarkable. It consists in spontaneous division, which is either longitudinal or transverse; in gemmation, the buds arising from the posterior part of the body; in the incysted process, cysts forming, which, when they burst, liberate animalcules which do not resemble their parent in form; and also in alternation of generations. (See GENERATIONS, ALTERNATION OF.) *I.* frequently occur in such large numbers as to color large tracts of water. Some of these impart a blood-red hue to the water; others a blue color: while others tinge the surface with green. They can resist a temperature of 24° below freezing-point, and a degree of heat equal to 260°. — See ANIMALCULE.

Fig. 1386. — INFUSORIA.
a, zoöthamnium arbuscula, magnified 8 times; *b*, separate body of the same magnified 300 times.

Infuso'rial, Infu'sory, *a.* Relating or pertaining to, or consisting of, or containing, infusoria.

Infu'sory, *n.*; *pl.* INFUSORIES. An infusorial animal.

In'ga, *n.* (*Bot.*) A genus of S. American trees, belonging to the order *Fabaceæ*, sub-order *Mimoscæ*, tribe *Acacieæ.* They have pinnated leaves, and in many cases handsome flowers. The white pulp contained in the pods of *I. Feuillei* is eaten in Peru, as is that of *I. spectabilis* and others in Panama, while that of the West Indian *I. vera* is purgative.

In'gate, *n.* (*Founding.*) The orifice through which the metal is poured into a mould.

In'gathering, *n.* A gathering in; act or occupation of getting in the crops and fruits of the earth; a harvesting.

"Thou shalt keep the feast of *ingathering.*"—*Exod.* xxiii. 16.

Ingel'able, *a.* [Lat. *ingelabilis.*] That cannot be congealed.

Ingemann, (*in'gā-man,*) BERNHARD SEVERIN, a distinguished Danish poet and novelist, b. in the island of Falster, 1789. His best lyrical production is the epic poem of *Valdemar den Store og Hans Mänd* (1824). Of his historical novels, written in imitation of Sir Walter Scott, and which were exceedingly popular in Denmark, the two best are *Valdemar Seier* (1826), and *Erik Menved's Barndorn* (1828). *I.* wrote also numerous tragedies, some of which have maintained their place on the national stage. His collective works have been published in 38 vols. (1857, Copenhagen). D. 1862.

Ingem'inate, *v. a.* [Lat. *ingemino.*] To double; to repeat; to reiterate.

—*a.* Redoubled; repeated.

Ingemina'tion, *n.* Reduplication; repetition; iteration.

Ingen'der, *v. a.* Same as ENGENDER, *q. v.*

Ingenerabil'ity, *n.* Incapacity of being produced or engendered.

Ingen'erable, *a.* [Lat. *in*, and *generabilis* — *generare*, to generate.] Insusceptible of generation or production

Ingen'erably, *adv.* In an ingenerable manner.

Ingen'erate, *v. a.* [Lat. *ingenerare.*] To generate or bring into internal being.

"Noble habits *ingenerated* in the soul, as religion, obedience gratitude."—*Hale.*

—*a.* Inwardly generated; innate; inborn; inbred; as, "*ingenerate* qualities of nature."—*Bacon.*

Ingenera'tion, *n.* Act of ingenerating or inwardly producing.

Inge'nio, *n.* [Sp.] In Cuba, &c., the name given to a sugar-house, or mill for bruising canes and boiling the juice.

Ingenious, (*in-jēn'yus,*) *a.* [Fr. *ingénieux;* Lat. *ingeniosus,* from *ingenium* — *in,* and *geno,* from *gigno,* to beget, to bring forth, to produce.] Gifted with genius; of good natural abilities; having the faculty of invention; — hence, by implication, prompt to devise, quick and skilful to invent, contrive, or combine; inventive; as, an *ingenious* artisan. — Proceeding from, belonging to, or characterized by genius, ingenuity, or inventive ability; of curious contrivance, design, structure, or mechanism; as, an *ingenious* model, an *ingenious* method, an *ingenious* piece of work. — Witty; characterized by fitness or adaptability; well-imagined; well-formed; as, an *ingenious* question.

Ingen'iously, *adv.* With ingenuity or readiness of contrivance; in an ingenious manner; characterized by inventive skill or adaptability.

Ingen'iousness, *n.* The quality of being ingenious or prompt in invention; ingenuity; curiousness of design or mechanism.

Ingenn'ity, *n.* [Fr. *ingénuité;* Lat. *ingenuitas,* from *ingenuus.* See INGENIOUS.] Quality, faculty, or power of ready skill or prompt invention; skill in contrivance; aptitude to conceive ideas, or to form new combinations of ideas; ingeniousness; as, the *ingenuity* characteristic of modern civilization. — Curiousness in design or mechanism; effect or result of ingenious ideas or combinations of ideas; as, the *ingenuity* of a scheme, plan, or system.

Ingenuous, (*in-jĕn'yu-us,*) *a.* [Lat. *ingenuus* — *in,* and *geno,* or *gigno.* See INGENIOUS.] Free-born; of honorable, as opposed to servile extraction; as, "*ingenuous* liberties." (*King Charles I.*) — Generous; noble; magnanimous; becoming honorable birth or extraction; as, "an *ingenuous* and noble ardour." (*Milton.*) — Becoming an honorable mind; free from reserve, dissimulation, hypocrisy, disguise, equivocation, or want of candor; open; free-hearted; frank; cordial; as, an *ingenuous* declaration.

Ingen'uously, *adv.* In a fair, frank, outspoken, or ingenuous manner; candidly; openly; without reserve, evasion, or equivocation.

Ingen'uousness, *n.* State or quality of being ingenuous, frank, fair, or outspoken; candor; absence of dissimulation, deception, or reserve.

Inger'minate, *v. a.* To cause to germinate or produce, as seed.

Ing'ersoll, CHARLES JARED, an American statesman, lawyer, and author, b. in Philadelphia, 1782, was the son of Jared *I.*, member of the convention which framed the U. S. Constitution. Charles Jared *I.* received a liberal education, which was completed by European travel. He was elected to Congress in 1812, and in 1814 advocated, in a powerful speech, the principle that "free ships make free goods." He was U. S. District Attorney for Pennsylvania from 1815 until 1829, and from 1840 to 1846 again represented his district in Congress. In 1847 President Polk appointed him Minister to France, but the Senate did not confirm the nomination. *I.* is the author of numerous works, the principal of which are: *Chiomara,* a poem (1800); *Edwy and Elgiva,* a tragedy (1801); *Inchiquin, the Jesuit's Letters* (1810); *Historical Sketch of the Second War between the U. States of America and Great Britain* (4 vols. 8vo., 1845–52). D. 1862.

Ingersoll, (*ing'ghur-sol,*) a town of Oxford co., prov. of Ontario, 19 m. due E. of London.

Ing'ersoll, in *Michigan,* a township of Midland county.

Inges'ta, *n.* [Lat. *in,* and *gerere, gestum,* to bear or carry.] (*Med.*) Whatever is taken into the body in the form of aliment; — the opposite of *egesta,* or those substances expelled from the system.

Ingestion, (*-jĕst'yun,*) *n.* [Lat. *ingestio.*] Act of taking or casting into the stomach; as, the *ingestion* of food.

Ingham, (*ing'am,*) in *Iowa,* a post-township of Franklin co.

Ingham, in *Michigan,* a S. central co.; *area,* about 560 sq. m. *Rivers.* Grand River, and Red Cedar and Sycamore creeks. *Surface,* generally level; *soil,* fertile. *Min.* Coal and iron. Lansing, the cap. of the State, is situated in the N.W. part of this co. *Cap.* Mason. *Pop.* (1894) 39,689.

—A township of Ingham co.

—Or INGHAM CENTER, a village of Ingham co.

Ingirt', *v. a.* To engird; to encompass; to encircle; to surround.

—*p. a.* Same as ENGIRT, *q. v.*

Ingle, (*ing'gl,*) *n.* [Corn. *engel,* fire.] A fire; also, a fireplace or chimney-corner. (Used chiefly in Scotland.)

"His wee bit *ingle,* blinkin' bonnily." — *Burns.*

Inglo'bate, *a.* [Lat. prefix *in,* and *globus,* globe.] In a globular or spherical form; — applied to the circular gravitation of nebulous matter.

Inglo'rious, *a.* [Fr. *inglorieux;* Lat. *inglorius.*] Not glorious; without producing or imparting honor, glory, or credit; not bestowing reputation, fame, or celebrity; as, an *inglorious* peace. — Disgraceful; covering with shame, odium, or ignominy; as, an *inglorious* panic caused the troops to retreat.

Inglo'riously, *adv.* In an inglorious or ignominious manner; disgracefully; shamefully.

Inglo'riousness, *n.* Lack of glory; state of being inglorious; absence of fame, celebrity, or reputation.

Inglnvies, (*-glū'vi-eez,*) *n.* [Lat.] (*Zoöl.*) The crop, or dilatation of the œsophagus, in which the food is accumulated and macerated, but not digested. It is largest in the Gallinaceous birds, and pigeons, but exists in certain birds of prey; also in the flamingo, and others.

In'-going, *n.* A going in; act of entrance, opposed to *out-going.*

—*a.* Entering in, as into a house or occupation.

Ingolstadt, (*in'gol-statt.*) [Anc. *Aurentum,* the golden city.] A town and fortress of Upper Bavaria, on the Danube, 35 m. S.W. from Ratisbon. Its fortifications, demolished in 1820, have since been rebuilt stronger than they were before. Its university, once celebrated, was removed to Munich in 1826. *Manuf.* Woollen and linen cloths, gunpowder, playing-cards, potash, &c. *Pop.* 11,446.

Ingorge, (*-gōrj',*) *v. a.* See ENGORGE.

In'got, *n.* [Fr. *lingot;* A.S. *geotan;* D. *gieten;* Ger. *giessen;* Sansk. *chut,* to pour out. See GUSH and JET.] A mass or wedge of gold, silver, tin, copper, or other metal, cast in a mould; also, a mass, wedge, or bar of unwrought metal. — Anciently, it was the common form and manner of carrying specie, and as each ingot was of a definite weight and consequent value, they could either be used in exchange, or coined by the rude process then in vogue for minting money. The ingot varied in value according to the nation that manufactured it; the Chaldean or Babylonic ingot of silver weighed 7 lbs. 11 ozs. 14 dwts. 17 grs.

Ingouville, (*ang'oo-veel,*) a town of France, dep. Seine Inférieure, about half a mile from Havre, of which it may be said to be a suburb. Its form is amphitheatrical, and it contains many fine villas belonging to the merchants of Havre. *Pop.* 13,512.

Ingraft', *v. a.* [*In,* and *graft.* See GRAFT.] To insert as a scion of one tree, shrub, or plant, into an incision made into another, for propagation; to propagate by incision; hence, by implication, to insert; to introduce; to implant something foreign into that which is native, for the purpose of propagation; as, to *ingraft* a cherry-tree. — To exercise the operation or process of grafting. — To set in, or fix deeply, firmly, and steadfastly.

Ingraft'er, *n.* One who ingrafts.

Ingraft'ing, *n.* (*Arboriculture.*) See GRAFTING.

Ingraft'ment, *n.* Act of ingrafting, or propagating by incision. — The scion, sprig, or thing ingrafted.

In'graham, in *Illinois,* a post-office of Clay co.

Ingraham, in *Iowa,* a township of Mills co.

Ingraham, in *New York,* a post-office of Clinton co.

Ingrain', *a.* Dyed in the grain; thoroughly worked in, as color.

Ingrain carpet, a double or two-ply carpet. — *Triple ingrain carpet,* a three-ply carpet.

In'grain, Engrain', *v. a.* To work into the grain or natural texture; to impregnate thoroughly. "Fields *ingrained* with blood." (*Daniel.*) — To dye in the grain or in the raw material.

In'grate, Ingrate'ful, *a.* [Lat. *ingratus.*] Ungrateful; unthankful; unmindful of benefits received; as, "*ingrate* forgetfulness." (*Shaks.*) — Unpleasing to the sense; as, "*ingrateful* food." — (*Milton.*)

In'grate, *n.* An ungrateful, thankless person.

Ingrate'fully, *adv.* Ungratefully; thanklessly.

Ingrate'fulness, *n.* Want of gratitude.

Ingratiate, (*in-grā'shi-āt,*) *v. a.* [L. Lat. *gratio, gratiatus,* to thank; Lat. *in,* and *gratia,* favor, grace. See GRACE.] To insinuate one's self into the favor or good graces of another; to commend one's self into another's good-will, confidence, or kindness; to bring into favor; — used in a reflexive sense, and preceding *with* before the person whose good offices are sought.

"Politicians who would rather *ingratiate* themselves *with* their sovereign than promote his real service." — *Spectator.*

Ingrat'itude, *n.* [Fr.; Lat. *ingratitudo.*] Want of gratitude or sensible expression of good-will and kindness for benefits or favors received; absence of appreciation of favors; manifestation of lack of disposition to return or respond to acts of kindness received; unthankfulness.

Ingre'dient, *n.* [Fr.; Lat. *ingrediens,* from *ingredior* — *in,* and *gradior,* to go, to step, to walk. See GRADE.] That which enters into a compound body, or is a component part of any mixture, or body consisting of different materials; an element; a constituent; a component.

"Parts, knowledge, and experience, are excellent *ingredients* in a public character."—*Rogers.*

Ingres, JEAN DOMINIQUE-AUGUSTE (*ăngr,*) a French historical painter, and, in the opinion of the French, the most eminent painter of our time, b. at Montauban, 1781. He studied under David, and subsequently went to Rome. Here he resided for fifteen years, after which he spent four years in Florence, by which time his fame was so well established that he was called to the School of Fine Arts in Paris as the successor of Dénon, and succeeded Horace Vernet, in 1829, as Director of the Academy at Rome. *I.* occupies a middle place between the classical and romantic schools, and is chiefly remarkable for correct design, ideal composition, and sober painting. His best known pictures are *Jupiter and Thetis,* a *Woman in the Bath, Ossian's Sleep, Raphael and the Fornarina, The Sistine Chapel, The Vow of Louis XIII.* (regarded by many as his *chef d'œuvre*), *The Birth of Venus Anadyomene, Jesus Disputing with the Doctors, Racine in his Court-Dress, Jeanne D'Arc at the Coronation of Charles VII., Stratonice, Portrait of Cherubini,* and *La Source.* At the Paris Exhibition of 1855 *I.* had a whole salon to himself; and at the Great English Exhibition at Brompton, in 1862, his picture *La Source,* painted when he was eighty years old, excited more interest and admiration than any other single picture in that rich and varied collection. *I.* was made Grand Officer of the Legion of Honor in 1855, and was raised to the dignity of Senator in 1862. D. 1867.

In'gress, *n.* [Lat. *ingressus,* from *ingredior.*] A going or entering into; entrance. — Means of entrance or access; power of entering; as, all *ingress* was debarred.

(*Astron.*) The moon's entrance into the earth's shadow in eclipses; and the sun's entrance into a sign, especially Aries.

Ingress, Egress, and *Regress.* (Law.) Words frequently used in leases to express the right of the lessee to enter, go upon, and return from the lands in question.

Ingress', *v. n.* To enter; to go in; to have access.

Ingression, (*-grĕsh'un,*) *n.* [Lat. *ingressio.*] Act of entering; entrance.

In'grians, *n. pl.* A tribe in the Russian government of St. Petersburg, belonging to the Karelian branch of the Finns, now reduced to about 18,000, in about 200 small and wretched villages.

Ingross', *v. a.* Same as ENGROSS, *q. v.*

Inguinal, (*ing-gwi'nal,*) *a.* [Lat. *inguen,* the groin.] Pertaining or relating to the groin; — a surgical term for a gland, ligament, and vessel in that neighborhood; and also for a kind of rupture called *inguinal hernia.*

In'gul, a river of Russia, rises in the govt. of Kherson, and, after a course of 170 m., joining the Bay at the town of Nikolaiev.

Ingulf, *v. a.* [Also written *engulf.*] To swallow up in a vast or deep gulf, whirlpool, or abyss; to overwhelm by ingurgitating.

"The river . . *ingulfs* their whole militia." — *Phillips.*

—To cast or draw into a gulf or deep place.

Ingulf'ment, *n.* State of being ingulfed; a swallowing up in a gulf, abyss, or vortex.

Ingur'gitate, *v. a.* [Fr. *ingurgiter;* Lat. *ingurgito.*] To ingulf; to swallow up. — To swallow or absorb greedily, or in large quantity.

Inhab'it, *v. a.* [Lat. *inhabito* — *in,* and *habito,* to dwell in a place, from *habeo,* to have.] To abide, live, or dwell in; to occupy and hold as a place of fixed residence; as, men *inhabit* cities.

—*v. n.* To dwell; to live; to abide.

"Learn what creatures there *inhabit.*" — *Milton.*

Inhab'itable, *a.* [Lat. *inhabitabilis.*] Habitable; that may be inhabited.

Inhab'itance, Inhab'itancy, *n.* Condition of being an inhabitant; residence; habitancy.

Inhab'itant, *n.* [Lat. *inhabitans.*] One who resides permanently in a place; one who has a fixed dwelling or place of abode, as distinguished from a casual visitor or temporary sojourner.

(*Law.*) One who has his domicil, or an actual fixed residence, in a place.

Inhabita'tion, *n.* [Lat. *inhabitatio.*] Act of inhabiting; state of being inhabited. — Abode; place of residence; dwelling.

Inhab'itativeness, *n.* (*Phren.*) An organ supposed to indicate the desire of permanence in place of abode.

Inhab'iter, *n.* One who inhabits; an inhabitant; a dweller.

Inhab'itress, *n.* A female inhabitant or resident. (R.)

Inhala'tion, *n.* [Lat. *inhalatio.*] Act of inhaling or drawing into. — That which is inhaled.

(*Med.*) The drawing of air, gases, or vapors into the lungs. Many substances are medicinally applied in this form, by means of an *inhaler,* an instrument so contrived as to admit of the inhalation of a variety of vapors mixed more or less with atmospheric air. The steam of hot water, the vapor of tar, of ether, of chloroform, of iodine, chlorine, &c., may be thus administered.

Inhale', *v. a.* [Lat. *inhalo* — *in,* and *halo,* to breathe.] To draw into the lungs; to inspire; as, to *inhale* air; — correlative of *exhale,* q. v.

Inhal'ent, *a.* Employed for inhaling.

Inhal'er, *n.* One who, or that which, inhales. — An apparatus used for inhalation of any vapor or volatile matter for medicinal requirements. — A respirator for protecting the lungs from the inhalation of damp or mephitic air.

Inhambupe, (*een-yam-boo'pa,*) a town of Brazil, abt. 90 m. N.N.E. of Bahia.

Inhance', *v. a.* Same as ENHANCE, *q. v.*

Inharmon'ic, Inharmon'ical, *a.* (*Mus.*) Inharmonious; discordant; dissonant; unmusical.

Inharmo'nious, *a.* Unmusical; discordant; wanting harmony.

Inharmo'niously, *adv.* Without harmony; discordantly.

Inharmo'niousness, *n.* Quality of being inharmonious.

Inhar'mony, *n.* Want of harmony; discord. (R.)

Inhauma, (*een-you'ma,*) a village of Brazil, about 8 m. N.E. of Rio Janeiro; *pop.* 2,000.

Inhearse', *v. a.* To enclose in a hearse, coffin, or funeral monument.

Inhere', *v. n.* [Lat. *inhæreo* — *in.* and *hæreo,* to hang or hold fast; to stick.] To exist or be fixed in something else.

Inher'ence, Inher'ency, *n.* [Fr. *inhérence,* from L. Lat. *inhærentia,* from Lat. *inhærens.*] Existence in something; a fixed state of being in another body or substance.

Inher'ent, *a.* [Fr. *inhérent;* Lat. *inhærens.*] Existing in something else, so as to be inseparable from it. — Naturally pertaining to; innate; inborn; natural; inbred; inwrought.

Inher'ently, *adv.* By inherence.

Inher'it, *v. a.* [Lat. *in,* and *hæres, hæredis,* an heir, Fr. *hériter.*] To take by descent from an ancestor; to receive by nature from a progenitor.—To enjoy; to take as a possession by gift.

—*v. n.* To take, or have possession of, as property.

Inheritabil'ity, *n.* Quality of being inheritable.

Inher'itable, *a.* That may be inherited; transmissible or descendible from the ancestor to the heir; that may be transmitted from the parent to the child; capable of taking by inheritance, or of receiving by descent

Inher'itably, *adv.* By inheritance.

Inher'itance, *n.* (*Law.*) That which is inherited; an estate derived from an ancestor by an heir by succession; the estate or possession which may descend to an heir; an estate given or possessed by donation or divine approbation. — The reception of an estate by hereditary right, or the descent by which an estate or title is cast on the heir; possession.

Inher'itor, *n.* One who inherits or may inherit.

Inher'itress, or **Inheritrix,** *n.* An heiress; a female who inherits, or is entitled to inherit after the death of an ancestor.

Inherse', *v. a.* Same as **Inhearse,** *q. v.*

Inhe'sion, *n.* [Lat. *inhæsio.*] The act of inhering; inherence.

Inhib'it, *v. a.* [Lat. *inhibeo, inhibitus* — *in,* and *habeo,* to have, to hold. See **Have.**] To restrain; to hinder; to check or repress.

—To forbid; to prohibit; to interdict.

Inhibi'tion, *n.* [Fr.; Lat. *inhibitio.*] A restraining. — Restraint; embargo; prohibition.

Inhib'itory, *a.* Prohibiting; prohibitory.

Inhive', *v. a.* To put into a hive; to hive.

Inhoop', *v. a.* To confine in an enclosure.

Inhos'pitable, *a.* Not disposed to entertain strangers gratuitously; affording no conveniences, subsistence, or shelter to strangers.

Inhos'pitableness, *n.* Quality of being inhospitable.

Inhos'pitably, *adv.* Unkindly to strangers; not hospitably.

Inhospital'ity, *n.* Want of hospitality or kindness to strangers.

Inhu'man, *a.* [Fr. *inhumain;* Lat. *inhumanus.*] Destitute of the kindness and tenderness that belongs to a human being; marked with cruelty; cruel; unfeeling; merciless; savage; barbarous.

Inhuman'ity, *n.* [Lat. *inhumanitas.*] Cruelty of disposition; savageness of heart; cruelty in act; barbarity.

Inhu'manly, *adv.* With cruelty; barbarously.

Inhu'mate, *v. a.* [Fr. *inhumer.*] To bury: to inhume. (R.)

Inhuma'tion, *n.* [Fr.; Lat. *inhumatio.*] Act of inhuming or burying in the earth; interment; sepulture.

(*Chem.*) A method of digesting substances by burying the vessel containing them in warm earth.

Inhume', *v. a.* [Lat. *inhumo* — *in,* and *humo,* to inter, to bury, from *humus,* the earth, the ground.] To inter; to deposit in the earth; to bury.

Inia, *n.* (*Zoöl.*) One of the few Cetacea which inhabits fresh water. It belongs to the family *Delphinidæ;* is the only one known species of its genus, and in form

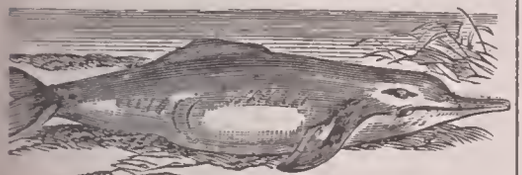

Fig. 1387. — INIA COLIVIENSIS.

resembles a dolphin with a long and slender snout. It is found in the upper tributaries of the Amazon, and is from 7 to 14 ft. long. It is pursued for the sake of the oil which it yields.

Inimag'inable, *a.* Unimaginable.

Inimi'cal, *a.* [Lat. *inimicalis,* from *inimicus* — *in,* and *amicus,* a friend.] Unfriendly; having the disposition or temper of an enemy; hostile; adverse; hurtful; repugnant.

Inimical'ity, *n.* State of being inimical. (R.)

Inimi'cally, *adv.* In a hostile manner.

Inimitabil'ity, *n.* Quality of being inimitable.

Inim'itable, *a.* [Fr.; Lat. *inimitabilis.*] That cannot be imitated or copied; surpassing imitation.

"The portal shone *inimitable* on earth."—*Milton.*

Inim'itableness, *n.* Inimitability.

Inim'itably, *adv.* In a manner not to be imitated; to a degree beyond imitation.

Ini'on, *n.* [Gr.] (*Anat.*) The ridge of the occiput.

Iniq'uitous, *a.* Characterized by iniquity; wicked; unjust; unrighteous; criminal.

Iniq'uitously, *adv.* Injuriously; unjustly; wrongfully.

Iniq'uity, *n.* [Fr. *iniquité;* Lat. *iniquitas,* from *iniquus,* unequal — *in,* and *æquus,* equal, *q. v.*] Injustice; unrighteousness; a deviation from rectitude; a want of uprightness in principle.

—A *sin* or crime; wickedness; any act of injustice.

Inirritabil'ity, *n.* [*in,* priv., and *irritability.*] Good-nature; placability.

Inir'ritable, *a.* Not irritable; good-natured.

Inir'ritative, *a.* Not accompanied with excitement; mild.

In'is, Inn'is. [Perhaps from Lat. *insula,* an island.] An Irish word signifying island, used as a prefix to the names of some islands on the coast of Ireland, and of several towns situated on lakes or rivers in the same country; as, *Inisfallen, Innishowen,* &c. (Also written *Ennis.*)

Ini'tial, *a.* [Fr.; Lat. *initialis,* from *initium,* a going in, entrance; *in,* and *eo, itum,* to go. See **Itinerant.**] Beginning; incipient. — Placed at the beginning.

—*n.* The first letter of a word or name.

(*Law.*) Though in general it is usual and regular in all legal deeds and writings for a party to write his full Christian name and surname, yet in many cases, especially in documents of a mercantile nature, signature by initials will bind equally with the full signature.

Ini'tially, *adv.* In an incipient degree.

Ini'tiate, *v. a.* [Lat. *initio, initiatus.*] To begin upon; to instruct in rudiments or principles; to instruct; to acquaint with. — To introduce into any society or sect by instructing the candidates in its principles or ceremonies; to introduce into a new state or society.

—*v. n.* To do the first act; to perform the first rite.

—*a.* Begun; commenced; entered upon; now first admitted, introduced, or experienced.

—*n.* One who is initiated.

Initiation, (*in-ish-i-a'shon,*) *n.* [Fr.; Lat. *initiatio.*] Act or process of initiating. — Act or method of introducing one into a new society, by instructing him in its principles, rules, or ceremonies; act or process of making one acquainted with rudiments or principles before unknown; admission by application of ceremonies or use of symbols; as, *initiation* in the Order of Freemasons.

Initiative, (*in-ish'i-a-tiv,*) *a.* [Fr.] Serving to initiate; initiatory.

—*n.* In introductory or inceptive step or movement; as, to take the *initiative* in any line of conduct or business. — The right or power to originate; — used in relation to legislative enactments.

Ini'tiatory, *a.* Inceptive; introductory; preparatory; as, an *initiatory* measure. — Initiating; serving to initiate; as, an *initiatory* rite.

Ini'tiatory, *n.* An introductory rite or ceremony.

Inject', *v. a.* [Lat. *injicio, injectus* — *in,* and *jacio,* to throw or cast.] To throw, cast, or put in or into; as, to *inject* a clyster. — To cast on; to throw. (R.)

Injection, (*in-jĕk'shun,*) *n.* [Fr.; Lat. *injectio.*] Act of injecting, or of throwing or casting in or into.

(*Med.*) A fluid thrown into the body, either through the bowels, bladder, the ear, or into some tumor or abscess, after the contents have been discharged. Injections, when given for purgative purposes, are made of Glauber, or Epsom salts, dissolved in water, to which castor-oil is usually added; or they may be made by adding turpentine or assafœtida to warm gruel, and throwing it up the bowels by means of an apparatus called an *enema syringe.* The old name for *I.* was glyster, or clyster; the term most generally used now for such an operation is *lavement,* or enema.

I. cock. (*Mach.*) The stop-cock in the ejection-pipe, for shutting off the supply of cold water used for the condensation of steam. — *I. pipe,* the pipe through which the injection water passes to the condenser; in a steam-vessel the injection-pipe is open to the sea, at the bottom of the vessel.

Inject'or, *n.* See **Section II.**

Injel'ly, *v. a.* To lay in jelly; or place as if in jelly. (Rarely used).

Injoin', *v. a.* See **Enjoin.**

Injoint', *v. a.* To joint; to fasten or attach together as with joints.

Injudicial, (*-dish'al,*) *a.* Not according to legal forms. (R.)

Injudicious, (*-dish'us,*) *a.* [Fr. *injudicieux.*] Not judicious; lacking judgment; acting without wisdom or judgment; as, an *injudicious* adviser. — Opposed to sound judgment, sense, or discretion; indiscreet; inconsiderate; incautious; unwise; imprudent; as, an *injudicious* step.

Injudi'ciously, *adv.* In an unwise or injudicious manner.

Injudi'ciousness, *n.* State or quality of being injudicious, unwise, or imprudent.

Injunction, (*in-jungk'shon,*) *n.* [Fr.; Lat. *injunctio* — *in,* and *jungo,* to join. See **Enjoin.**] Act of enjoining, exhorting, or commanding. — Command; order; mandate; precept.

(*Law.*) A writ which issues under the seal of a court of equity, in order to restrain proceedings in other courts, &c. Injunctions are usually divided into common and special, the former being granted to restrain proceedings in a court of law; the latter being granted to restrain the negotiation of notes and bills of exchange, the sale of land, the sailing of a ship, transfer of stock, &c. In fact, the variety of cases is endless in which a court of equity grants relief to a plaintiff, in restraining the commission or the continuance of some act of the defendant.

In'jure, *v. a.* [Fr. *injurier;* Lat. *injurior,* from *injuria* — *in,* and *jus, juris,* right, law, justice. See **Jurist.**] To act towards contrary to justice, right, or equity; to harm; to wrong; to hurt or wound, as the person; to impair soundness; to damage or lessen the value of; to slander, tarnish, deteriorate, or diminish; to annoy; to give pain to; to grieve; to hurt or weaken; to violate; to make worse; as, to *injure* one's person, property, principles, feelings, reputation, health, &c.

In'jurer, *n.* One who inflicts a wrong, harm, or injury.

Inju'rious, *a.* [Fr. *injurieux;* Lat. *injurius.*] Wrongful; unjust; hurtful, pernicious, or prejudicial to the rights or interests of another; as, an *injurious* report. — Hurtful or detrimental to one's health, feelings, pocket, or reputation; affecting with damage or loss; mischievous; baneful; as, *injurious* effects. — Lessening or tarnishing credit or reputation; detractory; calumnious; as, an *injurious* insinuation, an *injurious* appellation.

Inju'riously, *adv.* In an injurious or harmful manner; wrongfully; mischievously; hurtfully.

Inju'riousness, *n.* State or quality of being injurious; harm; injury.

In'jury, *n.* [Fr. *injure;* Lat. *injuria.* See **Injure.**] Any wrong, hurt, or damage done to a man's person, rights, reputation, or goods; any diminution of that which is good, valuable, or advantageous; detriment; damage; loss; injuriousness.

(*Law.*) Something done contrary to law, to the hurt of another person or his property. According to Blackstone, injuries or private wrongs are an infringement or privation of the private or civil rights belonging to individuals considered as individuals. He distributes the several modes of redress of private wrongs into three special species: first, that which is obtained by the mere act of the parties themselves, as reprisal, self-defence, arbitration; secondly, that which is effected by the mere act and operation of law, as retainer, remitter; and thirdly, that which arises from suit or action in courts, which consists in a conjunction of the other two, the act of the parties co-operating with the act of law; the act of the parties being necessary to set the law in motion, and the process of the law being in general the only instrument by which the parties are enabled to procure a certain and adequate redress.

Injus'tice, *n.* [Fr.; Lat. *injustitia* — *in,* and *justitia.* See **Justice.**] That which is contrary to equity, right, or justice; iniquity; wrong; any violation of another's rights; the withholding from another merited praise, or ascribing to him unmerited blame.

Ink, (*ink,*) *n.* [Dn. *inkt;* Fr. *encre.*] The basis of writing-ink is gallotannate of iron. It is generally made by mixing gall-nuts, sulphate of iron, and gum-arabic in different proportions. The following receipt gives an excellent ink, black, fluent, and permanent. Digest three-quarters of a pound of bruised nut-galls in a gallon of cold water, then add six ounces of sulphate of iron, and an equal weight of gum-arabic, and four or five drops of creosote as an antiseptic. Let the mixture digest for three or four weeks, shaking it up now and then, after which decant the clear fluid. Ink long exposed to moisture and to the atmosphere turns brown, through becoming converted into peroxide of iron. The writing of documents which has become yellow and pale from age, may be restored by passing over it, with a fine brush, a solution of gall-nuts, which, uniting with the iron, re-forms a black gallotannate. Ink-stains submitted to the action of an alkaline carbonate during washing become converted into spots of yellow peroxide, or iron-moulds. These may be removed by dissolving the iron oxide with an acid that will not attack the fibre of the cloth, such as oxalic acid, a weak solution of hydrochloric acid, and several others. *Blue ink* is now frequently used; it is sometimes made from indigo, and sometimes from Prussian blue. *Red ink* may be made by infusing Brazil wood, cut into small pieces, for two or three days in weak vinegar. The infusion may then be boiled with the wood for an hour, and afterwards strained and thickened slightly with gum-arabic and sugar: a little alum improves the color. A decoction of cochineal, with a little liquid ammonia, forms a beautiful red ink, but the color is not permanent. *Indian ink* consists of cakes made of lamp-black and size, or animal glue. The Chinese, however, in manufacturing this ink, do not use animal glue, but vegetable juices, which render it more brilliant and lasting. When Indian-ink is prepared with the best lamp-black, levigated with the finest gelatine, or solution of glue, it forms an ink of good color, but wants the shining fracture and permanency of Chinese ink. Indian ink is used in Europe for designs in black and white, in which it possesses the advantage of being able to afford gradations of tone according to the degree of its dilution with water. *Marking inks* are of various kinds, and are used for marking linen. They generally consist of solutions of nitrate of silver. In some cases the fabric to be marked is previously moistened with an alkaline solution. By this means, oxide of silver is precipitated upon, and combines with the cloth when it is written upon, so as scarcely to be removed by a reagent. *Sympathetic inks* are such as are invisible until heat or some other power is employed to develop them. Hellot's sympathetic ink consists of chloride of cobalt The letters are invisible till the paper on which they are written is held to the fire; when the water evaporates, and the letters appear green. *Printing ink* consists essentially of a mixture of lamp-black, finely-divided carbon, and oil. The qualifications of a good printing ink are: — 1. that it should distribute freely and easily, and work sharp and clean; 2. that it should not have too much tenacity for the type, but should have a much greater affinity for the paper, and so come off freely upon it; 3. it ought to dry almost immediately on the paper, but not dry at all upon the type or rollers; this is particularly necessary in newspaper printing; 4. it should be able to withstand all the effects of time and chemical re-agents, and should never change color. The quality of the linseed oil employed, and even the character of the seed from which the oil is obtained, requires great attention. In making printing-ink, the linseed oil is first clarified from all fatty matters, and the pure oil is boiled at a carefully regulated temperature. During the boiling, the best pale yellow soap is added, and the required driers are then mixed with it. The best lamp-black is obtained from the smoke of naphtha, the combustion of which has been regulated with care. This black is ground up intimately with the drying oil, which has assumed almost the character of a varnish, and the ink is complete.

Ink, *v. a.* To black, daub, or stain with ink; as, to *ink* types, to *ink* one's fingers.

Ink'-bag, *n.* A bag containing a fluid like ink, in cuttle-fishes.

Ink'-blurred, (*-blurd,*) *a.* Smudged, blurred, or stained with ink; as, an *ink-blurred* writing.

Ink'erman, in *W. Virginia*, a post-office of Hardy co.

Inkermann, (*in'ker-măn,*) a village of Russia, in the S. of the Crimea, govt. of Taurida, 33 m. from Simferopol. During the Crimean war, the Russians, nearly 50,000 strong, assailed the weakest part of the English position facing the harbor of Balaklava and the caverns of Inkermann, Nov. 5, 1854. For six hours, 8,000 British troops encountered at various points, and resisted, the assault of this overwhelming force. The French came to the support of the English, and the Russians were driven back with great slaughter. The English loss amounted to 3,000, and that of the French to 1,726 men. The Russians lost abt. 12,000 in killed and wounded.

Ink'-fish, *n.* (*Zoöl.*) See SEPIADÆ.

Ink'horn, *n.* An inkstand; — so designated from its being anciently constructed of horn. — A portable case containing the necessary appliances for writing.

Ink'iness, *n.* State or condition of being inky.

Ink'ing, *p. a.* Covering or feeding with ink; as, *inking* type.

Inking-roller. (*Typog.*) A roller for spreading ink over types, wood-cut blocks, or engraved plates. — *Inking-trough,* or *table.* A table used to supply a roller with the requisite quantity of ink.

In'kle, *n.* Same as INCLE, *q. v.*

Inkling, (*ink'ling,*) *n.* [Probably from A. S. *ingan,* to go in, to enter, with the dimin. termination *ling.*] A hint or whisper; an intimation.

"Aboard a Corinthian vessel he got an *inkling* among the ship's crew of a conspiracy." — *L'Estrange.*

Inknit, (*in-nit',*) *v. a.* To knit in.

Ink'stand, *n.* A vessel or utensil for holding ink and implements for writing; — sometimes applied to an inkhorn or bottle.

Ink'y, *a.* Containing, consisting of, or resembling ink; having the properties of ink; black with ink; tarnished or besmirched with ink; as, *inky* water, *inky* hands, &c.

Inlace', *v. a.* To insert in, as lace; to ornament with something so as to imitate lacework.

Inlaga'tion, *n.* [L. Lat. *inlagatio.*] (*Law.*) Restoration to the protection of law.

Inlaid', *pp.* of INLAY, *q. v.*

In'land, *a.* Situate far into the land, that is, remote from the ocean; as, an *inland* sea. — Pertaining to the interior of a country; internal; — opposed to *coasting*; as, *inland* navigation. — Carried on within the limits of a country; domestic; — in this sense opposed to *foreign*; as, *inland* traffic. — Peculiar in direct application to a country; drawn and made negotiable or payable in the same country; as, an *inland* bill of exchange, *inland* revenue, &c.

—*n.* The interior or inner part of a country.

"They . . . shall defend our *inland* from the pilfering borderers." *Shaks.*

In'land, in *Iowa*, a township of Cedar co.

Inland, in *Michigan*, a post-township of Beuzie co.

Inland, in *Ohio*, a post-office of Summit co.

In'lander, *n.* A dweller in the interior of a country, or at a distance from the sea.

Inlard, *v. a.* See ENLARD.

Inlay', *v. a.* (*imp.* and *pp.* INLAID.) To lay, set, or place in; — hence, to diversify cabinet or other work by laying in thin slices or cubes of fine wood, ivory, pearl, mosaic, &c., on some other surface of wood or coarser material; to adorn with marquetry.

—*n.* Pieces of rare wood, ivory, mosaic, &c., inserted into another surface for adornment, ornament, &c.; marquetry-work.

Inlay'er, *n.* One who inlays, or works in marquetry.

Inlay'ing, *n.* (*Arts* and *Manuf.*) That branch of decorative art, applied chiefly to the manufacture of ornamented furniture, desks, work-boxes, &c. It is performed by cutting grooves in the surface of any material, and filling up the hollows thus produced with some substance of a different kind or color, so that a marked contrast may be obtained between the ground-work and the pattern that is inserted in it. Inlaying may be executed in any kind of hard wood, metal, tortoise-shell, ivory, horn, mother-of-pearl, &c., in the manner described, or by sawing out a pattern simultaneously in two veneers, or thin layers of wood, of different colors, that have been placed together for the purpose, and are afterwards glued to the surface of a piece of wood of inferior quality, the pattern that is cut out of each veneer fitting exactly in the space that is left in the others when the device has been sawn out and removed. This method resembles mosaic-work in some respects, but differs from it in this essential point, that the materials are not fitted together in such small pieces. (See MOSAIC-WORK.) Damaskeening is a species of inlaying in metals, in which the natives of the East are very skilful. (See DAMASKEENING.) Two kinds of inlaying, often seen in old pieces of furniture, called "Buhl-work" and "Reisner-work," took their names respectively from two cabinet-makers who practised the art in Paris, in the latter part of the 17th century. The former is the insertion of slips and scroll-work of brass into a ground-work of dark or clouded wood, and the latter, the insertion of a pattern, cut in ebony, into tulip-wood, or any other wood of a light color. In some specimens the effect of painting is produced by the use of a variety of pieces of wood of different colors. Inlaying, when applied to the formation of flooring, is called marquetry and parquetry. — See MARQUETRY, PARQUETRY.

Inleague, (*-lēēg',*) *v. a.* To form a league with; to enter into alliance with; to confederate; to unite; to coalesce; to combine.

In'let, *n.* A passage or place of ingress; an entrance; an opening into an inclosed place; way of access or admission.

"Doors and windows, *inlets* of men and of light." — *Wotton.*

—A recess in the shore of the sea, or of a lake or great river; a bay; a creek; a channel or strait between two islands.

"*Inlets* among broken lands or islands." — *Ellis.*

—Anything inlaid, inserted, or let in.

Inlight'en, *v. a.* Same as ENLIGHTEN, *q. v.*

Inlist', *v. a.* See ENLIST, the more correct orthography.

Inlock', *v. a.* To lock in, as one thing within another.

In'ly, *a.* [A. S. *inlic.*] Internal; secret; interior; as, "the *inly* touch of love." — *Shaks.*

—*adv.* Within; in the heart; secretly; internally; as, to be *inly* angered.

In'macy, *n.* State or condition of being an inmate. (R.)

In'man, in *Tennessee*, a post-village of Marion co., on Nash., Chat. & St. L. R. R. *Pop.* (1897) 600.

Inman'tle, *v. a.* To envelope or shroud, as in a mantle. (R.)

In'mate, *n.* A co-dweller with another in the same house or habitation; a fellow-lodger; a lodger; one who lives with a family, — hence, one admitted into an hospital, asylum, prison, &c.

—*a.* Received as a lodger or co-dweller. (R.)

Inmesh', *v. a.* To draw within meshes, as of a net.

Inmew', *v. a.* To inclose or immure, as in a mew or cage for hawks. (R.)

In'most, *a.* Deepest or farthest within; remotest from the surface or external part.

"You must . . . pierce the *inmost* bosom of the earth." — *Shaks.*

Inn, *n.* [A. S. *inn, inne,* a chamber, an inn, a house; Icel. *inni,* a house, from *win,* within. See INN.] A house within which travellers obtain shelter, lodging, and entertainment, for payment; an hotel; a tavern; a house of public entertainment; a hostelry.

"Shall I not take mine ease in mine *inn*?" — *Shaks.*

Inns of Court, in England, the name of four societies or colleges in London for the study of the law, entitling the students, when duly qualified, to be called to the bar. These are of the Inner Temple and Middle Temple, the ancient habitation of the Knights Templars; Lincoln's Inn, (originally the dwelling-house of Henry Lacy, Earl of Lincoln); and Gray's Inn, once the manor-house of Lord Gray, in the reign of Edward III. Besides the *four* Inns of Court, there are *eight* Inns of Chancery; three of them belong to the Inner Temple, namely, Clifford's, Clement's, and Lyon's Inn; one, New Inn, to the Middle Temple; two, Furnival's Inn and Thavies' Inn, belonging to Lincoln's Inn; and Barnard's Inn, belonging to Gray's Inn.

Inn, a river of Europe, rising in a lake at the foot of the Rhætian Alps, and forming the romantic valleys called the Upper and Lower Engadine. It traverses the Tyrol from west to east, and falls into the Danube at Passau. It is 280 m. in length.

Inn, *v. a.* To house; to put under shelter; to place under cover.

"He . . . gives me leave to *inn* my crop." — *Shaks.*

—To provide with lodging and entertainment.

Innate', *a.* [Lat. *innatus,* from *innascor* — *in,* and *nascor, natus,* to be born. See NATIVE.] Inborn; native; natural. — Constitutionally inherent in the intellect, as, distinct from the effects produced by experience.

(*Bot.*) Applied to anthers attached by their base to the very apex of the filament, turning neither inward nor outward.

(*Philos.*) *I. ideas* are such as are inborn, and belong to the mind from its birth. "These," says Descartes, "I have called innate in the same sense in which we say that generosity is innate in some families, or that certain diseases (as the gout or stone) are innate in others; not that the children of those families labor under such diseases in their mother's womb, but that they are born with a certain predisposition or faculty of contracting them." It is now generally agreed among philosophers, that the mind is originally constituted with its own fundamental laws of thought, which will inevitably cause it to develop only to certain effects, and that at the same time a certain external influence, a contact with the outward world, is absolutely necessary, without which it would not develop at all.

Innate'ly, *adv.* Naturally; inherently.

Innate'ness, *n.* State or quality of being innate.

Innav'igable, *a.* [Lat. *innavigabilis.* See NAVIGATE.] That cannot be navigated; impassable by ships or vessels; offering no means of navigation; as, an *innavigable* river.

Innav'igably, *adv.* In a condition not admitting of navigation.

In'ner, *a.* [Compar. of *in.*] Interior; further inward than something else; internal; — opposed to *outer*; as, an *inner* apartment. — Having relation or reference to psychological being or its phenomena.

"This . . . governs the *inner* man, the nobler part." — *Milton.*

—Obscure; difficult of perception or comprehension.

Innerlei'then, a village of Scotland, 6 m. from Peebles, and noted for its saline springs. It is the "St. Ronan's Well" of Sir Walter Scott.

In'nermost, *a.* [*Inner* and *most.*] Farthest inward; most remote or distant from the external part.

In'ner-post, *n.* (*Ship-building.*) A piece brought in at the fore-side of the main-post; and generally continued as high as the wing-transom, to seat the other transoms upon.

Innerva'tion, *n.* [Fr., from Lat. prefix *in,* and *nervus,* nerve.] The act or operation of strengthening the nerves; process of innerving.

(*Physiol.*) The nervous influence necessary for the maintenance of life and the functions of the various organs; — an influence of whose character and source we are ignorant. It seems to resemble the galvanic or electric agencies.

Inn'holder, Inn'keeper, *n.* A person who keeps an inn or house for the entertainment of travellers; an hotel-keeper; a taverner.

Inn'ing, *n.* [A.S. *innung.*] The ingathering or harvesting of grain.

(*Sports.*) In cricket, the name given to the turn of a player to go *in* with his bat to the wicket.

—*pl.* Lands wrested or recovered from the sea.

In'nis, a Celtic word signifying *island*; prefixed to the names of many parishes, towns, and islands in Ireland.

Innisbe'gil, or **Innisbig'gle,** an island of Irelaud, in Achill Sound, co. Mayo.

Innis'beg, the name of many islands on the coast of Ireland.

Innisboffin, or BOF'FIN, a parish of Ireland, on an islaud of the same name, in Connaught, co. Mayo abt. 3 m. N.N.W. of Claggan Point. It has an excellent harbor on the S. coast. Inuisboffin is also the name of many islands in the cos. of Donegal and Longford.

Inniscar'ra, an island of Ireland, on the coast of Ulster

Inniscat'tery, or SCATTERY, an island of Ireland, in the æstuary of the Shannon, abt. 2 m. S.S.W. of Kilrush, co. Clare; *area,* abt. 100 acres.

Innisfal'len, an island of Ireland, co. Kerry, in the Lower Lake of Killarney.

Innissherk'in, or SHERKIN, an island of Ireland, at the entrance of Baltimore Bay, co. Cork, in Munster; *pop.* 1,026.

Innisturk', an island of Ireland, in the Atlantic Ocean, off the coast of co. Mayo; *pop.* 500.

Innitency, *n.* [Lat. prefix *in,* and *niti,* to lean.] A pressure or leaning towards. (R.)

Inn'keeper, *n.* See INNHOLDER.

In'nocence, In'nocency, *n.* [Fr. *innocence*; Lat *innocentia.*] Harmlessness; freedom from any quality that can injure; innoxiousness. — Freedom from crime, sin, or guilt; untainted purity of heart and life; unimpaired integrity; moral blamelessness.

"Man's best companions, *innocence* and health." — *Goldsmith.*

—Simplicity of mind; deficiency of intellectual power verdancy; iguorance.

"We laugh . . . at the *innocence* of children." — *Temple.*

—Freedom from the guilt of a particular sin or crime; as he proved his *innocence.*

(*Bot.*) See HEDGOTIS.

In'nocent, *a.* [Fr.; Lat. *innocens* — *in,* and *nocens,* from *noceo,* to harm, hurt, or injure.] Harmless; inoffensive; innoxious; free from deleterious or injurious qualities; as, an *innocent* remedy. — Free from guilt; not having violated any law or committed any wrong; untainted with sin; pure; upright; blameless; spotless; as, an *innocent* child. — Lawful; proper; permitted; as, an *innocent* amusement. — Free from the guilt of a particular crime, sin, or evil-doing; as, he is *innocent* of the charge brought against him. — Not contraband; sufferable; not liable to seizure or forfeiture; as, *innocent* goods.

—*n.* An innocent person; one free from guilt or reproach. — One who is ignorant; — hence, an idiot; a natural; an imbecile; a simpleton.

"*Innocents* are excluded by natural defects." — *Hooker.*

Innocent I., (St.,) (*in'no-sent,*) POPE, was a native of Albano, and succeeded Anastasius I. in 402. He endeavored to obtain terms of peace with Alaric, 407, but was unsuccessful, and during the following year Rome was taken and pillaged. D. 417.

INNOCENT II., a Roman of noble birth, elected, in 1130, by a part of the cardinals, whilst others chose Peter of Leon, who took the name of Anacletus. The party of the latter being the strongest at Rome, *I.* retired to France, where he remained two years. This contest for the papal chair continued until the death of Anacletus, in 1138, although the monarchs of England, France, and Germany espoused the cause of *I.* In 1139 *I.* was taken prisoner by Roger, king of Sicily, who had been the chief supporter of the rival Pope. He was released on recognizing Roger's title as King of Sicily. The same year, Arnold of Brescia began preaching at Rome, and was banished. D. 1143.

INNOCENT III., (*Lothario Conti,*) one of the most eminent of the Roman pontiffs, b. at Anagni, 1161. He succeeded Celestine III. in 1198; and being endowed by nature with all the talents of a ruler, possessed of great erudition, and favored by circumstances, he was better qualified than any of his predecessors to extend the papal power. His first care was to recover and secure such portion of the domains of the Holy See as were in the hands of usurpers. He applied himself earnestly to the improvement of the administration of justice in his estates, and with his high notions, derived from Hildebrand, of papal supremacy, he expected that all great questions, civil and ecclesiastical, should be decided by himself. He sought to unite the Christian princes in a crusade for the recovery of Palestine, and shortly afterwards promoted the crusade against the Albigenses. He had put France under an interdict, because Philip Augustus divorced his queen, Ingeburga; and when John king of England, refused to confirm the election of Stephen Langton, as archbishop of Canterbury, *I.* laid the kingdom under a ban also, and, in 1212, formally deposed John, and instigated the king of France to attack England. John was finally obliged to submit, resigned his territories to Rome, and received them, as a papal fief, from *I.* In 1210 the Pope excommunicated the Emperor Otho IV., who owed to him his elevation. *I.* abolished the Roman senate and consulate, and thus made himself absolute in his estates, which now extended from the Adriatic to the Mediterranean. Almost all Christendom was now subject to the Pope; two crusades were undertaken at his order, and his influence

extended even to Constantinople. *I.* enforced purity of morals in the clergy, and was himself irreproachable in private life. In 1215 he convoked the fourth general council of the LATERAN, *q. v.* D. 1216.

INNOCENT IV., (*Sinibaldi de Fieschi,*) was a Genoese, and became chancellor of the Roman Church. Gregory IX. created him a cardinal in 1227. He succeeded Celestine IV. in 1243, at which time the court of Rome was engaged in a contest with the emperor Frederick II. Innocent was obliged to retire to France, where he held the council of Lyons, in which Frederick was excommunicated. He is said to have been the first who gave red hats to the cardinals. D. at Naples, 1254.

INNOCENT V., a Dominican, became archbishop of Lyons, cardinal, and succeeded Gregory X. in 1276, but D. five months after his election. Some religious pieces of his have been printed.

INNOCENT VI., cardinal-bishop of Ostia, succeeded Clement VI. in 1352. He was a man of great learning and liberality, and some of his letters are extant. D. at Aviguon, 1362.

INNOCENT VII., B. at Abruzzo, 1336, was elected pope in 1404, but not without great opposition. D. 1406.

INNOCENT VIII., a noble Genoese, of Greek extraction, B. 1431, obtained the tiara, in succession to Sixtus IV., in 1484. He endeavored to organize another crusade, but without success. D. 1492.

INNOCENT IX., B. at Bologna, 1519, ascended the papal throne on the death of Gregory XIV., in 1591, but died two months afterwards. D. 1591.

INNOCENT X., (*J. Baptist Pamphilius,*) a Roman, succeeded Urban VIII. in 1644, at the age of 73. He condemned the doctrines of Jansenius, and prosecuted the Barberini family with great violence. D. 1655.

INNOCENT XI., (*Benedetto Odescalchi,*) B. 1611, was the son of a banker at Como, in the Milanese. In his youth he served as a soldier in Germany and Poland, quitted the camp to take orders, and rose through the intermediate dignities to the pontificate in 1676, on the death of Clement X. He was eminent for his probity and austerity, declaring himself against nepotism, restraining luxury and excess, and even prohibiting women from learning music. He also resolved to put an end to the mischiefs which had grown out of a prescriptive claim of the foreign ambassadors at Rome to a right of asylum. This led to a long quarrel with France, as Innocent would not yield to menaces, or make any exception to his rule not to receive an ambassador who would not renounce such claim. The sect of the Quietists arose at Rome under this pontificate, headed by the Spanish priest Molinos, against whose person and doctrines the Inquisition published a decree. Innocent D. 1689.

INNOCENT XII., (*Antonio Pignatelli,*) a noble Neapolitan, succeeded Alexander VIII. in 1691. He abolished the extraordinary distinctions paid to the nephews of popes, and condemned the *Maxims of the Saints*, written by Fenelon. D. 1700.

INNOCENT XIII., (*Michael Angelo Conti,*) a Roman, and the eighth pope of his family, B. 1655, succeeded Clement XI. in 1721. He is said to have D. of chagrin for having been persuaded to bestow a cardinal's hat on Dubois, (*q. v.*) D. 1726.

Innocents' Day, *n.* (*Eccl.*) One of the Christmas festivals, held in the Western Church on December 28, and in the Eastern on the 29th, under a title similar to that of the Latin festival. It is intended to commemorate the massacre of the children "from two years old and upward" at Bethlehem. These children are referred to as martyrs by St. Cyprian, and still more explicitly by St. Augustine; and it is to them that the exquisite hymn of Prudentius, *Salvete Flores Martyrum*, is addressed. The concurrence of the East and West in celebrating the festival is an evidence of its antiquity.

In'nocently, *adv.* In an innocent manner; harmlessly; innocuously.

Innocu'ity, *n.* State or quality of being innocuous; innocuousness.

Innoc'uous, *a.* [Lat. *innocuus — in*, and *nocco*, to harm, to hurt.] Harmless; safe; producing no injurious effects; innocent.

Innoc'uously, *adv.* With harmful or mischievous effects.

Innoc'uousness, *n.* State or quality of being innocuous; innocuity.

Innom'inable, *a.* [Lat. *innominabilis.*] That may not be named. (R.)

Innomina'tum, (Os,) *n.* [Lat. *in*, priv., *nomen*, a name; *os*, a bone; — *i. e.* the nameless bone.] (*Anat.*) A term applied to one-half of the *pelvis*, a bone which in youth consists of three distinct parts,—the *os ilium*, or haunch bone; *os ischium*, or hip bone; and the *os pubis*, or share bone. — ARTERIA INNOMINATA is the name applied to the first vessel given off from the arch of the *aorta*, which immediately divides into the right subclavian and right carotid, those vessels on the left side rising from the aorta in separate arteries.

In'novate, *v. a.* [Lat. *innovo, innovatus — in*, and *novo*, to make new. See NEW.] To change or alter by presenting something new. — To bring in or introduce as a novelty or something new.

—*v. n.* To introduce novelties; to effect change or alteration in established things; — with *on*.

Innova'tion, *n.* [Fr.; L. Lat. *innovatio.*] Act of innovating, or of introducing alteration. — Change made by the introduction of something new; change in established laws, customs, rites, or practices.

—*pl.* (*Bot.*) New shoots or new growths; — more especially applied to the shoots of mosses.

Innova'tionist, *n.* A favorer or upholder of innovation.

In'novative, *a.* Presenting, or characterized by innovations. (R.)

In'novator, *n.* [Fr. *innovateur.*] One who urges or effects innovations; as, "*innovators* of divine worship." *South.*

Innoxious, (*-nŏk'shus,*) *a.* [Lat. *in*, and *noxius — noceo*, to harm, to hurt. See NOXIOUS.] Harmless; free from pernicious or mischievous qualities; innocent in effects. — Free from crime or sin; pure; guileless; innocent.

"The good man walk'd *innoxious* through his age." — *Pope.*

Innox'iously, *adv.* Harmlessly; without causing mischief; without harm suffered.

Innox'iousness, *n.* State or quality of being innocuous; harmlessness.

Inns'prück, INNSBRUCK, a town of Austria, cap. of the Tyrol, at the confluence of the Sill and Inn. *Manuf.* Woollens, silks, cottons, gloves, glass, &c.

Innuen'do; *pl.* INNUEN'DOES. [Lat., from *innuo — in*, and *nuo*, to nod with the head.] Literally, a hint given by a nod or by nodding to; hence, an oblique or covert hint; a remote or guarded intimation, or reference to a person or thing not mentioned by name; an indirect insinuation. (Sometimes written *inuendo.*)

(*Law.*) In the old Latin forms of pleadings this term was used as a word of reference, when, in reisting the words of another party, it was necessary to describe more particularly the person or thing meant by that party; as, for instance, in a declaration in an action for slander, which is the most ordinary modern case of the employment of the innuendo, the plaintiff avers that the defendant said that *he*, innuendo (meaning the plaintiff), was a thief, &c.

Innumerabil'ity, *n.* [Lat. *innumerabilitas.*] State of being innumerable.

Innu'merable, *a.* [Lat. *innumerabilis.* See NUMBER.] Not to be counted; countless; numberless; that cannot be counted or enumerated for multitude. — Very numerous; unnumbered.

Innu'merableness, *n.* State or condition of being innumerable; innumerability.

Innu'merably, *adv.* Without number.

Innutrition, (*-nu-trish'on,*) *n.* [See NUTRITION.] Want of nutritive aliment; failure of nourishment.

Innutritious, (*-nu-trish'us,*) *a.* Lacking the properties of nutrition; innutritive.

Innu'tritive, *a.* Innutritious; wanting in nutritive power.

I'no, (*Myth.,*) a daughter of Cadmus and Hermione. She married Athamas, king of Thebes, after he had divorced Nephele, by whom he had two children, Phryxus and Helle. Ino became mother of Melicertes and Learchus, and soon conceived an implacable hatred against the children of Nephele, because they were to ascend the throne in preference to her own. Phryxus and Helle were informed of her machinations, and escaped to Colchis on a golden ram, (see PHRYXUS.) Juno, jealous of Ino's prosperity, sent Tisiphone to the palace of Athamas, and caused such disturbance therein that Athamas, taking Ino to be a lioness, and her children whelps, pursued her, and dashed her son Learchus against a wall. Ino escaped his fury, but threw herself from a high rock into the sea, with Melicertes in her arms. The gods had compassion on her, and Neptune made her a sea-deity, afterwards called Leucothoe. Melicertes also became a sea-god, known by the name of Palæmon.

Inobserv'able, *a.* [Lat. *inobservabilis.*] That cannot be observed.

Inobserv'ance, *n.* [Lat. *inobservantia.*] Non-observance; neglect of observing; inattention; disobedience.

Inobserv'ant, *a.* [Fr.; Lat. *inobservans.*] Heedless; not paying attention or taking notice.

Inobserva'tion, *n.* [Fr.] Want of observation; neglect of attention.

Inobtru'sive, *a.* Unobtrusive.

Inobtru'sively, *adv.* Unobtrusively.

Inobtru'siveness, *n.* Unobtrusiveness.

Inocar'pus, *n.* (*Bot.*) See THYMELACEÆ.

Inoccupa'tion, *n.* [Fr.] Want or absence of occupation.

Inoc'ulable, *a.* [Lat. *inoculare.*] That may be inoculated. — Having the quality of communicating disease by inoculation.

Inoc'ular, *a.* (*Zoöl.*) Lodged in the corner of the eye; — used with reference to the antennæ of some insects.

Inoc'ulate, *v. a.* [Lat. *inoculo, inoculatus — in*, and *oculus*, the eye. See OCULAR.] (*Hort.*) To insert, as an eye or bud of one plant into another plant, for the purpose of propagation on the new stock; to ingraft; to bud. — To insert an alien bud into; as, to *inoculate* a tree.

(*Med.*) To communicate disease, as the small-pox, by the introduction of a virus into the body.

—*v. n.* To propagate by budding. — To practise inoculation by infectious matter.

Inoculation, (*-ok-ū-lā'shun,*) *n.* Act or practice of inoculating, or of inserting buds of one plant under the bark of another for propagation.

(*Med.*) The operation of inserting under the cuticle any lymph, virus, or fluid, with the object of inducing a disease which shall be milder than that form of it taken naturally by infection. The term was first professionally employed for the propagation of small-pox, and though among uninformed persons it is confused with vaccination, the term is strictly confined to inserting the virus of small-pox into a healthy body, an operation now rendered illegal, and which, in most of the European states, is punishable as a misdemeanor. See VACCINATION.

Inoc'ulator, *n.* One who inoculates; a propagator of plants or diseases by the process of inoculation.

Ino'dorous, *a.* [Lat. *inodorus.* See ODOR.] Wanting odor or scent; having no smell; as, *inodorous* herbs.

Ino'dorousness, *n.* State or quality of being inodorous; absence of scent or smell.

Inoffen'sive, *a.* [Fr. *inoffensif.*] Not offensive; giving no offence, uneasiness, or provocation; unoffending; as, an *inoffensive* person, an *inoffensive* remark, an *inoffensive* practice. — Harmless; causing no disturbance, injury, or mischief; as, *inoffensive* play.

Inoffen'sively, *adv.* Without harm; in a manner to avoid offence.

Inoffen'siveness, *n.* Harmlessness; state or quality of absence of offence, either to the mind or senses.

Inofficial, (*-of-fish'al,*) *a.* Not official; not promulgated by the proper authority; not done in an official character; not invested with the customary forms of authority, or of official routine; as, an *inofficial* document, an *inofficial* visit.

Inoffi'cially, *adv.* Wanting the customary forms; divested of the character of authority.

Inofficious, (*-of-fish'us,*) *a.* [Lat. *inofficiosus.*] Not civil, attentive, or accommodating.

Inoffi'ciously, *adv.* Not officiously or authoritatively.

In'olite, *n.* (*Min.*) Calc sinter, a calcareous deposit from rivers or springs; a variety of calcite or carbonate of lime, *q. v.*

Inop'erative, *a.* Not operative; deprived or destitute of effect; inactive; producing no tangible results; infutile; as, *inoperative* remedies.

Inoper'cular, *a.* [Lat. *in*, and *operculum*, a lid.] (*Conch.*) Destitute of an operculum or lid, as certain shells.

Inopportune', *a.* [Lat. *inopportunus.* See OPPORTUNE.] Not opportune; unseasonable in time; inconvenient; untimely; unsuitable; as, an *inopportune* moment for making love.

Inopportune'ly, *adv.* At an inconvenient or improper time; unseasonably; unsuitably.

Inopportu'nity, *n.* Unseasonableness; absence of opportunity.

Inoppres'sive, *a.* Not burdensome, troublesome, or oppressive.

Inop'ulent, *a.* [Fr.] Not opulent, rich, or wealthy.

Inor'dinacy, *n.* Divergence from prescribed rule or method; irregularity; want of proper order. — Excess of demand; want of moderation; as, *inordinacy* of appetite.

Inor'dinate, *a.* [Lat. *inordinatus — in*, and *ordino*, to arrange, to lay in order, from *ordo, ordinis*, order, arrangement.] Beyond the limits prescribed by rule or custom; past the usual bounds; irregularly; disorderly; immoderate; excessive.

"Vain hopes, vain aims, *inordinate* desires." — *Milton.*

Inor'dinately, *adv.* In an inordinate manner; immoderately; excessively; irregularly.

Inor'dinateness, *n.* State or quality of being inordinate; divergence from order or prescribed rule; excess; lack of moderation; intemperance.

Inordina'tion, *n.* [Lat. *inordinatio.*] Deviation from established rule, regulation, or order; irregularity; divergence from natural or customary right or observance.

"An intrinsic *inordination* and deviation from right reason." *South.*

Inorgan'ic, Inorgan'ical, *a.* Destitute of organs; not endowed with vital organization; not formed with the organs or instrumental properties of life; inorganized; as, a mineral is an *inorganic* substance. — Pertaining or having reference to, or comprehending, the distribution and application of unorganized species or substances; as, *inorganic* forces.

Inorganic Chemistry. See ORGANIC AND INORGANIC CHEMISTRY.

Inorgan'ically, *adv.* Without organs or instrumental parts.

Inorganiza'tion, *n.* Want of organization.

Inor'ganized, (*-izd,*) *a.* Not organized or possessing organic structure or formation; void of organs or instrumental parts, as metals, minerals, &c.

Inos'culate, *v. n.* [Lat. *in*, and *osculari*, to kiss.] To anastomose; to fuse by apposition; to unite or cohere by contact; as, a vein *inosculates* with an artery. — To mingle or become mixed together as one; to blend.

—*v. a.* To unite by apposition or contact, as two vessels in the arterial system. — To become fused together or united as one.

Inoscula'tion, *n.* (*Zoöl.*) The union of two vessels of an animal body at their extremities, by means of which a communication is maintained, and the circulation of fluids carried on.

Ino'sic Acid, *n.* (*Chem.*) An acid found in the mother liquor that has deposited creatin. It is very soluble in water. On adding alcohol to its aqueous solution it is separated in an amorphous mass.

Inowrazlaw, JUNG-BRESLAU, (*i'nov-ras'law,*) a town of Prussia, cap. of a district, prov. of Posen, 14 m. from Bromberg. *Manuf.* Saltpetre, and it has also both distilleries and breweries.

Inox'idizable, INOX'YDIZABLE, *a.* (*Chem.*) That cannot be oxidized.

In pet'to. [It., in the breast.] In reserve or secrecy.

In'quest, (*-kwest,*) *n.* [O. Fr. *enqueste*; Fr. *enquête*, from Lat. *inquisitus*, sought after, from *inquiro — in*, and *quæro*, to seek, to search. See QUESTION.] A seeking or searching into; inquisition; inquiry; search; quest.

"This is the most laborious and vexatious *inquest* that the age must make after science." — *South.*

(*Law.*) An inquisition of jurors in causes, civil or criminal, when the facts are referred to their trial, being impanelled by the sheriff for that purpose. Also the

persons to whom the trial of fact in any question, civil or criminal, is committed.

I. of Office. (*Eng. Law.*) An inquiry made by the king's officer, sheriff, coroner, &c., by virtue of their office, or by writ sent them for that purpose, or by persons acting under a special commission, to inquire concerning any matter which entitles the king to the possession of lands and tenements, or goods and chattels; as forfeiture for offences, wreckage, treasure-trove, &c.

Writ of I. (*Law.*) A juror.

Inquietude, (*-kwī'e-tūd,*) *n.* [Fr.; Lat. *inquietudo.* See QUIET.] State of being without quietness; disturbed or uneasy state; restlessness, either of body or mind; disquietude.

Inquir'able, *a.* That may be inquired into; susceptible of inquisition or search.

Inquire, (*-kwīr',*) (often written ENQUIRE,) *v. n.* [Fr. *enquérir;* Lat. *inquiro — in,* and *quæro,* to seek, to search.] To institute an inquiry; to set an inquiry on foot; to ask a question; to seek for truth, by putting questions; to seek to elicit information by making queries. — To seek for truth by argument or the discussion of questions, or by examination or investigation.

NOTE. The word *inquire* precedes *of* before the person from whom information is sought; as, to *inquire of* a friend. Before the subject of inquiry, it precedes *after, about,* or *concerning;* as, he was anxiously *inquired after,* &c. When particular intelligence or information is sought, it is followed by *into.* "The son *inquires into* his father's years." (*Dryden.*)—When something is lost, or missing, or when a person or place is sought, — *for* or *after* follows the verb.

"*Inquire for* one Saul of Tarsus." — *Acts* ix. 3.

—*v. a.* To ask about; to seek by interrogating; as, he *inquired* the way.

Inquir'er, *n.* One who inquires, searchee, or examines; one who asks a question or interrogates; one who seeks for knowledge or information; as, a superficial *inquirer.*

Inquir'ing, *p. a.* Given to inquiry; eager for information; curious; disposed to investigation; as, an *inquiring* mind.

Inquir'ingly, *adv.* Interrogatively; by way of inquiry or investigation

Inqui'ry, *n.* (Also written ENQUIRY.) Act of inquiring or interrogating; a seeking for truth, knowledge, or information by asking or putting questions; as, to make a casual *inquiry.* — Search for truth, information, or knowledge; investigation into facts or principles; scrutiny into causes; research.

"I have been engaged in physical *inquiries.*" — *Locke.*

I., (*Writ of.*) (*Law.*) A judicial process addressed to the sheriff of the county in which the *venue* is laid, to summon a jury, in order to inquire what damages a plaintiff has sustained in an action upon the case where judgment goes by default.

Inquisition, (*in-kwi-zish'un,*) *n.* [Fr.; Sp. *inquisicion;* Lat. *inquisitio,* from *inquiro.* See INQUIRE.] A seeking or searching for or into; search; inquiry; examination; investigation.

(*Law.*) An examination of certain facts by a jury impanelled by the sheriff for the purpose. The instrument of writing on which their decision is made is also called an *I.* The sheriff or coroner, and the jury who make the *I.,* are called the *inquest.*

(*Eccl. Hist.*) The title given to a court armed with extensive criminal authority in various European countries; especially instituted to inquire into offences against the established religion. The first of these tribunals of faith was established in the south of France after the conquest of the Albigeois in the 13th century. They were established in Spain in the middle of the same century, not without much opposition on the part of the bishops and secular clergy, who, in Castile, long maintained their exclusive spiritual jurisdiction. In 1484, the supreme general Inquisition was founded at Seville by Queen Isabella, with the aid of the Cardinal Pedro Gonzalez de Mendoza. This great court, commonly known by the name of the *Holy Office,* had far more extensive authority than those local tribunals of the same name, which had previously been established. Thomas de Torquemada, prior of a Dominican convent, was its first president, with the title of inquisitor-general. The process of the Inquisition was widely different from that of all other courts of justice. The king named the grand inquisitor, who appointed his assessors, some of whom were secular, but the greater part regular ecclesiastics; the counsellors were six or seven in number, of whom one, by the ordinance of Philip III., must be a Dominican. A party who was brought under cognizance of the court by secret accusation was immediately seized by its officers (termed *officials* or *familiars*), and his property put under sequestration. If the accused was fortunate enough to absent himself, and did not appear at the third summons, he was excommunicated, and in some cases burnt in effigy. The subsequent process of the court by imprisonment, secret examination, and torture, is well known. Penitent offenders were subjected to imprisonment, scourging, confiscation, and legal infamy. Persons convicted and sentenced to death were burnt at the *autos da fé,* which usually took place on some Sunday between Trinity and Advent. In 1808 it was abolished by Napoleon. It was afterwards re-established by Ferdinand III. in 1814; but having been again abrogated by the Cortes in 1820, it has not been since reconstituted. In Portugal, the supreme court of Inquisition was established in 1557. Its history in many respects resembles that of the Spanish court; but in the eighteenth century its power was greatly curtailed by ordinances which required a certain degree of publicity in its procedure. It was abolished by the Cortes of 1821. There were courts of Inquisition in various southern provinces of France, the principal that of Languedoc, established at Toulouse, which was first founded after the war against the Albigenses; but their power was limited not long after their creation, and fell into desuetude long before their final abolition. At Rome the Inquisition was only established in 1542 as a congregation of cardinals, styled *of the holy office;* but the other courts of Inquisition throughout the Catholic world became subject to this body. Its authority was never recognized in France, and formally denied by *arrets du parlement,* in 1719, on the occasion of the constitution *Unigenitus.* In Italy itself, the institution never took much hold on the manners or usages of the people. The court, however, subsists at Rome chiefly in practice for the correction of ecclesiastical delinquents, but its subjects of jurisdiction are legally deemed to be, heresy, blasphemy, polygamy, sacrilege, abuse of confession, false pretences to holiness, divination and sortilege, use of prohibited books, breach of the fasts of the church, &c.

Inquisi'tional, *a.* [L. Lat. *inquisitionalis.*] Having reference to, making, or busy in, inquiry; as, *inquisitional* proceedings.

—Belonging, or relating to the Inquisition established in the Roman Catholic Church.

Inquisi'tionary, *a.* Inquisitional. (R.)

Inquis'itive, *a.* Prone to ask questions; addicted to inquiry or interrogation; disposed to seek information by asking questions; inclined to seek knowledge by investigation, observation, or discussion; curious; prying; given to inquisition or research; as, an *inquisitive* woman.

Inquis'itively, *adv.* With anxious curiosity to gain information; with narrow scrutiny.

Inquis'itiveness, *n.* Quality of being inquisitive; curiosity to learn what is kept hidden; spirit of interrogation, or disposition to acquire knowledge by asking questions.

Inquis'itor, *n.* [Lat.; Fr. *inquisiteur.*] One who makes inquiry, particularly one officially authorized to interrogate and examine. — A prying or inquisitive person; one who is curious to know the business of others.

(*Eccl. Hist.*) In the Roman Catholic Church, a member of the Holy Inquisition.

Inquisito'rial, *a.* [Fr.] Relating or belonging to inquisition or inquiry; as, an *inquisitorial* visit. — Pertaining to, or after the manner of the doings of, the Court of Holy Inquisition; as, *inquisitorial* torture.

Inquisito'rially, *adv.* After the manner of an inquisitor.

Inrail', *v. a.* To inclose or surround with rails.

"An *inrail'd* column rears its lofty head."—*Gay.*

Inregister, (*-rĕj'is-ter,*) *v. a.* [Fr. *enrégistrer.*] To register; to record.

In'road, *n.* An incursion; an invasion; a desultory attack or raid; an encroachment; the sudden entrance of an enemy into a country with hostile purposes; an irruption.

"Many hot *inroads* they make in Italy."—*Shak.*

Inroll', *v. a.* Same as ENROLL, *q. v.*

Insaliva'tion, *n.* [See SALIVA.] (*Med.*) The mixture of the food with the saliva, and other secretions of the mouth.

Insalu'brious, *a.* [Lat. *insalubris.* See SALUBRIOUS.] Not salubrious or healthful; unwholesome; inimical to health; as, an *insalubrious* climate.

Insalu'brity, *n.* [Fr. *insalubrité.*] State or quality of being insalubrious; want of salubrity; unhealthfulness; unwholesomeness.

Insal'utary, *a.* [Fr. *insalutaire,* from Lat. *insalutaris.*] Not conducive to health; not salutary; unwholesome. — Productive of evil or mischief; insecure.

Insanabil'ity, *n.* State of being insanable or incurable.

Insan'able, *a.* [Lat. *insanabilis.*] That cannot be healed or cured; irremediable; beyond sanative power.

Insan'ableness, *n.* State or quality of being insanable; insanability.

Insan'ably, *adv.* In an incurable or irremediable manner.

Insane', *a.* [Lat. *insanus — in,* and *sanus,* sound. See SANE.] Of unsound mind; deranged in intellect; mad; delirious; distracted; as, an *insane* person, an *insane* idea, an *insane* proceeding.

—Pertaining or having reference to, or appropriated to the use of, insane persons; as, an *insane* asylum.

Insane'ly, *adv.* Madly; foolishly; senselessly; without reason.

Insane'ness, *n.* Derangement of mind; madness; insanity.

Insan'ity, *n.* [Lat. *insanitas.*] State of being unsound in mind; derangement of intellect; madness; craziness; lunacy; mania; delirium; dementia; as, intemperance is moral *insanity.*

(*Med.*) One of the most terrible disorders to which the human race is subject; and one, also, the nature of which is the least understood. Of the nature of that spirit by which the body of man is animated we know little, and not more of the diseases or infirmities to which it is subject. The causes which may lead to insanity, particularly in those whose mental constitution is weak, are very numerous. In many cases, the tendency to insanity is hereditary, and transmitted from parents to children. One of the most fertile causes of insanity in this country is drunkenness. Excessive study, strong mental excitement, grief, jealousy, disappointment, frequently, also, lead to it. Religious excitement is also not an unfrequent cause. Sometimes insanity comes on quite suddenly, without any warning whatever; at other times there is a previous derangement of the animal functions, loss of appetite, restlessness, and want of sleep. It is usual to distinguish insanity into different kinds: — 1. *Moral insanity,* in which there is a morbid perversion of the feelings, affections, and active powers, without any illusion or erroneous convictions impressed upon the understanding. 2. *Intellectual insanity,* affecting the reasoning powers, and which may be either general or partial, — the latter as in monomania. 3 *Mania,* or *raving madness,* in which the mental faculties are notoriously impaired, but the patient gives way to all sorts of extravagances, and, if not prevented, will do mischief to himself and others. 4. *Dementia, imbecility, fatuity,* when the mental powers become gradually impaired, the sensibilities diminished, and the person at length becomes careless, or dead, to all that is going on around him. Usually, however, two or more of these kinds occur together. Moral insanity frequently manifests itself in a desire to steal, or appropriate the property of others. In monomania, the patient reasons correctly upon all matters except one, which forms the subject of his insanity. Imbecility usually commences with the loss of memory and the power of concentrating the attention, for any time, upon one subject; then all control is lost over the thoughts, and the mind wanders meaninglessly from one subject to another; at length there is a carelessness to all that is going on around, and life may become a mere existence, the mental faculties being entirely lost. *Idiocy* differs from imbecility in being congenital, while the latter is acquired, or produced by disease. Idiocy may be produced by various causes connected with the parents; as intermarriage of near relatives, intemperance, scrofulous habits, some powerful influence acting on the mother during pregnancy, &c. Idiots present every degree of mental imbecility, down to the lowest shade, without sense sufficient to satisfy the mere wants of nature. The head of the idiot is usually very small, particularly in the region of the forehead; in some cases, however, it may be quite natural, and in others large and misshapen. The beneficial effects of attention to the physical health, and of education, are manifested even in the case of idiots. (See CRETINISM.) The chance of recovery depends greatly on the complication, or otherwise, of insanity with other diseases, particularly epilepsy or paralysis, with either of which it is nearly hopeless. It is also influenced by the form of the disease, the period of its duration, the age, sex, and constitution of the patient. The mean duration of cases terminating favorably is from five to ten months; after the latter period, recovery is very doubtful. In advanced life, insanity is generally permanent, and imbecility is very rarely curable. While insanity may rise from some affection of the brain which speedily terminates in death, yet, in general, it is not necessarily a fatal disorder, for lunatics have been known to live thirty, forty, or fifty years after being seized with their disease. It is one of the signs of the advance of the present age, that the treatment of the insane is no longer what it was; they are no longer loaded with chains and confined to some dungeon, but are treated with kindness and consideration, and allowed all the liberty that the nature of their malady admits of. In the cure of insanity, in which great progress has recently been made, the means adopted naturally resolve themselves into medical and moral. When the malady proceeds from, or is accompanied by, physical derangement, as it usually is, it is necessary to ascertain the nature of this, and to take means for its removal. If there be excitement and inflammatory action, mild antiphlogistic measures will be necessary, together with aperients and a low diet. If, on the contrary, there is debility and prostration of strength, a nourishing diet will be required. When, as is often the case, want of sleep is an attendant symptom, opiates are to be given. In all cases, exercise, fresh air, and cleanliness are required. The moral treatment of the insane consists in diverting their thoughts by occupations and amusements, and gaining their confidence by kind measures. To M. Pinel, of France, is the world indebted for having been the first to introduce conciliatory measures in their treatment.

Insatiability, Insatiableness, (*-sā-shī-a-bil'ity,*) *n.* [Lat. *insatiabilitas.*] State or quality of being insatiable; greediness of appetite that cannot be satisfied or appeased; insatiety.

Insa'tiable, *a.* [Fr.; Lat. *insatiabilis — in,* and *satio,* to satisfy, from *satis,* enough, sufficient. See SATIATE.] That cannot be satisfied or appeased; extremely greedy; as, *insatiable* desires.

Insa'tiableness, *n.* See INSATIABILITY.

Insa'tiably, *adv.* With greediness not to be appeased or satisfied.

Insatiate, (*-sā'shī-āt,*) *a.* [Lat. *insatiatus.*] Insatiable; that may not be satisfied or appeased.

"*Insatiate* thirst of others' rights." —*Phillips.*

Insa'tiately, *adv.* Insatiably.

Insa'tiateness, *n.* State or condition of being insatiate.

Insati'ety, *n.* [Fr. *insatieté;* Lat. *insatiatas*] Insatiableness.

Insat'urable, *a.* [Lat. *insaturabilis.*] Impossible to be saturated, filled, or glutted.

Inscient, (*in'shī-ent,*) *a.* [Lat. *inscientis,* ignorant.] Possessing but a smattering of knowledge; dull; stupid; ignorant.

—[From *in,* used intensively, and *sciens,* from *scire,* to know.] Gifted with insight or knowledge; knowledgeable; with intelligence.

Insconce', *v. a.* Same as ENSCONCE, *q. v.*

Inscrib'able, *a.* That may be inscribed.

Inscrib'ableness, *n.* State or quality of being inscribable.

Inscribe', *v. a.* [Lat. *inscribo*—*in*, and *scribo*, to write. See SCRIBE.] To write in or upon; to engrave on for perpetuity or duration; to imprint on, as on the memory.—To mark with letters, charactere, or worde;—sometimse followed by *on;* as, I *inscribed* my name *on* the petition.—To commend to by a short ascription, less formal than a dedication; as, to *inscribe* a book to a friend.—To impress: to plant or imprint deeply; as, to *inscribe* an idea on the mind.

(*Geom.*) To draw or delineate in or within, as chords or angles within a circle, or as a rectilinear figure within a curvilinear one, in such a manner that all the linee of the former shall terminate in the periphery of the latter: or as a curvilinear figure within a rectilinear one in such a manner that all the lines of the latter ehall be tangents to the former.

Inscrib'er, *n.* He who inecribes.

Inscrip'tible, *a.* That may be written or engraved npon;—used particularly in relation to geometrical eolids or plane figures.

Inscription, (*-krip'shun,*) *n.* [Lat. *inscriptio*, from *inscribere.*] Act or process of inscribing.—Something inscribed, written, or engraved,—particularly a thing written, carved, or engraved; as, a Runic *inscription.*—An inscription or committal of a book to a person, whether intended as a mark of regard, or as inviting patronage; ae, the *inscription* of "Jane Eyre" to Mr. Thackeray.

Inscrip'tive, *a.* Presenting an lnecription; partaking of the nature or character of au inscription.

Inscrutabil'ity, *n.* State of being inscrutable.

Inscru'table, *a.* [Fr.; Lat. *inscrutabilis*—*in*, and *scrutor, scrutatus*, to search or probe thoroughly, from *scruta*, pl., old or broken etuff.] That cannot be searched lnto and understood by inquiry or study.—That cannot be penetrated, discovered, or comprehended by human reason; as, "the *inscrutable* ways of Providence."

Atterbury.

Inscru'tableness, *n.* State or qnality of being inscrutable; inscrutability.

Inscru'tably, *adv.* In an inscrutable or unfathomable manner.

Insculp', *v. a.* [Fr. *insculper.*] To engrave; to cnt.

"A coin . . . stamped in gold, bnt that *insculpt* upon."—*Shaks.*

Insculp'tured, *a.* Engraved; carved.

Inseam', *v. a.* To impress or mark wlth a seam or cicatrix.

"Deep o'er his knee *inseam'd* remained the scar."—*Pope.*

Insec'able, *a.* [Lat. *insecabilis.*] Indivisible; that cannot be sundered by cleavage.

In'sect, *n.* [Fr. *insecte;* Lat. *insectus*, divided into segments.] (*Zoöl.*) An animal of the class Insecta, a divisiou of the sub-kingdom Arthropoda, which is distinguished from the remaiuing Tracheata, or air-breathing Arthropods, by the possession of wings and certain characteristics of bodily formatiou which differ froiu those of the spiders and myriapods. They resemble the other Tracheata in breathing through air-holes, or *stigma*, placed iu rows along the body, and connected with *trachæa*, or air-tubes, which branch in the interior, and carry the air iuto every part of the body. The insects have the body divided into three distinct sections, known as the *head*, the *thorax*, and the *abdomen.* They lack any internal hard parts, have a mouth opening vertically, or a suction tube, and eyes which are destitute of coverings. This definition will comprehend the whole class of *I.*, either with or witnout wings,—either in their caterpillar or perfect state. Every year adds to the difficulty of defining ln a brief manner the characters of the great and smaller divisions of the animal kingdom. Hence it will appear, that in this clase of animals there are numerous distinctions, and that no general description will eerve for all; so various are the appetites, manners, and modee of propagation, that every species requires its distinct history. Though so far inferior in point of magnitude, *I.*, lt must be confessed, surpass in variety of structure and singularity of appearance all the larger branches of the animal world. The general characters by which they are distlnguiehed from other animals are these: First, they are furnlehed with six feet; secondly, the muscles are affixed to the internal eurface of the skin, which, though hard, sometimes preeervee a certain degree of flexibility; thirdly, they breathe, not like the generality of larger animals, by lungs or gills, bnt by spiracles or breathing-holee, distributed in a eeries or row on each eide the whole length of the abdomen, and communicating with two long air-pipee within their bodies, and a uumber of smaller ones, to carry the air to every part. The head is furuished with a pair of *antennæ*, or horne, which are extremely various in the different tribes, and which, by ineir differencee of etructure, form a leading character in the lnetitution of the genera into which *I.* are distributed. Insects have a very small brain, and instead of a eplual marrow, a kind of knotted cord, extendlng from the brain to ths hinder extremity; and numerous small whitieh threads, which are the nervee, spread from the brain and knots, in varions directione. The heart is a long tube, lying under the ekin of the back, having little holes on each eide for the admission of the juices of the body, which are prevented from escaping again by valves or clappers, formed to close the holes within. Moreover, this tubular heart le divided lnto several chambers, by transverse partitions, in each of which there is a hole shut by a valve, which allows the blood to flow only from the hinder to the fore part of the heart, and prevents it from passing ln the contrary direction. The ancients entertained an idea that *I.* were destitute of blood; hence they called them *animalia exsanguinea;* bnt now they are well known to be eo far from bloodless animals, that in many of them the circnlatlon ltself of the blood is clearly and dietlnctly perceived. The legs of *I.* (Fig. 1388) consist of two princl-

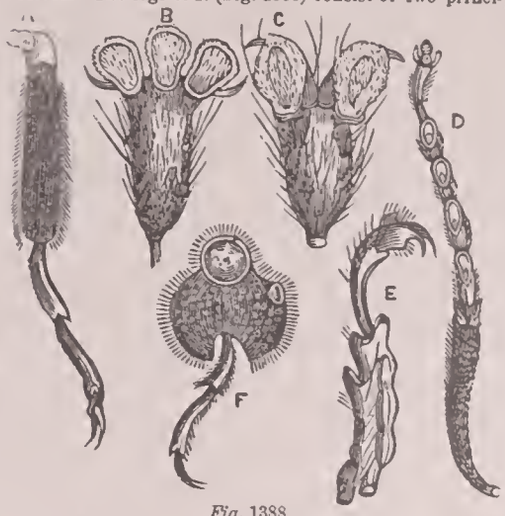

Fig. 1388.

VARIOUS FORMS OF INSECTS' FEET, SHOWING THE ADHESIVE DISCS OR SUCKERS; (highly magnified.)

A, one of the middle pair of legs of Water-beetle; B, foot of *Bibio febrilis*; C, foot of Honse-fly; D, leg and foot of *Cymbex lutea*; E, tarsus of Abyssinian Grassbopper, showing hooks or leaping appendages; F, one of the anterior legs of Water-beetle.

pal parts, the thigh (*femur*) and ehank (*tibia*), wlth two smaller articnlatione, the *coxa* and *trochanter*, interpoeed between the body and the thigh, and at the extremity of the ehank a set of three, four, or five small articulatione, called the *tarsus.* The last eegment of the tarsue ln terrestrial insects ie generally terminated by a pair of hooks or little clawe; and many dipterous insects, as the house-fly, have certain appliances for taking hold of smooth surfaces. There are three periods in the life of an *I.*, more or leee distinctly marked by corresponding changes in the form, power, and habits. In the first, or period of infancy, an lnsect is technically called a *larva*, a word signifying a mask, becauee therein its future form ie more or less masked or concealed. This name ie not only applied to grubs, caterpillare (see Fig. 538), and maggote, and to other *I.* that undergo a complete transformation, but aleo to young and wingless grasshoppers, and bugs, and indeed to all young *I.* before the wings begin to appear. In this firet period, which is generally much the longest, insects are alwaye wingless, pass most of their time in eating, grow rapidly, and usually cast off their skins repeatedly. The second period,—wherein those *I.* that undergo a partial transformation retain their activity and their appetites for food, continue to grow, and acquire the rudiments of wings, while others, at this age, entirely lose their larva form, take no food, and remain at rest in a deathlike eleep—ie called the *pupa* state, from a elight resemblance that some of the latter present to an lnfant trussed in bandages, as was the fashion among the Romans. The pupæ from caterpillare, however, are more commonly called *chrysalides*, because some of thsm, as the name implies, are gilt or adornsd with goldeu spots; and grube, after their first transformation, are often named *nymphs*—the reason for which le not very obvious. At the end of the second period, *I.* again shed

Fig. 1389.—VARIOUS FORMS OF ANTENNÆ.

their skins, and come forth fully grown, and (with few exceptions) provided with wings. They thns enter upon their last or adult state, wherein they no longer lncrease in elze, and during which they provide for a contlnnatlon of their kind. This perlod uenally lasts only a short time, for most insects die immediately after their eggs are laid. Bees, wasps, and ants, however, which live in society, and labor together for the common good of their communities, continue much longer in the adult state. Insecte possess some particular parts wnich are not to be fonnd in any of the larger anlmale; among these are the *antennæ* before mentioned (figure 1389), which are those processes or jolnted bodies eitnated on each side the head. They differ extremely in tho different tribes of *I.*, and are fonnd to constitute one of the most convenient parte to fix npon in the distribution of *I.* into genera and species. It is therefore necessary slightly to enumerate some of them:—*Antenna setacea*, or eetaceous antenna; bristle-ehaped, or growing fine and eharp at ite termination: *antenna filiformis*, or thread-shaped, being of equal size throughout: *antenna moniliformis*, or moniliform; each joint being globular, or nearly so: *antenna clavata*, club-shaped; having a knob at the top, as in the major part of Butterfiles: *antenna fissilis*, or fissile; one which is eplit or divided at the tip into eeveral lamellæ or flat separations: *antenna pectinata*, or pectinated; one which is divided along each side into numerons processes in snch a manner as to resemble the teeth of a comb: *antenna barbata*, or bearded; one which ie elightly feathered, either on one or both sides, with fine lateral fibres or hairs: *antenna perfoliata*, perfoliate; the jolnts of a flattened and circnlar ehape, with the stem or body of the antenna passing through them, as in the leaves of eome plants in which the etem eeeme to pase through them. Another part pecnliar to *I.* coneists in a pair or two of ehort jointed processee proceeding from the mouth; theee are termed *palpi* or feelers, which in some *I.* are very conepicnone, but not in all. The mouth ln *I.* is generally situated at the lower part of the front, and varies much ln etructnre in the different orders. In some it is furniehed with very strong jaws, often notched or serrated on the lnner eide into the appearance of teeth, and which alwaye meet horizontally; in others the month consists of a tnbe or inetrument for snction (Fig. 1390), either

Fig. 1390.—HEAD OF A BEE.
(Considerably magnified.)

simple, or guarded by varioue kinds of appendages. The eyes in *I.* are commonly situated on each side of the head, and are two in number; but ln eome insects, as ln Spiders, there are eix or eight. In most of the lnsect tribes the eyes may be considered as compound, the cornea presenting, when viewed with a microscope, the appearance of an infinite number of separate convexities, like eo many real convex lenses. There are also on the heade of many *I.* three emall, smooth, lucid globnles resembling so many separate eyee, placed on the top of the head, between or above the lateral ones; theee Linnæne distinguishes by the title of *stemmata;* they are aleo called *ocelli.* The body in the major part of lnsects is divided into the thorax or upper part, and the abdomen or lower part. In many of the Beetle tribe the back of the thorax is distinguished by a small triangnlar piece or division, situated at its lower part, between the junctnre of the wing-sheaths; this triangular part le called *scutellum*, or the escutcheon. Tho nnder part of the thorax is called the breast, or *pectus*, and ln this the sternum ie frequently distinguishable. The abdomen ie marked into traneverse sections, and the laet joint terminates in the tail. The wing-sheaths or shelly covsrlngs, ln the Beetls tribe and some others, are termed *elytra.*—The Insects have been divided into the seven sub-orders *Hymenoptera*, *Lepidoptera*, *Diptera*, *Coleoptera*, *Hemiptera*, *Orthoptera*, and *Neuroptera*; but several additional divisions are now recognized, and various classifications have been offered. In number of species they probably far exceed any other class of the animal kingdom, and may reach 1,000,000 in all.

In'sect, *a.* [Lat. *insectus—in*, and *seco*, to cut. See SECT.] Resembling an insect; having the qualities of an insect—hence, small; mean; contemptible.

Insec'tion, *n.* A cutting in; an incision.

Insectiv'ora, *n. pl.* [Lat.] (*Zoöl.*) An order of carnivorous quadrupeds synonymous with *Glires*, and deriving its name from the habits of the species belonging to it. Their distinguishing characteristics are the conical points on their teeth (Fig. 1391), for the purpose of crushing the hard outer coverings of the insects on which they feed. They are divided into four different families: — the *Talpidæ*, or Moles; the *Soricidæ*, or Shrews; the *Aculeata* (*Erinaceadæ*), or Hedgehogs; and the *Tupaidæ*, or Banxrings, a group of animals inhabiting the E. Indies, and hearing a close resemblance to squirrels in their appearance and habits. The term *Insectivora* is also applied to an order of birds in the ornithological system of Temminck.

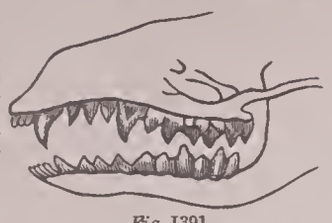

Fig. 1391.
TEETH OF AN INSECTIVOROUS ANIMAL.

Insec'tivore, *n.* (*Zoöl.*) An animal of the order INSECTIVORA, *q. v.*

Insectiv'orous, *a.* [Eng. *insect*, and Lat. *voro*, to devour. See VORACIOUS.] Feeding or subsisting on insects. —Relating or pertaining to the tribe of *Insectivores*. q. v.

Insectiv'orous An'imals. (*Zoöl.*) The Insectivora; animals which subsist wholly or in part upon insects, as the moles, shrews, &c.

Insectiv'orous Plants. These, also known as *Carnivorous Plants*, are plants which deviate from the usual plant method of obtaining nutriment from the soil and the air, and feed or subsist on insects or other small animals, which they capture by ingenious contrivances. In these respects they make an approach to the animal class of nutriment and modes of food getting, setting traps, as it were, to catch their prey. These traps consist in the leaf, which is modified in some peculiar way to adapt it to the purpose. Among the insect-catching plants, one of the most notable is the Venus fly-trap (*Dionœa muscipula*) of the Carolinas, the separated halves of whose leaves close instantly when their surfaces, which bear irritable hairs, are touched. The edges bear 12 to 20 long teeth, which closely interlock, the whole forming a living insect trap. The fly or other insect which has caused the closure is held until its soft parts are digested and its juices are absorbed by the leaf, when the latter opens again. A digestive secretion is thrown out, and the closed leaf acts as a true stomach, the work of digestion going on for a week or two. The sundews (genus *Drosera*, of which there are about 100 species) are notable for their power of capture. In these the leaves are thickly studded with hair or tentacles, which secrete a clear liquid, which is extremely viscid, holding any insect which touches it. These hairs are sensitive also, and when one is touched others bend toward it, until the prey is covered and inclosed by a hundred or more of these hairs. Then the secretion becomes digestive and the juices of the insect go to feed the plant. Remains of a dozen insects have been observed upon a single leaf. Other such contrivances exist, while of a different character are the pitcher-plants, of which there are many kinds in various parts of the world. In these the leaf takes the form of a vase, cup or tube, with a hood or cover at top by which the entrance may be closed. Water gathers within these hollow leaves, and, in some cases at least, a liquid secretion from the plant. In some species sweet drops are found on the ontside of the leaf leading upward to the mouth, within which other honeyed drops appear. These are arranged in a trail to lure the unsuspecting insect to enter the dangerous cage. On the hood and within the pitcher are stiff hairs or bristles pointing downward, and acting to prevent the prey from crawling out again. The California pitcher-plant has a bright-colored appendage hanging from the opening as a lure to the insect. In some cases the whole leaf is converted into a pitcher. In others the pitcher is formed of the tip of the leaf, being attached to a bare extension of the midrib, which is so bent as to hold it upright. The East India pitcher-plants, *Nepenthes*, of which there are 31 species, are of this character. In these small cups flies and other insects are caught in large numbers. Some plants form their traps by uniting the bases of opposite leaves. Such is the case with *Silphium perfoliatum*, the cup-plant of the Western prairies. Dead insects have been found in these cups, and have probably been digested. The teasel has a similar structure. The bladderworts (*Utricularia*), of which there are about 160 species, are aquatic plants which bear curious little sacs, or bladders, on their dissected leaves, which float in the water. These have open mouths which are lined with bristles, and which, while offering ready entrance to minute insects, prevent their return. Various other adaptions of the leaf, more or less similar to those named, exist, and in many plants there are belts of sticky material on the branches, as in the catchfly and in a species of wire-grass.—*Utility.* To what extent these adaptations are useful to the plant is not yet fully settled. When grown in the green-house these plants are found to flourish without insect food. But in nature they are usually found in poor soil, and some of them almost without roots, as in the cases of the sundew and butterwort—a plant belonging to the order *Utricularia*. Many of them have special attractions for insects, of color, odor, taste, &c., and special adaptions to hold their prey. Still more significant is the secretion of a liquid which has been proved to possess digestive properties. All these facts taken into consideration leave no doubt that many plants really feed upon animal food, and thus in a measure depart from the ordinary plant economy and take on a functiou of the animal kingdom.

Insecure', *a.* Unsafe; not secure; not confident of safety. — Not effectually guarded or protected; exposed to danger or loss.

Insecure'ly, *adv.* Without security or safety.

Insecure'ness, *n.* Absence of security.

Insecu'rity, *n.* [L. Lat. *insecuritas.*] Want of security, or safety against hazard or danger; as, the *insecurity* of a debt. — Absence of confidence in safety. — Lack of susceptibility; obtuseness; want of tenderness or emotional characteristics.

Insen'sate, *a.* [L. Lat. *insensatus* — *in*, and *sensatus*, from *sensus*, sensation, sense; Fr. *insense.*] Destitute of sense; stupid; foolish; wanting sensibility.

Insen'sateness, *n.* Insensibility.

Insense', *v. a.* To instruct. (Local Eng.)

Insensibil'ity, *n.* [Fr. *insensibilité.*] State or quality of being insensible; want of sensibility, or the power of feeling or perceiving; want of power to be moved or affected; want of tenderness or susceptibility of emotion or passion; dullness; stupidity; torpor.

Insen'sible, *a.* [Fr.; Lat. *insensibilis* — *in*, and *sensibilis*, from *sensus*. See SENSE.] That cannot be felt or perceived; imperceptible; destitute of the power of feeling or perceiving; wanting corporeal sensibility; not susceptible of emotion or passion; void of feeling; wanting tenderness; unfeeling; dull; stupid; torpid; void of sense or meaning.

Insen'sibleness, *n.* Insensibility.

Insen'sibly, *adv.* Imperceptibly; in a manner not to be felt or perceived by the senses; by slow degrees; gradually.

Insen'tient, *a.* Not sentient; senseless; inert; not having perception.

Inseparabil'ity, *n.* Quality of being inseparable.

Insep'arable, *a.* [Fr. *inseparable*; Lat. *inseparabilis.*] That cannot be separated or disjoined; not to be parted.

Insep'arableness, or INSEPARABILITY, *n.* [L. Lat. *inseparabilitas.*] Quality of being inseparable, or incapable of distinction.

Insep'arably, *adv.* In a manner that prevents separation; with indissoluble union.

Insep'arate, *a.* Not separate; united.

Insert', *v. a.* [Lat. *insero*, *insertus* — *in*, and *sero*, *sertus*, to bind or fasten together, to knit, to interweave.] To knit or join into; to put, bring, or introduce into; to thrust in; to set in or among.

Insert'ed, *a.* (*Bot.*) Attached to, or growing out of, as the parts of a flower.

(*Arch.*) Noting a column standing, or appearing to stand, partly in a wall.

Insert'ing, *n.* The act of one who inserts. — The thing inserted.

Insertion, (*-sĕr'shun,*) *n.* [Fr.; Lat. *insertio.*] Act of inserting, or of setting or placing in or among other things; the manner in which one part is inserted into, adheres to, or grows out of another; the thing inserted.

Inses'sores, *n. pl.* [Lat. pl. of *insessor*, a besetter.] (*Zoöl.*) The Perchers, an order of birds embracing far more species than any other in the whole class of birds, and widely differing from each other in many respects; but agreeing also in many important respects, especially in their feet, which have three toes directed forward and one behind, the latter being on the same level with the others.

Insesso'rial, *a.* (*Zoöl.*) Relating to the Insessores, or perching-birds.

In'set, *n.* Something set in; insertion.

—*v. a.* To set in; to infix or implant.

Insev'erable, *a.* Not to be severed.

Inshad'ed, *a.* That is marked with different shades.

Insheathe', *v. a.* To put in a sheath; to hide or cover in a sheath.

Inshel'ter, *v. n.* To shelter.

Inshore', *a.* and *adv.* Near the shore

Inshrine', *v. a.* See ENSHRINE.

Insicca'tion, *n.* The art of drying in.

In'side, *n.* The interior side or part of a thing; internal part; — opposed to the *outside.*

—*a.* Interior; internal; being within.

adv. or *prep.* Contained within; interior; internal.

Insid'ious, *a.* [Fr. *insidieux*; Lat. *insidiosus*, from (pl.) *insidiæ*, an ambush, ambuscade, from *insideo*, to sit in or upon — *in*, and *sedeo*, to sit.] Lying in wait; watching an opportunity to insnare or entrap; — hence, cunning; crafty; deceitful; artful; designing; treacherous; deceptive; intended to entrap.

Insid'iously, *adv.* With intention to ensnare; deceitfully; treacherously; with artifice or stratagem.

Insid'iousness, *n.* Quality of being insidious; a watching for an opportunity to ensnare; deceitfulness; treachery.

In'sight, *n.* Sight into; sight or view of the interior of anything; deep inspection or view; introspection; thorough knowledge or skill.

Insig'nia, *n. pl.* [Lat. pl. from *insigne*, *insignis*, distinguished by mark. See SIGN.] Badges or distinguishing marks of office or honor; marks, signs, or visible impressions, by which anything is known.

Insignificance, or INSIGNIFICANCY, *n.* [Fr. *insignifiance.*] Quality or state of being insignificant; want of significance or meaning; unimportance; want of force or effect; want of weight. — Meanness.

Insignif'icant, *a.* [Fr. *insignifiant.*] Void of signification; destitute of meaning, as words; answering no purpose; having no weight or effect; unimportant; immaterial; inconsiderable; trivial.—Mean; contemptible.

Insignif'icantly, *adv.* Without meaning; without importance or effect; to no purpose.

Insincere', *a.* [Lat. *insincerus.* See SINCERE.] Wanting sincerity; not being in truth what one appears to be, as persons; hollow; hypocritical; characterized by insincerity, as words or actions; deceptive; deceitful; false; disingenuous; not sound or secure.

Insincere'ly, *adv.* Without sincerity; hypocritically.

Insincer'ity, *n.* Want of sincerity, or of being in reality what one appears to be; dissimulation; hypocrisy; deceitfulness; hollowness.

Insin'uate, *v. a.* [Fr. *insinuer*; Lat. *insinuo*, *insinuatus* — *in*, and *sinuo*, to bend, wind, or curve, from *sinus*, a bent surface, a curve.] To put into the bosom of; to introduce gently, or into a narrow passage; to wind in.

—To ingratiate, push, or work, as one's self into favor; to introduce by slow, gentle, or artful means.

—To hint; to intimate; to suggest by remote allusion; to instil; to infuse gently.

—*v. n.* To creep in; to wind in; to flow in; to enter gently, slowly, or imperceptibly, as into crevices. — To gain on the affections by gentle or artful means; to wind along.

Insin'uating, *p. a.* Creeping or winding in; flowing in; gaining on gently; hinting; tending to enter gently; insensibly winning favor and confidence.

Insin'uatingly, *adv.* In the way of insinuation.

Insinua'tion, *n.* [Lat. *insinuatio.*] Act of insinuating; a creeping or winding in; a flowing into crevices; act of gaining on favor or affections, by gentle or artful means; the art or power of pleasing and stealing on the affections. — A hint; a suggestion or intimation by distant allusion.

Insin'uative, *a.* Stealing on the affections.

Insin'uator, *n.* He who, or that which, insinuates.

Insin'uatory, *a.* Insinuating; insinuative.

Insip'id, *a.* [Fr. *insipide*; Lat. *insipidus* — *in*, and *sapidus*, from *sapio*, to taste, to savor.] Destitute of taste; tasteless; vapid; wanting the qualities which affect the organs of taste. — Wanting spirit, life, or animation; wanting pathos or the power of exciting emotions; flat; dull; heavy; lifeless; spiritless.

Insipid'ity, *n.* [Fr. *insipidité.*] Quality of being insipid; want of taste, or the power of excitiug sensation in the tongue; lack of savor.

—Want of life or spirit.

Insip'idly, *adv.* Without taste; without spirit or life; without enjoyment.

Insip'idness, *n.* Insipidity; want of flavor.

Insip'ience, *n.* [Lat. *insipientia.*] Folly; want of understanding.

Insip'ient, *a.* Unwise; foolish. (R.)

Insist', *v. n.* [Lat. *insisto* — *in*, and *sisto*, to set or place one's self, from *sto*, to stand.] To stand or rest. — To dwell on in discourse. — To urge or press earnestly.

Insist'ence, *n.* The act of insisting or urging.

Insist'ent, *a.* Resting upon anything.

"The breadth of the substruction must be at least double to the *insistent* wall." — *Wotton.*

Insi'tiency, *n.* Freedom from thirst.

Insition, (*-sish'un,*) *n.* [Lat. *insitio.*] The insertion or ingraftment of one branch into another.

In si'tu, [Lat., in situation.] (*Min.*) Noting a mineral which is found in its original position, bed, or strata.

In'skip, in *California*, a post-village of Butte co., abt. 43 m. N. of Oroville.

Insnare', *v. a.* To catch in a snare; to take by artificial means; to entrap; to take in a trap or net. — To entangle; to involve in difficulties or perplexities; to allure; to inveigle.

Insnar'er, *n.* One who insnares; an insnarer.

Insobri'ety, *n.* Want of sobriety; intemperance; drunkenness.

Insociabil'ity, *n.* Unsociability. (R.)

In'solate, *v. a.* [Lat. *insolo*, *insolatus* — *in*, and *sol*, the sun.] To dry in the sun; to expose to the action of the sun.

Insola'tion, *n.* Exposure to the sun. — A stroke of the sun; a sun-stroke or *coup de soleil.* — The drying of chemical and pharmaceutical substances.

(*Bot.*) A disease of plants from exposure to too bright a light, which causes rapid evaporation, and kills the part in which the evaporation takes place; a scorching.

In'solence, or INSOLENCY, *n.* [Fr.; Lat. *insolentia.* State or quality of being insolent; an unusual degree of pride or haughtiness manifested in contemptuous and overbearing treatment of others; petulant contempt; impudence.

In'solent, *a.* [Lat. *insolens* — *in*, and *soleo*, to be wont or accustomed.] Excessively proud and haughty, with contempt of others: domineering in power; overbearing; insulting; abusive; impudent; proceeding from insolence; contemptuous.

In'solently, *adv.* With contemptuous pride; haughtily; rudely; saucily.

Insolid'ity, *n.* Want of solidity; weakness. (R.)

Insolubil'ity, *n.* [Fr. *insolubilité.*] Quality of not being soluble or dissolvable, — particularly in a fluid.

Insolu'ble, *a.* [Fr.; Lat. *insolubilis* — *in*, and *solvo*, *solutus*, to loose or loosen. See SOLVE.] That cannot be loosed; indissoluble; that cannot be dissolved, particularly by a fluid. — That cannot be made clear; not to be resolved, as doubts.

Insol'ubleness, *n.* Insolubility.

Insolv'able, *a.* [Fr.; Lat. *in*, and *solvo*, to loose, or loosen.] That cannot be loosened, disengaged, or unravelled; not to be cleared of difficulty or uncertainty;

not to be explained or solved; not admitting solution or explication.

"Wherein there appear some *insolvable* difficulties."—*Watts.*

—That cannot be paid.—That cannot be loosened or untied.

Insol'vency. [Lat. *in*, privative, *solvo*, to free, to pay.] (*Law.*) The state of a person who is insolvent, or unable from any cause to pay his debts, or who is unable to pay his debts as they fall due in the usual course of trade or business. The distinction between *bankruptcy* and *insolvency* which is taken by jurists and accurate law-writers seems to be little regarded in the practice of the U. S. In its primary sense, *I.* has a much more extensive signification than bankruptcy. The latter, which is properly one species or phrase of the former, was formerly applied to the dishonest merchant or trader. The meaning, however, is now so far changed, that no dishonesty is implied from the status of bankruptcy; but the word is still properly applied only to traders or merchants, and *I.* to the state of any insolvent debtor. In the U. S. both the legislation of Congress and of the separate States tend to obliterate the true distinction between bankruptcy and *I.*, and we have no special legislation establishing a well-defined demarcation between the two terms. In Great Britain the effects of bankruptcy do not cease with the seizure and sale of the property of the debtor, but he is further disqualified for acting as a member of the House of Lords, for election to the House in Scotland and Ireland, for election to or membership in the House of Commons, for acting as a justice of the peace, as mayor, alderman or councilor, and for some other official positions. If the decision in bankruptcy is annulled, or if the debtor can prove that misfortune without misconduct was the cause of his bankruptcy, these disqualifications cease. In the U. S. the power to establish a uniform system of bankruptcy was granted to Congress by the Constitution, but this right has been sparingly exercised and legislation of this character has been usually left to the States. A bankruptcy law was passed by Congress on March 2, 1867, which became operative Jan. 1, 1869. But this law was repealed in April, 1878, and no similar law has since been passed, though strong pressure was brought to bear upon Congress in favor of bankruptcy legislation in consequence of the business depression of 1893 and the following years. Insolvency laws, however, have been passed in the several States, differing considerably in their provisions. Proceedings may be instituted by the debtor in what is known as voluntary insolvency. If they are instituted by the creditor the *I.* is called involuntary. From the time he becomes an insolvent his debtors cannot discharge their claims by payments to him. An assignee, generally chosen by the creditors, takes the property, collects the assets, pays the expenses, and distributes the balance among the creditors. The debtor may make an assignment for the benefit of his creditors, himself selecting the assignee, and in some States may give judgments to preferred creditors. A discharge from creditors is often obtained by a composition, in which they agree to accept a fixed percentage of their claims and release the debtor from indebtedness for the balance. Settlement in this manner or by voluntary assignment has become quite common in the U. S.

Insol'vent, *a.* [Lat. *in*, and *solvens*, from *solvo*.] Not solvent; not having money, goods, or estate sufficient to pay all debts; not sufficient to pay all the debts of the owner; respecting debtors that are not solvent.

—*n.* A debtor unable to pay his debts.

Insom'nious, *a.* That is without sleep.

Insomuch', *adv.* So that; to that degree; in that.

Insoul', *v. a.* To inspirit.

Inspect', *v. a.* [Lat. *inspicio, inspectus* — *in*, and *specio*, to look, to look at, to behold.] To look on; to view or oversee for the purpose of examination; to view and examine. — To superintend; to oversee.

—*n.* Nice or close examination. (R.)

Inspec'tion, *n.* [Fr.; Lat. *inspectio.*] Prying examination; close or careful survey; insight; watch. — Guardianship; superintendence; oversight; official view or examination.

Inspec'tive, *a.* That inspects, or tends to inspect.

Inspec'tor, *n.* [Lat.] One who inspects, views, or oversees; a superintendent; an overseer.

Inspec'torship, Inspec'torate, *n.* The office of an inspector.

Insperse', *v. a.* [Lat. *inspergo.*] To sprinkle or cast upon. (R.)

Inspers'ion, *n.* A sprinkling or scattering upon. (R.)

Inspex'imus, *n.* [Lat., we have seen.] (*Law.*) A term sometimes used in letters-patent, reciting a grant, *inspeximus*, such former grant, and so reciting it verbatim.

Inspher', *v. a.* To place in an orb or sphere.

Inspir'able, *a.* [Lat. *in*, and *spirabilis.* See INSPIRE.] That may be inspired or drawn into the lungs; inhalable, as air or vapors.

Inspira'tion, *n.* [Fr.; Lat. *inspiratio* — *in*, and *spiro.*] Act of drawing air into the lungs; the inhaling of air. Act of breathing into anything. — The supernatural influence of the spirit of God on the human mind; the infusion of ideas, influences, or directions into the mind, by a superior being or supposed presiding power; a highly exciting influence. — See REVELATION.

Inspira'tional, *a.* That relates to, or partakes of, inspiration.

Inspira'tionist, *n.* One who holds to inspiration. (R.)

Inspi'ratory, *a.* Pertaining to or aiding inspiration, or inhaling air into the lungs.

Inspire', *v. a.* To breathe into; to draw into the lungs; to infuse by breathing. — To infuse or suggest, as ideas or monitions supernaturally; to communicate, as divine instruction, to the mind. — To infuse ideas or poetic spirit into.

—*v. n.* To draw in breath; to inhale air into the lungs; — opposed to *expire.*

Inspi'rer, *n.* He who inspires.

Inspir'it, *v. a.* To give new life to; to enliven; to invigorate; to animate; to cheer; to encourage.

Inspis'sate, *v. a.* [Lat. *in*, and *spisso, spissatus*, to thicken, to make thick, from *spissus*, thick.] To thicken, as fluids; to make thick.

"Sugar doth *inspissate* the spirits of the wine." — *Bacon.*

Inspis'sate, *a.* Thick; dense.

Inspissa'tion, *n.* The act of making any liquid thick.

"The effect is wrought by the *inspissation* of the air." — *Bacon.*

Inst. Contraction for *instant*, used in correspondence to denote the current or present month.

Instabil'ity, *n.* [Lat. *instabilitas.*] Unsteadiness; want of stability; want of firmness in purpose; mutability of opinion or conduct; inconstancy; fickleness; changeableness; liability to change.

In'stable, *a.* [Fr.; Lat. *instabilis.*] Inconstant; unstable.

Install', *v. a.* [Fr. *installer*; L. Lat. *installare.*] To set, place, or instate in a stall or seat, in an office, rank, or order; to invest with any charge, office, or rank, with the customary ceremonies.

Installa'tion, *n.* [Fr.; L. Lat. *installatio.*] Act of installing, or of giving possession of an office, rank, or order, with the customary ceremonies.

Instal'ment, *n.* Act of installing or giving possession of an office, with the usual ceremonies or solemnities. — The seat in which one is installed. — A term applied to the parts of a large sum of money which are paid, or to be paid, at different periods.

Instamp', *v. a.* To stamp upon; to enstamp.

In'stance, In'stancy, *n.* [Fr. *instance*; L. Lat. *instantia*, contention, from Lat. *instans*, from *insto* — *in*, and *sto*, to stand, *q. v.*] Urgency; a pressing solicitation; importunity; application. — Example; a case occurring; a case offered. — Time; occasion; occurrence.

—*v. a.* To mention as an instance, example, or case.

—*v. n.* To give or offer an instance, example, or case.

In'stant, *a.* [Fr., from Lat. *instans.* See INSTANCE.] Present; without intervening time; current. — Quick; making no delay; immediate. — Pressing; urgent; importunate; earnest.

—*n.* An immediate or present point, or moment of time. A point in duration; a moment; a part of duration in which we perceive no succession, or a part that occupies the time of a single thought; a particular time. — The present or current month; as, "On the twentieth *instant.*"

Instantaneity, *n.* Quality of being instantaneous.

Instanta'neous, *a.* [Fr. *instantané*; L. Lat. *instantaneus.*] Done in an instant; occurring or acting without any perceptible succession; very speedily.

Instanta'neously, *adv.* In an instant; in a moment; in an indivisible point of duration.

Instanta'neousness, *n.* Instantaneity.

Instan'ter, *adv.* [Lat.] (*Law.*) Instantly; presently.

In stantly, *adv.* Immediately; without intervening time; at the moment; instantaneously. — With urgent importunity; with diligence and earnestness.

Instar', *v. a.* To spot, stud, or adorn with stars. *Pope.*

In'star om'nium. [Lat.] An example which may suffice for all.

Instate', *v. a.* To set or place; to establish, as in a rank or condition.

In sta'tu quo. [Lat., the place in which.] In its former state; in the state in which it was in times past.

Instau'rate, *v. a.* [Lat. *instauro, instauratus.*] To repair; to restore.

Instaura'tion, *n.* [Lat. *instauratio.*] Restoration; reparation; renewal.

Instead', *adv.* In the stead, place, or room of. — Equal to.

Insteep', *v. a.* To soak; to lay under water; to steep.

In'step, *n.* The forepart of the upper side of the foot, near its junction with the leg. — The instep of a horse is that part of the hind leg which reaches from the ham to the pastern joint.

In'sterburg, a town of Prussia, prov. E. Prussia, 16 m. from Gumbinnen. *Manuf.* Leather, linen, &c. *Pop.* 11,000.

In'stigate, *v. a.* [Lat. *instigo, instigatus* — *in*, and *stigo*, to prick, to stir on; allied to Gr. *stizo*, to mark with a pointed instrument, to prick. See STIGMA.] To urge; to incite; to impel; to set on; to move by some incentive, as to an act of wickedness.

Instiga'tion, *n.* [Fr., from Lat. *instigatio.*] Incitement, as to evil or wickedness; the act of encouraging to commit a crime, or some evil act; temptation; impulse to evil.

In'stigator, *n.* [Lat.] One who instigates, or incites another to an evil act; a tempter; that which incites; that which moves persons to commit wickedness.

Instil', *v. a.* [Lat. *instillo* — *in*, and *stillo*, to drop, to drip, to trickle, from *stilla*, a drop.] To infuse slowly, or by small quantities; to pour in, or infuse by drops.

—To insinuate anything imperceptibly into the mind.

Instilla'tion, *n.* [Lat. *instillatio.*] Act of pouring in or infusing by drops or by small quantities.

—Act of infusing slowly into the mind.

—That which is infused.

Instilla'tor, INSTILLER, *n.* One who instils or infuses.

Instil'ment, *n.* Act of instilling; infusion.

—Anything instilled.

Instimula'tion, *n.* Act of stimulating, inciting, or urging forward.

Instinct', *a.* [Lat. *instinctus*, from *instinguo*, to instigate — *in*, and *stinguo* = Gr. *stizo*, to prick.] Moved; animated; excited.

"Itself *instinct* with spirit." — *Milton.*

In'stinct, *n.* [Fr.; Lat. *instinctus*, inwardly moved, suggestion, impulse.] (*Phil.*) According to Dr. Reid, "a natural, blind impulse to certain actions, without having any end in view, without deliberation, and very often without any conception of what we do;" and, according to Sir W. Hamilton, "an agent which performs, blindly and ignorantly, a work of intelligence and knowledge." Various other definitions are given. Brougham says that instinct is distinguished from reason, in that "it acts without teaching, either from others — that is instruction, or from the animal itself — that is experience;" "it acts without knowledge of consequences; it acts blindly, and accomplishes a purpose of which the animal is ignorant." In general, we find that instinct and reason prevail in an animal in the inverse ratio to each other. Hence, in man, whose reasoning powers are highly developed, the instincts are few, and manifest themselves principally in children and barbarians. An instinctive action is performed without any consciousness, on the part of the agent, of the end which it serves; it is effected as perfectly the first time as at any subsequent period; and is unsusceptible of any adaptation to particular emergencies: while a reasonable action, on the contrary, is one which always implies a consciousness, on the part of the agent, of the end in view, — which becomes only progressively perfect, and which is capable of being variously modified according to existing circumstances. Some philosophers have held that there is no real distinction between instinct and reason. Darwin (*Zoönomia*) regarded all instinctive acts as really intellectual operations; while Smellie, on the other hand, viewed reason itself as really an instinct. Hume, too, asserts "that the experimental reasoning itself, on which the whole conduct of life depends, is nothing but a species of instinct or mechanical power, that acts in us unknown to ourselves; and its chief operations are not directed by any such relations or comparisons of ideas as are the proper objects of our intellectual faculties." Three classes of theories have been proposed, to account for the instinctive actions: 1. The *physical*, which makes them depend upon the structure and organization of the animal. 2. The *psychical*, which regards them as the result of mental powers or faculties possessed by the animals, analogous to those of the understanding in man. 3. The *supernatural*, which views them as the workings of an intelligence superior to man, or the Supreme Being. Of this last opinion was Sir Isaac Newton. According to Dr. Busbman, instinctive acts can be traced to the direct effect of sensation, and are dependent on either external or internal stimuli, as externally from the senses, internally from feelings, — as hunger, thirst, &c. The great source of instinctive acts in the lower animals are, he says, smell and taste. They are all, however, referable to some uneasy sensations proceeding from certain irritations of particular organs; or, according to Broussais, they arise from "sensations which solicit a living being to execute involuntarily, and often unconsciously, certain acts necessary to its welfare."

Instinc'tive, *a.* [Fr. *instinctif.*] Prompted by instinct; spontaneous; acting without reasoning, deliberation, instruction, or experience; determined by natural impulse.

Instinc'tively, *adv.* By force of instinct; without instruction or experience; by natural impulse.

Instip'ulate, *a.* Without scruples.

Institute', *v. a.* [Lat. *instituo, institutus* — *in*, and *statuo*, to put, set, or place, from *sto*, to stand, *q. v.*] To establish; to appoint; to enact; to form and prescribe, as a law. — To found; to originate and establish. — To ground or establish on principles; to instruct, as children; to educate. — To begin; to commence; to set in operation. — To invest with the spiritual part of a benefice, or the cure of souls.

—*n.* [Fr. *institut*; Lat. *institutum.*] A purpose, precept, or design; that which is established, fixed, or ordained; established law; settled order; precept; maxim; principle.

—*n. pl.* A book of elements or principles of jurisprudence; a text-book, containing the principles of law made the foundation of legal studies, as Justinian's *Institutes.* — See ROMAN LAW.

—A literary and philosophical society, a body of men united for some literary or scientific purpose; — more especially applied to a learned body which was organized in France shortly after the first storm of the revolution of the last century had spent its fury. Its necessity arose from the fact of all the academies and art institutions having been destroyed; consequently, the *Institut Nationale* was formed on the 25th October, 1795, out of the remnants of the five academies; namely, the *French Academy*, the *Academy of Inscriptions and Belles-Lettres*, that of the *Sciences*, of the *Fine Arts*, and of the *Moral and Political Sciences*, — all united in one harmonious whole. The great object designed by the Institute was the advancement of the arts and sciences, by continual researches, by the publication of new discoveries, and by a correspondence with the most distinguished scholars of all nations, and especially by promoting such scientific and literary undertakings as would tend to the national glory and welfare. The Institute, since the restoration of the republic in France, is known by the name of the *National Institute.*

Institu'tion, *n.* [Fr.; Lat. *institutio.*] Act of instituting or establishing; establishment; that which is appointed, prescribed, or founded by authority, as laws, rites, and ceremonies.

An organized society for promoting any object, public or social. Thus, a college is termed a *collegiate institution;* an academy of belles-lettres, a *literary institution;* an almsgiving society, a *benevolent* or *charitable institution;* while a banking company or insurance office is a *commercial institution.* Hospitals are likewise charitable institutions, and will be found given under their respective heads.

(*Eccl.*) Act or ceremony of investing a clergyman with the spiritual part of a benefice, or the cure of soule.

Institn'tional, *a.* Enjoined; relating to an institution.

Institu'tionary, *a.* Elemental; institutional.

In'stitutist, *n.* One who is versed in, or writes, institutes or instructions.

In'stitutive, *a.* That institutes or establishes; having power to establish; established; depending on institution.

In'stitutively, *adv.* In accordance with an institution.

In'stitutor, *n.* [Lat.] One who institutes or establishes; one who educates; an instructor.

Instrat'ified, *a.* Stratified in or among other bodies; interstratified.

Instruct', *v. a.* [Lat. *instruo, instructum* — *in,* and *struo,* to join together, to pile up. See STRUCTURE.] To furnish with instruction; to impart, as knowledge, to one who is destitute of it; to teach; to educate. — To inform; to furnish with advice or counsel; to persuade or admonish; to give directions to; to enjoin; to order; to command; to advise or give notice to.

Instruct'er, *n.* See INSTRUCTOR.

Instruct'ible, *a.* That may be instructed; teachable; docile.

Instruction, (*-struk'shun,*) *n.* [Fr.; Lat. *instructio.*] Act of instructing; act of teaching or informing the understanding in that of which it was before ignorant; information; education. — Precepts conveying knowledge; advice; counsel; order; authoritative direction; mandate; command.

Instruc'tional, *a.* Relating or pertaining to instruction; educational.

Instruc'tive, *a.* [Fr. *instructif.*] Serving to instruct or inform; conveying knowledge or information.

Instruc'tively, *adv.* So as to afford instruction.

Instruc'tiveness, *n.* State or quality of being instructive; power of conveying instruction.

Instruct'or, *n.* (Sometimes written *instructer.*) [Lat.] One who instructs; a teacher; a person who imparts knowledge to another by precept or information; a tutor; any professional man who teaches the principles of his profession.

Instruc'tress, *n.* A female who instructs; a preceptress.

In'strument, *n.* [Fr.; Lat. *instrumentum* — *instruo,* to fit in order, to arrange, to prepare. See STRUCTURE.] Any thing by which one prepares, fits out, works at, or exercises a thing; that by which work is performed, or anything is effected; an implement; a tool; an utensil; as, mathematical *instruments.* — That which is subservient to the execution of a plan or purpose, or to the production of any effect; means used for contributing to an effect.

"The bold are but the *instruments* of the wise." — *Dryden.*

—An artificial machine or body constructed for yielding harmonious sounds.

"She taketh most delight
In music, *instruments,* and poetry." — *Shaks.*

(*Law.*) A writing containing the terms of a contract, process, proceeding, &c.; also, a person who acts for another.

Instrumen'tal, *a.* [Fr.; L. Lat. *instrumentalis.*] Conducive as an instrument or means to some end; contributing aid; serving to promote or effect an object; helpful; serviceable.

I. Music. All music composed for instruments is so called, in contradistinction to *vocal music.* This term is more especially applied to all the greater compositions, in which there is no part for the voice. Until the middle of the last century, the Italian composers used no other instruments in their great pieces than violins and bass-viols; at that time, however, they began to use the hautboy and the horn. Even to the present time, the Italians employ wind-instruments much less than either the French or Germans. In general, symphonies, overtures, sonatas, fantasias, solos, dances, marches, &c., belong to instrumental music.

Instrumen'talist, *n.* One who plays upon a musical instrument.

Instrumental'ity, *n.* State or quality of being instrumental; subordinate, or auxiliary agency; agency of anything, as means to an end.

Instrumen'tally, *adv.* By way or means of an instrument; in the nature of an instrument, as means to an end. — With instruments of music.

Instrumen'talness *n.* Instrumentality; usefulness, as of means to an end.

Instrument'ary, *a.* Instrumental.

Instrumenta'tion, *n.* Means; agency; a series or combination of instruments.

(*Mus.*) The arranging of music for a combined number of instruments. The nature and character of the musical ideas must alone determine whether the instrumentation shall be simple or artistic, and perhaps complex; the latter being the case when some of the instruments take a more prominent part than others. For both purposes, a thorough knowledge of every instrument in the orchestra is absolutely necessary, as without this, instrumentation becomes only a deafening mass of sounds. The stringed instruments, from their nature, in most cases, form the principal parts of a score, around which the other instruments move, without depriving them of their importance. The wind-instruments represent, more or less, as it were, a subordinate chorus, which may again be divided into two kinds, viz: the *wood* instruments and the *brass,* which, with the stringed instruments, give three essentially different choral effects, that may be mixed up together in endless variety.

Instrument'ist, *n.* One who performs upon an instrument of music; an instrumentalist.

Insua, (*een'soo-a,*) a mountain range of Brazil in the prov. of Matto Grosso.

Insubjection, (*-jĕk'shun.*) *n.* Want of subjection; state of insubordination to government.

Insubmerg'ible, *a.* That cannot be submerged.

Insubmissiou, (*-mish'un,*) *n.* Want of submission; disobedience.

Insubor'dinate, *a.* Not subordinate; not submitting to authority.

Insubordina'tion, *n.* [Fr.] Want of subordination; disorder; disobedience to lawful authority.

Insubstantial, (*-stăn'shi-al,*) *a.* Unsubstantial; ideal; intangible; as, "this *insubstantial* pageant." — *Shaks.*

Insubstantial'ity, *n.* State of being insubstantial.

Insuetude, (*-swe'tūd,*) *n.* [From Lat. prefix *in,* and *suetus,* to be accustomed.] Disuse; want of habitude or practice.

Insuf'ferable, *a.* [*In,* and *sufferable.* See SUFFER.] That cannot be suffered, borne, or endured; insupportable; that cannot be permitted or tolerated; as, *insufferable* cold, *insufferable* impertinence. — Detestable; contemptible; disgusting beyond endurance.

Insuf'ferably, *adv.* To a degree beyond endurance; as, a person *insufferably* proud.

Insufficience, (*-fish'ens,*) **Insufficiency,** (*-fish'en-sy.*) *n.* [See SUFFICIENT.] Want of sufficiency; inadequacy; deficiency.

"Consider the pleas made use of to this purpose, and shew the *insufficiency* and weakness of them."—*Atterbury.*

—Inadequacy of power or skill; inability; incapacity; incompetency; want of the requisite strength, value, or force; defect; as, "a minister's aptness or *insufficiency.*" *Hooker.*

Insufficient, (*-fish'ent,*) *a.* Not sufficient; not adequate to any need, use, or purpose; as, an *insufficient* quantity of provisions. — Wanting in strength, power, skill, or dexterity; incompetent; incapable; unfit; as, a man *insufficient* to perform the duties of an office.

Insuffi'ciently, *adv.* With want of sufficiency or adequacy; lacking proper skill or ability.

Insufflation, (*-flā'shun,*) *n.* [Lat. *insufflatio.*] Act of breathing on or into anything; as, "divine *insufflation.*" *Hammond.*

In'sular, In'sulary, *a.* [Fr. *insulaire;* Lat. *insularis,* from *insula,* an island. See ISLAND.] Belonging to an island; surrounded by water; as, *insular* people.

—*n.* A dweller in an island.

Insular'ity, *n.* State or condition of being insular.

In'sularly, *adv.* In an insular manner.

In'sulate, *v. a.* [From Lat. *insula,* island.] To place, as it were, in an island, or in a detached situation, or in a state to have no communication with surrounding objects; to detach; to isolate.

(*Elect.*) To keep electricity in, or away from a body, by supporting it on insulators.

Insulating-stool. A stool supported by non-conducting legs, as glass.

In'sulated, *p. a.* Detached; standing by itself; not being contiguous to other bodies; as, an *insulated* house, or column.

(*Elect.*) Applied to electrified bodies supported and surrounded by *insulators,* or bad conductors of electricity.

(*Astron.*) Noting stars supposed, like our sun, to be beyond the reach of any sensible action of the gravitation of others.

Insula'tion, *n.* Act of insulating; state of being detached from other objects.

(*Elect.* and *Thermotics.*) The state of an electrified or heated body surrounded by bad conductors of electricity or heat.

In'sulator, *n.* The person who, or thing which, insulates.

(*Elect.*) A bad conductor of electricity, so called from being used as support for bodies in which electricity is to be retained.

In'sulous, *a.* [Lat. *insulosus.*] Abounding in islands. (R.)

Insult, *n.* [Lat. *insultus,* from *insilio* — *in,* and *salio,* to leap, spring, or bound.] Any gross abuse offered to another, either by words or actions; act or speech of insolence or contempt; an affront; an indignity; contumely.

"Wrongs unredressed, or *insults* unavenged." — *Wordsworth.*

Insult', *v. a.* To treat with gross abuse, insolence, contempt, or indignity, by words or actions.

(*Mil.*) To attack suddenly and openly.

—*v. n.* To leap or jump. — To behave with insolence or insolent triumph.

Insult'er, *n.* One who insults.

'Man, the merciless *insulter,* man." — *Rowe.*

Insult'ing, *p. a.* Expressing insolence or contempt; as, *insulting* words.

Insult'ingly, *adv.* With insolent abuse or contempt; with contemptuous triumph.

Insuperabil'ity, *n.* Quality of being insuperable.

Insu'perable, *a.* [Lat. *insuperabilis* — *in,* and *superabilis,* from *supero,* to go or pass over, from *super,* over, above.] That cannot be passed over; that cannot be overcome or surmounted; unconquerable; insurmountable; inviucible; as, an *insuperable* difficulty.

Insu'perableness, *n.* State or quality of being insuperable.

Insu'perably, *adv.* Insurmountably; in a manner or degree not to be overcome.

Insupport'able, *a.* [Fr. *in,* and *supportable.* See SUPPORT.] That cannot be supported or borne; that cannot be tolerated or endured; insufferable.

Insupport'ableness, *n.* Quality of being insupportable or insufferable.

Insupport'ably, *adv.* In a manner or degree that cannot be supported or endured.

Insuppos'able, *a.* That cannot be supposed; inconceivable.

Insuppres'sible, *a.* [*In,* and *suppressible.* See SUPPRESS.] Not to be suppressed.

Insuppres'sibly, *adv.* In a manner or degree not to be suppressed.

Insurable, (*in-shūr'a-bl,*) *a.* That may be insured against loss or damage; proper to be insured; as, an *insurable* interest.

Insur'ance, Assur'ance, *n.* [Fr. *assurance;* L. Lat. *assecurare,* from Lat. *ad,* and *securus.* Both terms are commonly used synonymously; but the latter is now more frequently applied to contracts which depend on the continuance or failure of human life, while the former is applied to risks of all other kinds.] A contract between two parties, in which one of them, the *insurer,* undertakes, in consideration of a certain sum received or promised, called the *premium,* to indemnify, or assure, the other against a certain amount of loss from the occurrence of a specified contingency, as the burning of certain premises, the loss of a certain ship, or the death of a certain person. Such contracts are for a certain period, either a fixed time, or for a period terminable on the occurrence of an uncertain event, as the termination of a voyage. The deed by which the insurer becomes bound is called a *policy of I.,* and the contingency assured against is termed the *risk.* The principle of *I.* is founded upon the doctrine of probabilities. According to this latter, if we take a sufficiently extended range of instances, the probability of a certain event happening can be ascertained with a considerable degree of accuracy. Thus, though, as regards any individual, it is impossible to predict that he shall die within twelve months, yet, if we take a number of individuals, say 10,000, and find that over a period of ten years so many have died annually, we may generally predict, with tolerable certainty, that a like number will die annually in similar circumstances. If, however, in place of 10,000 persons, we take 1,000,000, and in place of 10 years, 50 years, we shall so much the more counteract the minor disturbing elements that, when acting on smaller numbers, materially affect the result, and thus arrive at a greater degree of certainty. It is in this way that insurers calculate their risks and estimate their premiums. From extended series of observations and carefully prepared tables, they know the chances of the event insured against happening, and determine the amount of premium accordingly. Thus, if, out of 100 risks, the insurer expects to have two losses, he calculates so as that the 100 premiums may cover the two losses, together with his own business expenses, &c. The business of *I.* is generally carried on by companies having a large subscribed capital, by means of which they are able, without difficulty, to meet any heavy loss, while their premiums being proportioned to their risks, their profit is, at an average, independent of such contingencies. The advantages of *I.* are very great. While, to one person, a merchant, the loss of a vessel might be a very serious matter, he can thus, by the payment of a certain sum, provide against it, so that he may carry on his business with a feeling of perfect security. The principle of *I.* is that of equalizing the accidents of life or fortune, by uniting many persons together, who agree to bear jointly the loss of any individual. "It is, in fact," says Prof. De Morgan, "in a limited sense and a practical method, the agreement of a community to consider the goods of its individual members as common. It is an agreement that those whose fortune it shall be to have more than average success shall resign the overplus in favor of those who have less. And though, as yet, it has only been applied to the reparation of the evils arising from storm, fire, premature death, disease, and old age, yet there is no placing a limit to the extensions which its application might receive, if the public were fully aware of its principles, and of the safety with which they may be put in practice." (*Essay on Probabilities.*) — From a passage of Livy it has been disputed whether the system of *I.* was known or practised by the Romans. Some authorities are of opinion that it was introduced into Europe by the Jews in 1182; while others state that it arose in Lombardy about 1280. The earliest ordinance respecting *I.* is dated Barcelona, 1435. The next was published at Florence in 1523. The Emperor Charles V. of Germany issued the "Caroline Code" in 1551; his son, Philip II., added a number of new decrees concerning *I.* in 1563 and 1565. The preamble to the first English statute on this subject (14 Eliz. c. 12) was passed in 1601. Louis XIV. issued an ordinance on the subject in 1681. — The three great divisions of *I.* are *marine, fire,* and *life* insurance. The two last are of much later origin than he first. — A *marine I.* is a contract entered into between persons having some interest in vessels, their cargo, or their earnings, on the one side, and the insurers, or persons who, on the payment of a certain premium, undertake to indemnify the former against specified losses during a particular voyage, or for the time specified in the policy. The insurers are usually called *underwriters,* because they write their names at the foot of the policy. The contract of insurance is one pre-eminently based on

the assumption of perfect good faith between the parties; and hence any concealment, or misrepresentation of material facts, likely to affect the underwriter's estimate of the risk, will render the policy void, even where the concealment or misrepresentation may have resulted from a mistake, without the intention to deceive. The policy of insurance is printed with blank spaces, to be filled up with the particulars of each case; and the perils insured against are described as "the adventures and perils of the seas, men-of-war, fire, enemies, pirates, rovers, thieves, jettisons, letters of mart and countermart, surprisals, takings at sea, arrests, restraints, and detainments of all kings, princes, and people of what nation, condition, or quality soever, barratry of the master and mariners, and all other perils, losses, and misfortunes, that have, or shall come to the hurt, detriment, or damage of the said goods, merchandises, and ship, &c., or any part thereof." The risk on the ship in voyage policies commences at and from the place specified in the policy, and continues till she has been moored for twenty-four hours in safety at the destination specified. If the ship should deviate from the regular and usual course of the specified voyage insured, without necessary or reasonable cause, the underwriter is thenceforth discharged from all liability under the policy. In all voyage policies it is implied in the contract that the ship shall be seaworthy at the commencement of the risk; but it has recently been decided that there is no such warranty of seaworthiness implied in time policies. In case of any loss or misfortune, the insured and their servants are expected to labor for the recovery of said goods, merchandise, or ship, or any part thereof, for the insurers, who will bear the expenses thereof. When an absolute total loss occurs, the assured are entitled to recover the amount of the policy, without giving any notice of abandonment; when the subject insured is so seriously damaged that its recovery might cost more than its eventual value, it forms a "constructive total loss," and notice of abandonment requires to be given by the insured, when the underwriters become owners of the vessel, and bound for the amount of the insurance. When there is partial loss or damage, arising from any of the causes insured against, it is determined by what is termed *particular average*. In every case of partial loss the underwriter is liable to pay such proportion of the sum he has subscribed as the damage sustained by the subject of *I.* bears to its whole value at the time of *I.* — *Fire Insurances* are almost invariably effected by joint-stock companies, of which the considerable towns throughout the Union are amply provided. Some of these insure entirely at their own risk, and for their own profit; in others, which are called mutual *I.* companies, every person insured becomes a member or proprietor, and participates in the profits or loss of the concern. In fire *I.* the insurers, in consideration of a certain premium received by them, either in a gross sum or in annual payments, contract to indemnify the insurer against all loss or damage he may sustain in his houses, or other buildings, stock, goods, or merchandise, by fire, during a specified period. Usually the period is for one year, and renewed annually by payment of another premium. As in marine *I.*, a misrepresentation, whereby the property insured may be charged at a lower rate of premium than it otherwise would be, invalidates the policy. The party effecting the *I.* must also have a *bona fide* interest in the property insured. The amount insured is payable to its full extent, provided the loss or damage is equal to the sum insured. The conditions on which an *I.* is granted are in all cases printed upon the policy, and form a part of the contract. The policy of *I.* is not in its nature assignable, nor can it be transferred without the express consent of the office. Risks are of various kinds, and are commonly divided into *common*, *hazardous*, *doubly hazardous*, and *special*. — *Life I.* or *Assurance*, is a contract for payment of a certain sum, in the event of the death of a particular person, in consideration of a premium paid at once or periodically. Assurances are said to be *absolute* when the amount of the *A.* is payable on the death of the party assured; *contingent*, when the payment depends also upon some other event; as the existence of some other person or persons at the time of the death. They are also *temporary*, when the sum is payable only on the expiry of the life within a certain time; *deferred*, when payable only in the event of the expiry of the life after a certain time; and for the whole life, payable at the death of the individual, whenever that may happen. Assurances are also effected on joint lives under various contingencies. The system of life *A.* seems to have been borrowed from the marine, and the practice at first was for individuals to underwrite life-risks in the same way as marine; and this probably existed during the greater part of the 17th century. There are several kinds of societies; as the *proprietary*, *mutual A.*, and *mixed societies*. The proprietary, or *joint-stock companies*, are formed of persons who have subscribed a capital, on the *A.* of which the business of the company is carried on, and who divide the profits entirely among themselves. In the *mutual A.* societies, on the other hand, there is no proprietary, the assured being likewise the assurers, and dividing the profits among themselves, after deducting the expenses of management, and reserving a guaranty fund. In the mixed class of offices, which is the most numerous in the U. States, there is a proprietary, but, at the same time, the assured are allowed to participate largely in the profits of the society, which are usually divided in the form of bonuses at stated periods. The premiums to be paid are adjusted according to the age of the party on whose life the *A.* is made; being lowest for young lives, and increasing from year to year as the expectancy of life diminishes. Before effecting an *A.*, there are certain forms to be filled up, and certain regulations to be complied with, so as to ascertain the state of health of the proposer; for unless he be in good health, the office will not undertake the risk at the ordinary rate. If the proposer misstates or conceals anything that may affect the rate of premium, it vitiates the policy, though some offices now declare their policies to be indisputable after a certain time. If an *A.* is effected by one person on the life of another, the assurer is generally required to prove that he has a sufficient interest in the life to warrant him in taking out a policy to the extent proposed. Occasionally offices will lend the value of a policy at a moderate rate of interest on its security. It is a more common practice among offices to allow a policy-holder to resign his *A.*, and to return him a certain portion of the premiums paid. The sum so returned is generally about one-third of the premiums paid and the bonuses declared on the policy. On the expiry of the life of the insured, the company requires the production of certain documents; as the register of the burial of deceased, and reference to the medical men and others who attended him in his last illness. It is due to American *I.* offices to state that generally, on being satisfied as to the death of the party, their payments are prompt; and the number of cases in which they have disputed claims is very limited. — See MORTALITY (LAWS OF).

Insure, (*-shūr'*,) *v. a.* To make sure or secure; as, to *insure* protection to any one. — To contract or covenant for a consideration; to secure a person against loss; as, to *insure* a ship, to *insure* one's life, *insured* at Lloyd's. —*v. n.* To underwrite; to practise making insurance.

Insurer, (*-shūr'er*,) *n.* One who insures; an underwriter.

Insur'gency, *n.* [Fr. *insurgence.*] Act of rising in opposition to civil or political authority.

Insurgent, *a.* [Lat. *insurgens*, from *in*, and *surgo* to rise. See SURGE.] Rising upon; rising up or to; rising in opposition to lawful, civil, or political authority. —*n.* A person who rises in opposition to civil or political authority. — One who openly and actively resists the execution of laws.

Insurmountabil'ity, INSURMOUNT'ABLENESS, *n.* — State of being insurmountable.

Insurmount'able, *a.* [Fr. *insurmontable.*] That cannot be surmounted; insuperable; that cannot be overcome; not to be surmounted; not to be passed by ascending.

Insurmount'ably, *adv.* In a manner or degree not to be overcome.

Insurrec'tion, *n.* [Fr.; L. Lat. *insurrectio*, from *insurgo*, *insurrectum.*] A rising up; a rising upon or against; a rising against civil or political authority; the open and active opposition of a number of persons to the execution of law in a city or state.

Insurrec'tional, *a.* [Fr. *insurrectionnel.*] Pertaining to insurrection; consisting in insurrection.

Insurrec'tionary, *a.* Pertaining or suitable to insurrection.

Insurrec'tionist, *n.* One who favors insurrection.

Insusceptibil'ity, *n.* Want of susceptibility or capacity to feel or perceive.

Insuscep'tible, *a.* Not susceptible; not capable of being moved, affected, or impressed; not capable of receiving or admitting.

Insuscep'tive, *a.* Not susceptive.

Intact', *a.* [Fr.; Lat. *intactus* — *in*, and *tango*, to touch.] Untouched; uninjured; undisturbed.

Intact'able, *a.* (*Zoöl.*) Not perceptible to the touch.

Intagliated, (*in-tăl'yāt-ed*,) *a.* Engraved or stamped on.

"Starry stone deeply *intagliated*." — *Wharton.*

Intaglio, (*in-tăl'yō*,) *n.* [It., from *intagliare*, to cut into, to carve; Fr. *tailler*, to cut.] A method of engraving, which is distinguished from *cameo* by having the figures sunk into the material employed, instead of being raised in relief, was practised by the Egyptians and the ancient Jews, and was brought to its highest perfection by the Greeks. It is the method employed in the engraving of SEALS, *q. v.*

Intail', *v. a.* See ENTAIL.

In'take, *n.* The spot or point where water is taken into a pipe, reservoir, &c.; — used in contradistinction to *outlet.*

Intangibil'ity, *n.* Want of tangibility.

Intan'gible, *a.* [*in* and *tangible.*] That cannot or may not be touched; not perceptible to the touch.

Intan'gibleness, *n.* State or quality of being intangible.

Intan'gibly, *a.* So as to be intangible.

Intan'gle, *v. a.* Same as ENTANGLE, *q. v.*

Intast'able, *a.* Having no taste; possessing no savor.

Integer, (*in'te-jer*,) *n.* [Lat., from *in*, and *tango*, *tago*, to touch. See TANGENT.] That which is whole or entire; the whole of anything, particularly a whole number in contradistinction to a *fraction.*

In'tegral, *a.* [Fr.; L.Lat. *integralis*, from Lat. *integer.*] Undiminished; complete; not defective; whole; entire; making part of a whole, or necessary to make a whole; not fractional; as, an *integral* system.

(*Arith.*) Noting a whole number; — in calculus, an expression which, being differentiated, will produce a given differential.

In'tegral, *n.* A whole; a whole thing or number.

In'tegral Cal'culus, *n.* [From Lat. *integer*, entire.] (*Math.*) As the integral calculus forms one of the most important branches of modern mathematics, and as it is so intimately connected with differentials, it has been deemed best, in the present work, to combine the two in their approximate relationship, rather than to enter upon each separately. A definition of the words, therefore, has been merely given under the headings CALCULUS and DIFFERENTIAL CALCULUS, the subject being fully entered into under the present article. (1) The object of the differential calculus may be stated briefly to be to find the ratios of the differences of certain variable magnitudes, on the supposition that these differences become *infinitely small*; and this hypothesis gives rise to considerable abbreviations in the general calculation of differences. It may be as well here to inquire, Are they all ultimately connected with the subject? what are the terms *infinite* and *infinitely small?* It must, however, be first borne in mind, that every magnitude which serves the purpose of mathematical investigation can be augmented or diminished, without any limit as to extent. We may, consequently, imagine a quantity to become so great as to exceed any finite assignable quantity of the same nature as itself, or so small as to be less than any finite assignable quantity as itself: in the former case, the quantity is said to be infinite, and in the latter infinitely small. From these data it may be said that a finite magnitude may be regarded as nothing, or zero, in comparison with one infinitely great, and as infinitely small magnitudes as nothing, or zero, in comparison with a finite magnitude. The infinitely small quantities which come under consideration in the differential calculus are called *differentials*; and hence the connection between the terms infinite and infinitely small with the present subject. The following are the principles of the differential calculus, and will explain the synonyms which will be made use of in the article. One quantity, u, is said to be a *function* of another, x, when the value of the magnitude of u depends upon the variation of a. Thus, the area of a triangle is the function of the base when the altitude remains unaltered; since the area will increase or decrease with the increase or decrease of the base. If $u = ax^2bx$, where a and b are constant quantities, and x a variable one, u is said to be a function of x, since if x changes, the value of u will be altered; this relation between u and x is usually expressed by writing $u = f(x)$, or $\phi(x)$, the symbols f and ϕ expressing the word function. The quantity x is called the *independent variable*, and u the *dependent variable*. The differential of a variable may be truly defined to be the infinitely small difference between two successive states of the same variable, and the object of the calculus is to find this differential for all possible cases; that is to say, for all the possible functions of the proposed variables, such as x, y, z, &c., of which the particular differentials are expressed by dx, dy, dz, &c. Before any explanation is entered into as to how this operation is performed, it will be necessary to examine into the distinctions that must be made between the process by which an ordinary, or finite difference, is obtained, and that to which we must have recourse when the difference is infinitely small, or, in other words, is a differential. If we consider the proposed system or function in any two determinate states different from each other, the difference of the two values of the same quantity taken in the two states will be determinate, and consequently cannot be considered as minute as we please, so that no part of its expression can be omitted; but if the two states of the function approach indefinitely near each other, the difference of the two values of the same variable may be rendered as small as we please. It then becomes a differential, and is in fact nothing more than the ordinary difference simplified by the suppression of the quantities, which in its expression may be regarded as infinitely small in comparison with the other quantities of which it is composed. Such may be said to be the general principle of differentiation, or, in other words, the manner in which the first differential coefficient A, or $\frac{du}{dx}$, is found. The differential coefficient of the term of any function equals the sum of the differential coefficients of each function; for, let $u = z+v+w+$ &c., z, v, w, being functions of x; therefore:

$$u+\frac{du}{dx}h+\text{ \&c.} = z+\frac{dz}{dx}h+v+\frac{dv}{dx}h+w+\frac{dw}{dx}h+\text{ \&c.}$$

$$\therefore \frac{du}{dx} = \frac{dz}{dx}+\frac{dv}{dx}+\frac{dw}{dx}+\text{\&c.; or,}$$

$$\frac{d\cdot(z+v+w+\text{\&c.})}{dx} = \frac{dz}{dx}+\frac{dv}{dx}+\frac{dw}{dx}+\text{ \&c.;}$$

which proves the truth and application of the formula. The utility of these first principles of the differential calculus may be shown by the following problem: — The radius of a circular plate of metal is 12 inches; find the increase of area when the radius is increased ·001 inch.

If u = area of a circle, radius = x

$\therefore u = \pi x^2$; and $du = 2\pi x dx$

Make x=12, dx=.001, then du=increase of area;

$\therefore du$=3.1416×24×.001=.0753984 of a square inch.

In the differentiation of angular, exponential, and logarithmic functions, when $u = \sin x$, $\frac{du}{dx} = \cos x$, or $\frac{d\cdot\sin x}{dx}$ $= \cos x$; when $u = \cos x$, $\frac{du}{dx} = -\sin x$; when $u = \tan x$

$\frac{du}{dx} = \frac{d\cdot\tan x}{dx} = \frac{1}{\cos^2 x}$. Another formula will be found very useful, — that the differential coefficient of the logarithm of a function equals the differential coefficient

of the function divided by the function itself. The primal principle of tho differential calculus may be defined to be its application to the equations of curves, by which means the radii of curvation are able to be discovered by a few simple formulas. It also applies to the finding of the maxima and the minima, investigations with regard to sines, and numerous other mathematical inquiries, which, without its aid, could only be solved by the most laborious and difficult methods. It was invented by Leibnitz; and the dispute between him and Newton on the subject of the discovery will be found narrated under the article *Fluxions*. The Integral Calculus is the direct reverse of the differential, its object being to discover the original function from a given relation between the differential coefficients and functions of x and u. The process by which u is formed from $\frac{du}{dx}$ is called integration, and when performed, is expressed by prefixing the symbol $\int x$. Thus, if $\frac{du}{dx} = \phi(x)$, $u = \int x.\phi(x) = C$. Since $\int$ is the initial letter of *summa*, or sum, the integral is said to be the sum of the differentials of the function. A constant quantity, C, is added, since constant quantities connected with the original function by the sign $\pm$ disappear in differentiation; and therefore, when we return to the original value u, an arbitrary quantity, as C, is added, which must be determined by the nature of the problem. The simplest case to be decided in the integral calculus is when $\frac{du}{dx} = ax^m$. Let $u = Ax^n + C$; $\therefore \frac{du}{dx} = nAx^{n-1} = ax^m$; $a = nA$, and $m = n-1$; $\therefore u = m+1$; and $A = \frac{a}{n} = \frac{a}{m+1}$; $\int x\, ax^m = \frac{a}{m+1} x^m x^1 + C$; or, to integrate a monomial, *add unity to the index, divide by the index so increased, and add a constant*. The integrals of the sum of any number of differential coefficients = the sum of the integrals of each differential coefficient. The method usually given for the integration of $\int \frac{1}{a(x_2+1)^n}$ is called "integration by parts," which is very general in its application, and which may be here explained. Since $\frac{d}{dx}(pq) = p\frac{dq}{dx} + q\frac{dp}{dx}$; $\therefore p\frac{dq}{dx} = \frac{d}{dx}(pq) - q\frac{dp}{dx}$; $\therefore \int_x p\frac{dq}{dx} = pq - \int_x q\frac{dp}{dx}$. If any differential coefficient can be divided into parts, one of which is a function of x, as p, and the other is the differential coefficient of a known function of q; then u, the required function, is equal to the product of p and q, *minus* the integral of q manitpiled by $\frac{dp}{dx}$. The utility of this method depends upon $q\frac{dp}{dx}$ being less complicated than the original function $p\frac{dq}{dx}$. In the integration of the preceding examples, the differential coefficient has either been a given function of one of the variables, or else has been expressed in such terms of the two, that by a very evident process it has been reduced to a function of one of the variables, or else has been expressed in such terms of the two, that by a very evident process it has been reduced to a functional of one only. The next step, therefore, by which we proceed, is to integrate differentials when the differential coefficients and the variables x and y are mingled together. This class of equations, termed *par excellence* "differentials," is divided into minor classes dependent upon the *order* and *degree* of the differential coefficient. Thus, an equation involving $\frac{dy}{dx}, \frac{d^2y}{dx^2}, \frac{d^3y}{dx^3}$, &c. . . . . $\frac{d^ny}{dx^n}$ is called a differential equation of the nth ordor, and of the first degree, while one containing $\frac{dy}{dx}, \left(\frac{dy}{dx}\right)^2, \left(\frac{dy}{dx}\right)^3$, &c. . . $\left(\frac{dy}{dx}\right)^n$ is said to be of the first order, and of the nth degree. The application of these equations may be briefly sketched by the following problem. Find the curve in which the subtangent is equal to the sum of the abscissa and ordinate:

$$\text{Here } y\frac{dx}{dy} = x+y; \text{ and let } x = yz;$$

$$\therefore \frac{dx}{dy} = z + y\frac{dz}{dy}; \quad \frac{x+y}{y} = z+1;$$

$$\therefore \frac{dy}{ydz} = 1; \quad \therefore \log\left(\frac{y}{c}\right) = z = \frac{x}{y}.$$

Lagrange has worked out three different classes of differential equations, and his theorems on the subject, and the formulas he has laid down for eliminating the integrals, are easy enough for the mathematical student to follow. The *Calculus of Variations* is that which treats on the finding of the maximum and minimum, and also on the nature of the functions which possess that property. This variety of Fluents is merely another form of differentiation under a new symbol, consequently it need not be treated on here. The problems termed *isoperimetrical*, invented and named by James Bernouilli, come under this latter system. Isoperimetrical figures are such as have equal perimeters, or circumferences. Bernouilli's problems rest on the following question: — "Given the length of a curve, find its equation when the area included by it is a maximum," which can be thus mathematically put: — Find $y = f(x)$, so that $\int_x u$ may be a maximum, while $\int_x u_1 = c$; which can be easily brought out, and the integral found. The *Infinitesimal Calculus* is the art of employing infinitesimal quantities as auxiliaries, in order to discover the relations which exist among the proposed quantities. The subject will be found treated under the article FLUXIONS.

In'tegrally, *a.* Wholly; completely; entirely.

In'tegrant, *a.* [Lat. *integrans*, from *integro*, to renew, to restore, from *integer*.] Necessary to constitute an entire thing; making part of a whole; as, an *integrant* particle.

In'tegrate, *v. a.* [Lat. *integro, integratus*.] To renew; to restore; to perfect; to make entire. — To indicate the sum total, or whole; as, an *integrating* anemometer. (*Math.*) To find the integral of.

Integra'tion, *n.* [Lat. *integratio*.] Act of making whole or entire. (*Math.*) The summation of any number of terms of a series whose law, or general term, is given.

Integ'rity, *n.* [Fr. *intégrité*; Lat. *integritas*, from *integer*.] State of being untouched, undiminished, or unimpaired. — State of being pure, entire, unadulterated, or uncorrupted; wholeness; entireness; unbroken state; as, the *integrity* of a country. — Moral soundness or purity; incorruptness; uprightness; honesty; probity. — Purity; genuine, unimpaired, or unadulterated state.

"Language continued long in its purity and *integrity*." — *Hale.*

Integuma'tion, *n.* That branch of physiology having reference to the integuments of animals and plants.

Integ'ument, *n.* [Fr.; Lat. *integumentum* — *in*, and *tego*, to cover. See TEGUMENT.] That which naturally invests or covers another thing, as the skin covers the body.

Integument'ary, *a.* Pertaining to or composed of integuments.

Integumenta'tion, *n.* Act of covering with integuments; state of being covered with integuments.

In'tellect, *n.* [Fr., from Lat. *intellectus*, from *intelligo* — *inter*, and *lego*, to select, to catch with the eye. See LEGIBLE.] That faculty of the human soul or mind which perceives or understands, or which receives or comprehends the ideas communicated to it by the senses or by perception, or by other means; the faculty of thinking; the UNDERSTANDING, *q. v.*

In'tellected, *a.* [From *intellect*.] Endowed with intellectual powers or capacities. (R.)

Intellection, (*-lĕk'shun,*) *n.* [Lat. *intellectio*.] Act of understanding; intuition.

Intellec'tive, *a.* [Fr. *intellectif*.] Having power to understand or comprehend. — Springing from or produced by the understanding. — To be perceived by the understanding only, not by the senses; as, "*intellective* abstractions of logic." — *Milton.*

Intellec'tively, *adv.* With intellection.

Intellectual, (*-lĕkt'yu-al,*) *a.* [Fr. *intellectuel*; L. Lat. *intellectualis*.] Relating to the intellect or understanding; as, "the *intellectual* system of the universe." (*Cudworth.*) — Belonging to the mind; mental; performed by the understanding; as, an *intellectual* operation. — Formed or idealized by the intellect alone, not by the senses.

"In a dark vision's *intellectual* scene." — *Cowley.*

— Possessing the power of understanding; as, an *intellectual* being.

— *n.* The intellect or understanding; the mental faculty.

"I kept her *intellectuals* in a state of exercise." — *De Quincey.*

Intellect'ualism, *n.* Intellectuality; intellectual power. — Doctrine of the derivation of knowledge from pure reason.

Intellect'ualist, *n.* One who overrates or over-estimates the understanding. — One who propounds the doctrine that human knowledge is derived from pure reason.

Intellectual'ity, *n.* [Fr. *intellectualité*.] Intellectual power.

Intellect'ualize, *v. a.* To treat, discuss, or reason upon intellectually. — To render intellectual; to endow or invest with intellect.

Intellect'ually, *adv.* By means of the intellect or understanding.

Intel'ligence, *n.* [Fr.; Lat. *intelligentia*, from *intelligo*. See INTELLECT.] The power of discovering or understanding; act or exercise of knowing. — Discernment; understanding; intellectual capacity, skill, or knowledge. — The pure intellect; faculty of exercising the higher functions of the understanding. — An account of things distant or before unknown; advice; notice; news. — Instruction or general information; as, a person of *intelligence*. — A spiritual being; — usually applied to pure spirits.

"The glorious angels and created *intelligences*." — *Hale.*

Intelligence Office, an office or place where intelligence is communicated and information obtained, — particularly in regard to servants or hired help.

Intel'ligencer, *n.* One who or that which gives or conveys intelligence; a messenger; a spy.

"They have news-gatherers and *intelligencers*." — *Spectator.*

Intel'ligent, *a.* [Fr.; Lat. *intelligens*, from *intelligo*.] Well-informed; skilled; knowing; endued with a good understanding; as, an *intelligent* man. — Endowed with the faculty of understanding or reason.

Intelligential, (*-jĕn'shal,*) *a.* [See INTELLIGENCE.] Intellectual; exercising the faculty of understanding; relating or pertaining to the intelligence; as, "act *intelligential*." (*Milton.*) — Consisting of unbodied mind; as, "*intelligential* substances." (*Milton.*)

Intel'ligently, *adv.* In an intelligent manner.

Intelligibil'ity, *n.* [Fr. *intelligibilité*; L. Lat. *intelligentabilitas*.] State or quality of being intelligible; possibility of being understood.

Intel'ligible, *a.* [Fr.; Lat. *intelligibilis*.] That may be understood or comprehended; comprehensible; conspicuous; plain; clear; as, an *intelligible* description.

Intel'ligibleness, *n.* Intelligibility.

Intel'ligibly, *adv.* In a manner to be understood; clearly; plainly; comprehensibly; as, to write *intelligibly*.

Intem'perament, *n.* A bad constitution.

"Some depend upon the *intemperament* of the part ulcerated." — *Harvey.*

Intem'perance, *n.* [Fr.; Lat. *intemperantia*.] Want of temperance, moderation, or due restraint; excess in any kind of indulgence; unbridled appetence. — Habitual indulgence in drinking ardent liquors, with or without intoxication; excess of sensual indulgence.

"*Intemperance* in meats and drinks." — *Milton.*

— Any intemperate act or condition; an excess; an indulgence.

Intem'perate, *a.* [Lat. *intemperatus*.] Not temperate not moderate or restrained within due limits; excessive indulgence of any appetite or passion; immoderate enjoyment or exertion; passionate; as, an *intemperate* woman. — Beyond rule, or just quantity or measure; inordinate; excessive; ungovernable; as, *intemperate* language. — Prone to an immoderate use of ardent or spirituous liquors.

Intem'perately, *adv.* With excessive indulgence of appetite or passion; exceeding the bounds of moderation; in an intemperate manner.

Intem'perateness, *n.* State or quality of being intemperate; excessive degree of indulgence in any appetite or passion; want of moderation; excess. — Immoderate degree of any quality in the weather, as in cold, heat, or storms.

Inten'able, *a.* [Fr.] Untenable; that cannot be held or defended; as, an *intenable* fort.

Intend', *v. a.* [L. Lat. *intendere*, to will, to purpose, to decide; Lat. *intendo* — *in*, and *tendo*, to stretch out.] To stretch or set forward in mind; to purpose; to mean; to design; as, "an enemy *intends* you harm." — *Shaks.*

— *v. n.* To have a design, purpose, or intention.

Inten'dancy, *n.* [Fr. *intendance*.] Office or vocation of an intendant, or the district committed to his charge.

Inten'dant, *n.* [Fr.; from Lat. *intendo*.] One who has the superintendence, charge, direction, supervision, or management of some public business; as, an *intendant* of finance.

Intend'ed, *p. a.* Betrothed; affianced; as, an *intended* wife.

— *n.* One who is betrothed; an affianced lover.

"I might appear to disparage his *intended*." — *Disbome.*

Intend'er, *n.* One who intends.

Intend'ment, *n.* [Fr. *entendement*.] Intention; design; purpose. (*Law.*) The true meaning, the correct understanding, or intention, of the law; a presumption or inference made by the courts. Thus, it is an *I.* of the law that every man is innocent until found guilty; that every one will act for his advantage; that every officer acts in his office with fidelity; that the children of a married woman, born during the coverture, are the children of the husband. (R.)

Inten'erate, *a.* [Lat. *in*, and *tener*, tender.] To soften; to make tender or delicate; as, *intenerating*, milky grain.

Intenera'tion, *n.* Act of making soft; state or condition of being made tender. (R.)

Inten'sate, *v. a.* To render intense, or more intense.

Inten'sative, *a.* Intensifying; giving intensity.

Intense', *a.* [Lat. *intensus*, from *intendo* — *in*, and *tendo*, to extend. See TEND.] Strained; extended; stretched; tightened; very close; strict, as when the mind is fixed or bent on a particular object; as, *intense* study. — Raised to a high degree; violent; vehement; very severe or keen; ardent; severe; as, *intense* heat or cold, *intense* feeling or excitement, *intense* pleasure or pain, &c.

I. Blue. (*Dyeing.*) Indigo refined by solution and precipitation, in which state it is equal in color to Antwerp blue. By this process, Indigo also becomes durable, and much more powerful, transparent, and deep. It washes and works well in water; and in other respects has the common properties of indigo.

Intense'ly, *adv.* To an extreme degree; vehemently; as, weather *intensely* hot, a person *intensely* excited. — Attentively; forcibly; earnestly; as, *intensely* studious.

Intense'ness, *n.* State of being intense, or of being strained or stretched; intensity; as, *intenseness* of cold, *intenseness* of thought.

Intensifica'tion, *n.* Act of intensifying, or of rendering more intense.

Inten'sify, *v. a.* [Lat. *intensus*, and *facio*, to make.] To make more intense.

— *v. n.* To become intense or more intense; to act with increasing strength, power, or energy.

Intension, (*-tĕn'shun,*) *n.* [Lat. *intensio*.] A straining, stretching, or expanding; state of being strained; as, the *intension* of a violin-string. — Increase of active

power or vital energy; —in contradistinction to *remission*, or *relaxation*.

Inten'sity, *n.* [Fr. *intensité;* L. Lat. *intensitas.*] State of being intense, or of being stretched or strained; state of being raised to a great degree; intenseness; as, *intensity* of heat or cold, *intensity* of suffering.

(*Phys.* and *Mech.*) The rate or degree of energy with which a force or cause acts. The *I. of an electric current* is equal to the electro-motive force divided by the resistance. —Bunsen has found that the *I. of electric light* is equal to that of 572 candles. —The *I. of radient heat* is the quantity of heat received on the unit of surface.

Inten'sive, *a.* Having intensity; stretched or admitting of extension, as distance. —Unremitted; intent; assiduous.

"Tired with assiduous attendance and *intensive* circumspection." *Wotton.*

(*Gram.*) Tending to give point, force, or emphasis; as, an *intensive* proposition.

Inten'sively, *adv.* By increase of degree; in a manner to give force or emphasis.

Inten'siveness, *n.* State or quality of being intensive.

Intent', *a.* [Lat. *intentus*, from *intendo.*] Having the mind strained or bent on one object; hence, anxiously diligent; sedulously fixed; closely applied;—preceding *on*; as, *intent on* business.

"Of action eager, and *intent on* thought." — *Dryden.*

—*n.* The stretching of the mind toward an object; the thing aimed at or designed; purpose; design; aim.

"Half to shew, half veil the deep *intent.*" — *Dunciad.*

Intention, (*-tĕn'shun,*) *n.* [Lat. *intensio.*] A stretching or bending the mind toward an object; uncommon exertion of the intellectual faculties; fixedness of attention; closeness or assiduity of application; earnestness. —Fixed bent of the mind toward a certain object; as, an *intention* to do better. —Design; purpose; aim; end; drift; object to be accomplished.

"The road to hell is paved with good *intentions.*" — *Proverb.*

—State of being strained, stretched, or distended. See INTENSION.

(*Logic.*) The terms *first* and *second intentions* were introduced by the schoolmen to distinguish certain classes of thought. A first *I.* is a conception of a thing, or things, formed by the mind from external materials, or materials existing without itself. A second *I.*, on the other hand, is a conception of another conception, or conceptions formed by the mind from materials existing in itself. Thus man, animal, stone, are first intentions, being conceptions formed from external materials; while genus, species, &c., are second intentions, being formed from first intentions.

(*Surg.*) A wound is said to heal *by the first I.* when cicatrization occurs without suppuration; union *by the second I.* being that which does not occur until the surfaces have suppurated. To obtain union by the first *I.* the edges of a recent wound must be brought in apposition and kept together by means of adhesive plasters and a proper bandage.

Inten'tional, *a.* Intended; designed; done with aim or design; as, an *intentional* service.

Intentional'ity, *n.* State or quality of being intentional; aim; purpose; design.

Inten'tionally, *adv.* By design; with intention; purposely.

Intentioned, (*-tĕn'shund,*) *a.* With intention; having designs;—used in composition; as, *well-intentioned*, having good intent or aim; *ill-intentioned*, having evil tendency.

Intent'ly, *adv.* With close attention or application; with eagerness or earnestness; fixedly; steadfastly; assiduously; as, I found her reading *intently.*

Intent'ness, *n.* The state of being intent; close and assiduous application.

Inter', *v. a.* [Fr. *enterrer* —*en*, and *terre;* Lat. *terra*, the earth. See TERRESTRIAL.] To deposit and cover in the earth; to bury; to inhume; as, to *inter* a corpse.

Inter-. A Latin preposition, used as a prefix, and denoting *between* or *among.*

In'teract, *n.* [Fr. *entr' acte.*] An interlude; a short piece introduced between the acts of a play. —Intermediate employment or time.

Interac'tion, *n.* Intermediate action.

Interad'ditive, *n.* A thing added parenthetically between the parts of another thing, as a clause in a sentence.

Intera'gency, *n.* Intermediate agency.

Intera'gent, *n.* One who acts as an intermediate agent.

Interambula'cra, *n. pl.* [Lat.] The imperforated plates which occupy the intervals of the perforated ones, or *ambulacra*, in the shells of *Echinoderma.*

Interam'nian, *a.* [Lat. *interamnus.*] Lying between rivers.

Interartic'ular, *a.* Lying between joints or articulations.

Interan'lic, *a.* [Lat. *inter*, and *aula*, ball.] In existence between royal courts. (R.)

Interax'al, *a.* Placed in an interaxis.

Interax'illary, *a.* (*Bot.*) Situated within the axils of leaves.

Interax'is, *n.* [Lat. *inter*, and *axis.*] The space between axes.

Interbreed', *v. a.* and *n.* To breed by cross-infusions of stocks, as animals.

Inter'calar, Inter'calary, *a.* [Lat. *intercalarius* —*inter*, and *calo*, to call, to proclaim. See CALL.] Inserted out of the regular order, or in the midst of others.

(*Calendar.*) Noting a day inserted out of the usual order to preserve the account of time. Thus every fourth year containing 366 days, while the other years contain only 365, one of the months in that year must have an additional day, which is called the intercalary day. The additional day was given to February, as being the shortest month, and in the ancient Roman calendar was inserted between the 24th and 25th days. In the ecclesiastical calendar it still retains that place; but in the civil calendar it is the 29th.—See CALENDAR, BISSEXTILE.

Inter'calate, *v. a.* [Lat. *intercalo, intercalatus.*] To insert or introduce between others, as an extraordinary day or other portion of time.

Inter'calated, *p. a.* (*Geol.*) Noting beds or layers of one kind of rock or other substance included between beds or strata of other kinds.

Intercala'tion, *n.* [Fr., Lat. *intercalatio.*] The act of intercalating.

Intercede', *v. n.* [Lat. *intercedo* —*inter*, and *cedo*, to go. See CEDE.] To mediate; to interpose; to make intercession; to act between parties with the aim of reconciling differences which may exist; to plead in another's favor; —generally before *with.*

"Your lordship may *intercede with* them on my promise of amendment." — *Dryden.*

Interce'dent, *a.* [Lat. *intercedens.*] Coming between; mediating; pleading for.

Interced'er, *n.* An intercessor; one who intercedes; a mediator; a pleader in behalf of another.

Intercel'lular, *a.* Lying between the cells.

(*Anat.*) A term sometimes applied to irregular passages through the substance of the lung, which form the termination of the bronchial tubes, are clustered with air-cells, and not lined by mucous membranes.

(*Vegetable Anat.*) The spaces between the cells, tubes, or vessels of which the tissue of a plant consists. As the cells are usually, and the tubes or vessels always round, it necessarily follows that when pressed together, there will be spaces left between their sides.

Intercept', *v. a.* [Fr. *intercepter;* Lat. *intercipio, interceptus* —*inter*, and *capio*, to take. See CAPTURE.] To take away between or in the midst of a way, course, or passage; to take or seize on by the way; as, to *intercept* a love-letter. —To stop during passage; to obstruct, as the progress of; as, to *intercept* a messenger. —To cut off or interrupt communication with, or progress toward.

"While storms vindictive *intercept* the shore."—*Dryden.*

(*Math.*) To include or comprehend between.

(*Geom.*) To include between.

Intercept'er, *n.* One who intercepts or waylays.

Interception, (*-sĕp'shun,*) *n.* [Fr., from Lat. *interceptio.*] Act of intercepting, or of seizing something on its course or passage; a stopping; hinderance; obstruction of a way or proceeding.

Intercession, (*-sĕsh'un,*) *n.* [Fr., from Lat. *intercessio.*] Act of interceding or mediating; interposition between parties at contention or variance, with a view to adjust and reconcile differences.

"He made *intercession* for the transgressors."—*Isaiah* liii. 12.

—Pleading, prayer, or solicitation in behalf of another person. (Sometimes, but rarely, used in a contrary sense.)

"Your *intercession* now is needless grown;
Retire, and let me speak with her alone."—*Dryden.*

Interces'sional, *a.* Relating to, or consisting of intercession or interposition.

Interces'sor, *n.* [Lat.; Fr. *intercesseur.*] One who intercedes; a mediator; a go-between; one who pleads in behalf of another; one who makes interposition between persons at variance with a view to adjust and reconcile their differences.

"Patron or *intercessor*, none appeared."—*Milton.*

(*Eccl.*) A bishop who, during a vacancy of the see, administers the bishopric until his successor is elected.

Intercesso'rial, *a.* Relating or pertaining to an intercessor.

Interces'sory, *a.* [L. Lat. *intercessorius.*] Interceding; mediatorial; conveying intercession; as, *intercessory* pleadings.

Interchain', *v. a.* To link or unite closely together, as by a chain.

"Two bosoms *interchained* with an oath."—*Shaks.*

Interchange', *v. a.* To change, as one with the other; to put, as each in the place of the other; to reciprocate; to give and take mutually; to exchange; as, to *interchange* ideas, to *interchange* places. —To cause to follow; to alternate; as, to *interchange* sorrows with joys.

—*v. n.* To succeed by alternation.

"With some *interchanging* changes of fortune."—*Sidney.*

—*n.* A mutual giving and receiving; reciprocation; exchange.

"Ample *interchange* of sweet discourse."—*Shaks.*

—Alternate succession; state of being mutually changed or reciprocated; as, the "*interchanges* of light and darkness." — *Holder.*

—Permutation of commodities; barter; reciprocity of traffic; commerce.

Interchangeabil'ity, *n.* Interchangeableness.

Interchange'able, *a.* That may be interchanged; that may be given or taken mutually; as, "*interchangeable* warrants." (*Bacon.*) —Following each other in alternate succession, as the seasons.

Interchange'ableness, *n.* State of being interchangeable.

Interchange'ably, *adv.* Alternately; by reciprocation; in a manner by which each gives and receives.

Interchap'ter, *n.* An interpolated chapter.

Intercip'ient, *a.* Intercepting; waylaying; stopping.

—*n.* The person who, or thing which intercepts, or obstructs on the passage.

Interclavic'ular, *a.* (*Anat.*) That which is placed between the clavicles.

I. Ligament. (*Anat.*) A fibrous bundle, placed transversely above the extremities of the sternum, between the heads of the two clavicles, for preventing their separation in the forced depression of the shoulder.

Interclose', *v. a.* To inclose; to include or bring within.

Interclond', *v. a.* To invest or surround with clouds.

Interclude', *v. a.* [Lat. *intercludo—inter*, and *claudo*, to shut. See CLAUSE.] To intercept; to obstruct; to cut off; to interrupt; to shut from a place, passage, or course by some intervening obstacle.

Intercluision, *n.* [Lat. *interclusio.*] Interception; obstruction; impediment to way or progress.

Intercolo'nial, *a.* Relating to the intercourse between different colonies; as, *intercolonial* trade.

Intercolo'nially, *adv.* As between colonies.

Intercolumnia'tion, *n.* [Lat. *inter*, and *columna*, column.] (*Arch.*) The space between two columns, measured at the lowest part of their shafts. It is one of the most important elements of a building, and on it depends the effect of the columns themselves, their proportion, and the harmony of an edifice. Intercolumniations are of five species, viz., *Arœostyle; Diastyle; Eustyle; Pycnostyle;* and *Systyle;* q. v.

Intercom'bat, *n.* A combat between.

Intercom'mon, *v. n.* To share or participate with others; to feed at the same board or table.

Intercommune', *v. n.* To associate; to commune reciprocally.

—In Scotland, to inhibit from communion; as, an *intercommuned* minister.

Intercommu'nicable, *a.* Susceptible of mutual communication.

Intercommu'nicate, *v. n.* [*Inter*, and *communicate.* See COMMUNICATE.] To hold mutual or reciprocal communication.

Intercommunica'tion, *n.* Reciprocal communication; mutual intercourse.

Intercommun'ion, *n.* Mutual communion.

Intercommu'nity, *n.* Mutual community; reciprocal communication or intercourse.

—Mutual exercise or freedom of religion.

Intercompar'ison, *n.* Mutual or reciprocal comparison.

Intercos'tal, *a.* [Lat. *inter*, and *costa*, rib.] (*Anat.*) Noting certain muscles, vessels, &c., situated between the ribs. There are two sets of intercostal muscles — the external and internal — which decussate each other like the strokes of the letter X.

In'tercourse, *n.* [Lat. *intercursus*, from *intercurro* —*inter*, and *curro*, to run. See COURSE.] Mutual communion or communication; connection by reciprocal dealings between persons or nations; communication; commerce; communion; especially, interchange of thought and feeling; fellowship; familiarity; acquaintance; association.

"The dreary *intercourse* of daily life."—*Wordsworth.*

In'tercourse, In *Pennsylvania*, a post-village of Lancaster co., abt. 12 m. E. of Lancaster city.

Intercross', *v. a.* and *n.* To cross one another, as lines.

Intercur'rence, *n.* A passing between; occurrence; as, "the *intercurrence* of a liquor."—*Boyle.*

Intercur'rent, *a.* [Lat. *intercurrens.*] Running between; intervention; as, *intercurrent* matter. (*Boyle.*)—Occurring; taking place; intervening.

Intercuta'neous, *a.* [Lat. prefix *inter*, and Eng. *cutaneous.*] That is beneath the skin; sub-cutaneous.

Interdash', *v. a.* To dash among or between; to scatter through; to intersperse.

Interden'til, *n.* (*Arch.*) The space between two dentils.

Interdepend'ence, *n.* Reciprocal dependence.

Interdepend'ency, *n.* Mutual dependence.

Interdepend'ent, *a.* Reciprocally dependent.

Interdict', *v. a.* [Lat. *interdico, interdictus—inter*, and *dico*, to speak.] To forbid; to prohibit; to place under an interdict or inhibition.

(*Eccl.*) To debar from communion; to cut off from the exercise and enjoyment of communion with a church.

—*n.* [O. Fr.; Lat. *interdictum.*] A forbidding; an inhibition; a prohibiting order or decree.

(*Eccl. Hist.*) In the Roman Catholic Church, *I.* is a mode of censure adopted against a kingdom, province, or town, in consequence of some offence alleged to have been committed by the people or rulers. In the terms of this *I.*, all kinds of church benefits are denied to such place; there is no church-service, and no administration of the sacraments. Sometimes, however, the rigor of these interdicts has been mitigated in particular cases, permitting the baptizing of infants, the giving absolution to dying persons, &c. In the Middle Ages, this was the most terrible blow that could be inflicted upon a prince or people, and had sometimes the effect of throwing a people into a state of rebellion, in consequence of which the prince was compelled to sue for pardon from the pontiff. Interdicts appear to have been first made use of by the bishops in the 9th cent.; but they were afterwards adopted by the popes. In 998, when Robert of France was married to Bertha, his cousin, Gregory V. interdicted the whole country, and obliged the king to dissolve the union. After a time, they became so common, that they, in a great measure, lost their effect, and fell into disuse. To *I.* of fire and water (*interdictio ignis et aquæ*) was a censure pronounced against individuals, and prohibited any one from receiving them or granting

them fire or water. The last example was by Pius VII. when he issued an inefficient decree against Napoleon in 1809.

Interdic'tion, *n.* [O. Fr.; Lat. *interdictio.*] Act of interdicting or prohibiting; inhibition; cutting off from the exercise or enjoyment of some privilege.

Interdic'tive, Interdic'tory, *a.* Serving to interdict or prohibit; belonging to an interdiction.

Interdig'ital, *a.* [Lat. prefix *inter*, between, and *digitus*, finger.] (*Anat.*) Placed between the fingers; applying to the spaces between the fingers.

Interdig'itate, *v. n.* To interweave. (R.)

Interdigita'tion, *n.* (*Anat.*) Space lying between fingers, or between finger-like appendages.

In'terdunce, *n.* (*Carp.*) An inter-tie.

In'terest, *v. a.* [O. Fr. *interest*, an interest in, a right; Fr. *intéresser*, to interest; Lat. *interesse*, to be between — *inter*, and *esse*, from *sum*, to be.] To concern; to affect; to awaken or excite emotion or passion; to engage the attention of; — generally before *in* or *for*.

"Ill success did not discourage that ambitious and *interested* people." — *Arbuthnot.*

—To give a share in; to have a share in; to excite or engage in behalf of another; — used reflexively.

"Scipio . . . gained a great nation to *interest* themselves for Rome against Carthage." — *Dryden.*

In'terest, *n.* Concern; regard; attention especially devoted to some object. — Influence exerted over others.

"They who had hitherto preserved them had now lost their *interest*." — *Clarendon.*

—Share; part; participation; portion; as, he has an *interest* in the business. — Advantage, personal or universal; good, whether general or private; lot; share. — Aroused state of feeling, particularly sympathetic gratification or friendly regard; as, to feel an *interest* in a person's welfare. — Premium paid for the use of money; profit accruing from the investment or speculative disposition of money or property; as, ten per cent. *interest* on capital. — Any addition or increase of benefit or injury; as, his dislike was returned with *interest*.

(*Hist., Law,* and *Arithmetic.*) *I.* in the annual sum or rate agreed to be paid by the borrower of a sum of money to the lender for its use. The sum so lent is called the *principal;* the sum per cent. agreed on as interest, the *rate*. The system of lending money on interest seems to have existed from very early times; and Moses has laid down rules regarding it. The Jews were enjoined not to take interest of a fellow-countryman, but were allowed to do so of strangers. Still, however, it seems to have been practised, and the taking of interest, or usury, is frequently condemned in Scripture. In Greece and Rome, too, the system was common. In Greece, the rate of interest not being regulated by law, was generally high, being from 10 to 18 per cent., and upwards. In Rome, during the republic, the rate of interest was excessively high — sometimes 30 or 40 per cent. In Mohammedan countries, notwithstanding the prohibition in the Koran, the ordinary rate of interest is at least three or four times as great as the ordinary rate in Europe. In most of the European states, in the Middle Ages, Christians were forbidden, both by the ecclesiastical and civil law, from taking interest; but the practices of the Jews in that respect were connived at. At the present time, the rate per cent. is established by law in most countries, and the loan of money at a higher rate than the legal one is called *usury*. All legal restrictions as to rate of interest were abolished in England, in 1839. Generally speaking, the rate of interest depends on the profit that may be yielded by its employment in industrious undertakings. "The rate of interest," says an economist, "is the measure of the net profit on capital. All the terms beyond this on the employment of capital are resolved into compensations under distinct heads, for risk, trouble, or skill, or for advantages of situation or connection." The rate of interest also varies according to the security for the repayment of the principal and the duration of the loan. If there is any degree of risk as to the repayment of the loan, the rate of interest must necessarily be higher to compensate for that risk; and supposing the security to be equal, capital lent for a fixed and considerable period always fetches a higher rate than that which is lent for a short period, or repayable at the pleasure of the lender. Interest is usually paid yearly or half-yearly: and in this case the loan is said to be at *simple interest*. Though the payment of interest be not made when it becomes due, no interest can be charged upon the accumulated interest, though it is difficult to see how it should not be so. Thus, if $100 be lent at 5 per cent., and the interest allowed to accumulate for four years, when it would amount to $20, the borrower has had the use of the several interests after they became due, as much as he has had that of the principal. Sometimes, however, money is so invested that the interest is not paid as it becomes due, but is progressively added to the principal, the two sums together afterwards bearing interest; and this is what is termed *compound interest*. Interest is reckoned at so much per cent. per annum, that is, so many parts of one hundred annually. Thus, 5 per cent. means $5 of every $100 annually; 4 per cent., $4 of every $100, &c. There are various books of tables for the calculation of interest. In order to find the interest of a given sum at any rate for a year, multiply the sum by the rate of interest, and divide by 100. Where there are days in the calculation, they must be treated as fractional parts of a year; that is, the interest for a year must be multiplied by them, and the product divided by 365.

In'terested, *p. a.* Possessing an interest; concerned in a cause or in consequences; liable to be implicated or affected; chiefly concerned for one's private advantage; as, an *interested* spectator.

In'teresting, *p. a.* Awakening or arousing emotions or passions; engaging or exciting the attention or curiosity; as, an *interesting* book, an *interesting* character.

In'terestingly, *adv.* In an interesting manner.

In'terestingness, *n.* Quality or condition of presenting features of interest.

Interfacial, (*-fā'shal,*) *a.* (*Geom.*) Comprised between two plane surfaces or faces; as, an *interfacial* angle.

Interfere', *v. n.* [Norm. *entreferrent*, an engagement, a fight; O. Fr. *entreferir*, to exchange blows; Lat. *inter*, and *ferio*, to strike.] To clash; to come into collision; to be in opposition; as, "*interfering* commands." (*Smalridge.*) — To interpose; to intermeddle; to intervene; to enter into or connect one's self with the concerns of others; as, to *interfere* between husband and wife.

(*Phys.*) To exert the reciprocal actions denoted by the term INTERFERENCE, *q. v.*

Interfer'ence, *n.* Act of interfering; interposition; intermeddling; mediation; intervention. — Act of coming into violent contact; clashing; collision.

(*Phys.*) The mutual action that two luminous rays exert upon each other when they are emitted from two neighboring sources, and meet each other under a very small angle. This action may be observed by means of the following experiment. In the shutter of a dark room two very small apertures are made, of the same diameter, at a very slight distance from each other. The apertures are closed by pieces of colored glass, red for example, by which two pencils of homogeneous light are introduced. These two pencils form two divergent luminous cones, which meet at a certain distance; they are received on a white screen a little beyond the place at which they meet, and in the segment common to the two discs which form upon the screen some very well-defined alternations of red and black bands are seen. If one of the two apertures be closed, the fringes disappear, and are replaced by an almost uniform red tint. From the fact that the dark fringes disappear when one of the beams is intercepted, it is concluded that they arise from the interference of the two pencils which cross obliquely. This phenomenon has been made the touchstone of the two rival theories of light, the *undulatory* and the *emission*. According to the former, it is thus explained: if two luminous waves simultaneously impel a molecule of ether, its motion will be the resultant of the original impulses; and if the two motions (as in the case of diffraction) be nearly in the same direction, the resultant will be nearly their sum; if opposite, their difference. Thus, when a particle has begun to undulate from the action of a luminous wave, and if, while in motion, another wave impinge upon it, the result will be increase of light, if the motion of the second wave conspire with that of the first; but a decrease, if they oppose each other; and total darkness, if, while opposing, they are equal in velocity. Let *d* be the distance corresponding to a complete period of vibration; then, if the second wave impinge upon the molecule after it has accomplished one or more whole vibrations corresponding to the distances *d*, 2*d*, 3*d*, &c., and has returned to its original position, the two waves will evidently conspire together, and produce more violent motion; but if it impinge on the molecule when the latter has only accomplished half a vibration, corresponding to distances $\frac{1}{2}d$, $\frac{3}{2}d$. $\frac{5}{2}d$, &c., then the wave will oppose the particle's return to its original position; thus producing diminution of motion, or, if equal, rest. In the former case, the intensity of light is increased; in the latter, diminished; and if the undulations are of equal velocity, the light is doubled in the first case, and destroyed in the second. The emission theory totally fails to explain interference. In light of different colors, the value of *d* differs for each color, being least for violet, and greatest for red light. The principle of interference accounts in the most satisfactory way for the colors of thin plates, the fringes that accompany shadows, &c.; and its explanation forms the most decisive reason yet known for adopting the *undulatory* in preference to the *emission* theory of light. See LIGHT.

(*Farriery.*) A striking of one foot against another; — said of a horse.

Interfer'er, *n.* One who interferes or interposes.

Interfer'ingly, *adv.* In a manner characterized by interference.

Inter'fluent, Inter'fluous, *a.* [Lat. *interfluens*, from *interfluo* — *inter*, and *fluo*, to flow. See FLOW.] Flowing between.

Interfoliaceous, (*-fō-li-ā'shus,*) *a.* [Lat. *inter*, between, and *folium*, leaf.] (*Bot.*) Placed alternately between leaves.

Interfo'liate, *v. a.* [From Lat. *inter*, and *folium*, leaf.] To intertwine; to interweave.

Interfulgent, *a.* [Lat. *interfulgens.*] Shining between.

Interfused, (*-fūzd',*) *a.* [Lat. *interfusus.*] Poured or scattered between.

Interfusion, (*-fū'zhun.*) *n.* [Lat. *interfusio.*] A pouring or scattering out between.

Interganglion'ic, *a.* [Prefix *inter*, and Eng. *ganglionic.*] (*Anat.*) Belonging to the nervous chords in the intervals of the ganglions, which they connect together.

Interhe'mal, *a.* [Lat. prefix *inter*, and Eng. *hemal.*] Situate between the hemal spines; as, the *interhemal* bones of fishes.

In'terim, *n.* [Lat.] The mean or intervening time.

"I a heavy *interim* shall support by his dear absence."—*Shak.*

(*Eccl. Hist.*) Several decrees have been issued bearing this title. The first, published by the diet of Ratisbon, July 29, 1541, referred the religious disputes of the Germans to the arbitration of a general council. The second, known as the *Augsburg Interim*, issued by Charles V., was read before the diet of Augsburg, May 15, 1548, and failed in its object of reconciling the Roman Catholics and the Protestants. The *Interim of Leipsic* was promulgated by the Elector Maurice of Saxony, Dec. 22, 1548, and was accepted by some Protestants. Charles V. and Maurice resorted to arms to support their respective decrees, and the Emperor was compelled to revoke his interim in 1552.

Inte'rior, *a.* [Lat. compar. of obs. *interus.*] Inner; internal; being within any limits, inclosure, or substance; — correlative to *exterior*, or *superficial;* as, the *interior* of a house, the *interior* parts of the earth. — Inland; remote from the confines, frontier, or shore; as, the *interior* of a country.

I. Angle. (*Geom.*) The angle of a polygon formed by two adjacent sides, and lying within the polygon.

—*n.* The inner or internal part of a thing; the inside. —The inland part of a country, state, or kingdom.

(*Pol.*) The home department of the government of any country, or that branch of administration which has especial control of the internal affairs and polity of that country; as, the Secretary of State for the *Interior*.

Interior'ity, *n.* State or condition of being interior or within.

Inte'riorly, *adv.* Internally; inwardly.

Interja'cence. Interja'cency, *n.* Intermediateness; state of being interjacent or intervening.

Interja'cent, *a.* [Lat. *interjacens*, from *interjacio* — *inter.* and *jacio*, to lie.] Intervening; lying between; as, *interjacent* rocks.

Interjan'gle, *v. n.* To make a discordant or jangling noise in a reciprocal manner; to prate or chatter noisily.

Interject', *v. a.* [Lat. *interjicio, interjectus* — *inter*, and *jacio*, to throw or cast.] To throw in between other things; to insert.

—*v. n.* To come between; to interpose.

Interjection, (*-jĕk'shun,*) *n.* [Fr.; Lat. *interjectio*] Act of throwing or casting between; as, "the *interjection* of laughing." — *Bacon.*

(*Gram.*) A word in speaking or writing inserted between words connected in construction, expressive of some phase of passion or emotion; an exclamation; as, "She 's lost to me, hut, *ah!* I love her still."

Interjec'tional, *a.* Relating to or partaking of the properties of an interjection. — Thrown in or inserted between other words or phrases; as, an *interjectional* figure.

Interjec'tionary, *a.* Same as INTERJECTIONAL, *q. v.*

Interjoin', *v. a.* To intermarry; to join reciprocally. *Shaks.*

In'terjoist, *n.* (*Carp.*) Space or vacuum between two joists.

Interjunction, (*-jŭnk'shun,*) *n.* A mutual junction or joining.

Interknit, (*-nĭt'.*) *v. a.* To knit in and out; to weave in or unite closely.

Interlace', *v. a.* [Fr. *entrelacer.*] To fold, plait, or twine, as one within another; to put or insert, as one thing with another; to interweave.

"The epic way is everywhere *interlaced* with dialogue."—*Dryden.*

Interlacing Arches. (*Arch.*) A form of ornamental arches common in the Norman style (Fig. 1392), in which the circular curves are intersected or interlaced.

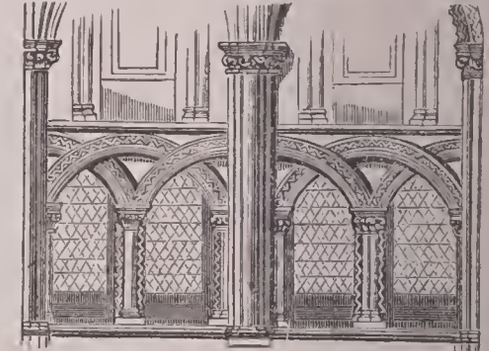

Fig. 1392. — INTERLACING ARCHES.
(From St. Cross, Hampshire, England, beginning of 12th cent.)

Interlace'ment, *n.* Insertion within; intertwining.

Interlam'inated, *a.* Inclosed by laminæ.

Interlamina'tion, *n.* State or condition of being interlaminated.

In'terlapse, *n.* The lapse of time between any two events.

Interlard', *v. a.* [Fr. *entrelarder.* See LARD.] To mix, as fat with lean; to diversify by mixture of substance; — hence, by implication, to mix, as an ingredient; to insert or place between; as, conversation *interlarded* with jests.

Interlay', *v. a.* [*Inter* and *lay.* See LAY.] To lay or place among or between.

In'terleaf, *n.* A blank leaf inserted between two other leaves.

Interleave', *v. a.* To insert, as a leaf or leaves; to insert, as a blank leaf or leaves in a book between other leaves.

Interla'chen, or INTERLA'KEN, ("between the lakes,") a village of Switzerland, 26 m. from Berne. It is beautifully situated near the bank of the Aar, in the valley of Boedeli, between the lakes of Brienz and Thun. It

is a great resort for tourists during the summer months. In full view from the village are the magnificent Jungfrau (*Maiden*), and several other remarkable peaks of the Bernese Alps. *Pop.* 1,760.

Fig. 1393. — INTERLACHEN.

Interli'bel, *v. a.* To libel in a reciprocal manner.

Interline', *v. a.* [L. Lat. *interlineare.*] To put a line or lines between; to write in alternate lines.

"*Interlining* Latin and English one with another." — *Locke.*

—To write between lines already printed or written, for the purpose of addition or emendation.

Interlin'eal, Interlin'ear, Interlin'eary, *a.* [Fr. *interlinéaire.*] Written between lines already written or printed; inserted between other lines.

Interlin'early, *adv.* By way of interlineation.

Interlin'eary, *a.* See INTERLINEAL.

—*n.* A book containing insertions or addenda between the lines. (R.)

Interlin'eation, *n.* Act of interlining, or of inserting words or lines between lines previously written or printed. — The words, passage, or line inserted between lines before written or printed; as, "frequent blots and *interlineations.*" — *Swift.*

Interlin'ing, *n.* Interlineation; addition or correction by writing between lines previously printed or written.

Interlink', *v. a.* To link in between; to unite by connecting links, as one chain to another.

—*n.* An intermediate or connecting link; a step in a ratiocinatory process.

Interlob'ular, *a.* [Fr. *interlobulaire.*] Situate between lobes.

Interloca'tion, *n.* [O. Fr.] A placing between; intervention; interposition.

Interlock', *v. n.* To unite with another; to lock in with, or flow into one another.

—*v. a.* To lock one with another; to embrace by locking together.

Interlocution, (*-lo-kū'shon,*) *n.* [Fr.; Lat. *interlocutio* — *inter,* and *loquor,* to speak.] A speaking between or among different persons; — hence, dialogue; conference; interchange of speech.

"It is done by *interlocution,* and with a mutual return of sentences from side to side." — *Hooker.*

(*Law.*) Preparatory course of procedure; an intermediate act preceding a final decision.

—Intermediary argument, reasoning, or discussion.

Interlocutor', *n.* [Fr. *interlocuteur.*] A dialogist; one who speaks in a dialogue.

Interlocu'tory, *a.* [Fr. *interlocutoire.*] Referring to, or consisting of dialogue; as, an *interlocutory* discourse.

(*Law.*) Noting one of those judgments which are given in the middle of a cause, upon some plea, proceeding, or default, which is only intermediate, and does not finally determine or complete the suit. Of this nature are all judgments for the plaintiff upon pleas in abatement of the suit or action. The term, however, is most commonly applied to those incomplete judgments whereby the right of the plaintiff is indeed established, but the *quantum* of damages sustained by him is not ascertained, which can only be done by the intervention of a jury.

—*n.* Interpolated argument or digression.

Interlocu'trice, *n.* A female interlocutor.

Interlope', *v. a.* [Lat. *inter,* and D. *loopen,* Ger. *laufen,* to run; Eng., to leap.] To run or come in between; to intrude; to interpose; to run in between persons and illegally intercept a right or advantage; to traffic illegally; to forestall; to anticipate irregularly; to prevent the due course of right.

In'terloper, *n.* One who enters into business to which he has no right; one who interposes wrongfully; one who intercepts what belongs to another; one who enters a place or country to trade without a proper license; an intruder.

Interlu'cent, *a.* [Lat. *interlucens.*] Shining between.

In'terlude, *n.* [L. Lat. *interludium,* an interlude; Lat. *inter,* and *ludus,* a play, from *ludo,* to play. See LUSORY.] (*Dram. Lit.*) A short play, or dance, accompanied by music, introduced between the acts of a piece, or between the play and the afterpiece. It is not of modern invention. The ancients were acquainted with certain short pieces, loosely connected, which served to make an easy transition from one play to another. Interludes are not so much used now as formerly, when a song or dance, at least, was generally given between every act of a tragedy or comedy. According to Arteaga, modern interludes were at first madrigals, which were sung between the acts of a play by several voices, and were connected with the piece. These, however, soon lost their primitive form, and represented some action.

(*Mus.*) The name given to those short pieces of church-music, seldom exceeding a few bars, and generally produced *extempore,* and played after each stanza, excepting the last of the metrical psalm, to give breathing-time to the singers.

Interlud'ed, *a.* Inserted or practised as an interlude; containing interludes.

Interlud'er, *n.* A performer in an interlude. (R.)

Interlu'nar, Interlu'nary, *a.* [Lat. *inter,* and *luna,* the moon.] Belonging to the time that elapses between the going out of the old and the coming in of the new moon.

Intermarriage, (*-mar'ij,*) *n.* Marriage between two families, where each takes one and gives another.

Intermar'ry, *v. a.* To marry amongst each other; to marry one and give another in marriage, as two families; to marry some of each order, family, tribe, or nation, with the other.

(*Physiol.*) The *I.* or intercourse of near relatives has been universally believed to entail degeneration upon the offspring, and the act has been condemned and prohibited. The physical deformity and mental debasement of the *Cagots* of the Pyrenees, of the *Marrons* of Auvergne, of the *Sarrasins* of Dauphiné, of the *Cretins* of the Alps, and the gradual deterioration of the slave population of America, have been attributed to the consanguineous alliances which are unavoidable among these unfortunate peoples. More recently, the same opinion has been supported by the history of deaf-mutism and of idiocy. Of 235 deaf and dumb children whose parentage could be traced, 70, or nearly 30 per cent., were the offspring of the intermarriage of blood-relations. But in opposition to, and apparently destructive of such an hypothesis, may be adduced the unimpaired condition and symmetry of the Jews, of the small Mohammedan communities in India, and the isolated tribes in North America, among whom the repeated intermarriage of near relatives is compulsory.

Intermax'illary, *a.* (*Anat.*) Situated between the jaws.

Intermed'dle, *v. a.* To meddle in the affairs or concerns of others; to mix one's self with officiously; to interpose or interfere improperly.

—*v. n.* To mix; to cause to become mingled or interposed. (R.)

Intermed'dler, *n.* One who intermeddles in matters that do not concern him; a prying intruder or interloper; a busybody.

Intermed'dlesome, *a.* Disposed to interpose or intermeddle.

Intermed'dlesomeness, *n.* State or quality of being intermeddlesome.

In'termede, *n.* [Fr. *intermède;* It. *intermezzo.*] (*Dram. Lit.*) A short musical piece, generally of a burlesque character; but many pieces not intended merely for introduction between the acts of a more serious performance are comprised under this name by the French and Italians. The term is almost synonymous with *interlude,* q. v.

Interme'diacy, *n.* Intervention; interposition. (R.)

Interme'dial, *a.* [Lat. *intermedius.*] Intervenient; lying between; intermediate; as, "*intermedial* space."

Interme'diary, *a.* [Fr. *intermédiaire.*] Lying between; intermediate; intervening; as, an *intermediary* step.

—*n.* That which is intervenient or intermediate, or which lies between.

Interme'diate, *a.* [Fr. *intermediat;* Lat. *inter,* and *medius,* that is in the midst, mid, middle.] Lying or being in the middle place or degree between two extremes; being between two points of time or space; intervening; interposed; as, an *intermediate* color, *intermediate* accommodation on board ship, &c.

I. State. (*Theol.*) The state of the soul between death and the resurrection of the body.

I. Terms. (*Math.*) The terms of a progression between the first and the last; the means.

I. Shaft. (*Marine Engin.*) The strong shaft which runs across the frame of the engines, to connect the two engines and the two paddle-wheels.

—*v. n.* To come between; to interpose; to intervene.

Interme'diately, *adv.* By way of interjacence or intervention.

Intermedia'tion, *n.* Intervention; common mediation.

Interme'diator, *n.* A go-between; a mediator between people; an intercessor.

Interme'dium, *n.* [Lat.] A mediatory agent or instrument. — Intermediate space; interjacency.

Inter'ment, *n.* [Fr. *enterrement.*] Act of interring or depositing a dead body in the earth; burial; sepulture; inhumation.

Intermezzo, (*-mĕd'zo.*) [It.] (*Mus.*) See INTERMEDE.

Intermication, (*-kā'shun,*) *n.* [Lat. *intermicare.*] A shining between or amidst.

Intermigra'tion, *n.* Reciprocity of migration: act of removing, as when two parties or peoples take each the place of the other.

Inter'minable, *a.* [Fr., from Lat. *in,* and *terminus,* a boundary-line, a limit.] Admitting no bound or limit; endless; illimitable; without end or termination; as, *interminable* space.

—*n.* The Almighty, as having illimitable being.

Inter'minableness, *n.* State of being limitless or endless.

Inter'minably, *adv.* Having no end, bound, or limit.

Inter'minate, *a.* [Lat. *interminatus.*] Limitless; unbounded; unending; as, "*interminate* sleep." *Chapman.*

Intermingle, (*-min'gl,*) *v. a.* To mingle or mix among or together; to intermix; to put, as one thing with others.

"There trees and *intermingled* temples rise." — *Pope.*

—*v. n.* To be mixed, mingled, or incorporated.

Intermission, (*-mish'un,*) *n.* [Fr.; Lat. *intermissio* — *intermitto, intermissus.*] Temporary cessation; intermediate or intervening pause; temporary discontinuance or subsidence; interruption; interval; stop; rest; as, labor without *intermission.*

Intermis'sive, *a.* Occurring by fits or starts; alternating; having temporary cessations; broken in continuity; as, *intermissive* wars.

Intermit', *v. a.* [Lat. *intermitto* — *inter,* and *mitto,* to cause to go, to pass over, to cease. See MISSION.] To discontinue; to break off for a time; to interrupt; to suspend.

"Arts . . . *intermitted* and interrupted by war." — *Hale.*

—*v. n.* To cease or become suspended for a time; to go off at intervals, as a fever.

Intermit'tent, *a.* [Fr.] Ceasing at intervals; ceasing for a time and then returning; as, an *intermittent* fever.

—*n.* (*Med.*) Any disease which ceases for a time and again returns, so that the patient is free from it in the intermediate intervals. — See AGUE.

Intermit'tingly, *adv.* With intermissions or intervals.

Intermix', *v. a.* [Lat. *intermisceo, intermixtus* — *inter,* and *misceo,* to mix.] To mix among; to mix together; to intermingle; to put, as some things with others.

"Her persuasions she *intermixed* with tears." — *Hayward.*

—*v. n.* To be intermingled; to be mixed or thrown together.

Intermix'edly, *adv.* In a mixed manner; in the way of admixture.

Intermix'ture, *n.* [*Inter* and *mixture.* See MIXTURE.] A mass of ingredients; a mass incorporated by mixture. — Admixture; some additional ingredient mingled in a mass; as, an *intermixture* of levity and folly. — *Bacon.*

Intermobil'ity, *n.* Capacity of mobile self-action in things.

Intermodillion, (*mo-dil'yun,*) *n.* (*Arch.*) The vacant space between two modillions.

Intermontane', *a.* [Lat. *inter,* and *mons, montis,* mountain.] Between mountains.

Intermun'dane, *a.* [Lat. *inter,* and *mundanus* — *mundus,* the world. See MUNDANE.] Existing between worlds, or between orb and orb; as, *intermundane* space.

Intermu'ral, *a.* [Lat. *intermuralis,* from *murus,* a wall. See MURAL.] Lying between walls.

Intermus'cular, *a.* [Fr. *intermusculaire.*] Between the muscles.

Intermuta'tion, *n.* Interchange; reciprocal change.

Inter'nal, *a.* [Lat. *internus.*] Interior; inward; that is within any limit, confine, or surface; arising from, or being dependent on, the body itself; — opposed to *external;* as, *internal* excellence, the *internal* parts of the earth, or of the human body. — Intrinsic; native; real; genuine; as, *internal* rectitude. — Pertaining or having reference to the heart; as, *internal* purity. — Within a country; having reference to its own affairs, concerns, or interests; domestic, as contra-distinguished from *foreign;* as, *internal* trade, *internal* government.

Internal Angle. (*Geom.*) See ALTERNATE.

Internal'ity, *n.* State or condition of being internal; interiority.

Inter'nally, *adv.* Inwardly; within the body; beneath the surface or limit; — hence, mentally: spiritually; intellectually.

International, (*-năsh'un-al,*) *a.* [*Inter* and *national.*] Relating to transactions between independent nations, acknowledging no common superior. In this sense we speak of *international law* as an important branch of the so-called LAW OF NATIONS, *q. v.* It may be expedient to lay down a caution against an incorrect use of the word which has of late arisen, namely, in the sense of "common to" all or several nations: *e. g.* an *International Exhibition of Industry.*

I. Trade. The name often given by political economists to the double operation of importation and exportation of products, goods, and commodities; the difference of value between exports and imports being called *balance of trade.*

Interna'tionalist, *n.* One who advocates or upholds the principles and claims of international law.

Interna'tionalize, *v. a.* To make or render international; to cause to affect the reciprocal relations of two or more nations; as, to *internationalize* a treaty offensive and defensive.

Interna'tional, The, or **International Society.** (*Pol.*) See SECTION II.

Interne', *n.* An interior.

Interneclary, (*-nĕ'shi-a-re,*) **Internec'inal, Interne'cine,** *a.* [Lat. *internecinus, internecо* — *inter,* and *nĕco,* to slay, from *nex, necis,* death, murder, slaughter; akin to Sansk. *nash,* to die, to perish.] Aiming at the slaughter and destruction of each other; mutually destructive; deadly; as, *internecine* war, an *internecine* feud.

Interne'cive, *a.* [Lat. *internecivus.*] Having a tendency to slaughter.

Interneu'ral, *a.* (*Anat.*) Lying between the neural spines or processes.

In'ternode, *n.* [Lat. *internodium.*] (*Bot.*) A space between one knot or space, and another.

Interno'dial, *a.* Occurring between nodes or joints.

Inter nos. [Lat.; Fr. *entre nous.*] Between us.

Internuncial, (*-nŭn'shal,*) *a.* [Lat. *inter*, and *nuncius*, messenger.] Belonging or having reference to an internuncio.

Internuncio, (*-nŭn'shĭ-o,*) *n.* [Lat. *internuntius — inter*, and *nuncius*, messenger; It. *internunzio.*] A messenger between two parties; — more eepecially, the title given to the Pope's representative at republice and minor courts, as dietinguiehed from the *nuncio*, or papal legate at the courte of emperore and kinge. — Formerly, the designation borne by the Austrian ambnseador at the Ottoman Porte.

Interoceanic, (*-ō-she-ăn'ĭk,*) *a.* Between occaue; as, *interoceanic* eteam-navigatiou.

Interoc'ular, *a.* [Lat. *inter*, and *oculus*, eyo.] Between the eyes; placed between the eyes.

Interor'bital, *a.* Placed between the orbits, as of the eyes.

Interos'culant, *a.* See OSCULANT.

Interos'seal, Interos'seous, *a.* [Lat. *inter*, and *osseus.*] Situated between bonee; ae, an *interosseous* tendon.

Interpale', *v. a.* To separate by, or place between, pales.

In'terpause, *n.* An intervening pause or break.

Interpella'tion, *n.* [Fr.; Lat. *interpellatio — inter*, and obs. *pello, pellatum*, to spenk.] A speaking between; an interruption of one speaking; — hence, an interruption; a summons; a citation; an earneet address; intercession.

Interpeu'etrate, *v. a.* To penetrate between or beneath other substances.

—*v. n.* Tn penetrate between or within substances.

Interpenetra'tion, *n.* Act of penetrating within, between, or beneath other subetancee.

Interpen'etrative, *a.* Susceptible of penetration among or between other subetances.

Interpet'alary, *a.* (*Bot.*) Situate between the petals of a flower.

Interpet'iolar, *a.* (*Bot.*) Applied to stipules occupying the space between the petioles of oppoeite leaves.

Interpilas'ter, *n.* (*Arch.*) The Intervening epace between two pilasters.

Interplace', *v. a.* To place between.

Interplan'etary, *a.* Between the planets.

In'terplay, *n.* Interaction; reciprocal influence; mutnal exercise.

Interplead', *v. a.* (*Law.*) To try between themselves, as the claimants in an Interpleader.

Interplead'er, *n.* (*Law.*) A proceeding in a suit where a person owes a debt or rent to one of the parties, but, till the determination of It, he does not know to which. He accordingly desires that they may interplead, so that he may be safe In the payment; In which case it is usnal to order the money to be paid into court, for the benefit of each of the parties as the court, upon hearing, shall decree It to be due.

Interpledge, (*-plĕj',*) *v. a.* To give and take as a pledge reciprocally.

Interpoint', *v. a.* To polnt; to punctnate.

Interpolate, (*-tĕr'po-lāt,*) *v. a.* [Lat. *interpŏlo, interpolatus — inter*, and *polio*, to furbish, to smooth, to polish.] To corrupt; to falsify; to foist In; to insert, as a spnrious word or passage In a manuscript or book; to add a spnrious word or passage to the original.

(*Math.* and *Astron.*) To fill up the intermediate terms of a series of nnmbers, or observations, by numbers which follow the eame law.

Inter'polated, *p. a.* Ineerted or added to the original; foisted in; imported into; as, an *interpolated* paesage.

(*Math.*) Applied to terme introduced into a series by interpolation.

Interpola'tion, *n.* [Fr.; Lat. *interpolatio.*] Act of interpolating, or of foisting or importing a word or passage into a book or manuecript, as a spurione or extraneona word or passage lneorted in the genuine writings of an anthor.

"I have changed the situation of some of the Latin verses, and made some *interpolations.*"—*Cromwell.*

(*Math.* and *Astron.*) A method employed for filling up the intermediate terms of a eeries of numbers or obeervatione, by numbers which follow the same law. The method itself is dependent upon the following problem: — Let there be given two seriee of numbere, the corresponding terme of which have some determinate relation to each other, and of which the first ie called the seriea of roote, and the second the eeries of functions (see INTEGRAL CALCULUS); to find the function corresponding to auy term in the seriee of roots, from the numbers in the eeriea of functious, which precedo or follow that which is reqnired, thie ie a question of *interpolation.* In other worde, its application may be shown as follows: — The most extensive table of logarithms in common nse is a succession of valuee of log. x, answering to $x = 10{,}000$, $x = 10{,}001$, $x = 10{,}002$, and so on up to $x = 99{,}999$. The process of interpolation ie that of inserting in a table valuee of the tabulated function, intermediate to those given in the tablo. For exaunple, euppoeo that p, q, r, s, &c., are written in a table oppoeite to a, $a + b$, $a + 2b$, $a + 3b$, &c., if it is demandod what is the value of the fnnction corresponding to $a + 2\frac{1}{2}b$, it would be a question coming nnder the heading, interpolation. In astronoiny, aleo, it teaches ns a mathematical law which will connect together a number of observed facts. Thus, supposing that twenty places of a comet have been determined by observation, theae places are said, in mathematical language, to be Interpolated when a cnrve defined by an analytical equation has been formed, which passes through them all; for, by means of thia cnrve, the point of location of the comet at any intermediate time can be easily discovered.

Inter'polator, *n.* One who interpolates; one who foists into a hook or manuecript spurious passagee, or falsified words; one who adde something to genuine writinge.

Interpol'ish, *v. a.* To polish between.

Interpone', *v. a.* To eet or ineert between. (R.)

Interpo'nent, *n.* One who, or that which interposes.

Interpos'al, *a.* Act of interpoeing; interposition; interference; agency between two persoue. — Intervention; a comiug or going between.

Interpose', *v. a.* [Fr. *interposer;* Lat. *interpono.*] To place between; to cauee to intervene; as, to *interpose* a body between one's eyesight and the sun. — To thrust in; to intrude, as an obstruction, interruption, or inconvenience.

"Death stands ready to *interpose* his dart."—*Milton.*

—To offer, as aid or servicee, for succor or relief, or for the adjustmeut of difficultiee or differences.

"The common Father of mankind seasonably *interposed* his hand."—*Woodward.*

—*v. n.* To come in between; to etep in between persone at variance, as an adjuster or peace-maker; to mediate; to iutercede.

"Those who in quarrels *interpose*
Must often wipe a bloody nose."—*Gay.*

—To intervene; to put in by way of iuterruptlon; to interfere; to intermeddle.

"But *interposes* Eleutherius, this objection may be made indeed almost against any hypothesis."—*Boyle.*

Interpos'er, *n.* One who makes interpositlon; a mediator; one who acts as an agent between partiee.

Interpos'it, *n.* [Lat. *interpositus.*] A place of deposit between one commercial place or country and auother; an entrepôt.

Interposition, (*-po-zĭsh'un,*) *n.* [Fr.; Lat. *interpositio.*] Act of interposing; a placing, coming, or being between; ae, the *interposition* of the Atlantic Ocean between Europe nnd America. — Intervenient agency; as, a divine *interposition.*—Mediation; intercesaion; agency between parties; as, a reconciliation wae effected by the *interposition* of a mutual frieud.

—Anything interposed.

Inter'pret, *v. a.* [Fr. *interprĕter;* Lat. *interpretor*, from *interpres.* See INTERPRETER.] To act the part of an interpreter of; to explain; to expound; to tranelate unintelligible worde into intelligible oncs; to construe; to decipher; to define; — used in application to language, &c. — To explain or nnfold fhe meaning of predictione, dreams, vislons, omens, or enigmas; to elucidate; to nnravel, as something not understood.

Inter'pretable, *a.* That may be interpreted or elncidated.

Interpreta'tion, *n.* [Fr.; Lat. *interpretatio.*] Act of interpreting; explaining of unintelligible worde in language which is intelligible; act of expounding or nnfolding what is not understood or not obvious; translation. — The eenee unfolded by an interpreter; exposition; meaning; sense. — Art of teaching the real eentiments contained in any form of worde.

"We beseech thee to give us the *interpretation* and use of it."
Bacon.

(*Math.*) The process of explaining specinl resnlts arrived at by the application of geueral mathematical rulee or formulæ.

Inter'pretative, *a.* [Fr. *interprĕtatif.*] Containing explanation. — Intended or adapted to explain; as, "*interpretative* lexicography." — *Johnson.*

Inter'pretatively, *adv.* In an interpretative manner.

Inter'preter, *n.* [Lat. *interpres, interpretis — inter*, and *pres*, or *præs, prædis*, a bondeman, a eurety, from Gr. *priamai*, to buy with one's money.] Oue who explaine, expounds, or elucidatee; an expositor; a tranelator; a dragoman; and in India, a moonshee.

Interpunction, (*-punk'shun,*) *n.* [Lat. *interpunctio.*] The making of points to govern the parts of a sentence; punctuation.

Interra'dial, *a.* [Lat. prefix *inter*, and *radius*, ray.] Between the radii, or rays.

Interreceive', *v. a.* To recelve between or within.

Interreg'num, *n.* [Lat. *inter*, and *regnum*, a kingdom, kingly government. See REGAL and REIGN.] The time which elapeee between the death, abdication, or deposition of one klng, and tho election or succession of auother; time during which a throne is vacant. — Any period during which the executive functions of a government are in a state of enspeusion or inoperation.

In'terreign, (*-rān,*) *n.* Vacancy of a throne; interregnum, (*q. v.*)

Inter'rer, *n.* One who Inters or bestowe the ritee of eepulture.

In'terrex, *n.* [Lat. *inter*, and *rex*, king.] A regent; the lieutenant or governing magistrate of a kingdom during an interregnum or vacancy of the throne.

Inter'rogate, *v. a.* [Fr. *interroger;* Lat. *interrogo, interrogatus — inter*, and *rogo*, to ask. See ROGATION.] To ask formally; to queetion; to examino by putting quoetions; as, to *interrogate* a witnese.

—*v. n.* To ask; to put queetiona; to make inquiriee of.

Interrogatee', *n.* One who is interrogated, or who is asked qnestions.

Interroga'tion, *n.* [Fr.; Lat. *interrogatio.*] Act of interrogating or of questioning; examination by qnestions. — A question put; an inquiry.

(*Gram.*) A mark or sign, thus (?), denoting that the sentence which immediately precedes it ie a question; as, *What is it?* It is also used ae a note indicative of a query, and also to indicnte the expression of a doubt.

Interrog'ative, *a.* [Fr. *interrogatif;* late Lat. *interrogativus.*] Denoting a queetion; put forward in the form of a question; as, an *interrogative* phrase.

—*n.* (*Gram.*) A word used in asking questione; as, *what? who? which? why? wherefore? whence? whom?*

Interrog'atively, *adv.* In an interrogative nr queetioning manner.

Interrog'ator, *n.* [Lat.] A questioner; one who interrogatee.

Interrog'atory, *n.* [L. Lat. *interrogatorium.*] A question; an inquiry; a query.

(*Law.*) Written questions proposed to witnesees who nre to be examined out of court, nnder authority of courts where euch examination is not directed to be taken *viva voce.*

—*a.* [Fr. *interrogatoire;* late Lat. *interrogatorius.*] Consisting of questions; containing or expressing a question; as, an *interrogatory* sentence.

Interrupt', *v. a.* [Lat. *interruptus*, from *interrumpo — inter*, and *rumpo*, to break.] To break in between; to break off; to hinder, obstruct, or stop by breaking In upou the course or progrese of anything; to impede; to break the current or motion of; as, he was *interrupted* while speaking, heavy gales *interrupted* the vessel'e progress. — To divide; to break; to eepnrate; to sever, as contiuuity or a continued eeries; as, a mountaiu not *interrupted* by pass or defile.

Interrupt'ed, *a.* Broken; intermitted; exhibiting iuterruption.

(*Bot.*) Applied to parts of plants when symmetrical arrangement is destroyed by local causes.

Interrupt'edly, *adv.* With breaks, obstructions, or interruptions.

Interrupt'er, *n.* Ile who, or that which, interrupts.

Interruption, (*-rŭp'shun,*) *n.* [Fr.; Lat *interruptio.*] Act of interruption, or breaking in upon progression or continuity. — Stop; hinderauce; obstruction causcd by breaking in upon any course, current, progress, or motion; as, I cannot go on with the work on nccount of *interruptions.* — Intermission; cessation; stop.

Interrup'tive, *a.* Interrupting; having a tendency or inclination to interrupt.

Interrup'tively, *adv.* In a manner to Interrnpt; by interruption.

Interscap'ular, *a.* (*Anat.*) Lying between tho shoulder-blades.

Interscen'dent, *a.* (*Math.*) Applied to quantities which have irrational quantities for exponente of their powere. Interscendent quantities are so called because they hold a menn as it were between algebraic and transcendable quantities.

Interscind, (*-sĭnd',*) *v. a.* [Lat. *interscindere.*] To cut off by interruption.

Interscribe', *v. a.* [Lat. *interscribere — inter*, and *scribere*, to write.] To wrlte between.

Interse'cant, *a.* [Lat. *intersecans.*] Dividing into parts; crossing.

Intersect', *v. a.* [Lat. *interseco, intersectus — inter*, and *seco*, to cut.] To cut in between; to cut asnnder; to divide; to cut or croes reciprocally; to divide into parts by crossing.

—*v. n.* To meet and cut acrose each other; as, the point where two linee *intersect.*

Intersection, (*-sĕk'shun,*) *n.* [Fr.; L. Lat. *intersectio.*] The act or state of intersection.

(*Geom.*) The meeting or concourse of lines and snrfacee. The number of intersections of a plane curved with a right line determines the order of that cnrve, and hence it followe that, in general, the number of intersectione of two plane curves is equal to the prodnct of their ordere. The order of a surface is the number of real nnd Imaginary intersections which it makes with a right line, and hence agrees with the order of each of its plane sections.

Intersec'tional, *a.* Relating, or belonging to, or formed by intereectione.

Interset', *v. a.* To eet or place between or amidst.

Intershock', *v. a.* To luvest with a mntual shock.

Intersocial, (*-sō'shĭ-al,*) *a.* Belonging to intercourse or associatiou; having reference to the mutual relatione attaching to persons in society.

Intersom'nious, *a.* Between the hours devoted to sleep. (R.)

Intersour', *v. a.* To mingle something sour with.

In'terspace, *n.* An intervening space; vacnum between two thiugs.

In'terspeech, *n.* A speech brought hy interposition between other speechee.

Intersperse', *v. a.* [Lat. *interspersus — interspergo, inter*, and *spargo*, to strew, to scatter, to eprinkle, from the root *spar*, whence Gr. *speiro*, to sow.] To strew or eprinkle among; to scatter or set here and there among things; as, to *intersperse* flowers in a parterre of ehrubs.

Intersper'sion, *n.* Act of scattering or setting here and there among other thlngs.

Interspi'nous, *a.* (*Anat.*) Being between the spinous bonee.

Intersplra'tion, *n.* Inspiration at intervals.

Inter-state', *a.* (*Law.*) Existing between differeut States.

Interstel'lar, Interstel'lary, *a.* [Lat. *inter*, and *stellaris*, from *stella*, a star, *q. v.*] (*Astron.*) Intervening between the etars; situated beyoud tho eolar system.

In'terstice, *n.* [Fr., from Lat. *interstitium*, from *intersisto — inter*, and *sisto*, to place, set, cause to atand, to stand. See STAND.] Space between thiuge; chiefly a narrow or emall space between things closely set, or the parts which compoee a body. — An interveniug space of time; as, "The *interstices* of time."

Interstl'tial, *a.* Pertaining to or containing interstices; intermediate.

Interstratifica'tion, *n.* (*Geol.*) The subdivision of a deposit by layers of other subetances.

Interstrat'ified, *a.* (*Geol.*) Applied to deposits intersected by layers of other rocks; — or to a stratum contained within another etratum.

Intertain, *v. a.* See ENTERTAIN.
Intertan'gle, *v. a.* To intertwine; to intertwist.
Intertex'ture, *n.* [From Lat. *inter*, between, and *texo*, to weave.] The act of interweaving, or the state of being interwoven.
In'ter-tie, *n.* (*Arch.*) An horizontal piece of timber framed between two points, in order to tie them together; sometimes this is called a *cross-brace*.
Intertis'sued, *a.* Wrought with joint tissue.
Intertraf'fic, *n.* Mutual traffic; traffic of one with another.
Inter-transpic'uous, *a.* Transparent between the parts; transpicuous.
Intertri'go, *n.* [From Lat. *inter*, between, and *tero*, to rub.] (*Med.*) An excoriation about the anus, groins, axilla, or other parts of the body, attended with inflammation and moisture. It is most commonly produced by the irritation of the urine, from riding, or some acrimony in children.
Intertrop'ical, *a.* Situated between the tropics.
Intertwine', *v. a.* To unite by twining or twisting, as one with another.
—*v. n.* To be mutually interwoven.
In'tertwine, *n.* A mutual twining or twisting.
Intertwin'ingly, *adv.* By intertwining.
Intertwist', *v. a.* To twist, as one with another.
In'terval, *n.* [Fr. *intervalle;* Lat. *intervallum* — *inter*, and *vallum*, a line of palisades, a rampart, a wall, from *vallus*, a stake, a pole.] A space between things; a void space intervening between any two objects. — Space of time between any two points or events, or between two paroxysms of disease, pain, or delirium. — The distance between two given sounds in music, or the difference in point of gravity or acuteness.
In'terval, *n.* A name sometimes given in some parts of the U. States to low or alluvial, level, and fertile land on the margin of rivers. (Also written *intervale*.)
(*Mus.*) The imaginary distance between two sounds as respects their acuteness and gravity; thus, for instance, the imaginary distance from C upwards to D is called the interval of a tone; from C to E the interval of a major third; from C to G the interval of a fifth, and so on.
—*a.* Relating to the kind of land above described.
Interveined, (*-vānd'*) *a.* Intersected, as with veins.
Intervene', *v. n.* [Fr. *intervenir;* Lat. *intervenio* — *inter*, and *venio*, to come. See VENTURE.] To come or be between persons or things; to be situated between; to come between points of time or events; to happen in a way to disturb, cross, or interrupt; to interpose.
Interven'er, *n.* (*Eccl. Law.*) One who interposes his claim in a suit in which he was not originally a party.
Interven'ient, *a.* Intervening; passing between.
Interve'nium, *n.* [Lat. *inter*, between, and *vena*, a vein.] (*Bot.*) The area lying between two or more veins or veinlets of leaves.
Interven'tion, *n.* [Fr.; Lat. *interventio.*] Act of intervening; a state of coming or being between; interposition; agency of persons between persons; mediation; interposition in favor of another.
(*Pol.*) The armed interposition of one state in the domestic affairs of another. Since the Congress of Vienna, this right of interventiou has become distinctly recognized, and has been acted upon more frequently than formerly. The right of every nation to increase its national dominions, wealth, and power, by all innocent and lawful means, is an incontrovertible right of sovereignty, generally recognized by the usage and opinion of nations; but when the exercise of this right directly interferes with the sovereign rights of other states, then the right of interventiou, or interference of other states, is requisite to preserve the balance of power. As is rightly observed in Wheaton's *International Law*, the internal development of the resources of a country, or its acquisition of colonies and dependencies, at a distance from Europe, has never been considered a just motive for such interference. Interventions, therefore, to preserve the balance of power, have been generally confined to preventing a sovereign, already powerful, from incorporating conquered provinces into his territory, or increasing his dominions by marriage or inheritance, or exercising a dictatorial influence on the councils and conduct of other independent states.
Interven'tor, *n.* A mediator; one appointed by a Church to reconcile parties.
Intervert', *v. a.* To turn to another course.
"The duke *interverted* the bargain." — *Wotton.*
Interver'tebral, *a.* Being between the vertebræ.
In'terview, *n.* A meeting; a conference or mutual communication of thoughts.
—*v. a.* To visit or call upon a prominent person or public character for the purpose of interrogating him, and eliciting information; as, to *interview* a senator. (Used in the U. States.)
Intervis'it, *n.* An intermediate visit.
Intervis'iting, *n.* A mutual visiting.
Intervolution, *n.* The state of being intervolved.
Intervolve', *v. a.* [Lat. *intervolvo.*] To involve one with another.
Interweave', *v. a.* (*pret.* INTERWOVE; *pp.* INTERWOVEN. See WEAVE.) To weave together; to intermix or unite in texture or construction; to intermix; to set among or together; to intermingle; to insert together.
Interweav'ing, *n.* Intertexture.
Interwish', *v. a.* To wish mutually to each other.
"What tyrants and their subjects *interwish.*" — *Donne.*
Interworlds', *n. pl.* Worlds among other worlds.
Interwound'ing, *a.* Wounding mutually.
Interwreathed', *a.* Woven in a wreath.

Intes'table, *a.* [Lat. *intestabilis.*] Disqualified to make a will.
Intes'tacy, *n.* State of being intestate, or of dying without making a will, or disposing of one's effects.
Intes'tate, *a.* [Fr. *intestat;* Lat. *intestatus* — *in*, and *testatus*, from *testor*, to testify, to make a statement or will. See TEST.] Dying without having made a will: not devised; not disposed of by will.
—*n.* A person who dies without making a will; — the opposite of *testator*.
Intesti'na, *n. pl.* [Lat. *intestinus.*] (*Zoöl.*) The name given by Cuvier to the intestinal worms. — See NEMATOIDS.
Intes'tinal, *a.* [Fr., from Lat. *intestina.*] Pertaining to the intestines of an animal body; belonging to the intestines.
I. Worms. (*Zoöl.*) See NEMATOIDS.
Intestina'lia, *n. pl.* (*Zoöl.*) The name applied by Linnæus to the intestinal worms. See NEMATOIDS.
Intestine', *a.* [Fr.; Lat. *intestinus.*] Inward; domestic; not foreign; as, an *intestine* war.
(*Hydrodynamics.*) Nothing motion among component particles or fluids.
In'testine, *n.;* (usually in the *pl.*, INTESTINES) [Fr. pl. *intestins;* Lat. pl. *intestina.*] (*Anat.*) The convoluted membraneous tube that extends from the stomach to the anus, receives the ingested food, retains it a certain time, mixes with it the bile and pancreatic juice, propels the chyle into the lacteals, and covers the fæces with mucus, is so called. The *I.* are situated in the cavity of the abdomen, and are divided into the small and large, which have, besides their size, other circumstances of distinction. The *small I.* are supplied internally with folds, called *valvulæ conniventes*, and have no bands on their external surface. The *large I.* have no folds internally; are supplied externally with three strong muscular bands, which run parallel upon the surface, and give the intestines a saccated appearance; they have also small fatty appendages, called *appendiculæ epiploicæ*. The first portion of the intestinal tube, for about the extent of twelve fingers' breadth, is called the *duodenum;* it lies in the epigastric region; makes three turnings, and between the first and second flexure receives, by a common opening, the pancreatic duct, and the ductus communis choledochus. It is in this portion of the *I.* that chylification is chiefly performed. The remaining portion of the small *I.* is distinguished by an imaginary division into the *jejunum* and *ileum*, q. v. The beginning of the large *I.* is firmly tied down in the right iliac region, and for the extent of about four fingers' breadth is called the *cæcum*, having adhering to it a worm-like process, called the *processus cæci, vermiformis*, or *appendicula cæci vermiformis*. The great *I.*, thence forward called *colon*, ascends towards the liver, passes across the abdomen, under the stomach, to the left side, where it is contorted like the letter *S*, and descends to the pelvis, hence it is divided in this course into the *ascending portion*, *the transverse arch*, and the *sigmoid flexure*. When it has reached the pelvis, it is called the *rectum*, from whence it proceeds in a straight line to the anus. The intestinal canal is composed of three membranes, or coats: a *common* one from the peritoneum, a *muscular coat*, and a *villous coat*, the villi being formed of the fine terminations of arteries and nerves, and the origins of lacteals and lymphatics. The *I.* are connected to the body by the meseutery; the duodenum has also a peculiar connecting cellular substance, as have likewise the colon and rectum, by whose means the former is firmly accreted to the back, the colon to the kidneys, and the latter to the os coccygis, and, in women, to the vagina. The remaining portion of the tube is loose in the cavity of the abdomen. The arteries of this canal are branches of the *superior* and *inferior mesenteric*, and the *duodenal*. The veins evacuate their blood into the vena portæ. The nerves are branches of the eighth pair and intercostals. The *lacteal vessels*, which originate principally from the jejunum, proceed to the glands in the mesentery.
Intex'ine, *n.* (*Bot.*) The name applied by Lindley to the fourth coating of the pollen-grains in certain plants, which is intermediate between the extine and the exintine.
Intex'tured, *a.* Woven in; inwrought.
Inthrall', *v. a.* To enslave; to reduce to bondage or servitude; to shackle.
Inthral'ment, *n.* Act of inthralling; servitude; slavery; bondage.
Inthrone', *v. a.* To enthrone; to seat on a throne; to raise to royalty.
Inthrong', *v. a.* To crowd together; to throng.
Inthroniza'tion, *n.* The act of enthroning.
Intice', *v. a.* See ENTICE.
In'timacy, *n.* The state of being intimate; close familiarity or fellowship; nearness in friendship.
In'timate, *a.* [Lat. *intimus*, superl. of *intus*, within.] Inmost; innermost; inward; internal; near; close in friendship or acquaintance; familiar.
—*n.* A familiar friend or acquaintance; an associate; one to whom the inmost thoughts and feelings, or private concerns of another are intrusted without reserve.
—*v. a.* [L. Lat. *intimo, intimatus*, from Lat. *intimus*, innermost.] To hint; to suggest obscurely, indirectly, or not very plainly; to give slight notice of; to announce; to make known.
In'timately, *adv.* In an intimate manner; closely; with close intermixture and union of parts; with nearness of friendship or alliance; familiarly; particularly;
Intima'tion, *n.* [Fr.; Lat. *intimatio.*] Act of intimating; that which intimates; hint; an obscure or indirect suggestion or notice; a declaration or remark communicating imperfect information; announcement.

Intim'idate, *v. a.* [Fr. *intimider;* L. Lat. *intimido, intimidatum;* Lat. *in*, and *timidus*, full of fear, fearful, from *timeo*, to fear.] To put in fear or dread; to make fearful; to inspire with fear; to dishearten; to dispirit: to deter; to frighten; to terrify.
Intimida'tion, *n.* [Fr.] Act of intimidating, or of making fearful; the state of being abashed.
Intim'idatory, *a.* Tending to intimidate.
Intinctiv'ity, *n.* [Lat. *intingo*, to dip in.] The want of the quality of coloring other bodies.
In'tine, *n.* [Lat. *intus*, within.] The name applied by Lindley to the hyaline, extensible, and very tenuous innermost coating of pollen-grains.
Inti'tle, *v. a.* See ENTITLE.
Intit'ule, *v. a.* To entitle; to give a title to.
In'to, *prep.* Noting entrance, or a passing from the outside of a thing to its interior parts. — Noting penetration beyond the outside or surface, or access to it. — Noting insertion, mixture, inclusion, or the passing of a thing from one form or state to another.
Intol'erable, *a.* [Fr. *intolérable*, from Lat. *intolerabilis* — *in*, and *tolerabilis*, from *tolero*, to endure, to undergo. See TOLERATE.] That cannot be borne; that cannot be endured; unsupportable; insufferable; not to be allowed.
Intol'erableness, *n.* Quality of being not tolerable or sufferable.
Intol'erably, *adv.* To a degree beyond endurance.
Intol'erance, *n.* [Fr. *intolérance;* Lat. *intolerantia.*] Impatience; want of capacity to endure; want of toleration; the not enduring at all, or not suffering to exist without persecution.
Intol'erant, *a.* [Fr. *intolérant;* Lat. *intolerans* — *in*, and *tolero.*] That cannot bear or endure; impatient; not enduring difference of opinion or worship; refusing to tolerate others.
—*n.* A bigot; one who does not favor toleration.
Intol'erantly, *adv.* Not tolerantly.
Intol'eranted, *a.* Not endured; not tolerated.
Intolera'tion, *n.* Refusal to tolerate others in their opinions or worship.
Intomb', *v. a.* To deposit in a tomb; to bury.
In'tonate, *v. n.* [Lat. *intono, intonatus* — *in*, and *tono*, to sound, to resound, to thunder. See TONE.] (*Mus.*) To sound; to sound the notes of a musical scale.
—To read, as in liturgical services, in a musical manner.
Intona'tion, *n.* [Fr.] The modulation of the voice in expression.
(*Mus.*) The art of tuning and giving to the tones of the voice, or instruments, that occasional impulse, swell, and decrease, upon which all expression, to a great extent, depends. The intonation of a singer may be true or false, according to the observance or non-observance of the just proportions that belong to the intervals sung. True intonation is an exception among singers and among players upon bowed instruments, such as the violin, violoncello, &c. In church music, those antiphones which are first sung by the priest and then responded to by the choir or congregation, are called *intonations*.
Intone', *v. n.* [Lat. *intono.* See INTONATE.] To make a slow, protracted noise.
—*v. a.* To chant; to sing.
Intor'sion, *n.* [Lat. *intortio*, from *intorqueo* — *in*, and *torqueo*, to turn, to turn about, to twist. See TWIST.] A winding, bending, or twisting in any particular direction.
Intort', *v. a.* To twist; to wreathe; to wring.
Intor'tion, *n.* See INTORSION.
Intox'icant, *n.* An intoxicating liquor.
Intox'icate, *v. a.* [L. Lat. *intoxico, intoxicatum;* It. *intossicare;* Lat. *in*, and *toxicum*, poison = Gr. *toxikon*, a poison in which arrows were dipped, from *toxon*, a bow.] To inebriate; to make drunk, as with spirituous liquors. — To excite the spirits to a kind of delirium; to elate to enthusiasm, frenzy, or madness; to infatuate.
Intox'icatedness, *n.* The state of being intoxicated, drunkenness.
Intoxica'tion, *n.* [Fr., from Lat. *in*, and *toxicum*, a poison.] Act of intoxicating or of making drunk; the state of being drunk; an extraordinary exhilaration, with imperfect articulation and inability to regulate voluntary motion; inebriation; drunkenness; a high excitement of mind; an elation which rises to enthusiasm, frenzy, or madness.
(*Med.*) The state produced by the excessive use of alcoholic liquids or inebriating substances. In general, intoxication comes on gradually, and several stages may be noted in its progress. Thus, it shows itself at first by a general liveliness and excitability. During this stage, the circulation of the blood becomes more rapid, and all the functions of the body are performed with more freedom. No surcharge of blood, however, is produced either in the head or lungs by the excitement. While in this condition, indeed, the mental powers seem to act more freely; the imagination is stimulated; the fancy is more lively; and the feeling of strength and courage is increased. The effect on the brain is much more decided in the second stage of intoxication. Then all the peculiarities of character, the weaknesses and failings of temperament, which the individual can keep under and conceal in his sober moments, manifest themselves; consciousness begins to be attacked; secret thoughts and the sense of propriety are lost. The peculiarities of this stage are summed up in the old proverb, *in vino veritas* — "in wine there is truth." In the next stage, consciousness is still more weakened; the balance of the body cannot be kept; the sight becomes confused, and the brain dizzy. After this point, the mind seems to be entirely overwhelmed by the tumult of animal excitement; consciousness is utterly extinguished; the tongue can only mutter incoherent gibberish; the face becomes suffused with blood; the

eyes protrude; and perspiration etreame from the pores of the skin. Lastly, when completely prostrated, the victim of intoxication einks into a heavy elumber, closely resembling the stupor of an apoplectic fit. But it is chiefly to the after-effects of the paroxyem that we have to trace the original growth and ultimate inveteracy of the drunken habit. Tbe uneasy eeneations of depression following upon the excitement of the previous debauch, are thought to be relieved by a freeh recurrence to the stimulant; and a morbid appetite is thus created, which craves its relief, aud finds it lu the renewed administration of spirituous drinks. just ae the natural appetite of hunger develops those sharp disquietudee that are allayed by food. This morbid appetite, in so far ae it is morbid, may iu itself be regarded aud treated as a disease; but the universal health ultimately ehows eigne of a more deep injury. The cheeks begin to have a bloated and flabby look, with a complexiou that either weare a peculiar pallor, or vergee iuto ehades of purple; while the nose not rarely presents a suspicious tinge of crimson. The appetite for ordinary food tails; the digestion is impaired; the sleep is disturbed; and the vigor of frame and capaclty for exertion eink accordingly, the limbs often aching and trembling, and the beart drooping with a miserable feeling of nervous exhaustion. Even prior to thie, the drunkard is often liable to those minor illusions which end in the full development of that form of temporary and abject insanity known as the drunkard's delirium, or delirium tremens (*q. v.*) One effect, and a leadiug one, of the customary presence of alcohol in the blood of the drinker, is to reduce the vitality of that fluid, so that it tends to euetain only the lowest forms of nutrition and animalization, and deposits in great part merely an inert fat within those organs where it should minister to the growth and maintenance of a delicate construction, destined for uses essential to life. Thus, wo have fatty deposits, or changes of higher structures into fat, in the heart, the liver, and in the blood-veesels, the coats of the last becoming easily ruptured. Hence, liability to diseases of the heart and of the liver, often followed by dropsies, or to affections of the other intestines, or to attacks of apoplexy and palsy. If not cut off abruptly in his career, the life of the drunkard becomes one long malady towards its cloee, the final condition being usually one of imbecility of mind and body, yet with throes of suffering to the last. It has beeu authoritatively shown that, while the average expectation of future life to the temperate man at 50 may be reckoned at 20 years, that of the drunkard at the eame age is only 4 years.

(*Law.*) *I.* or drunkenness is not, in point of law, an excuse for any wrong done by the druukeu party. Crimes which are committed in a state of drunkennese are puniehable in the same way as if the actor were eober, though it is discretionary in the court to mitigate the eentence. As regards contracts entered into by a drunken party, there is no peculiarity, unless the fact of drunkeuness was taken advantage of by the sober party, in which case it lies on the drunken party to prove this. Cases may no doubt arise where the drunkeuncss may be an element of fraud, and eo the contract or deod may be rescinded or set aside. The mere act or state of drunkenness, wheu privately indulged in, ie not an offence against the law; but if it be ehown in public, it may become eo. By a ntatute of James I., a person found drunk in the etreete was liable to be fined, or, if unable to pay, to be committed to the stocks for six hours. In the Middle Agee, and in the 16th century, *I.* was severely puniehed in France. By five ordinances, in the years 802, 803, 810, 812, and 813, Charlemague declaree habitual drinkers unworthy of being heard beforo courts of justice in their own case, or as witness for another. By an edict of 1536, Francis I. decreed that whosoever should be found intoxicated was to be imprisoned on bread and water for the first offeuce; the eecond time, dogging in the prisou was added; the third time he was publicly flogged; and if the offender was incorrigible, hie ears were cut off, he was deemed infamous, and banished the kingdom.

In'tra. [Lat.] A Latin preposition or adverb used as a prefix in English words, and eignifying *within*, or on tbe ineide.

In'tra, a town of N. Italy, in Sardinia, on tho W. shore of Lake Maggiore, 35 m. from Novara. *Manuf.* Cheese, wine, and brandy. *Pop.* 4,000.

Intractabil'ity, *n.* Obstinacy; intractablenese; the state of being intractable.

Intrac'table, *a.* [Lat. *intractabilis* — *in*, and *tractabitis*, from *tracto*, to drag, to handle, frequent. from *traho*, to draw. See TRACT.] Not to be governed or managed; stubborn; refractory; unmanageable; violent; ungovernable; iudocile; nuteachable.

Intrac'tableness, *n.* Quality of heing intractable, or ungovernable; obstinacy; pereeverance; indocility.

Intrac'tably, *adv.* In a perveree, stubborn manner.

Intrac'tile, *a.* That is not tractile; that cannot be drawu out.

Intrados, (*in-trai'dos.*) [Lat. *intra*, within; *dorsum*, back.] (*Arch.*) The outline or curve formed by the jnuctiou of the lower ende of the voussolre of an arch is called its *intradosor soffit;* while the curve, which ie eimilarly formed by the upper ends of the voueeoire, le termed its *extrados.* — See ARCH.

Intra-folia'ceous, *a.* [It. *intrafogliaceo.*] (*Bot.*) Situated between the leaf or petiole and the stem, as etipules, &c.

In'trails, *n. pl.* See ENTRAILS.

Intramar'ginal, *a.* Being within the margin.

Intramun'dane, *a.* [Lat. *intra*, within, and *mundus*, the world.] Being within the world.

Intramu'ral, *a.* [Lat. *intra*, and *muralis*, from *murus*, a wall. See MURAL.] Being within the walls.

Intrance', *v. a.* See ENTRANCE.

Intranquil'lity, *n.* Unquietnees; want of reet.

Intran'scalent, *a.* [*In*, priv., aud *transcalent.*] Impervious to beat.

Intransgres'sible, *a.* [Lat. *in*, *trans*, beyond, and *gradior*, to walk.] That cannot be passed.

Intran'sient, *a.* Not transieut; stable.

Intran'sitive, *a.* [Lat. *intransitivus*, from *intranseo* — *in*, and *transeo*, to pass over. See TRANSIT.] (*Gram.*) Designatiug a verb which expresscs an action or state that ie limited to the ageut, or, iu otber words, an action that does not pass over to or operate upon au object.

Intran'sitively, *adv.* Without an object followiug; in the manner of an intransitive verb.

In tran'situ. [Lat.] In the act of passing from one place to another.

Intransmis'sible, *a.* That cannot be tranemitted.

Intransmutabil'ity, *n.* The state of being intransmutable.

Intransmu'table, *a.* That cannot he transmuted or changed into another substance.

In'trant, *n.* Oue who makee au entrance, as entering upon an office.

Intrap', *v. a.* See ENTRAP.

Intreat', *v. a.* See ENTREAT.

Intrench', *v. a.* [*In*, and Fr. *trancher.* See TRENCH.] To dig or cut a treuch around, as iu a fortification; to fortify with a ditch and parapet; to furrow; to make hollows in; to cut into.

—*v. n.* To invade; to encroach; to trespass upon; to cut off, as a part of what belougs to another.

"We are not to *intrench* upon truth in any conversation." —*Locke.*

Intrench'ment, *n.* Act of intrenching; a trench; a ditch and parapet for defence; any defence or protection. See LINES OF INTRENCHMENT.

Intrep'id, *a.* [Fr. *intrépide;* Lat. *intrepidus* — *in*, and *trepidus*, trembling with fear. See TREPIDATION.] That doee not tremble from danger; unshaken; firm; undaunted; fearlese; resoluto; daring; courageous.

Intrepid'ity, *n.* [Fr. *intrépidité.*] Quality of being intrepid; fearlessnese; fearlese bravery in danger; undaunted courage.

Intrep'idly, *adv.* Without trembling or shrinking from danger; fearleesly; daringly; resolutely.

In'tricacy, *n.* [L. Lat. *intricatio.*] State of beiug intricate or entangled; perplexity; involution; complication; complexity.

In'tricate, *a.* [Lat. *intricatus*, from *intrico*, to entangle, to perplex — *in*, and *tricor*, to make or etart difficulties; Sp. *intricar*, to entangle.] Entangled; involved; perplexed; complicated; obscure.

In'tricately, *adv.* With involution or infoldings; with perplexity or intricacy.

In'tricateness, *n.* State or quality of being intricate; involution; perplexity; complication; obecurity.

Intrigue, (*in-trēg',*) *n.* [Fr.; It. *intrigo*, from Lat. *intrico.* See INTRICATE.] An eutanglement; a plot or scheme of an intricate character, intended to effect some purpose by secret artifices.

"Busy meddlers in *intrigues* of state." —*Pomfret.*

(*Lit.*) The plot or undercurrent of a novel, play, or romance; the complicated machinery of action and deeign operating on the curiosity or interest of a reader or spectator.

"The hero of a comedy is represented victorious in all his *intrigues.*" —*Swift.*

—A clandestiue commerce of love; an amour; a secret love-affair.

"Now love is dwindled to *intrigue.*" —*Swift.*

—*v. n.* [Fr. *intriguer*; Lat. *intrico.*] To form a plot, scheme, or desigu generally complicated, and intended to effect some purpose by secret artifice. — To carry on a clandestine love-affair; to pursue a forbiddeu amour.

Intriguer, (*-trēg'er,*) *n.* Oue who intrigues; one who desigus, plots, or schemes, or who carries on a clandestine or illicit amour.

Intrig'nery, *n.* Arts, practicee, or processes of intrigue.

Intrig'uingly, *adv.* Characterized by intrigue; invested with artifice or clandestine schemiug.

Intrin'sic, Intrin'sical, *a.* [Fr. *intrinsèque;* Lat. *intrinsicus* — *intra*, and *secus*, near, by, along, on.] Inward; internal; innate — hence, genuine; true; real; essential; iuherent; not apparent or accidental; — opposed to *extrinsic;* as, *intrinsic* worth, merit, excellence, or goodness, *intrinsic* value of the precious metale, &c.

Intrinsical'ity, *n.* State or quality of being intrinsic; genuineuess.

Intrin'sically, *adv.* Internally; naturally; really; verily; truly.

"A lie is a thing . . . . *intrinsically* evil." —*South.*

Intrin'sicalness, *n.* State or quality of being intrinsic; essentialnees.

Intro-. [Lat.] A prefix denoting *in*, *into*, *within*, and the like.

Introces'sion, *n.* [Lat. prefix *intro*, and *cedere*, to pass.] (*Med.*) The depression or sinking of any part iuwarde.

Introduce', *v. a.* [Lat. *introduco* — *intro*, and *duco*, to lead or bring. See DUCT.] To lead or bring in; to conduct or usher into a place; as, to *introduce* a person into eociety. — To bring into or under notice; to present to; to bring to be acquainted; to make known formally; as, to *introduce* a foreigu envoy at court, to *introduce* a friend to another person. — To bring, as something uew, into notice, practice, or use; to import; to bring before the public; as, to *introduce* a new style of dress, to *introduce* an improved method of agriculture. — To produce; to give cauee or occasion; as, to *introduce* habits in children. — To begin; to opeu to notice or observation; as, to *introduce* a novel with a preface.

Introdu'cer, *n.* One who effecte introduction.

Introduction, (*-dŭk'shun,*) *n.* [Fr.; Lat. *introductio.*] Act of introducing; act of conducting or nshering into a place, or of bringing into notice; as, "the *introduction* of the liturgy into Scotland." (*Clarendon.*) — Act of making persons kuown to each other; as, the *introduction* of a lawyer to a client. — Act of bringing something into notice, practice, or use; importation; a setting before the public; ae, the *introduction* of a style, mode, or fashion. — A preface or preliminary discourse; the first part of an oration or diecourse. — An introductory treatise: as, the *introduction* to theological ecience.

Introduc'tive, *a.* [Fr. *introductif.*] Introductory; serving as the means of bringing forward something new.

Introduc'tively, *n.* In a manner to effect introduction.

Introduc'tor, *n.* One who introducee; an introducer.

Introduc'torily, *adv.* By way of introduction.

Introduc'tory, *a.* [L. Lat. *introductorius.*] Serving to introdnce eomething else; preliminary; prefatory; preparatory; as, an *introductory* preamble.

Introduc'tress, *n.* A female who introdnces.

Introflexed, (*-flĕxst',*) *a.* Having an inward flexure.

Intro'it, *n.* [L. Lat. *introitus.*] (*Eccl.*) In the Roman Catholic Church, a psalm chauted at the firet entering of the priest within the raile of the altar.

Intromis'sion, *n.* [Fr.; L. Lat. *intromissio* — Lat. *intro*, and *missio* — *mitto*, to send.] Act of eending in or into; act of introducing oue body into another.

Intromit', *v. a.* [Lat. *intromitto* — *intro*, and *mitto*, to send.] To send or let in; to admit. — To permit or allow to enter; to be the medium by which a thing enters or is admitted.

Intromit'tent, *a.* [Lat. *intro*, and *mittere*, to eend.] Sending or conveying into.

Intropres'sion, *n.* Preseure acting internally.

Introrecep'tion, *n.* [Lat. *intro*, and *receptio*, reception.] Act of receiving into.

Introrse', *a.* [Lat. *introrsus*, inward.] (*Bot.*) A term used in describing the direction of bodiee to denote their being turned towards the axie to which they appertain; thus, in moet plants, the authere are introrse, being turued towards the style.

Introspect', *v. a.* [Lat. *introspicere.*] To look into or witbin; to view the interior or ineide of.

Introspection, (*-spĕk'shun,*) *n.* [Lat. *intro*, and *spectio*, from *specio*, to look at.] A looking within; a view of the inside or interior.

"I was forced to make an *introspection* into mine own mind." *Dryden.*

Introspec'tive, *a.* Looking within; inepecting in wardly.

Introsusception, (*-sŭs-cĕp'shun,*) *n.* [Lat. *intro*, and *susceptio*, a takiug in.] Act or practice of taking inwardly. (B.)

(*Anat.*) See INTUS-SUSCEPTION.]

Introversion, (*-vĕr'shun,*) *n.* Act of introverting; etate or condition of being introverted.

Introvert', *v. a.* [Lat. *intro*, and *verto*, to turn. See VERSION.] To turn inward; ae, an *introverted* toe.

Intrude', *v. a.* [Lat. *intrudo* — *in*, and *trudo*, to push, to thrust; akin to Heb. *tarad*, Ar. *tarada*, Chald. and Syriac *tirad*, to thruet.] To come and go in without invitation, request, or welcome; to enter, witbout rigbt or permission; to thruet one's self, uninvited or unwelcome, into company.

"Forgive me . . . if officious friendship *intrudes* on your repose." — *Rowe.*

—To force an entry or way in without permission, juet rigbt, or expectation of welcome; to encroach; as, to *intrude* on auother person's grounds.

—*v. a.* To force or thrnst in; — with the reciprocal pronoun; as, I do not *intrude myself* where I aiu not welcome.

(*Geol.*) To force or urge witb violence, as igneous rocks in a state of fusion through or into rents or fissures in disrupted etrata of other rocks.

Intrud'ed, *p. a.* (*Geol.*) Intrusive.

(*Zoöt.*) Applied to the head of an insect, when nearly withdrawn within the trunk.

Intrud'er, *n.* One who intrudes without permission; one who comes or goes in, or entere, where he has no right, or where he is not welcome.

Intrusion, (*-trū'zhun,*) *n.* [Fr., from L. Lat. *intrusio* — *intrudo, intrusus.* See INTRUDE.] Act of intruding, or of thrusting iu, or of entering into a place or state without just right, invitation, or welcome; encroachment.

(*Law.*) A species of injury to freehold property. It arisee when a stranger intrudes between the death of tenant for life or yeare and the entry of the heir of a remainder-man or reversioner expectant on the estate for life or years, who had died previoue to the decease of such tenant for lifo or years. Writ of intrusion lies only for a party who has the remainder or reversion in fee; remainder-man in tail has remedy by formedon.

(*Geol.*) The forcing or injecting of igneous rocks in a etate of fueing through or Into other dierupted rocks.

Intrn'sive, *a.* [Fr. *intrusif.*] Intruding upon; apt to intrude; thrusting In, or entering without right, invitation, or expected welcome; as, an *intrusive* visitor.

Intrusive Rocks. (*Geol.*) Rocks that have been intruded. See INTAUDE.

Intru'sively, *adv.* In an intrusive manner; wanting invitation or welcome.

Intru'siveness, *n.* Quality of being intrusive; act of entering without right, permission, or welcome.

Intrust', *v. a.* (Sometimes written ENTRUST.) [*In* and *trust.*] To place trust or confidence in; to deliver in trust; to confide to the care of; to commit to the charge of another with confidence in his integrity and fidelity; as, to *intrust* a messenger with money, to *intrust* a secret to a woman.

Intuition, (*-tū-ish'un,*) *n.* [Fr.; Lat. *in,* and *tuitio,* a taking care of, from *tueor,* to look at, behold, view.] (*Phil.*) That power of the human mind by which a thing is known or comprehended immediately, as soon as it is perceived or attended to. When the mind perceives the agreement or disagreement of two ideas, immediately by themselves, without the invention of any other, this is *intuitive;* for in this the mind is at no pains of proving or examining, but perceives the truth, as the eye does the light, only by being directed towards it. Thus, the mind perceives that white is not black, that a circle is not a triangle. Things that are known by intuition cannot be made more certain by arguments than they are at first. *Axioms* are propositions known by intuition.

Intui'tional, *a.* Relating or belonging to, or characterized by intuition; intuitive; attained by direct cognition.

Intui'tionalism, *n.* (*Phil.*) The doctrine that truth is perceived by intuition.

Intu'itive, *a.* [Fr. *intuitif.*] Perceived by the mind immediately, without the intervention of argument or testimony. — Exhibiting truth to the mind on bare inspection, as evidence; having the power of discovering truth without process of reasoning; as, the *intuitive* faculty. — Received or obtained by intuition or direct cognition, as knowledge.

Intu'itively, *adv.* In an intuitive manner; by instant perception; without ratiocination.

"God Almighty . . . sees all things *intuitively.*" — *Baker.*

Intumesce, (*-tu-mes',*) *v. a.* [Lat. *intumescere.*] To swell or expand with heat.

Intumes'cence, *n.* [Fr., from L. Lat. *intumescentia,* from Lat. *in,* and *tumesco* — *tumeo,* to swell.] Act of swelling. — A swell; a swelling; a tumid state.

In'turning, *a.* Suitable for being turned into; as, "an *inturning* place." — *Wickliffe.*

Intus-suscep'tion, *n.* [Lat. *intus,* within, and *suscipio,* to receive.] (*Med.*) A disease or natural accident of the bowels, caused by the falling into one bowel of a portion of the other above it. Thus a part of the ilium drops into the larger calibre of the cæcum and colon, causing a perfect stoppage in the bowels. The accident is a very serious one, and often proves fatal.

Intwine', *v. a.* To twist, or wreathe together; to twine around; to inweave.

Intwine'ment, *n.* The act of intwining.

Intwist', *v. a.* To twist together; to interweave.

In'ula, *n.* (*Bot.*) A genus of plants, order *Asteraceæ.* They are coarse perennial herbs with alternate leaves and yellow flowers. The root of *I. Helenium,* the well-known Elecampane, yields a starch called INULIN, *q. v.* To this genus also belongs the Golden Samphire, *I. crithmifolia.*

Inulin, ALANTINE, *n.* (*Chem.*) A substance having the same composition as starch ($C_{12}H_{10}O_{10}$), but differing from it in giving a brown instead of a blue color with iodine. It is obtained from the roots of the Elecampane (*Inula Helenium*) by bruising and digesting them in water, and clarifying the solution with the white of an egg. On cooling, the *I.* is deposited as a white powder. It has been used as a medicine from the time of Hippocrates, being an aromatic, tonic, expectorant, and diaphoretic, and also useful in chronic catarrh and dyspepsia.

Inumbrate', *v. a.* [Lat. *inumbro, inumbratus* — *in.* and *umbra,* a shadow, a shade.] To cast a shadow upon; to shade.

Inunctuos'ity, *n.* Destitution of oiliness.

Inun'dant, *a.* [Sp. *inundante.*] Overflowing. (R.)

Inun'date, *v. a.* [Lat. *inundo, inundatus* — *in,* and *undo,* to rise in waves or surges, from *unda,* a wave. See UNDULATE.] To cover with water or a fluid; to overflow; to deluge; to flood; to overwhelm; to fill with an overflowing abundance or superfluity.

Inunda'tion, *n.* [Lat. *inundatio;* Fr. *inondation.*] Act of inundating; an overflow of water or other fluid; a rising and spreading of water over low grounds; an overspreading of any kind; an overflowing or superfluous abundance.

Inurbane', *a.* [Lat. *inurbanus.*] Without urbanity; uncivil.

Inurbane'ly, *adv.* In an uncivil manner; rudely.

Inurban'ity, Inurbane'ness, *n.* Want of urbanity; rudeness; incivility.

Inure', *v. a.* [Norm. *enuer,* to inure, from *ure,* probably a contraction from Lat. *usura,* a using, from *utor, usus,* to use, practise, exercise.] To habituate or bring to the use or practice of; to accustom; to apply or expose in use or practice till use gives little or no pain or inconvenience, or makes little impression.

—*v. n.* To pass in use; to take or have effect; to be applied; to serve to the use or benefit of.

Inure'ment, *n.* Practice; habit; custom.

Inurn', *v. a.* To put in an urn; to bury; to inter; to entomb.

Inusita'tion, *n.* [Lat. *inusitatus,* unusual.] Disuse.

Inutil'ity, *n.* [Fr. *inutilité;* Lat. *inutilitas.*] The quality of being unprofitable; unprofitableness; needlessness.

In vac'uo. [Lat.] In a void or empty space.

Invade', *v. a.* [Lat. *invado* — *in,* and *vado,* to go. See WADE.] To enter, as a country, with hostile intentions; to enter as an enemy; to attack; to assail; to assault. — To infringe; to encroach on; to violate, as one's rights; to fall on; to seize.

Invad'er, *n.* One who invades or assails; an intruder; an encroacher.

Invagina'tion, *n.* [Lat. prefix *in,* and *vagina,* sheath.] (*Surg.*) Intus-susception. — An operation which consists in introducing one end of a divided intestine into the other, with the view of restoring the continuity of the intestinal canal. — An operation for the radical cure of crural hernia, which consists in introducing into the crural canal a thick lint of charpie, the effect of which is, by compression and adhesive inflammation, to obliterate the neck of the hernial sac.

Inval'id, *a.* [Fr. *invalide;* Lat. *invalidus* — *in,* and *validus,* sound, strong, from *valeo,* to be well, to be able. See VALID.] (*Law.*) Inoperative; wanting in force, strength, power, or efficacy; null; void; as, an *invalid* contract.

Invalid, (*in-vă-lēd',*) *a.* [Lat. *invalidus.*] Not strong; weak; infirm; feeble; in ill health; sick; as, an *invalid* seaman.

—*n.* A person sickly, or physically debilitated; one who is infirm, wounded, maimed, or otherwise disabled for active service, — particularly a soldier or sailor worn out in service.

—*v. a.* To render as invalid; to enroll on the list of invalids in the naval or military service.

"*Invalided,* bent, and almost blind."—*Dickens.*

Inval'idate, *v. a.* [Fr. *invalider.*] To render invalid or nugatory; to weaken or deteriorate the force or efficacy of; to deprive of strength, power, or validity; to prove to be of no force, as testimony; to overthrow; as, to *invalidate* a will.

Invalida'tion, *n.* Act, practice, or process of causing to be invalid.

Invalides, (*in-va-lēēds',*) *n. pl.* [Fr.] (*French Hist.*) Previous to the reign of Henry IV., old and disabled soldiers had no other resources in France than the charity of the monastic establishments of royal foundation to depend on for their support; but in 1596, that king formed an asylum for military invalids in an old convent in the Faubourg St. Marcel. This institution was removed to the château de Bicêtre by Louis XIII., but for want of funds did not receive any augmentation. In 1670, during the administration of Louvois, Louis XIV., by whose wars the number of invalids was greatly augmented, determined to found a magnificent establishment to receive them. The foundations were laid in

Fig. 1394. — DOME OF THE INVALIDES, PARIS.

1670, and the main building was finished about 1706. Several additions were made at various times to the buildings of the hotel; and the whole edifice now covers 16 acres of ground, enclosing 15 courts. The church or dome (Fig. 1394) was built by Mansard, and finished in 1706. The governor of this magnificent institution is generally the senior marshal of France. All soldiers who are actually disabled by their wounds, or who have served 30 years, and obtained a pension, are entitled to the privileges of this institution. The hotel can accommodate 5,000 men, who all wear the same costume.

Invalid'ism, *n.* State or condition of an Invalid; sickness; infirmity; feebleness.

Invalid'ity, *n.* [Fr. *invalidité;* L. Lat. *invaliditas.*] Weakness; want of cogency; lack of legal force or efficacy; as, the *invalidity* of an agreement.

Inval'idness, *n.* Invalidity; as, the *invalidness* of ratiocination.

Inval'orous, *a.* Without courage or valor; pusillanimous, timorous; cowardly.

Inval'uable, *a.* That admits no assignable value; precious and estimable beyond a standard of appreciation; so valuable that its worth cannot be estimated; priceless; as, an *invaluable* privilege, an *invaluable* assistant, &c.

Inval'uably, *adv.* Inestimably; pricelessly.

Inval'ued, *a.* Of great or inestimable value.

Invariabil'ity, *n.* Invariableness; state or quality of being invariable.

Inva'riable, *a.* [Fr.] Without variation; constant in the same state; immutable; unalterable; unchangeable; that does not vary; always uniform; as, an *invariable* rule or practice.

—*n.* (*Math.*) An invariable quantity; a constant.

Inva'riableness, *n.* State or quality of being invariable; immutability of position, condition, or nature; unchangeableness; constancy.

Inva'riably, *adv.* Constantly; uniformly; without alteration, contrariety, or change.

Invaried, (*-vā'rid,*) *a.* Unvaried; without change or alteration.

Invasion, (*-vā'zhun,*) *n.* [Fr., from late Lat. *invasio,* from *invado.* See INVADE.] Act of invading or encroaching upon the rights or possessions of another; attack on the privileges of another; infringement; violation.

"From every *invasion* that sin makes upon innocence."—*South.*

—A hostile irruption or entrance into the possessions or territories of another for conquest or plunder; attack; incursion; raid; inroad.

—Approach or attack of any enemy, or of anything inimical, pernicious, or destructive; as, an *invasion* of cholera.

Inva'sive, *a.* [L. Lat. *invasivus.*] Making invasion or irruption; entering on another's possessions with hostile aims or designs; aggressive; infringing the rights or privileges of another.

Invect'ed, *a.* (*Her.*) Same as ENGRAILED, *q. v.*

Invec'tive, *n.* [Fr.; Lat. *invectivus,* scolding, abusive, from *inveho* — *in,* and *veho,* to carry.] An attack with vituperative words; a railing speech or expression; an outburst of denunciatory language; something uttered or written that conveys, or is intended to convey, violent censure, reproach, or opprobrium on another: a harsh accusation; abuse; trenchant satire; burning sarcasm; — preceding *against.*

"He fell into bitter *invectives against* the French king."—*Bacon.*

—*a.* [Lat. *invectivus.*] Abusive; vituperative; satirical; railing; sarcastic; as, an *invective* passage in speech or writing.

Invec'tively, *adv.* Abusively; satirically.

Inveigh, (*in-vā',*) *v. n.* [Lat. *inveho* — *in,* and *veho,* to carry. See VEHICLE.] To attack with words; to exclaim or rail against; to utter censorious and bitter language against any one; to reproach; to revile; to upbraid. (Followed by *against.*)

Inveigh'er, *n.* One who inveighs; a vehement railer.

Invei'gle, *v. a.* [O. Fr. *enveogler;* Fr. *aveugler;* Lat. *ab,* without, and *oculus,* eye, sight.] To mislead; to delude; to entice; to seduce; to wheedle; to persuade to something evil by deceptive arts or flattery.

Invei'glement, *n.* Seduction to evil; enticement.

Invei'gler, *n.* One who inveigles; a deceiver.

Inveil', *v. a.* To cover, as with a veil.

Invendibil'ity, *n.* Unsalableness.

Inven'dible, *a.* [Lat. *invendibilis.*] Unsalable.

Inven'dibleness, *n.* The state of being unsalable.

Inven'om, *v. a.* See ENVENOM.

Invent', *v. a.* [Fr. *inventer;* Lat. *invenio, inventum* — *in,* and *venio,* to come.] To devise, as something not before known; to contrive and produce, as something that did not before exist. — To forge; to fabricate; to contrive falsely. — To feign; to frame by imagination.

Invent'er, *n.* One who invents. See INVENTOR.

Invent'ful, *a.* Full of invention.

Invent'ible, *a.* Capable of being invented.

Invent'ibleness, *n.* The state or quality of being inventible.

Inven'tion, *n.* [Fr.; Lat. *inventio.*] The action or operation of inventing, or of finding out something new; the contrivance of that which did not before exist. *Invention* is the creation or construction of something which has not before existed; *discovery* is the making manifest something which has hitherto been unknown. Galileo invented the telescope; Harvey discovered the circulation of the blood. In older times, however, this distinction was not observed, and the two terms were used synonymously; thus Locke and Bacon talk of the invention of sciences. The rights of individuals to the honor due to inventions or discoveries are matters of constant discussions in the history of letters and science, and the subject is as yet but little understood. It is a very remarkable fact that not unfrequently discoveries are made by more than one person at the same time.

—That which is invented; contrivance; device. — Forgery; fiction. — The skill or ingenuity which is or may be employed in contriving anything new.

(*Fine Arts.*) *I.,* in painting, consists principally in three things: first, the choice of a subject properly within the scope of art; secondly, the seizure of the most striking and energetic moment of time, for representation; and lastly, the discovery and solution of such objects, and such probable incidental circumstances, as, combined together, may best tend to develop the story, or augment the interest of the piece. The cartoons of Raphael furnish an example of genius and sagacity in this part of the art.

(*Law.*) See PATENT.

I. of the Cross. See CROSS.

Inven'tive, *a.* [Fr. *inventif.*] Quick at contrivance; ready at expedients.

Inven'tively, *adv.* By the power of invention.

Inven'tiveness, *n.* The faculty of inventing; ingenuity.

Inven'tor, *n.* [Lat.] One who invents or finds out something new; one who contrives and produces anything not before existing; a contriver.

Invento'rial, *a.* Relating to an inventory.

Invento'rially, *adv.* In the manner of an inventory.
In'ventory, *n.* [Fr. *inventaire*, from late Lat. *inventarium*, from Lat. *invenio*, to coms upon, to find, to meet with. See INVENT.] A catalogue of movables; a catalogus or account of particular things.—(*Law.*) An account, catalogus, or schedule of all the goods, chattels, or credits of a deceased person, made by an executor and administrator.
—*v. a.* [Fr. *inventorier.*] To make a list, catalogue, or schedule of; to insert or register in an account of goods.
Inven'tress, *n.* [Fr. *inventrice.*] A female who invents.
In'ver Grove, in *Minnesota*, a post-township of Dakota co. *Pop.* (1897) 1,262.
Invera'ry, the chief town of the co. of Argyle in Scotland, 42 m. N.W. of Glasgow. It is situated on a small bay, 8 m. from the head of Loch Fyne. *Pop.* (1895) 750.
Inverkei'thing, a seaport of Scotland, in Fifeshire, on the coast of the Frith of Forth, 10 m. N of Edinburgh. *Pop.* (1895) 1,675.
Inverisimil'itude, *n.* Want of verisimilitude.
Invermina'tion, *n.* (*Med.*) See HELMINTHIASIS.
Invernae'ulo, *n.* [From Sp. *invierno*, winter.] A green-house for preserving plants in winter.
In'verness, a co. of Scotland, having N. Ross-shire, and part of the Moray Frith; E. the counties of Nairn, Moray, and Aberdeen; S. those of Perth and Argyle; and W. the Atlantic Ocean. *Area*, 4,600 sq. m. *I.* possesses the most rugged, grand, and important scenery in Great Britain, and may be considered the very heart of the Highlands. It lies obliquely across the N. part of Scotland, having the Loch Eil on the S.W., and the estuary of the Ness and Moray Frith on the N.E. The whole county may be said to consist of transverse mountain-chains, with deep intervening glens, here called *straths*, or else separated by lochs or rapid rivers from the alternate barriers that stretch so wild and imposingly across the county. The principal mountains are the Grey, or Monadlier in the N., and Benalder in the S.; which throw off Cairngorm, Ben Nevis, Brae-Riach, and some other spurs, varying from 3,000 to 4,370 feet above sea-level. Of the wild and lonely glens, or straths, the chief are the Caledonian, from which eight smaller glens diverge, Strathglass, and further south Strathspey, in the district of Badenoch. The rivers of greatest importance are the Ness, Lochy, Beauly, and Spey. The W. coast of *I.* is remarkably bold and rugged, being deeply cut up, like that of Norway, by inlets, lochs, and fiords, producing a succession of imposing peninsulas, headlands, and promontories. Seven of the Hebrides, besides many small islands nearer the coast, form part of the county of Inverness; these are Skye, Rum, Barra, North and South Uist, Benbecula, and Harris. The only mineral of any quality worked for is limestone. The physical aspect of the co., and the sterile nature of the soil, where capable of agriculture, render the finer crops extremely difficult to raise, hence oats are almost the only cereal produced. The wealth of the co. lies in the immense number of black cattle reared on the mountain pastures. *I.* being renowned for its breed and great herds of horned beasts. *Pop.* (1891) 90,121.

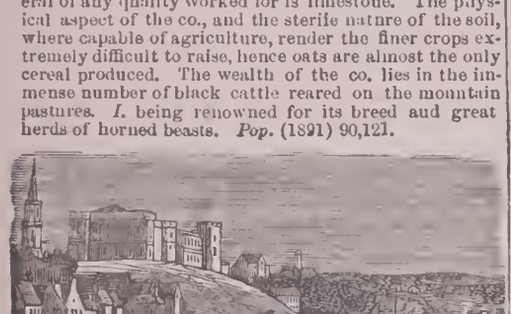

Fig. 1395.—INVERNESS.

INVERNESS, a sea-port town and cap. of the above co., is situated on both sides of the river Ness, at its entrance into the Moray Frith, 115 m. from Edinburgh, Lat. 57° 28′ 36″ N., Lon. 4° 13′ 30″ W. It is a fine town, with a commodious harbor, and was long considered as the metropolis of the Highlands. Tartan cloth for the Highland markets is here manufactured in considerable quantities. *Pop.* (1897) 21,250.
Inverness, in *Florida*, a post-village, cap. of Citrus co., on S., F. & W. R. R., about 40 m. S.W. of Ocala. *Pop.* (1897) 426.
Inverness, in *Michigan*, a village of Merrimac co., on the Sheboygan river, about 18 m. S. of Merrimac.
—A township of Sheboygan co.
Inverness, in *Ohio*, a post-office of Columbiana co.
Inverse', *a.* [Lat. *inversus*, from *inverto—in* and *verto*, to turn. See VERSION.] Inverted; reciprocal,—opposed to *direct.*
(*Bot.*) Noting a part whose apex is in the direction opposite to that of the organ with which it is compared.
(*Math.*) Two operations are said to be *inverse*, one of the other, when their successive performance on any subject leaves the latter unchanged; in other words, when the one destroys the effect of the other. Addition and subtraction, multiplication and division, involution and evolution, integration and differentiation, are, severally, examples of inverse operations.
I. Proportion. (*Arith.* and *Algebra.*) Two quantities are said so be inversely proportional to two others with which they are respectively associated, when the first is to the second as the associate of the second is to that of the first. Thus A and B are inversely proportional to *a* and *b* when

$$A : B = b : a, \text{ or } A : B = \frac{1}{a} : \frac{1}{b};$$

that is to say, when the ratio of A to B is the reciprocal of that of *a* to *b*, or, otherwise expressed, is equal to the ratio of the reciprocals of *a* and *b*.
Inverse'ly, *adv.* In an inverse order or manner.
Inver'sion, *n.* [Fr.; Lat. *inversio.*] Act of inverting; state of being inverted; change of order, so that the last becomes first, and the first last; a turning or changs in the natural order of things.—Change of places, so that each takes the place of the other; a turning backward; contrary method of operation; a change of order or position.
(*Mus.*) The transposing of one of the two notes of an interval by an octave upwards or downwards, to a position the reverse of that which it before occupied with respect to the other note, so that if the transposed note was the lower note of the two, it shall now be the higher one, and *vice versâ*. The new interval thus formed takes its name from the complement of the octave; for example, a unison inverted becomes an octave, a second becomes a seventh, a third becomes a sixth, a fourth becomes a fifth, a fifth becomes a fourth, a sixth becomes a third, a seventh becomes a second, and an octave becomes a unison. By inversion diminished intervals become augmented, and augmented become diminished; major become minor, and minor become major; but perfect intervals are also perfect when inverted.
(*Geom.*) A peculiar method of transformation. Two points, *p p′*, are said to be inverse to each other, relative to a fixed point (*origin*), A, and a given *fundamental* quadric curve or surface, F, when they constitute a pair of conjugate points with respect to the latter, that is to say when the polar of one passes through the other, and when they are likewise collinear with A. Two curves, or surfaces, are said to be inverse to each other when every point of the one has its inverse on the other.
(*Rhet.* and *Philology.*) The placing of words out of their natural order. In every language there is a certain customary arrangement observed in the ordering of words in a sentence. In English the order generally is first the nominative, then the verb, and afterwards the accusative, if the verb be active. This order, however, is, for the sake of effect, frequently varied; as in the sentence "Great is Diana of the Ephesians," which is infinitely more forcible than "Diana of the Ephesians is great." In this respect the Latin language admits of much more liberty than ours does. Milton, in his prose works, and some of the older English writers, in attempting to imitate this, produced obscurity.
Invert', *v. a.* [Lat. *inverto—in*, and *verto*, to turn. See VERSION.] To turn into a contrary direction; to turn upside down; to place in a contrary order or method; to reverse; to change the order or position of.
(*Mus.*) To change the position either of a subject or of a chord.—*Worcester.*
Inverted Arch. (*Arch.*) An arch wherein the lowest stone, or brick, is the key-stone, (Fig. 1396.) It is used in foundations, to distribute the weight of particular points, such as A, A, A, over the whole of the foundation. It is also commonly used in the construction of tunnels.

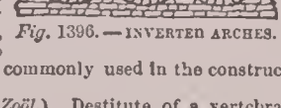

Fig. 1396.—INVERTED ARCHES.

Inver'tebral, *a.* (*Zoöl.*) Destitute of a vertebral column.
Invertebra'ta, *n. pl.* [Lat. *in*, not, and *vertebra*, a joint of the backbone.] (*Zoöl.*) A negative term, first employed by Lamarck to designate animals destitute of a vertebral column or backbone. The Invertebrata constitute three out of the four great divisions of the animal kingdom; viz., *Articulata*, *Radiata*, nd *Mollusca.*
Inver'tebrate, *n.* (*Zoöl.*) An animal having no vertebral column or spinal bone; one of the INVERTEBRATA, *q. v.*
Inver'tebrate, Inver'tebrated, *a.* Destitute of a vertebral chain or backbone.
Invert'edly, *adv.* In a contrary or reverse order.
Invest', *v. a.* [Fr. *investir*; Lat. *investio—in*, and *vestio*, to cover with a garment, to clothe.] To clothe; to dress; to put garments on; to array.—To clothe with office or authority; to place in possession of an office, rank, or dignity; to adorn; to grace.—To surround; to inclose; to block up; to lay siege to; to besiege.—To place or lay out, as money in some species of property.
Inves'tigable, *a.* [L. Lat. *investigabilis.*] That may be investigated or searched out; discoverable by rational search or disquisition.
Inves'tigate, *v. a.* [Lat. *investigo, investigatus—in, vestigo*, from *vestigium*, a footstep or track.] To trace out; to search into; to inquire and examine into with care and accuracy; to find out by careful disquisition.
Investiga'tion, *n.* [Fr.; Lat. *investigatio.*] The act of searching minutely for truths, facts, or principles; a careful inquiry to find out what is unknown; examination; search; scrutiny; research.
Investiga'tor, *n.* [Fr. *investigateur.*] One who investigates, or makes diligent research into anything.
Investiga'tory, *a.* Searching, inquiring into.
Invest'iture, *n.* [Fr.; L. Lat. *investitura.*] Right of giving possession of any manor, office, or benefice; as, "the *investiture* of bishops." (*Raleigh.*)—Investment; that with which any one is invested.
(*Feudal Law.*) The actual conveyance of feudal lands by a lord to his vassal. It was of two kinds,—*proper* and *improper.* The first was an actual putting in possession upon the ground, either by the lord or his deputy, which is now called, in common law, livery of seisin. The second was symbolical, and consisted in the delivery of a turf, a stone, a wand, a branch, or whatever else might have been made usual by the caprices of local custom. Du Cange enumerates no less than ninety-eight varieties of investitures. Investitures were introduced at a time when the art of writing was but little known, and by the open and notorious delivery of possession in the presence of other vassals, who, in case of a disputed title afterwards, might bear witness to the fact.
Invest'itures, (War of.) (*Hist.*) A war between the Emperor Henry IV. and Gregory VII., respecting the right of investiture, commenced in 1074, and terminated with the capture of Rome, March 21, 1084.
Invest'ive, *a.* Investing; clothing. (R.)
Invest'ment, *n.* [Fr. *investissement.* See VESTMENT.] Action of clothing or investing—That with which one is invested; a vestment; a robe; a garment.

"White *investments* figure Innocence."—*Shaks.*

—The placing or laying out of money in some species of property or funded stock, generally as a permanent transaction; as, an *investment* in real-estate, an *investment* in Five-twenties.
(*Mil.*) The enclosure of a fortress on every side with troops, all the avenues to it being occupied, so as to prevent the garrison receiving supplies, or communicating with other troops. This is the first step necessary in a siege.
Invest'or, *n.* One who invests.
Invet'eracy, *n.* [Lat. *inveteratio.*] State of being inveterate; long use or habitude; long continuance, or the firmness of any obstinacy of property or quality confirmed by time; as, the *inveteracy* of bad habits, the *inveteracy* of national prejudices.
Invet'erate, *a.* [Lat. *inveteratus*, from *inveterо—in*, and *vetus, veteris*, old. See VETERAN.] Long used, accustomed, or established; deep-rooted: firmly implanted by long continuance; violent; obstinate; virulent; malignant; as, an *inveterate* abuse, an *inveterate* disorder.—Characterized by habits confirmed by long practice or persistence; habitual; confirmed; ineradicable; as, an *inveterate* drinker, an *inveterate* talker.
Invet'erately, *adv.* Violently; obstinately; persistently.
Invet'erateness, *n.* Inveteracy; obstinacy strengthened and ineradicably confirmed by long habitude; as, "the *inveterateness* of malice."—*Sir T. Browne.*
Invetera'tion, *n.* [Lat. *inveteratio.*] Act of hardening, strengthening, or confirming by long continued practice or indulgence.
Invid'ious, *a.* [Lat. *invidiosus*, from *invidia*, envy. See ENVY.] Envious; malignant; as, an *invidious* reserve.—Hate; in a manner to incur hatred or ill-will; as, an *invidious* preference.—Enviable; desirable.

"A more honourable and *invidious* state."—*Barrow.*

Invid'iously, *adv.* Enviously; malignantly; in an invidious manner.
Invid'iousness, *n.* State of being invidious or envious; quality of provoking ill-will or hatred.
Invig'ilance, Invig'ilancy, *n.* Want of vigilance; absence of watchfulness; heedlessness.
Invig'orate, *v. a.* [It. *invigorire.*] To give vigor to; to strengthen; to animate; to impart tone, or give life or energy to; as, *invigorating* weather, an *invigorating* thought, to *invigorate* a debilitated system of body.
Invigora'tion, *n.* Action of invigorating; state of being invigorated.

"I find in myself . . . the very height of activity and *invigoration.*"—*Norris.*

Invincibil'ity, Invin'cibleness, *n.* [Fr. *invincibilité.*] State or quality of being invincible or unconquerable; insuperableness.
Invin'cible, *a.* [Fr.; L. Lat. *invincibilis—in*, and *vincibilis*, from *vinco*, to conquer.] Not to be conquered, vanished, or subdued; that cannot be overcome; insuperable; insurmountable; irrefutable; as, an *invincible* nation, an *invincible* repugnance or dislike, an *invincible* argument, an *invincible* obstacle.
Invin'cibleness, *n.* See INVINCIBILITY.
Invin'cibly, *adv.* Unconquerably; insuperably; in an invincible manner.
Inviolabil'ity, *n.* [Fr. *inviolabilité.*] State or quality of being inviolable; quality of not being subject to be broken; inviolableness; as, *inviolability* of faith.
Invi'olable, *a.* [Fr.; Lat. *inviolabilis.*] Not to be profaned or violated; not susceptible of being broken or maltreated; that ought not to be injured, polluted, or treated with irreverence; not to be disfigured, stained, or tarnished; sacred; as, an *inviolable* trust.—Insusceptible of hurt or wound; as, "*inviolable* saints." *Milton.*
Invi'olably, *adv.* Without profanation; without breach or failure.
Invi'olacy, *n.* The state of being inviolate; inviolability.
Invi'olate, *a.* [Lat. *inviolatus.* See VIOLATE.] Unhurt; uninjured; unprofaned; unpolluted; unbroken.
Invi'olated, *a.* Unviolated.
Invi'olately, *adv.* Without violation.
In'vious, *a.* [Lat. *invius—in*, and *via*, a way.] Impassable; untrodden.

"And virtue *invious* ways can prove."—*Hudibras.*

In'viousness, *n.* The state of being invious; impassableness.
Inviril'ity, *n.* Want of virility of manhood.
Invis'cate, *v. a.* To lime; to daub with glue.
Invis'cerate, *v. a.* To breed: to nourish.
Invisibil'ity, Invis'ibleness, *n.* [Fr. *invisibilité.*] State of being invisible; imperceptibleness to sight.

Invis'ible, *a.* [Fr.; Lat. *invisibilis.*] Not visible; that cannot be seen; imperceptible by the sight.

Invis'ibly, *adv.* In a manner to escape the sight; imperceptibly to the eye.

Invi'sion, *n.* Want of vision.

Invi'ta Miner'va. [Lat., Minerva being unwilling.] Without the aid of genius.

Invita'tion, *n.* [Fr.; Lat. *invitatio.*] Act of inviting; solicitation; a bidding or asking to come.

Invita'tory, *a.* Using or containing invitation; as, "The *invitatory* psalm," (xcv.)

Invite', *v. a.* [Fr. *inviter;* Lat. *invito.*] To ask to do some act or to go to some place; to request, as the company of a person; to bid; to call; to summon; to solicit; to draw to; to tempt to come. — To allure; to attract; to entice.

"Hope of success might *invite* some other choice." — *Bacon.*

—*v. n.* To ask or call to anything pleasing.

Invit'er, *n.* One who invites.

Invit'ing, *n.* Invitation; solicitation.

Invit'ingly, *adv.* In such a manner as to invite or allure; temptingly.

Invit'ingness, *n.* The quality of being inviting or attractive.

Invit'rifiable, *a.* That cannot be vitrified.

Invocate, *v. a.* [Lat. *invoco, invocatus.*] To invoke; to call on in supplication; to implore; to address in prayer.

Invoca'tion, *n.* [Fr.; Lat. *invocatio.*] Act of invoking or addressing in prayer; the form or act of calling for the assistance or presence of any being, particularly of some divinity. — A judicial call, demand, or order.

(*Lit.*) In a general sense, an address, at the commencement of a poem, to the Muses, or some other being supposed to be capable of giving inspiration. Among the most beautiful invocations must be reckoned that which precedes the long catalogue of chieftains in the second book of the *Iliad.* The extreme solemnity of this invocation, and the extraordinary richness of imagery with which it is introduced, are among the strongest arguments for the oral transmission of the Homeric poems during a long series of ages.

I. of Saints. (*Theol.*) The act of addressing prayers to the blessed spirits who are with God, whether the angels or the souls of the just who have been admitted to the happiness of heaven. The practice of addressing prayers to angels, especially to the angel-guardian, to the Virgin Mary, and to other saints, prevails in the Roman, the Greek, the Russo-Greek, and the Eastern churches of all the various rites. The Council of Trent (25th Sess., *On the Invocation of Saints*) defines very precisely what is the doctrine of the Catholic Church on this subject. It declares "that the saints who reign with God offer up their prayers to God for men; that it is good and useful supplicantly to invoke them, and to resort to their prayers, aid, and help, for the purpose of obtaining benefits of God through his Son Jesus Christ our Lord, who alone is our Redeemer and Saviour." From this decree, it is inferred that the Catholic doctrine on the saints does not prescribe the practice of invoking them as necessary or essential, but only as "good and useful"; and that what is to be asked of them is not the direct bestowal of grace and mercy as from themselves, but only their prayers, their assistance, and their help in obtaining benefits from God.

In'vocatory, *a.* Making invocation; invoking; that invokes.

In'voice, *n.* [Fr. *envoi,* a sending, or thing sent, from *envoyer,* to send — *en,* and *voie,* a way, journey, from Lat. *via.* See ENVOY.] A written account of the particulars of merchandise shipped or sent to a purchaser, consignee, factor, &c., with the value, or prices, and charges annexed. (Formerly called *bill of parcels.*)

—*v. a.* To make an invoice or written account of goods or property, with their prices; as, to *invoice* a consignment of cotton.

Invoke', *v. a.* [Lat. *invoco* — *in,* and *voco,* to call, from *vox, vocis,* voice, *q. v.*] To address in prayer; to call upon for assistance and protection; to invocate; as, to *invoke* the aid of Providence. — To call for or invite with earnestness; to summon solemnly.

Fig. 1397. — INVOLUCRE. (*Cornus Canadensis.*)

Invol'ucel, *n.* (*Bot.*) See INVOLUCRE.

Involucel'late, *a.* (*Bot.*) Having involucels.

Involucel'lum, *n.* [Lat.] See INVOLUCEL.

Involu'cral, *a.* Belonging to an involucrum.

Involu'crate, Involu'crated, *a.* Possessing an involucre.

Involucre, *n.* [From Lat. *involvere,* to envelop.] (*Bot.*) A whorl of bracts placed round the base of an umbel, a capitulum, or sometimes a single flower. In some umbelliferous plants, as for instance the carrot, there are two kinds of *I.* — one at the base of the primary divisions of the floral axis or general umbel, and another at the base of each of the partial umbels or umbellules. The former is then called the *general involucre,* and the latter an *involucel* or *partial involucre.* In the *I.* of the heads of flowers in the order *Asteraceæ,* such as the marigold, daisy, &c., there are frequently two or three rows of bracts overlapping each other. To these overlapping bracts the term *phyllaries* has been applied. Sometimes, as in *Cornus Canadensis* (Fig. 1397), the *I.* becomes petal-like, and is more showy than the blossom itself.

Involu'cred, (*-kĕrd,*) *a.* (*Bot.*) Involucrate; having an involucre.

Involu'crum, *n.* (*Bot.*) Same as INVOLUCRE, *q. v.*

Invol'untarily, *adv.* In an involuntary manner; not spontaneously; not by choice or option; against one's will, or in a manner independent of the will; as, she sighed *involuntarily.*

Invol'untary, *a.* [See VOLUNTARY.] Not voluntary; unwilling; not possessing will, choice, or option. — Not resulting from choice; not proceeding from the will, or opposed to it; as, an *involuntary* fit of laughter. — Independent of will or choice; as, the *involuntary* action of the heart.

In'volute, *n.* [Lat. *involutio,* unfolding.] (*Geom.*) Applied to a curve supposed to be described by the extremity of a string unwinding itself from another curve (*evolute*), about which it has been rolled.

(*Bot.*) Noting that the edges of an organ are rolled inwards on each side, as occurs in the leaf of the apple.

In'volute, In'voluted, *a.* [Lat. *involutus,* from *involvo.*] (*Bot.*) Rolled inward from the edges, — said of leaves.

(*Conch.*) Applied to the exterior lips of a shell when turned inwards at the margin, as in *Cypræa.*

Involution, (*lū'shun,*) *n.* [Fr.; late Lat. *involutio.*] Action of infolding, entangling, or involving. — State of being entangled, involved, or complicated; involvement.

"All causes are blended by mutual *involutions.*" — *Glanville.*

—That which serves as a covering, inclosure, or envelope for anything.

(*Gram.*) The insertion of one or more clauses in a sentence between the subject and the verb.

(*Math.*) An operation which is the reverse of *evolution,* and consists in raising the power or index of a number by multiplying it successively into itself. Thus, to raise 4 to 4^3, or 64, is a process of involution, and is performed by multiplying 4 by 4, and again by 4. Involution in algebra is exactly the same as in arithmetic, symbols only being used instead of figures.

Involve', *v. a.* [Lat. *involvo* — *in,* and *volvo,* to roll. See VOLUTE.] To roll in or upon; to inwrap; to infold; to envelop; to wind round.

"*Involv'd* in snaky folds." — *Milton.*

—To envelop or invest with something circumfluent, or existing on all sides; as, to *involve* in obscurity.

"In a cloud *involv'd,* he takes his flight." — *Dryden.*

—To imply; to comprise; to include; to implicate; to contain by rational interpretation, construction, or inference; as, to affirm the contrary *involves* a contradiction. — To entangle; to complicate; to render intricate; as, an *involved* paradox. — To take in; to conjoin; to catch; to seize; as, her fate is *involved* with my own. — To plunge or overwhelm, as in ruin; to embarrass; to overburden; as, his affairs are seriously *involved.* — To blend; to intermix or mingle confusedly.

"Earth with hell mingle and *involve.*" — *Milton.*

(*Math.*) To raise to any power; to multiply into itself, as any quantity, a certain number of times. — *Johnson.*

Involv'edness, *n.* State or condition of being involved; involution.

Involve'ment, *n.* Act of involving; involvedness.

Invulnerabil'ity, *n.* [Fr. *invulnerabilité.*] State or quality of being invulnerable, or proof against wounds, hurt, or injury.

Invul'nerable, *a.* [Fr.; Lat. *invulnerabilis.* See VULNERABLE.] That cannot be wounded or hurt; insusceptible of injury; as, an *invulnerable* conscience.

Invul'nerableness, *n.* Invulnerability.

Invul'nerate, *a.* Invulnerable; that is proof against harm or injury.

Inwall', *v. a.* To inclose or fortify with a wall; as, an *inwalled* city.

In'ward, *a.* [A. S. *inweard* — *in,* and *ward.* See WARD.] Internal; interior; placed inside; being within; — opposed to *outward.* — Having residence in the mind or soul; as, *inward* thoughts.

"An unwonted honor for an *inward* toil." — *Shaks.*

In'ward, In'wards, *adv.* Toward the inside; as, to move *inwards.* — Toward the centre or inner parts; as, "his breast bending *inward.*" (*Dryden.*) — Into the mind or thoughts.

"Looking *inward* we were stricken dumb." — *Hooker.*

In'wardly, *adv.* Internally; within; in the inner parts.

"Cantharides he prescribed both outwardly and *inwardly.*" *Arbuthnot.*

—Toward the centre; interiorly; as, to incline or bend *inwardly.* — In the heart; privately; secretly; sacredly; as, she frets *inwardly.*

In'wards, *adv.* See INWARD.

Inwards, *n. pl.* The inner parts of an animal; the bowels; the intestines; the viscera.

In'wardness, *n.* Internal state; interiority.

Inweave, (*-wēv',*) *v. a.* (*imp.* INWOVE; *pp.* INWOVEN, INWOVE.) To intermix or intertwine by weaving; to weave together.

"Rich tap'stry, stiffen'd with *inwoven* gold."—*Pope.*

Inwheel', *v. a.* To surround; to form a circle around.

Inwood', *v. a.* To hide in woods or umbrageous places. (R.)

In'wood, in *Indiana,* a post-village of Marshall co., abt. 5 m. E.N.E. of Plymouth.

Inwork, (*-wŭrk',*) *v. a.* To work within or into.

Inwork'ing, *n.* An operation internally conducted.

In'worn, *p. a.* Worn or wrought within.

Inwov'en, *pp.* of INWEAVE, *q. v.*

Inwrap, (*-rap',*) *v. a.* To wrap round; to cover or inclose by wrapping; to infold; to envelop; as, to be *inwrapped* in fog. — To perplex; to involve in difficulty or embarrassment.

Inwreathe, (*-rēth',*) *v. a.* To encircle or surround, as with a wreath, or with something resembling a wreath or coronal.

"The palm of peace *inwreathes* thy brow." — *Thomson.*

Inwrought, (*-rawt',*) *pp.* or *a.* Wrought in, or inworked, as among other things; adorned with figured work.

"His bonnet sedge *inwrought* with figures dim." — *Milton.*

Inyan Reakah, (*in'yan re-a'ka,*) (River of the Rock,) rises in *Minnesota,* and flowing S.W. into Iowa, enters the Sioux River in Sioux co.

Inyan Yan'kee River, in *Iowa,* enters the Missouri River in Harrison co. It is sometimes called the LITTLE SIOUX.

In'yo, in *California,* a S. E. co., adjoining Nevada; *area,* about 10,020 sq. m. *Rivers.* Owen river, and several smaller streams, besides numerous lakes or *sinks. Surface,* much diversified, the Sierra Nevada extending along the entire W. border. *Soil,* generally fertile in the valleys. *Cap.* Independence. *Pop.* (1897) abt. 3,750.

Io. (*Myth.*) According to one of the most popular versions, she was a daughter of Inachus, king of Argos. The love of Zeus for this maiden roused, as in other myths, the jealousy of Hera, who transformed Io into a heifer, and placed her in charge of Argus Panoptes. This guardian was slain by Hermes, who was thence called *Argeiphontes,* or the Slayer of Argus. Hera then sent a gadfly, which stung the heifer, and drove her in madness over the earth. Thus began those wanderings of Io which Æschylus has sketched in his drama of *Prometheus Chained.* The tale of Io is thus connected with the legend of Epaphus, the calf-god (identified by Herodotus with the Egyptian Apis), and also with the myths of Heracles, of whom, according to the prophecy of Prometheus, she was to be an ancestor.

I'o, *n.; pl.* I'os. [Lat., ho! hurrah!] An exclamation expressive of jubilation or triumph; — frequently employed interjectionally; as, *Io,* Bacchus!

I'odate, *n.* [Fr. See IODINE.] (*Chem.*) A salt of the iodic acid.

Iod'ic Acid, *n.* (*Chem.*) A compound of iodine and oxygen, containing by weight 127 parts of iodine to 40 of oxygen. By boiling 5 parts of iodine with 200 parts of nitric acid of a specific gravity of 1·5, until the iodine disappears, carefully distilling to dryness, and dissolving the remainder in water, on causing it to crystallize, the iodic acid separates in colorless 6-sided crystals.

Iodic Mercury, *n.* (*Min.*) A rare mineral from Mexico, of a reddish-brown color, and supposed to consist of iodine and mercury. (Called also COCCINITE.)

Iodic Silver, *n.* (*Min.*) See IODYRITE.

I'odine, *n.* [Gr. *iodes,* violet-colored.] (*Chem.*) One of an important group of four elementary substances, viz., iodine, chlorine, bromine, and fluorine, closely resembling each other in their chemical relations. *I.* is obtained from a sea-weed commonly known as *kelp,* the ashes of sea-weeds. It is found in some mineral springs and in sea-water, whence it is abstracted by the sea-weeds. It crystallizes in scales of a bluish-black color, melts at 225° F., and boils at 347° F., yielding a vapor of a rich violet color. The *sp. gr.* of *I.* is 4·948, and of its vapor compared with air, 8·716. It is slightly soluble in water, but dissolves readily in ether, alcohol, and in the aqueous solutions of hydriodic acid and of iodide of potassium. With starch, free *I.* produces a beautiful blue color, so that a solution of starch gives the best test for its presence. If the presence of a soluble iodide is suspected, a small quantity of chlorine water added displaces the iodine from combination, and renders it capable of acting upon the starch. It is said that iodine may thus be detected when dissolved in one million parts of water. *I.* combines with hydrogen to form hydriodic acid (*q. v.*), and with oxygen to form iodic acid, (*q. v.*) If finely powdered *I.* is put into caustic ammonia, it is in part dissolved; the remainder is left as a dark powder, the *iodide of nitrogen* which, on being separated by a filter and dried on bibulous paper, forms an exceedingly explosive compound, a slight jar or the touch of a feather being sufficient to explode it. *I.* forms compounds with many of the metals, some of which are remarkable for their brilliant colors, and others are of great value in the arts and in medicine. These will be described under the heads of the various metals which are thus combined. *I.* was discovered in 1811, by Courtois of Paris, in the waste liquors left from the manufacture of carbonate of soda from the ashes of sea-weeds. Its preparations have come into extensive use in medicine and in photography. It and most of its compounds are irritant poisons. In cases of poisoning by them, vomiting should at once be induced and assisted by the free use of warm liquids containing starchy matter, as starch, flour, or arrow-root, boiled in water. The starch uniting with the iodine forms a comparatively inert and harmless compound. — *Symbol* I.

I'odism, *n.* (*Med.*) A peculiar morbid state induced by the use of iodine.

I'odite, *n.* (*Min.*) Same as IODYRITE.

I'odize, *v. a.* To coat with iodine.

Iod'oform, *n.* (*Chem.*) A yellow solid substance obtained by adding the alcoholic solution of potash to the tincture of iodine, evaporating to dryness, and treating the remainder with water. It is soluble in alcohol, but only slightly so in water. *Form.* CHI_3. *I.* is a valuable medicine, being employed as a local anæsthetic and antiseptic, its lack of irritating properties rendering it very useful for this purpose. It cannot be used as an anæsthetic by inhalation, on account of its solid form, but is of great utility as a local application to relieve pain, as in painful ulcers, sores, abraded surfaces, &c. In such cases it both promotes healing and acts as an antiseptic.

Iodohyd'rie, *n.* (*Chem.*) Same as HYDRIODIC (*q. v.*).

I'odous Acid, *n.* (*Chem.*) An acid composed of iodine and a smaller proportion of oxygen than in iodic acid.

I'odure, Iodure', *n.* (*Chem.*) Same as IODITE (*q.v.*).

Io'ka, in *Iowa*, a post-village of Keokuk co. *Pop.* 158.

Io'la, in *Illinois*, a post-village of Clay co.

Iola, in *Kansas*, a city, the cap. of Allen co., on the Mo. Pac. and A., T. & S. Fé R. Rs., 44 m. W. of Fort Scott. Is the trade center of a fine farming district; has gas wells, mineral waters, and various manuf. *Pop.* (1895) 1,565.

Io'la, in *Pennsylvania*, a post-office of Columbia co.

Io'la, in *Wisconsin*, a post-township of Waupaca co.

Iole, (*Myth.*) the daughter of Eurytus, king of Œchalia. Having been betrothed by her father to Hercules, and then refused her hand, the hero, incensed at the father's perfidy, carried her off by violence. It was in the hope of curing his love for Iole that his wife, Dejanira, sent Hercules the poisoned shirt by the boy Lichas, and which inflicted such agony that he flung himself on the burning pyre. Iole, however, consoled herself for the loss of her lover, by directly afterwards marrying his son Hyllus.

I'olite, *n.* [Gr. *ion*, violet, and *lithos*, stone.] (*Min.*) A glassy, transparent, or translucent mineral, having a blue color when viewed in one direction and a yellowish color when seen in a direction at right angles to the first. From this fact it is by some called *Dichroite. Sp. gr.* 2·56–2·67. *Comp.* Silica 49·4, alumina 33·9, magnesia 8·8, protoxide of iron 7·9. It occurs at Haddam, Conn., Brimfield, Mass., and Richmond, N. H. Iolite alters readily on ordinary exposure, and foliates and changes color. It is then called *hydrous I.* It is sometimes used for ornament, and when cut, shows different colors in different directions.

I'on, *n.* [Gr., from *eimi*, to go.] (*Electro-Chem.*) See ELECTROLYSIS.

I'on, a son of Xuthus, son of Erechtheus. He married Helice, daughter of Selinus, king of Ægialo. He succeeded to his father-in-law's throne, and built a city, which he called Helice, after his wife. His subjects were named after him, *Ionians*, and their country that of *Ionia.*

Io'na, ICOLMKILL, I-COLUMB-KILL, (*e-o'na.*) The isle of *Columba's cell or retreat*, one of the W. islands of Scotland, in the Atlantic Ocean, separated from the western point of Mull by a narrow channel, called the Sound of Iona, 7 miles from Staffa. *Ext.* 3 miles long by 1½ broad. *Area*, 2,000 acres. *I.* is chiefly interesting to the antiquarian, for the ruins of its ancient religious edifices. These were established about the year 565, by St. Columba, who left Ireland, his native country, with the intention of preaching Christianity to the Picts. The remains of these edifices, almost all constructed of fine slenite, together with crosses and sepulchral monuments, are the antiquities now extant. In the church, said to have been built by Queen Margaret towards the latter end of the 11th century, are the tombs of 48 Scottish kings, 4 kings of Ireland, 8 Norwegian monarchs, and 1 king of France. The rearing of black cattle forms the principal occupation of the inhabitants.

I'one, in *California*, a post-town of Amador co., about 40 m. S. E. of Sacramento, on the Southern Pacific R. R. *Pop.* (1897) about 900.

Ione, in *Nevada*, a village of Nye co., on Reese river, about 140 m. E. by S. of Carson City.

Io'nia, (*Anc. Geog.*,) the most flourishing district of Asia Minor, where a colony from Attica settled about 1050 B. C. This beautiful country extended from the Hermus along the shore of the Ægean Sea to Miletus and the promontory of Posideum. This tract of country was bounded on the north by Æolia, south by Caria, east by Lydia and part of Caria, and on the west by the Icarian and Ægean seas, and lay between 37° and 40° north latitude; its longitude has never been accurately defined. This country is said to have been peopled by Greek colonists about 1045 B. C. After founding Colophon, Ephesus, Miletus, and other important cities, the Ionians obtained possession of Smyrna about 685 B. C., and the country soon attained a high degree of prosperity. At the commencement of the reign of Crœsus, 560 B. C., it was subject to the Lydians, and it was conquered by Cyrus 537 B. C. The inhabitants made unsuccessful efforts to regain their independence, 500 and 406 B. C., and they assisted the Greeks against the Persians at the battle of Mycale, 479 B. C. The Persian yoke was at length shaken off by the victory at the Eurymedon (*q. v.*), but the peace of Antalcidas again imposed it upon the Ionians 387 B. C. On the overthrow of the Persian empire by Alexander III. Ionia became subject to Macedonia, and it afterwards formed part of the Roman empire, 133 B. C

Ionia, (*i-o'ne-a.*) in *Michigan*, a S.W. central co.; *area*, about 580 sq. m. *Rivers.* Grand, Flat, Maple, and Looking-glass rivers, and Prairie creek. *Surface*, undulating; *soil*, fertile. *Cap.* Ionia. *Pop.* (1894) 34,817.

Io'nia, in *Michigan*, a city, the cap. of Ionia co., on Grand river, and the D., L. & N. and D., Gr. H. & M. R. Rs., 34 m. E. of Grand Rapids. Has extensive R. R. machine shops and other industries. *Pop.* (1894) 5,021.

Io'nian Islands, a prov. or monarchie of Greece, consisting of the seven islands, Cephalonia, Cerigo, Corfu, Ithaca, Paxo, Santa Maura, and Zante, with a number of islets, extending along the S.W. coast of Greece; Lat. between 35° 48′ and 39° 55′ N., Lon. between 18° 35′ and 23° 18′ E. Corfu is the most northerly, and lies opposite to Albania; Paxo, Santa Maura, Ithaca, Cephalonia, and Zante, follow each other in succession to the southward, lying along the coasts of Albania and the ancient Elis; but Cerigo is detached, being 150 m. to the S.E. of Zante, and opposite to the coast of the ancient Lacouia. *Area* of the whole, 1,097 sq. m. *Prod.* Corn, grapes, olives, currants, cotton, honey, wax, &c. *Manuf.* Salt, olive-oil, wine, brandy. The *I. I.*, with their dependencies, were erected into the republic of the Seven United Islands, March 21, 1800. It was to pay a moderate tribute to the Porte, and its independence was guaranteed by Turkey and Russia. The French captured the islands in 1807, and Russia ceded them to France by a secret article of the treaty of Tilsit, July 7, 1807. The French garrisons surrendered to an English force, Oct. 3, 1809, and by a treaty between Great Britain and Russia, signed at Paris Nov. 5, 1815, they were formed into an independent State, called the *United States of the Ionian Islands*, or the Septinsular Republic, under the protection of England. With the consent of Great Britain, they were re-united to the kingdom of Greece in 1864. *Pop.*, mostly of Grecian descent, 251,712.

Ionian Sea, that part of the Mediterranean communicating with the Gulf of Venice by the Strait of Otranto, and having Greece and part of European Turkey on the E.; Sicily and the most S. part of Italy on the W. Its greatest breadth is between Cape Matapan in the Morea, and Cape Passaro in Sicily, which is abt. 400 m.

Io'nian Philos'ophy, the earliest of the philosophic systems of ancient Greece was so called because its advocates were principally natives of Ionia. The principal members of this school are Thales, its founder, who is also styled the father of Greek philosophy, Anaximander, Anaximenes, Diogenes of Apollonia, Heraclitus, and Anaxagoras. Philosophy in Greece first concerned itself with speculations regarding the origin of nature, and the primary materials of the world. Hales taught that water was the original element, out of which all things proceeded. According to Anaximenes, air was the primary material out of which all things arose; while Heraclitus attributed the existence of all things to fire. The two last, however, are not to be regarded as materialists, for they regarded these elements as spiritual essences, analogous to the soul of man. To what may be considered as another branch of this school, belong Anaximander and Anaxagoras. The former of those regarded the world as made up of numberless small particles, of different kinds and shapes, to the different combinations of which all things owed their existence. Out of primary chaos, certain contraries, as earth and heaven, cold and heat, were first evolved. The whole was moved and directed by an eternal substance, which he called the infinite. This system was also adopted by Anaxagoras, who dwelt still more upon the moving principle by which the elements are brought into combinations of order and beauty, and who may be regarded as the first who clearly and broadly laid down the leading distinctions between mind and matter, the former being the moving principle, perfect and simple, the latter inert matter. The Ionian school became extinct before the more highly developed system of Socrates.

Ion'ic, Io'nian, *a.* [Gr. *Ionikos*, relating to Ionia.] (*Geog.*) Pertaining, or having reference to, Ionia, or to the people of the Ionian Islands.

Ionic, *n.* (*Pros.*) An Ionic verse or metre.

Ionic Dialect. See GREEK LANGUAGE.

Ionic Foot. (*Pros.*) A foot composed of four syllables.

Ionic Order, *n.* (*Arch.*) One of the five orders of architecture, of which the distinguishing feature is the

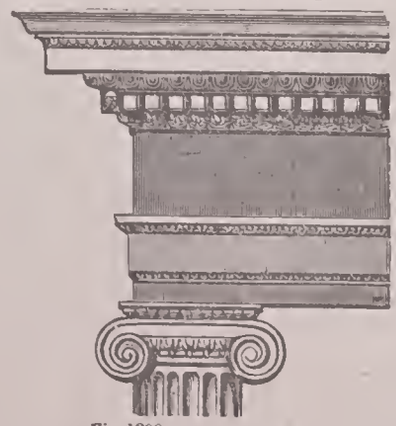

Fig. 1398. — GRECIAN IONIC.

volute of its capital. In the Grecian Ionic, the volutes appear the same in the front and the rear, being connected in the flanks with a kind of balluster-like form; though in the external angles of the inner columns a diagonal volute is introduced. The Romans made their Ionic capital with four diagonal volutes, and they curved the sides of their abacus. The Greek volute continues the fillet of the spiral along the face of the abacus; whereas in the Roman order its origin is behind the ovolo. In some Grecian examples, the neck is added below the echinus, sculptured with flowers and leaves. The height of the column is about nine diameters, and the base varies greatly in different examples. When a pedestal is used, it is somewhat higher, and more ornamented, than the Doric pedestal. The Greeks usually made the entablature of this order very simple; the architrave has two fasciæ, the frieze is plain, and the cornice of few sub-divisions; but the modern Ionic has seldom less than three fasciæ in the architrave; the frieze is often cushioned, and the cornice is deeper and not unfrequently modillioned, its profile being much varied. The dentil is also much used in the bed mouldings. The shaft is cut into twenty-four flutes, separated by fillets. Some of the most celebrated examples of the order are the temple on the Ilyssus, that of Athena Pallas at Athens, of Bacchus at Teios, and of Fortuna Virilis at Rome.

Ionid'ium, *n.* (*Bot.*) A genus of plants, order *Violaceæ*. The root of the species *I. ipecacuanha* was supposed by Linnæus to be the true ipecacuanha. It is now known as the *woody* or *false ipecacuanha* of Brazil, and is employed as an emetic in that region. It contains the principle *emetina*. Other species, as *I. parviflorum*, *I. tuber*, &c., have similar properties; the roots of the former constitute the *Cuchunchully de Cuenca*, which is much used in Venezuela as a remedy for elephantiasis.

Ios'co, in *Michigan*, an E. co., bordering on Lake Huron and Saginaw Bay; *area*, about 563 sq. m. *Rivers.* Au Sable river, and numerous smaller streams. *Cap.* Tawas City. Its former name was KANOTIN. *Pop.* (1894) 12,339. —A post-township of Livingston co., about 32 m. E. S. E. of Lansing.

Ios'co, in *Minnesota*, a village and township of Waseca co., about 20 m. E. of Mankato.

Io'ta, *n.* The name of the smallest Greek letter, corresponding to the English *i*;—hence, a jot; a tittle; a very small particle or quantity.

I O U. (*i. e.*, "I owe you.") A memorandum given in acknowledgment of a debt, or as security for borrowed money, and duly signed;—used in England.

I'owa, a N. central State of the American Union, lying between Lat. 40° 30′ and 43° 30′ N. Lat., and Lon. 90° and 97° W., having N. Minnesota; E. the States of Wisconsin and Illinois, from which it is separated by the Mississippi; S. Missouri; and W. the Missouri and Sioux rivers. This State presents the form of a parallelogram, with an extreme length, N. to S., of about 300 m., by a nearly uniform breadth of 208, and includes an area of 55,045 sq. m., or 35,228,800 acres, of which an unusually large percentage is susceptible of cultivation.—*Gen. Desc.* The general aspect of the surface of this State is that of undulations, which in no part rise into high hills or mountains, although a tract of considerably elevated table-land occupies the major portion of its centre, dividing the streams of the Mississippi basin from those which are tributary to the Missouri. Rolling prairies, intersected by timber-skirted rivers, form a characteristic feature of the scenery of this State. The banks of these rivers frequently rise into calcareous bluffs from 40 to 130 ft. high. The aspect of the S. division is more gently picturesque. The area of land occupied by treeless prairies is estimated at about three-fourths of the entire surface, but the woodland is so well distributed that much less inconvenience has been felt from scarcity of timber than in other States having large prairie-systems. The greatest deficiency of wood is found N. of the 42d parallel. In the river bottoms further S., broad belts of woodland attain on these alluvions to a richly developed growth of ash, elm, oak, walnut, poplar, and white maple. The oak is especially predominant, and here exhibits magnificent dimensions. The forests of *I.*, however, are not the nucleus of an extensive lumber trade; yet timber is cultivated with conspicuous success upon the broad and fertile prairies.—*Rivers.* Several large and important rivers intersect the prairie-system of this State, principally in a S.E. direction. The chief of these, the Des Moines, rising in Minnesota, traverses the entire State, and after a course of abt. 450 m., enters the Mississippi near the angle which connects *I* with Illinois and Missouri. Of the other streams which find embouchure in the Mississippi, — the Iowa, Wapsimicon, Makoqueta, Turkey, and Upper Iowa, are the most noticeable. The Wapsinicon and Makoqueta possess currents of much force, and supply a very abundant water-power. The W. boundary of the State is occupied by the Missouri, with one of its branches, the Great Sioux, together with a minor tributary, the Little Sioux. *Min.* This State possesses mineralogical resources of a peculiarly rich and extensive character. The great

Fig. 1399. — SEAL OF THE STATE.

IOWA

SCALE OF MILES

0 5 10 20 30 40

State Capital ☆ County Seats ○

Places of 25,000 and over DAVENPORT

" 10,000 to 25,000 Clinton

" 5,000 to 10,000 Boone

" 3,000 to 5,000 Iowa Falls

Hammond's 8 x 11 Map of Iowa
Copyright, 1904, by C. S. Hammond & Co., N.Y.

IOWA.

Land surface, Sq. m. 55,475
Water surface, Sq. m. 550
Pop. 1900..2,231,853
White ..2,218,667
African....12,693
Indian.....382
Chinese.....104
Japanese..... 7
Native-born, 1,925,933
Foreign-born, 305,920
Males ...1,156,849
Females1,075,004

COUNTIES.

Adair.....E 6
Adams.....D 5
Allamakee....L 2
Appanoose....H 7
Audubon.....D 5
Benton .....J 4
Blackhawk....J 4
Boone.....F 5
Bremer.....J 3
Buchanan.....K 3
Buena Vista...C 3
Butler.....H 3
Calhoun.....D 4
Carroll.....D 4
Cass.....D 6
Cedar.....L 5
Cerro Gordo..G 2
Cherokee.....B 3
Chickasaw ....J 2
Clarke .....F 6
Clay.....C 2
Clayton..... L 3
Clinton .....M 5
Crawford.....C 4
Dallas .....E 5
Davis .....J 7
Decatur.....F 7
Delaware.....L 4
Des Moines....L 7
Dickinson.....C 2
Dubuque.....M 4
Emmet.....D 2
Fayette .....K 3
Floyd .....H 2
Franklin.....G 3
Fremont .....B 7
Greene.....E 4
Grundy .....H 4
Guthrie .....E 5
Hamilton .... F 4
Hancock.....F 2
Hardin..... G 4
Harrison.....B 5
Henry ..... K 6
Howard .....J 2
Humboldt.....E 3
Ida .....C 4
Iowa.....J 5
Jackson.....M 4
Jasper.....G 5
Jefferson.....K 6
Johnson.....K 5
Jones.....L 4
Keokuk.....J 6
Kossuth.....E 2
Lee .....L 7
Linn.....K 4
Louisa ....L 6
Lucas .....G 7
Lyon ... .A 2
Madison. .....E 6
Mahaska.....H 6
Marion.....G 6
Marshall.....G 5
Mills.. .....B 6
Mitchell.....H 2
Monoua .....B 5
Monroe .....H 7
Montgomery..C 6
Muscatine.....L 5
O'Brien .....B 2
Osceola. .....B 2
Page.....C 7
Palo Alto.....D 2
Plymouth.....A 3
Pocahontas..D 3
Polk.....F 5
Pottawattamie B6
Poweshiek....H 5
Ringgold.....E 7
Sac .....C 4
Scott.....M 5
Shelby.....C 5
Sioux.....A 2
Story.. .... G 4
Tama .....H 4
Taylor.. .....D 7
Union.....E 7
Van Buren....K 7
Wapello .....J 6
Warren .....F 6
Washington..K 6
Wayne .....G 7
Webster.....E 4
Winnebago...F 2
Winneshiek .K 2
Woodbury....B 4
Worth.....G 2
Wright.....F 3

CITIES-TOWNS

Pop. Thousands.		
52	Des Moines.	F 5
36	Dnbuque...	M 4
35	Davenport.	M 5
33	Sionx City..	A 4
25	Council Bluffs	B 6
25	Cedar Rapids	K 5
23	Burlington.	L 7
22	Clinton.....	N 5
18	Ottumwa ..	J 6
14	Keokuk ...	L 8
14	Muscatine..	L 6
12	Waterloo...	J 3
12	Ft. Dodge..	E 4
11	Marshalltowu	H 4
9	Ft. Madison.	L 7
9	Oskaloosa...	H 6
8	Boone.....	F 4
7	Iowa City...	K 5
7	Creston	E 5
5	Mason..	G 2
5	Hartford	F 4
5	Cedar Falls..	J 3
5	Centerville .	H 7
5	Oelwein	K 3
5	Atlantic	D 6
4	Fairfield ...	K 5
4	Webster City	F 4
4	Redoak.....	C 6
4	Washington	K 6
4	Charles City	H 2
4	Lemars	A 3
4	Mt.Pleasant.	K 7
4	Mariou.....	K 4
4	Missouri Valley..	B 5
3	Chariton. ...	G 6
3	Perry.....	E 5
3	Cherokee....	B 3
3	Grinnell	H 5
3	Newton.....	G 5
3	Lagrange...	J 2
3	Maquoketa .	M 4
3	Independence	K 4
3	Indianola....	F 6
3	Shenaudoah	C 7
3	Eaglegrove .	F 3
3	Vintou.....	J 4
3	Auburn.....	F 2
3	Belle Plaine.	J 5
3	Clarinda.....	D 7
3	Decorah.....	K 2
3	Estherville..	D 2
3	Waverly	J 3
3	Knoxville...	G 6
3	Spencer.....	C 2
3	Glenwood ...	B 6
3	Winterset...	E 6
2	Algona..	E 2
2	Anamosa....	L 4
2	Albia.....	H 6
2	Manchester..	L 4
2	Carroll.....	D 4
2	Iowa Falls ..	G 3
2	Cresco	J 2
2	Denison.....	C 4
2	Whatcheer..	J 6
2	Osage	H 2
2	Hampton....	G 3
2	Lake City ...	D 4
2	Tama	H 5
2	Pella.....	H 6
2	Jefferson....	E 4
2	Tipton.....	L 5
2	Osceola.....	F 6
2	Nevada	G 4
2	Ames.....	F 4
2	Harlan	C 5
2	Emmetsburg	D 2
2	New Hampton	J 2
2	Sheldon.....	B 2
2	Eldora	G 4
2	Villisca.....	D 7
2	Storm Lake.	C 3
2	Waukon.....	L 2
2	Corning.....	D 6
2	Bloomfield ..	J 7
2	Mouticello ..	L 4
2	Stuart.....	E 5
2	Sac City.....	D 4
2	Hamburg....	B 7
2	Colfax.....	G 5
2	Marengo.....	J 5
1	Bedford.....	D 7
1	Idagrove....	C 4
1	Sigourney...	J 6
1	Toledo.....	H 4
1	Hedrick.....	J 6
1	West Union.	K 3
1	Onawa	A 4
1	Leon.....	F 7
1	Audubon....	D 5
1	Eldon.....	J 7
1	Hawarden ..	A 3
1	Rock Rapids	A 2
1	Forest City..	F 2
1	Mystic	H 7
1	Mountayr ...	E 7
1	Clear Lake..	G 2
1	Seymour....	G 7
1	Valley Jc...	F 5
1	W. Liberty..	L 5
1	Mt. Vernon..	L 5
1	Avoca.....	C 6
1	Guttenburg.	L 3
1	Bellevue	N 4
1	Lamoni.....	F 7
1	Britt.....	F 2
1	McGregor...	L 2
1	Corydon	G 7
1	Clarion.....	F 3
1	Traer.....	J 4
1	Orange City.	A 3
1	Ackley.....	G 3
1	Lansing	L 2
1	Sumner.....	J 3
1	Odebolt.....	C 4
1	Manson.....	D 3
1	Moultou	H 7
1	Laporte.....	J 4
1	Wapello.....	L 6
1	De Witt....	M 5
1	Logan.....	B 5
1	Nashua.....	H 3
1	Cascade	M 4
1	Dunlap.....	B 5
1	Farmingtou	K 7
1	Dyersville...	L 4
1	Grundy Center	H 4
1	Elkader.....	L 3
1	Fayette	K 3
1	Greenfield ..	E 6
1	Lake Mills ..	F 2
1	Sibley	B 2
1	Garner	F 2
1	Northwood .	G 2
1	Woodbine...	B 5
1	New Sharon.	H 6
1	Sanborn	B 2
1	Belmond	F 3
1	Wilton.....	L 5
1	Rockwell City	D 4
1	Spirit L.....	C 2
1	Adel.....	E 5
1	Cincinnati ..	H 7
1	Montezuma..	J 5
1	Nora Sprs...	H 2
1	Reinbeck....	H 4
1	Guthrie Center	E 5
1	Greene.....	H 3
1	Brooklyn	J 5
1	Fonda.....	D 3
1	Afton.....	E 6
1	Manning....	D 5
1	Parkersburg	H 3
1	Tabor	B 7
1	Sidney	B 7
1	Lucas	G 6
1	Keosauqua..	K 7
1	Grand Jc....	E 4
1	Williamsburg	K 5
1	Colnmbus ..	L 6
1	Mapleton....	B 4
1	Rockford ...	H 2
1	Rock Valley	A 2
1	W. Burlington	L 7
1	Akron.....	A 3
1	Sabula.....	N 4
1	Madrid	F 5
1	Coon Rapids	D 5
1	Lenox	D 7
1	Strawberry Point..	K 3
1	Alton.....	B 3
1	State Center	G 4
1	New London	L 7
1	Hartley	C 2
1	Calmer.....	K 2

Pop. Hundreds.		
9	Le Claire ...	M 5
9	Keota	K 6
9	Rolfe.....	E 3
9	Ogden.	F 4
9	Postville....	K 2
9	Scranton....	D 4
9	Elma.....	J 2
9	Anita.....	D 6
9	Panora.....	E 5
9	Lisbon.....	L 5
9	Beacon	H 6
9	Allerton.....	G 7
9	Murray.....	F 6
9	Morning Sun	L 5
9	Jewell.... ..	F 4
9	Humeston ..	G 7
9	Correctionville	B 4
9	Neola.....	B 6
9	Monroe.....	G 5
9	Oakland.....	C 6
9	Pomeroy....	D 3
9	Armstrong..	E 2
9	Dysart.....	J 2
9	Griswold	C 6
8	Bonaparte...	K 7
8	Adair.....	D 6

coal-field of Missouri and Iowa covers an area estimated at 25,000 sq. m., in the central and S. portions of the State, bounded by a semicircular zone, outside of which a belt of the upper carboniferous limestone is found in variant width, while on the S.E. the channel of the Mississippi intersects a deposit of lower carboniferous limestone. The coal veins in this State, however, have not generally the thickness of strata which characterizes the Missourian or S. division of the same coal-field. There are 400 mines, with a yield of over 6,000,000 tons annually. Lead also forms a prominent feature of the mining industy of the State, the great Mississippian lead region penetrating into *I.*, and forming the basis of plumbiferous operations, of which Dubuque may be considered the central point. The returns of copper and zinc are also very considerable. With the copper ore, silver is found in frequent association. Iron is found in abundance, but as yet the output is small, and but little progress has been made in this industry. The State is rich in limestones, of which inexhaustible deposits exist, much of it suitable for lime making and building purposes. Sandstone occurs abundantly in the N.E., there being a deposit of not less than 1,000 feet in thickness. Gypsum is plentiful, and is quarried like ordinary limestone, and there is an abundant supply of brick and potters' clay and of building-sand. The only outcrop of igneous rocks occurs in the extreme N.W. section of the State, where is found the Sioux granite or quartzite, a highly valuable building stone. An attractive surface feature of the State is its large number of small but beautiful lakes, which occur in unusual abundance in the central portion of the northern section, and of which the most attractive have become favorite places of resort for rest and recreation. The largest of these are Spirit Lake and the Okoboji Lakes, in Dickinson co. W. Okoboji is about 15 miles long, and is notable for the beauty and variety of its scenery. Small lakes occur in Sac and Wright counties which are bordered by walls of boulder, from which they are known as walled lakes. All the lakes are well stocked with fish and are resorted to by numbers of water-fowl. In addition to what has been said regarding the woodland, it may be stated that an extensive planting of trees has taken place, which is fast changing the aspect of the country, many formerly open sections

Fig. 1400.
THE ROCKY TOWERS (near Dubuque, Upper Mississippi).

of the State now being well wooded.—*Soil and Agric.* The valleys of Cedar, Iowa and Des Moines rivers may be deemed the chief agricultural regions of the State, being remarkably fecund in organic elements of soil, with a desirable intermixture of saline particles and earthy silicates. To the N. of these tracts, the land, though cereally valuable, is still well adapted for the inferior kinds of husbandry. The soil of *I.* is, generally speaking, of various descriptions, but, on the whole, tolerably good, consisting in the river-bottoms, of a deep, black mould, mixed in the prairies with sandy loam, red clay, and gravel. It is well suited to the growth of wheat, Indian corn, and the chief descriptions of grain, and especially adapted to the production of fruits, and esculent roots and vegetables, in almost infinite abundance and variety. The area of land not applicable to plough-culture is, nevertheless, admirably fitted for grazing and stock raising, and the extent to which this branch of farming has been pursued indicates the most desirable capabilities of development. The agricultural operations of *I.* are remarkably exempt from the drawbacks of rust and insects.—*Productions.* The native flora of *I.* includes some half-dozen species of oak, with hickory, elm, walnut, cottonwood, maple, linden and various other useful trees, while the native fruits embrace plums, grapes, cherries, apples and the principal berries. The growth of agricultural enterprise in this State has been remarkably rapid, surpassing in the leading grain crops any other State in the Union, while the landscape of the Iowan farming country has been very greatly improved by the introduction of hedges in place of the unsightly snake-fences of some of the neighboring States. In corn and oats *I.* holds high rank. The corn crop, as early as 1870, reached 68,935,465 bushels, which in 1880 was increased to the immense total of 276,093,295 bushels. This great yield has since been much surpassed, the crop of 1900 being 383,413,100 bushels. This closely approached Illinois, the leading State in corn product of that year. The oat crop in 1900 was 160,364,170, a crop surpassed only by Illinois, which produced 180,305,630 bushels. Less attention is paid to wheat. The crop in 1900 being 21,769,440 bushels. Iowa in 1890, by the census returns, had 228,622 farms, containing all 34,674,337 acres of land, valued at $1,256,751,980. The most valuable feature of farm product is live stock, which was estimated at $278,830,091, this surpassing any other State.—*Climate.* Except in some of the lowest located bottoms, the State is salubrious in climate, the winter cold, though frequently severe, being not injuriously so, while the summer heat is rarely oppressive. While the fructifying warmth of more southern States is not reached, yet in the sweetness of her grasses, the products of her dairy and the quality of her butter, *I.* stands in the foremost rank, the character of soil and climate alike conducing to this result.—*Industrial products.* While the interests of *I.* are mainly agricultural, her mining industries are important, the coal mines yielding in 1890 more than 6,000,000 tons, while the yield of lime and gypsum was also important. Among the leading articles of manufacture are flouring and grist-mill products, packed meats and canned goods, carriages and wagons, agricultural implements, bricks and tiles, saddlery, woollen goods, &c.—*Finance.* *I.* has no public debt, the last of the funded debt being extinguished in 1892. The assessed valuation of taxable property is in the vicinity of $600,000,000. About $17,000,000 annually is raised by taxation. The first railroad was built in 1855, 68 miles being opened. The length of railroad at present is about 9,000 miles.—*Counties and Towns.* *I.* is divided into 99 counties, viz.:

Adair,	Davis,	Jefferson,	Pocahontas,
Adams,	Decatur,	Johnson,	Polk,
Allamakee,	Delaware,	Jones,	Pottawattomie,
Appanoose,	Des Moines,	Keokuk,	Poweshiek,
Audubon,	Dickinson,	Kossuth,	Ringgold,
Benton,	Dubuque,	Lee,	Sac,
Black Hawk,	Emmett,	Linn,	Scott,
Boone,	Fayette,	Lonisa,	Shelby,
Bremer,	Floyd,	Lucas,	Sioux,
Buchanan,	Franklin,	Lyon,	Story,
Buena Vista,	Fremont,	Madison,	Tama,
Buller,	Greene,	Mahaska,	Taylor,
Calhoun,	Grundy,	Marion,	Union,
Carroll,	Guthrie,	Marshall,	Van Buren,
Cass,	Hamilton,	Mills,	Wapello,
Cedar,	Hancock,	Mitchell,	Warren,
Cerro Gordo,	Hardin,	Monona,	Washington,
Cherokee,	Harrison,	Monroe,	Wayne,
Chickasaw,	Henry,	Montgomery,	Webster,
Clarke,	Howard,	Muscatine,	Winnebago,
Clay,	Humboldt,	O'Brien,	Winneshiek,
Clayton,	Ida,	Osceola,	Woodbury,
Clinton,	Iowa,	Page,	Worth,
Crawford,	Jackson,	Palo Alto,	Wright.
Dallas,	Jasper,	Plymouth,	

The principal cities are Des Moines (the cap.), Davenport, Iowa City, Cedar Rapids, Clinton, Council Bluffs, Fort Madison, Keokuk, Muscatine, Dubuque, Burlington, Ottumwa, Oskaloosa, Marshalltown, Fort Dodge, Sioux City, Mason City, Waterloo, Webster City and Cedar Falls.—*Govt., &c.* The executive and legislative administration of the State is vested in a governor, chosen every 4, a senate—numbering 50 members—elected every 4, and a house of representatives—numbering 100—every 2 years, by the suffrages of the male inhabitants of 21 years of age. The members of both houses receive pay for their attendance. The entire judiciary of the State are elected by the people. The Constitution of the State prohibits the creation of any corporation with banking privileges. In 1882, a prohibitory amendment to the State Constitution was ratified by popular vote, and by a majority of 40,000. This provides against the manufacture and sale of spirituous liquors within the State.—*Public Instruction, &c.* A Board of Education is established, who are required to provide for the education of all the youth of the State through a system of public schools, to be kept in each district three months in the year. They are under the control of the Legislature. The school funds are defined, to which may be added "such other means as the General Assembly may provide;" and a State University is established. Besides the latter are some 90 colleges and high-schools of superior character, instructing many thousands of students. Among other institutions belonging to this State may be mentioned the Asylum of the Blind, located at Vinton, Benton co.; the Institution of the Deaf and Dumb (at Iowa City); the Iowa Hospital for the Insane (established at Mount Pleasant, Henry co., with an auxiliary branch at Independence, Buchanan co.); the State Agricultural College and Model Farm, situated in Story co.; the Iowa Soldiers' Orphans' Home; the Iowa Reform School, and State Penitentiary, &c.—The religious character of the State is amply represented by churches, &c., pertaining to almost every known Christian persuasion. The spirit of intelligent progress prevalent in this State has its importance sufficiently exemplified by the fact that, in 1869, there were 215 newspapers, which had increased in 1897 to 1,139, including 100 monthly, semi-monthly and quarterly publications. In the field of journalism the German, Bohemian and Norwegian languages find representation. This is demanded by the large immigration from the Scandinavian and Teutonic countries of Europe, which has added a highly valuable element to the population of Iowa.—*History.* The territory of *I.* was first visited by French explorers, was ceded by France to Spain in 1763, again ceded to France in 1801, and acquired by the U. S. as part of the Louisiana purchase in 1803. The Indian claims were obtained by several treaties from 1832 to 1843, and of the former tribes only a small remnant of the Sacs and Foxes now remain. Whites first settled at Dubuque, for lead-mining purposes. Others came for agricultural purposes, and *I.* was separated as a Territory in 1838 and admitted as a State in 1846. An important Indian outbreak took place in 1857, which destroyed the Spirit Lake settlements and checked the development of that part of the State. The State capital at first was Iowa City, but was removed to Des Moines in 1857, where a beautiful capitol building has been erected. *Pop.* (1880) 1,624,666; (1890) 1,911,896; (1900) 2,231,853.

Iowa, in *Illinois*, a village of Perry co.

Iowa, in *Iowa*, a S.E. central co.; *area*, about 576 sq. m. *Rivers.* Iowa, and the N. Fork of English River, and Oldman's, Beaver, and Richmond creeks. *Surface*, generally level; *soil*, fertile. *Cap.* Marengo. *Pop.* (1895) 18,964.

—A township of Washington co.

Iowa, in *Wisconsin*, a S.W. co.; *area*, about 740 sq. m. *Rivers.* Wisconsin river and several smaller streams. *Surface*, hilly; *soil*, fertile. *Min.* Lead in abundance, with copper and zinc. *County-seat*, Dodgeville. *Pop.* (1895) 23,447.

Iowa Centre, in *Iowa*, a post-village of Story co. about 7 m. S.S.E. of Nevada.

Iowa City, in *Iowa*, a thriving city, cap. of Johnson co., on the Iowa river, 54 m. W. by N. from Davenport on the C., R. I. & P. and B., C. R. & N. R.Rs. Here is the State University and other important educational institutions; extensive and varied manuf. and a good local trade. *Pop.* (1895) 7,526.

Iowa Falls, in *Iowa*, a prosperous town of Hardin co., on Iowa river and several railroad lines, 60 m. E. of Fort Dodge; a trade and shipping center for fine farming region. *Pop.* (1895) 2,234.

Iowa Point, in *Kansas*, a post-village and township of Doniphan co., on the Missouri river, about 120 m. above Leavenworth.

Iowa River, in *Iowa*, rises in Hancock co., in the N. part of the State, and flowing a general S.E. course enters the Mississippi river from Louisa co. Length about 300 m.

Iowaville, in *Kansas*, a post-office of Sedgwick co.

Ipava (*e-pa'va*), a small lake of Venezuela, forming, as it is said, the main source of the Orinoco.

Ipava, in *Illinois*, a post-village of Fulton co., about 50 m. W.S.W. of Peoria. *Pop.* (1897) 720.

Ipecacuanha (*i'pe-kăk-u-ăn'na*), IPECAC. [The Peruvian name of this root.] (*Med.*) An important article of the *Materia Medica*, which is the root of the *Cephaelis ipecacuanha*. See CEPHAELIS.

Iphicrates (*i'fik-ra-tes*), a famous general of Athens, defeated the Lacedæmonians 392 B.C., and relieved Sparta when invaded by Epaminondas 368; died some time after 335 B.C.

Iphigenia (*if-i-jē'nī-a*). [*Homeric Myth.*] A daughter of Agamemnon and Clytemnestra. When the Greeks, going to the Trojan war, were detained by contrary winds at Aulis, they were informed by Calchas, the soothsayer, that, to appease the gods, they must sacrifice Iphigenia to Diana, because her father had killed the favorite stag of that goddess. Agamemnon heard this with the greatest horror and indignation, and rather than shed the blood of his daughter, he, as chief of the Grecian forces, commanded one of his heralds to order the army to disperse. After much solicitation from the other chiefs, Agamemnon consented, however, to immolate his daughter for the common good of Greece; but as soon as Calchas had taken the knife and was about to strike the fatal blow, Iphigenia suddenly disappeared, and a goat of uncommon size was found in her place. This supernatural change animated the Greeks, the wind suddenly became favorable, and the combined fleets set sail from Aulis. Iphigenia's innocence had excited the compassion of the goddess Diana, who carried her to Taurica, where she intrusted her with the care of her temple, whence she subsequently fled with her brother Orestes and his friend Pylades.

I'phitus, king of Elis, celebrated as the founder of the Olympic games, 8th century B.C.

Ipomœa (*ip-o-me'a*), n. [Gr. *ips*, a worm which infests the vine; *omoios*, like, from its habit of twining around other plants, like the creeping of a worm.] (*Bot.*) A genus of plants, order *Convolvulaceæ*. The roots of the species *I. orizabensis* are sometimes found intermixed with those *Exogonium purga*, the true jalap of pharmacopœias. This spurious jalap is known in Mexico as *male jalap*, and its commercial name is *woody jalap*. It has similar properties to those of the well-known drug, but is less powerful. The roots of *I. Turpethum*, or *Turpethi*, were formerly much used as a purgative. The large roots of *I. macrorhiza*, a species common in Georgia and South Carolina, contain much farinaceous matter, and are used as food like a sweet potato.

Ip'sambool, ABUSAMBUL, ABOUSAMAUL, or ABOO SAMBOOL, a town in Nubia, on the left bank of the Nile, 50 m. from Derr; Lat. 22° 22′ N., Lon. 31° 40′ E. The place is remarkable for the remains of two rock-hewn temples excavated in the solid mass of the sandstone mountain—magnificent specimens of Egyptian architecture.

Ip'se dix'it. [Lat., he himself said it.] A phrase frequently used substantively to express a mere saying or assertion without proof; as, "you have only his *ipse dixit* for the fact of the occurrence."

Ipsus (*Anc. Geog.*) A village of Asia Minor, in the kingdom of Phrygia, on a river of same name, famous for a great battle fought here between Antigonus and his son Demetrius against Seleucus, Ptolemy, Lysimachus, and Cassander B.C. 301; which battle ended in the death of Antigonus on the field, the flight of his son, and the division of his empire among the conquerors.

Ipswich (*ip'sij*), the cap. of the co. of Suffolk, England, on the river Orwell, 65 m. from London. *Manuf.* Tobacco, snuff, and agricultural implements. It has also iron-foundries and ship yards. *Pop.* (1897) 59,150.

Ips'wich, in *Massachusetts*, a post-town and port of entry of Essex co., on the Ipswich River, abt 4 m. from the sea, and abt. 25 m. N.N.E. of Boston.

Ipswich Lights, in *Massachusetts*, two lighthouses on the coast of Essex co., on Ipswich Beach; Lat. 42° 41′ 6″ N., Lon. 70° 46′ 30″ W. One of them, the Weston Light, revolves; the other is fixed.

Ipswich River, in *Massachusetts*, enters the Atlantic Ocean in Ipswich co. Its embouchure is called Ipswich Bay.

Ipuca, (*e-poo'ca,*) a village of Brazil, abt. 70 m. E.N.E. of Rio Janeiro; *pop.* 3,600.

Ipu-Grande, (*e-pōō-gron'da,*) n town of Brazil, prov of Ceara, abt. 260 m. S.W. of Tortaleza.

Iquique, (*e-kee'ka,*) a seaport-town of Peru, dep. of Arequipa, abt. 40 m. W. of Tarapacca. Suffered terribly by an earthquake in 1868, and again in 1877.
—Also, a guano island in the Pacific Ocean, opposite the above town; Lat. 20° 12′ 30″ S., Lon. 70° 14′ 45″ W.

Ira, in *Michigan*, a twp. of St. Clair co., on Lake St. Clair.

Ira, in *New York*, n post-village and twp. of Cayuga co., about 24 m. N. of Auburn.

Ira, in *Vermont*, a post-township of Rutland county.

Iraja, (*ee-ra'zha,*) a vill. of Brazil, prov. of Rio Janeiro.

Irak-ajemi, (*e'rak-a'jeh-mee'.*) The most important prov. of Persia, lucluding the greatest part of the ancient kingdom of Media. It is bounded S. by Fars and Khuzistan, E. by Khorassan and the Great Salt Desert, W. by Kurdistan, N. by Azerbijan, Ghilan, and Mazanderan; Lat. from 31° 35′ to the Elburz range, in 36° N., Lon. between 48° 20′ and 53° 20′ E. It is intersected in many places by ranges of bleak and barren mountains. This wild sterility is, however, compensated for by the richness and beauty of many of the valleys, where rice, wheat, barley, and other grains nad fruits are produced in great abundance. The chief cities are Teheran, the metropolis of the kiugdom, and Ispahan, two of the most populous clties in Persia. *Pop.* unascertained.

Irak-Arabi, (*e'rak-a'ra-bi'.*) A district iu Asiatic Turkey, in the pachalic of Bagdad. It lies between the rivers Tigris and Enphrates, and lncludes the ruins of Babylon.

Iran, the original name of Persia.

Ira'nian, *a.* (*Geog.*) Belonging or relating to Iran, now Pgasia, *q. v.*

Ira'sburg, in *Vermont*, a post-village and township of Orleans co., on Black river, about 40 m. N. N. W. of Montpelier. *Pop.* (1897) 1,021.

Irascibil'ity, *n.* [L. Lat. *irascibilitas.*] Quality of being lrascible, or easily inflamed by auger; irritability of temper.

Iras'cible, *a.* [Fr.; L. Lat. *irascibilis*, from *irasco*, to be angry, to he in a rage, from *ira*, anger, wrath. See Ire.] Very susceptible of nnger; easily provoked or inflamed with reseutment; irritable.

Iras'cibleness, *n.* Irascibility; the quality of belng irascible.

Iras'cibly, *adv.* In an irascible manner.

Irasu, (*e-ra-soo',*) a volcano of Central America, state of Costa Rica, near the city of Cartago. Height, 11,478 ft.

Irate', *a.* [Lat. *iratus.*] Angry; enraged; incensed.

Ir'bit, or Ir'bitskaia, a town of Russia, and cap. of a district of the same name, situated on the rivers Irbit and Nitza, in the frontiers of Siberia, about 270 m. from Perm; Lat. 57° 35′ N, Lon. 62° 50′ E. It is a depot for Siberian furs and other Asiatic merchandise passing into Europe.

Ire, *n.* [Fr.: Lat. *ira;* akin to Heb. *chara*, to burn, to be kindled, to be angry, wroth.] Anger; wrath; rage; keen resentment.

Iredell, (*ir'dell,*) in *N. Carolina*, a W. central co.; *area*, about 600 sq. m. *Rivers.* Great Catawba and Yadkin rivers. *Surface*, hilly; *soil*, fertile. *Min.* Gold In considerable qnantities has been found near the S. border of the co. *Cap.* Statesville.

Ire'ful, *a.* Full of lre; angry; wroth; furious with anger.

Ire fully, *adv.* In an angry manner.

Ire'land, a large and important island of Europe, in the N. Atlantic Ocean. It lies to the W. of Great Britain, being separated from tho latter by St. George's Channel on the S., the Irish Sea in the middle, and the North Channel on the N.E.; the distance from St. David's Head, In S. Wales, across St. George's Channel to Carnsore Point, in *I.*, is about 47 m.; the distance from Holyhead in N. Wales, across the S. waters of the Irish Sea to Dublin, about 56 m.; and the distance from the Mull of Cantyre, across the N Channel to the opposite Irish coast, abont 13½ m. And besides its proximity to Englnnd, *I.*, has been long politically connected with that division of the British empire; and since 1800, when its national legislature was merged in the imperial parliament, it has formed a component part of the *United Kingdom of Great Britain and Ireland.* This island was called by Aristotle and Strnbo *Ierne*, by Cæsar, Pliny, and Tacitus, *Hibernia*, and by Mela and others *Juverna;* these names being obviously derived from its Celtic or aboriginal designation of *Ir, Eri, Erin*, or *Erinnys*, whence also the modern nomenclature has been deduced. *Gen. Desc. I.* is situated between the parallels of 51° 25′ and 55° 23′ N. Lat., and of 6° and 11° W. Lon. It is of a rhomboidal figure; and though more compact than Great Britain, is deeply indented, particularly on its S.W. and N. coasts, with bays nnd nrms of the sea. The greatest length of the island, between, Mizen Head, co. Cork, and Fair Head in Antrim, or from S. to N.E., is abt 301 m.; and its maximum breadth, from the W. coast of Mayo to the E. shores of co. Down, abt. 182 m.; but in other places the breadth is much less, and there is no part of Ireland above from 50 to 55 m. from the sea. *Area*, 31,874 sq m., of which 985 sq. m. are water. *Coastline, Islands, &c.* The Irish coast, particularly on the N.W., W., aad S.W., is deeply indented with numerous bnys, gulfs, and arms of the ocean (or loughs), forming some noble havens. *I.* has 14 harbors nccessible to the largest ships, 17 for frigates, and from 30 to 40 for coasting-vessels, independent of at least 24 good summer roadsteads. Of these the most remarkable are Loughs Foyle and Swilly on the N. coast; Loughs Strangford and Belfast, the bays of Dundrum, Dundalk, and Dublin, and Wexford Haven on the E. coast; the S. seaboard comprises the Cove or lnrbor of Cork, one of the finest in Europe (Fig. 705), the harbors of Waterford, Dungarvan, and Yonghal, and the bays of Courtmacsherry, Glandore, and Clonakilty. The principal inlets of the sea on the W. coast are Donegal, Sligo, Killala, Clew, Galway, Tralee, Brandon, Dlngle, Bantry, and Dunmanus bays, aud the æstnaries of the Shannon and Kenmare rivers. The chief Irish headlands are, Dunmore Head (which, exclusive of a few insignificant islands, is the most W. point of Europe,) and Achill Head on the W. coast; Cape Clear on the S.; Carusore Point on the S.E.; and Fair and Malin Heads on the N. A great number of small islands and rocky islets belong to *I.*, chiefly friuging its W. coast. They are, however, of but little importance; the largest are Achill, Clare, the N. and S. Arrans, Valentia, and Rathlin (the *Ricina* of Ptolemy,) on the N.E. seaboard.—*Surface, &c.* As contrasted with Scotlaud, or even the greater part of England, *I.* may be said to bo a flat country. Still the surface is in parts much diversified; aad even where it is quite flat, the prospect is generally bounded by hills or mountains in the distance. With the exception of the Devil's-bit and Slieve-Bloom Mountains, which run N.E. and S.W. for about 30 m., intersecting Tipperary, and dividing King's and Queen's counties, most of the other Irish mountains are parcelled out into groups, or form short chains only. The principnl group is situate In the S.W. corner of Munster, in the cos. Kerry and Cork, adjoiuing the celebrated lakes of Killarney; Gurrane Tual, (iu Macgillicuddy's Reeks,) In this group, the highest summit in Ireland, is 3,404 ft. above sea-level. The Wicklow Mountains, in Leinster, on the E. coast of the island, cover a considerable area: Lngnaquilla, the highest point, is about 3,000 ft. nbove the sea Some of the glens in this mountaiu-cluster are celebrated for their beauty. The Mourne range in the S. part of co. Down are also of considerable extent, some of their peaks attaining an elevntion of above 2,700 ft. The mountain system of Donegni, and those in the N. parts of cos. Leitrim nnd Sligo, and in the W. divisions of cos. Mayo aud Galwny, constitute a formidable barrier alonq the N.W., and the major portion of the W. coast, and aerve at once to attract the moisture bronght from tho Atlantic, and to break the fury of the storms from that quarter. Some of the Irish mountains are rugged and precipitous; but the greater nnmber are smooth and semi-globular, admitting of cnltivation a considerable way up their sides, nnd sometimes to their very apexes. The central portion of *I.* consists of a vast tract of level land, broken in somo places by a few undulating hili-ranges; but for a great part of its extent nearly an uninterrupted flat, stretching in somo parts, as between Dublin and Galway Bay, quite from sea to sea. This great level consists partly of rich cultivated land; but it also comprises n vast area of bog, extending over the greater portion of six of the centrnl counties. Though not continuous, these bogs differ but little in elevntion, and being in parts separated only by narrow ridges of dry land, they have received the common appellation of the *Bog of Allen.* Several rivers have their sources in this morass, the highest part of which is assumed to have an elovntion of about 280 ft. above the level of the sea. There are several very extensive levels in other parts of the country; and some of them, particularly in the cos. Tipperary and Limerick, are not inferior in fertility to any land in the British empire.—*Rivers and Lakes.* This island is plentifully watered, having to boast of an unusual number of rivers and inland areas

Fig. 1401.—HENRY GRATTAN.

of water. At the head of the former is the Shannon, which, as a channel of internal communication is inferior to no river in the United Kingdom, being navigable for 214 m., or throughout the greater part of its entire course; the rivers next in magnitude and importance are the Barrow, Suir, Nore, Lee, Blackwater, Foyle, Slaney, Boyne, Bann, Kenmare, Moy, &c. *I.* is more remarkable for the number and extent of her lakes, or as they are there called, *loughs*, than either Scotland or England, though they must perhaps, in general, yield to those of the sister island in point of picturesque beauty. Lough Neagh, in Ulster, ranks high among the secondary European lakes, innsmuch as it extends over about 100,000 acres. Lough Erne, in co. Fermanagh, consists of two considerable lakes, connected by a winding strait, on an island in which the town of Enniskillen is built. Both these lakes are full of islands, some large and thickly inhabited, many well wooded, and the whole so disposed, and accompanied by such a diversity of coastline, as to form numberless tableaux of rich and interesting prospects. Loughs Corrib, Mask, and the exquisitely beautiful lakes of Killarney (*q. v.*), are the other principal sheets of water. The total superficies of the Irish lake-system has been estimated at 455,399 acres; of which 32,474 acres are included in the prov. of Leinster, 44,652 In Munster, 183,796 in Ulster, and 194,477 in Connnught.—*Clim.* The climate of *I.* is more temperate and equable than that of other countries of Europe in the same lat. The heat of summer is less oppressive, and the cold of winter less severe. The great defect of the Irish climate is excess of humidity; not only is rain more frequent than in England, but the atmosphere, in the absence of rain, is largely impregnated with moisture. This circumstance, the result of the insular position of the country, nnd of the prevalence of W. winds for three-fourths of the year, accounts for the greater verdure of the island, and for the trees continuing much longer In leaf than In England. In the driest seasons, *I.* rarely suffers from droughts, but the crops are often injured hy too much wet. Hence, it is naturally much better adapted for a grazing than for an agricultural territory, and its superiority as a pastoral country was well known to the ancients. Were drainage as extensively practised in *I.* as it is in England, there can be little doubt that the climate would derive improvement, though, from the position of the island in respect of the Atlantic it must necessnrily be always distinguished for humidity. The mean temperature of the N. of Ireland is about 48°, of the middle 50°, and of the south 52° Fahr.—*Geol.* The geological character of *I.* differs greatly from that of England, and in a general point of view rather resembles that of France; *I.* being, like the latter, a basin surrounded hy mountains of a primary or transition character. The Mourne Mountains and others in the N.E., are composed chiefly of granite, mica-slate, greywacke, and porphyry. Granite prevails in the Wicklow Highlands, and it is found, together with gneiss, mica-slate, hornblende, qnartz, and old red sandstone in Mnyo, and other parts of the W. Claystone, feldspar, primitive greenstone, and limestone are the other chief primary and transition rocks. Limeatone is a very prevalent formation, it being found over the whole country, except in a few of the N. and W. counties. In many placea sandstone protrudes through it in the form of knolls. In the N. the trap-field of Antrim, the greatest basaltic formation in Europe, extends over an area of 800 sq. m., and presents in the Giant's Cnuseway (*q. v.*) the fineat examples of columnar basalt. No tertiary beds, containing shells like those of the London and Paris basins, have been discovered; but the limestone, generally speaking, abounds with fossil remains. Coal, that most valuable of fossils, is found in the S. and E. The principal coal-field is that of Kilkenny, which, like the great English carboniferous formations, rests upon a substratum of mountain limestone. Little coal is, however, raised, and the principni Irish towns are supplied with this article of fuel from Great Britain. Iron is found in many parts of the country, but is little worked. In Donegal and Galway, stntuary marble of n quality little inferior to the Italian, is excavated, and the black and gray marbles of Kilkenny are much prized, and considerably exported. Copper, lead, and sulphur mines occur in parts of Leinster and Munster, and gold and silver has been found in Wicklow; copper, however, is the only metal which at present appears to be remuneratively raised; the ore is mostly sent to Wales for smelting. Antimony, manganese, serpentine of good quality, fuller's earth, slate, gypsum, &c., with beryls and garnets, are the other chief mineral products. The deficiency of good coal in *I.* is less felt as regards domestic than manufacturing purposes. About 2,800,000 acres, or nearly 1-7th part of the entire surface of the island, consists of bog-land, which is capable of furnishing an almost inexhaustible supply of peat nt very little more expense than that of the labor required in digging it. The drainage and fertilization of these extensive morasses have long been regarded as objects of great national importance, but most nttempts have hitherto been only partially successful. In not a few localities they have been wholly cut out, and where this is the case, and other bogs are not easily accessible, the inhabitants have suffered great privations from the want of fuel.—*Soil.* The diversity of soils is not so great in *I.* as in the sister island It has no stiff, clayey, or chalky deposits. Sandy soils are also rare. Loam, resting on a substratum of limestone, predominates in *I.*; and, though often very shallow, it is almost everywhere very prolific. In short, deducting the bogs and mountains, it is certain that this island is about the richest country, in respect of soil, in Europe. As a grazing country, *I.* is probably superior to any in the old world.—*Agric.* The three principal crops grown In *I.* are oats, potatoes, and hay, which, combined, occupy about three-fourths of the entire area under til-

hage. Among the subordinate crops, the cereals, beans, peas, roots, grasses, and grape seed are cultivated, but to no great extent. Flax, on the contrary, is steadily increasing in production. Owing to the humidity of the climate tho country is not well fitted for the superior grains, which are at ouce more precarious and not of so good quality as in England; but it is admirably suited for the raising of oats. The soil of Ireland is so admirably adapted for grazing that in most parts it never fails, however foul or exhausted when laid down to grass, speedily to clothe itself with a rich and luxuriant mantle of herbage.—*Rural Economy.* The bulk of the population of Ireland depend for employment and subsistence on the soil. The competition for small patches of land is consequently very keen, and the rents greater than the occupiers can afford, tbough not greater tban might be paid for them were they consolidated into propor sized farms, and cultivated on an improved system. In Ireland, in fact, the possession of a piece of ground has long been a condition all but indispensable to existeuce; and we should not, therefore, wonder that the occupiers should cling with desperate tenacity to their small patches. This has led ln most parts to a sort of tacit but well-understood agreement among the *cottiers*, or small farmers, to support each other against interlopers; and, in the greater part of tho country, it is as necessary to the quiet possession of the land to secure what is called *tenant-right*, or tbe good will of the occupier, as it is to make a bargain with the landlord. Auy tenant who should neglect this indispensable precaution would ruu a great risk of being disturbed in, or forcibly ousted from, bis bolding. Indeed, most of tho agrarian outrages which have for so iong agitated the country have been directly or indirectly connected with land-occupancy. It is not necessary to enter into any lengthened disquisiti ns as to the various circumstances which have led to that minute parcelling of the land which is the *bane* of Ireland. The greatest influence is doubtless to be ascribed to the custom of providing for tho sons, and sometimes, also, the daughters of the occupiers of land, by giving them shares of their father's holdings. A good deal of wbat is peculiar in the mode of occupying land in this island has grown out of conditions under which it was originally acquired by the ancestors of its present owners. About nine-tenths of the soil was forfeited nnder Cromwell and William III., aud this amouut of real estate was, for the most part, oither gratuitously granted to, or was acquired at a nominal rate of purchase by, noblemon and gentlemen of fortune and influence in England. Snch persons could not be expected to leave their country to reside permanently in Irelaud; and, in point of fact, they but rarely visited their Irish estates, bnt satisfied themselves with tbo acquisition of what rents they could get from them. No sympatby existed between them and their tenants; tbe religious and political principles of the one party were diametrically in antagonism to those of the other. The landlords looked upon tbeir tenants as a sort of unwilling bondsmen, who, if auy favorable opportunity should present itself, would immediately sbake off tbeir depeudence on them; and, on the other haud, tbo tenants regarded the landlords as usurpers of an alien race unjustly intruded on the properties of others, and as enemies to the religion and rights of the Irish people. The legislation bearing on the relations between landlord and teuaut has been of a very various and contradictory character. An immense number of holdings was created by the Freehold Votes Act of 1793; but in 1816 an Act was passed to facilitate the working of the Ejectment Act, passed in the reign of Queen Anne. In 1851 an Act was passed to facilitate ejections in cases of implied tenancies from year to year under £50 rental, and in 1860 these facilities were increased and extended to all tenancies. There are no records of evictions earlier than 1849. From that dato forward they were large, numbering in the period from 1840 to 1880 70,107 families, comprising 460,570 persons, averaging 12,500 persons a year. The the ejectments increased in number after 1870, showing that tbe Landlord and Tenant Act of that year had an effect opposite to that intended, and, far from improving the relationa betwcen landlords and tenants, acted to increase the existing difficulties and in many cases led to the infliction of great and almost unavoidable hardships upou the tenants. It completely broke down under the strain of the famine of 1879–80, and in 1881 a new Land Act was passed, intended to remedy its defects. Its principal measures were dosigned to protect the tenaut from paying more thau a fair rent, aud to provide for loans to tenants to enable them to purcbase their holdiugs on equitable terms. The "fairness" of a rent was to be decided by mutual agreement or by tbe intervention of the courts, and the rent thus fixed held good for 15 years. A Land Commission was appointed as a supreme court of appeal—except in special cases—In questions between landlord and tenant and with the power of sanctioning loans. It was objected to by Parnell, the leading agitator in the cause of Ireland, that the period of 15 years fixed for revaluations is too short, and that the courts which are to aettle rent and other disputes are filled witb relatives and friends of the laudlords, and are likely to decide in their favor. The holdings of Irish tenants are very small. In 1841 thore were 310,436 between 1 and 5 acres, and only 48,625 above 30 acres. In subsequent years a more favorable condition appeared, and in 1890 the boldings of from 1 to 50 acres had decreased to about 60,000, and those of 30 acres had increaaed to more than 162,000. With this increase in size of farms there has been an increase of pasturage, while the acreage devoted to potatoes has notably decreased. Tbere bas been a slow but steady growth ln the live-stock kept.—*Fisheries.* The seas around Ireland swarm with fish. Cod, ling, and hake are found ln great abundance on the Nymph bank, ln St. George's Channel to the S. of Waterford. Large shoals of herring visit the coast annually, and the bays and crecks furnish quantities of the smaller and more delicate species. Oysters (notably the bivalves called *Carlingfords* and *Redbanks*) are found in great plenty, and supply a moity of the English demand. Other deep-sea fisheries include those for mackerel, hake, soles, cod, and lobsters, hut the most prosperous fishery is tbat for salmon. Despite the abundance of fish, the fisheries are not flourishing, and large quantitics of cured fish are imported from Scotland.—*Manuf.* Ireland is not a manufacturing country. Its state of chronic inquietude, and the goueral dependence of the population on land, have hitherto formed insuperable obstacles to tho formation of great manufacturing establisbments; while the want of coal, capital, and skilled labor, and the great ascendancy of Great Britain in iudustrial enterprise, will, we think, hinder Ireland from ever attaining to any eminence in a manufacturing sense, excepting only that which is derived from the great linen trade of Ulster. The woolen iudustry, which was formerly large, has greatly declined tbrough restrictive legislation. In 1641 more than 30,000 persons were employed in the manufacture of frieze and fiannel. There are now less than 8,000. The silk manufacture, introduced by French emigrants early in the 18th century, is nearly confined to Dublin. Poplins are still extensively manufactured there aud in a few otber towns. *Pol. Div.* The kingdom of Ireland, comprising the four grand divisions known respectively as the provinces of *Leinster*, *Ulster*, *Munster*, and *Connaught*, is subdivided into 32 counties, viz.:

LEINSTER:	Queen's,	Down,	Limerick,
Carlow,	Westmeath,	Fermanagh,	Tipperary,
Dublin,	Wexford,	Londonderry,	Waterford.
Kildare,	Wicklow.	Monaghan,	CONNAUGHT:
Kilkenny,	ULSTER:	Tyrone.	Galway,
King's,	Antrim,	MUNSTER:	Leitrim,
Longford,	Armagh,	Clare,	Mayo,
Louth,	Cavan,	Cork,	Roscommon,
Meath,	Donegal,	Kerry,	Sligo.

Chief Cities and Towns. Dublin (the metropolis), Belfast, Cork, Galway, Waterford, Limerick, Clonmel, Wexford, Dundalk, Drogheda, Loudouderry, Sligo, &c.—*Canals.* The *Grand Canal*, commenced ln 1765, counects Dublin with the Shannon by two branches, having their terminiat Ballingasloe and Banagher respectively; another arm also effects a direct communication between

Fig. 1402.—BLARNEY CASTLE (CO. CORK).

the capital and Queen's co., via Kildare. The *Royal Canal*, commenced in 1789, extends from Dublin to Tarmonbarry, on the Shannon, 92. m., at a maximum elevation of 307 feet above sea-level. The river Shannon has been rendered uavigable from Limerick almost to its source, and is traversed by steamers carrying both passengers and freight. The Boyne navigation from Drogheda to Navan, and the Laggan from Belfast to Lough Neagh, are partly river and partly still water. The *Ulster Canal* connects Lougbs Neagh and Erne.—*Railways.* Except the more remote N.W. districts of Ireland, the country is intersected throughout by a well-planned and efficiently conducted net-work of railroads.—*Constitution, Govt., &c.* The Irish constitution is modelled on that of England; but for a lengtbened period the native Irish, comprising the great bulk of the population, were effectually excluded from all participation in its benefits, and were in fact reduced to a state of helotism. Tbis conduct, it is ueedless to add, was little less injurious to the conquerer than to the conquered. "As the English would neither in peace govern the Irish by the law, nor could in war root them out by the sword, their needs became pricks in their eyes and thorns in their sides." Bnt nations are slow and reluctant learners; and that selfish, short-sighted policy flourished in its full vigor down almost to our own time. The granting of the elective franchise to the Catholics, so late as 1792, and the repeal of the last remnant of the penal code in 1839, have been the two principal steps in the progress to a better system. The legislature consisted previous to the union with Great Britain of a viceroy, or chief governor, nnder the style and title of *Lord Lieutenant* (with power to appoint a deputy during absence), a House of Lords, and a House of Commons. The first parliament, in which members were returned from all parts of Ireland, sat ln the beginning of the reign of James I. Previously to 1768, the lower house held their seats for life, so that they could hardly be considered as representatives even of the Protestant part of the nation, and had bnt little sympathy with popular feelings. At this period, however, parliaments were made octennial. Since the union, in 1800, Ireland has been represented ln the imperial parliament holden in London hy 28 temporal lords elected for life by the whole body of Irish peers, 4 bishops (Protestants), who sit according to annual rotation of sees; and from the Union until the passing of the Reform Act in 1832, by 100 members of the lower house. The last-named Act gave to Ireland five additional representatives; but at the present time 103 Irish members sit in the British House of Commons. The executive government is vested ln the lord-lieutenant, appointed by the English government, or, in his absence, in the lords justices—generally the primate, lord chancellor, and commander of tho forces, and a privy council nominated by the Crown, and consisting chiefly of the high judicial and ministerial functionaries. The viceroy is assisted by the Secretary of State for Ireland, a member of tbe House of Commons, and who is especially responsible for all matters connected with Irish government. The judicial establishment is vested in the lord-chancellor, assisted by the master of the rolls, and by 12 puisne judges. Every corporate town has a judge or recorder, and local magistrates elected by the municipality; and every manor has its courts presided over by a seneschal or bailiff nominated by the proprietor. Each county is governed by a lord-lieutenant, and the country at large has a splendidly organized mounted constabulary, armed and drilled after the manner of regular troops, and numberiug about 12,500 officers and men.—*Religion.* The ecclesiastical arrangements that prevailed in Ireland until the beginning of 1870 were at once anomalous and irrational. The doctrines of the Reformation never made any considerable footing in the country, the new tenets being only espoused by English settlers within the *pale*, and by the Scottish colonists in Ulster. But after Protestanism had been adopted by the majority of tbe Englisb people, and had been made the established religion of their kingdom, it was determined to establish it as the state religion in Ireland. In pursuance of this resolution, the Catholic clergy were ejected from their livings, which were bestowed upon divines belonging to the Church of England. This change did not, however, produce any correaponding alteration in the religions feelings of the people, who seemed, indeed, to become the more attached to their ancient faith according as its teachers were treated with harshness and injnstice. In addition to the unpopularity attaching to the State Church in Ireland from its being the Church of a minority, the fact of its deriving the largest portion of its income from tithes tended materially to increase the odium uuder which it long labored. Since the accession to power of Mr. Gladstone's liberal cabinet, the whole incongruous and anomalous system known as the "Irish Church" has been overthrown, in so far as regards its basis of establishment. This measure, despite strenuous opposition on the part of tbe Conservatives, passed the British House of Commons in 1869. This measure, while relieving Ireland from the strain of supporting a Church alien to the great majority of the inhabitants, only in part removed the difficulty, since the great property which had been accumulated by the "Irish Church" was mainly invested for its benefit, the Roman Catholic clergy failing to benefit by it. In the N. of Ireland, Presbyterianism largely prevails, while Methodists, Friends, and Independents form a considerable element of the population. —*Education.* The primary schools of Ireland have been since 1831 open to Christians of every denomination, without compulsory attendance on religious instruction of any class. A system of non-denominational national education was inaugurated in 1845, but the schools have lacked the support of the religious organizations and education has suffered in consequence. These schools number over 8,000, with more than 500,000 pupils. One million sterling, from tbe former endowment of the Established Church, was set aside in 1878 for the encouragement of secular intermediate education. Of the higher educational institutions, Trinity College, at Dublin, and the Queen's Colleges at Cork, Belfast and Galway, are tbo most important. These institutions are open to all, there being no religious requirement. St. Patrick's College, Maynooth, founded in 1795, is the principal institution for the training of priests. The Royal University of Ireland was founded in 1880, and superseded the Queen's University. It is not a teaching but only an examining body, like the University of London, and grants degrees irrespective of religious affiliation. Other institutions are the Royal College of Science, established in Dublin in 1867; the Roman Catholic University of Ireland, founded at Dublin in 1854, and two Proshyterian colleges, at Belfast and Londonderry. There are several collegiate institutions for instruction in the higher faculties of acience and learning. Among tbem are Trinity College, Dublin (the only university entitled to confer degrees in all the faculties), the Roman Catholic College at Maynooth, and tbe Queen's Colleges at Cork, Belfast and Galway.—*Inhab.* The Irish belong to what is called the Gaelic

division of the Celtic family, having, as is supposed, emigrated from Britain when the latter was invaded and settled by the *Cimbri*, or northern Celts. About the time when the Romans withdrew from Britain, a tribe called the *Scoti* began to acquire a preponderating influence in Ireland, which from the 5th to about the 11th century was thence called *Scotia*. But about the latter period, this tribe having effected a settlement on the W. coast of N. Britain, its name was transferred to that country, which still retains it, and Ireland again recovered its former name of *Hibernia*, or *Iernc* (Erin). The number of English settlers in Ireland was long inconsiderable. Till the plantation of Ulster, in the reign of James I., they were almost entirely confined to the E. and S. E. counties, where, though they had partially changed the language, they had made comparatively little change in the habits and manners of the people. The population of Connaught, and generally of all the W., and a large portion of the other parts of the island, may, even at this day, be considered as of nearly pure Celtic origin; and in several of the remoter districts, *Erse*, or the Irish dialect of the Celtic, is even now the ordinary language of the common people. Notwithstanding the differences that may easily be traced in different parts, from the intermixture of English and Scottish blood, the entire population has a peculiar and distinctive character that is not to be misunderstood. It may in general be said of the Irish that they are ardent in their affections, irascible, and easily influenced by sudden impulses. They are preeminently witty, hospitable, and sociable, though sometimes parsigions. Prodignlity is one of the distinguishing traits of their light-hearted, happy-go-easy disposition. Physically considered, the Irish are generically a fine race of people, handsome, hardy, and frequently of stalwart build and stature. The women, too—more particularly of the S. counties—are distinguished for their beauty of form and feature, and for their many characteristic moral excellence.—*Hist.* Ireland has produced some of the most illustrious statesmen, orators, poets, and warriors of the United Kingdom, as Burke, Grattan, Sheridan, Curran, Goldsmith, Moore, and Wellington. Although Ireland, styled *Iernis*, is mentioned in a Greek poem five centuries before Christ, and by the names of *Hibernia* and *Juverna* in various foreign pagan writers, little is known with certainty of her inhabitants before the 4th century after Christ, when, under the appellation of *Scoti*, or inhabitants of *Scotia*, they became formidable by their descents upon the Roman province of Britain. These expeditions were continued and extended to the coasts of Gaul till the time of Laogare MacNeill, monarch of Ireland (430 A. D.), in whose reign St. Patrick attempted the conversion of the natives. Although Christianity had been previously introduced in some parts of the island, St. Patrick encountered great obstaclee; and the new faith was not fully established in Ireland till about a century after his decease. From the earliest period, each province of Ireland appears to have had its own king, subject to the *Ard-Righ* or monarch, to whom the central district called Meath was allotted, and who usually resided at Tara. Each clan was governed by a chief selected from its most important family, and who was required to be of mature age, capable of taking the field efficiently when occasion required. The laws were peculiar in their nature, dispensed by professional jurists styled *Brehons*, who, as well as the poets and men of learning, received high consideration, and were endowed with lands and important privileges. In the 6th century extensive monasteries were founded in Ireland, in which religion and learning were zealously cultivated. From these establishments numerous missionaries issued during the succeeding centuries, carrying the doctrines of Christianity under great difficulties into the still pagan countries of Europe, whose inhabitants they surprised and impressed by their self-devotion and their asceticism. Many students of distinction from England and the continent of Europe frequented Ireland, and received gratuitous instruction at this period. Among the eminent native Irish of these times were Columba (*q. v.*), or Columbkill, founder of the celebrated monastery of Iona; Comgall, who established the convent of Bangor, in the county of Down; Kiaran, of Clonmacnoise; and Adamnan, abbot of Iona, and biographer of Columba. Of the Irish missionaries to the European continent, the more distinguished were Colnmbanus (*q. v.*), founder of Bobbio; Gallus, of St. Gall, in Switzerland; Dichuill, patronized by Clothaire; and Ferghal, or Virgilius, the evangelizer of Carinthia. The progress of Irish civilization was checked by the incursions of the Scandinavians, commencing toward the close of the 8th century, and continued for upward of 300 years. Establishing themselves in towns on the E. coast of Ireland, with the assistance of friendly native tribes, they continued to make predatory expeditions into the interior until their signal overthrow at the battle of Clontarf, near Dublin (1014 A. D.), by Brian, surnamed *Boru*, or *Boroimhe*, monarch of Ireland. From that time little is accurately known of the history of Ireland till the first descent made upon it by Henry II., who obtained, in 1155, a bull from Pope Adrian IV. authorizing him to take possession of the island, on condition of paying to the papal treasury a stipulated annual revenue. The country was not wholly subdued till 1210, when a charter of liberties was granted to the Irish by King John, and afterward continued by Henry III. Henry VIII. took the title of *King of Ireland*, and introduced the Protestant Reformation into the country. His reign was marked by the insurrection of Lord Thomas Fitzgerald, which ended in the comparative ruin of the powerful house of Kildare. James I. introduced into Ulster many Scotch and English Protestant settlers. In 1641 a Catholic insurrection broke out in Ulster, which quickly spread out into all parts of the island. No fewer than 40,000 Protestants perished in Ulster by violence, and the country was a prey to anarchy till 1649, when Cromwell subdued it. Four-fifths of the whole soil was confiscated. Once more, in 1688, the Catholics took up arms, and James II., after his flight from England, presented himself in Ireland, and was received with acclamation. But the battle of the Boyne, in 1690, and the disastrous defeat of Aughrim, July 12, 1691, put an end to the insurrection, which was followed by numerous confiscations. The next hundred years of Irish history record little else than relentless persecution of the Catholics. In 1798 the Catholics besought a French invasion to aid in the insurrection they contemplated. The French rendered but feeble assistance—sufficient, however, to encourage the outbreak, which broke out May 23, and was carried on with rancor on the one part, and sanguinary retaliation on the other. The country was pacified by Lord Cornwallis, and a bill of amnesty was passed in 1799. Government took advantage of this insurrection to hasten the legislative union of the two countries, which despite the eloquent opposition of Grattan (Fig. 1402) and his party, was effected in Jan. 1800. For several years the question of Catholic emancipation was a standard subject of excitement. In 1823, the question assumed larger proportions. Daniel O'Connell was the most prominent advocate of Irish rights from this period till his death, in 1847. On April 13, 1829, the long-mooted Act of Catholic Emancipation received the royal assent. O'Connell took his seat as a member for Cork, and immediately proclaimed an agitation for repeal of the legislative Union. The year 1848 was marked by the abortive revolutionary movement of William Smith O'Brien and other patriots. Though this rebellion was easily put down—almost without bloodshed—it caused an intense revival of the national feeling, which indicated itself in a "Phœnix" conspiracy in 1858, and the Fenian movement which began in 1867, and which long continued a serious source of anxiety to the British authorities. Dynamite

Fig. 1403.—DANIEL O'CONNELL.

and other outrages took place as consequences of the excited state of feeling, culminating in the assassination of Lord Frederick Cavendish, Chief Secretary for Ireland, and Mr. Burke, under Secretary, in 1882. The existence of these movements, and the deep-lying current of feeling that they indicated, convinced thoughtful men, among them Mr. Bright, and afterward Mr. Gladstone, that the state of Ireland was one that called strongly for radical steps of reform. Mr. Gladstone set to work with an energy and a disregard of the prevailing sentiment that were characteristic of him. His first movement was one which has been already mentioned, the disestablishment of the Irish Church, a Church which represented less than one in five of the population, but to support which all were taxed. Then he introduced into Parliament and carried through a series of measures for the benefit of the Irish farmer, to give him a more secure tenure, to pay him for improvements he had made if he were ejected from the land, and to aid in forming a class of peasant proprietors. A Land Commission was formed, with the power to reduce rents when desirable, and fixing the rent for a number of years. More lately, a Land Purchase Commission was organized, for the purpose of assisting tenants to buy their farms by a loan under certain conditions as to repayment. These measures were part of a great movement of agrarian reconstruction of Ireland, aided alike by Conservative and Liberal governments. Meanwhile the peasantry, supported by the Land League, kept up a fierce struggle with some of the unpopular landlords, and successive Coercian Acts were passed to quell the disturbance, one of the severest of these under Mr. Gladstone's administration. These troubles led to a demand for Home Rule, the Irish Nationalist party in Parliament being led by Charles S. Parnell, while throughout the island the agitation in its favor steadily grew, until, when a new Franchise Bill gave Ireland a popular representation, Home Rule gained 86 out of 103 Irish seats. This result made a strong impression on Gladstone, who in 1886 brought in a bill for the establishment of an Irish Parliament. This bill was defeated in the House of Lords. A land purchase bill was passed in 1903, for the abolition of landlordism, Parliament agreeing to assist tenants to pay for their farms, and to loan them in addition a large sum at low interest and on long terms of repayment. This, it is hoped, will remove the long-continued misery and discontent. *Pop.* (1901) 4,456,546.

Ire'land, one of the BERMUDA ISLANDS (*q. v.*).

Ireland, New, a long, narrow island in the South Pacific Ocean, to the N.E. of New Britain, from which it is separated by St. George's Channel. Lat. between 2° 35′ and 5° 2′ S.; Lon. between 150°: 0′ and 152° 50′ E. Length, 200 miles; average breadth, 5 miles.

Irenæ'us, St., B. in Greece about 202, was a disciple of Polycarp, by whom he is said to have been sent to Gaul. On the martyrdom of Pothinus he succeeded him in the bishopric of Lyons, in 177. *I.* was a man of considerable learning, and animated with ardent zeal for Christianity. The common idea that he suffered martyrdom rests on no good foundation. His great literary work is his refutation of the Valentinian form of the Gnostic heresy, and is usually named *Adversus Hæreses*. The original Greek, with the exception of a few fragments preserved by succeeding writers, has been lost, and the remaining portion of the work is in a barbarous Latin version. The best edition of his works was published in 2 vols., 8vo., Leipzig, 1853. D. about 202.

Ire'ne, a Byzantine empress, alike famous for her talents, her beauty, and her crimes, was B. at Athens of a private family about 752. She was raised to the throne of Constantine by her marriage with Leo IV., who succeeded his father six years after the celebration of their nuptials, in 775. In 780, in consequence of the death of Leo, she became regent of the empire for her son Constantine, then in the tenth year of his age, and the court of Constantinople was soon a perpetual scene of intrigue and counterplot, which led to the most ruthless crimes. In this struggle, the uncles of the young emperor, fired with as much ambition, and endowed with infinitely less personal grace and love of art than the beautiful Athenian, were ranged on one side with the Iconoclasts, and Irene on the other supported the worship of images, and had the address and firmness of purpose to carry her point, which was finally decreed in a council held at Nice, 787. In the meantime, the education of her son, whom she never meant to exercise the supreme power, was totally neglected; and when he arrived at maturity, and was put in forcible possession of his father's authority by the troops, he not only proved incapable, but most unscrupulous and cruel in the exercise of his authority. With a reckless and ambitious woman like Irene on the watch for her opportunity, and his subjects alienated in disgust, it is not surprising that her emissaries were at last able to seize on the person of the emperor, and having done so, they put out his eyes, and proclaimed Irene — the only person that had shown any capability of sustaining the weight of government. She had reigned five years sole empress, and was negotiating a marriage with Charlemagne, which would have united the Eastern and Western empires, when Nicephorus, the grand treasurer, became leader of a revolt, and having brought over some of her eunuchs to his party, succeeded in dethroning her. A few months afterwards, she died in exile at the isle of Lesbos, A. D. 803, still in the vigor of her years, and in all likelihood broken-hearted by her fall.

I'rian, *a.* [Fr. *irien.*] (*Anat.*) Belonging or relating to the Iris.

Iriar'tea, *n.* (*Bot.*) A genus of S. American trees, order *Palmaceæ*, having lofty, smooth, faintly ringed stems, and pinnate leaves, with somewhat triangular leaflets. The leaf-stalks rise from a sheathing column. The Pashiuba or Piziuba palm, *I. exorhiza*, common in swamps and marshy grounds in the forests of the Amazon district, is remarkable for sending out roots above ground, which extend obliquely downwards, and often divide into many rootlets just before they reach the soil; the tree as it grows still producing new roots from a higher point than before, whilst the older and more central ones die, so that at last a lofty tree is supported as on three or four legs, between which a man may walk erect with a palm of seventy feet high rising straight above his head. The outer wood is very hard, so as to be used for harpoons; splits easily, and into perfectly straight laths; is excellent for floors, ceilings, shelves, &c., and is exported for umbrella-sticks.

Irida'ceæ, *n. pl.* (*Bot.*) The Iris or Corn-flag fam., an order of the alliance *Narcissales*, consisting of herbaceous plants, usually with bulbs, corms, or rhizomes; parallel-veined leaves, and spathaceous flowers. The perianth is superior, petaloid, and 6-parted, in 2 whorls. The stamens are 3 in number and are inserted upon the outer segments of the perianth; their anthers are 2-celled, and extrorse. The ovary is inferior, 3-celled, with a single style, having 3 stigmas, often petaloid. The fruit is capsular, 3-celled, and 3-valved, with luculicidal dehiscence. The seeds are numerous, with horny or hard albumen. The plants of this order are chiefly natives of temperate and warm climates; they are particularly abundant at the Cape of Good Hope. There are 57 genera and 557 species. The rhizomes of several species have acrid properties, which render them purgative or emetic; those of others are fragrant. Coloring matter is obtained from some species. Some of the genera furnish the horticulturist with showy border flowers. — See IRIS, and CROCUS GLADIOLUS.

Irides'cence, *n.* The property of exhibiting colors like those of the rainbow.

Irides'cent, *a.* [Fr.] Having colors like the rainbow.

Irid'ian, *a.* Pertaining to the iris.

Iridiocyano'gen, *n.* (*Chem.*) The supposed nega-

IRELAND
SCALE OF MILES
0 10 20 30 40
Railroads
Steamship Routes
Canals
Battlefields
Size of type indicates relative importance of places
ATLANTIC
OCEAN
IRISH SEA
ST. GEORGE'S CHANNEL
North Channel
SCOTLAND
CANTIRE
Mull of Cantire
ULSTER
CONNAUGHT
LEINSTER
MUNSTER
DONEGAL
LONDONDERRY
ANTRIM
TYRONE
FERMANAGH
ARMAGH
DOWN
MONAGHAN
CAVAN
LOUTH
MEATH
WEST MEATH
LONGFORD
SLIGO
MAYO
GALWAY
ROSCOMMON
KINGS COUNTY
QUEENS COUNTY
KILDARE
DUBLIN
WICKLOW
CARLOW
KILKENNY
WEXFORD
WATERFORD
TIPPERARY
CLARE
LIMERICK
KERRY
CORK
Belfast
Londonderry
Dublin
Galway
Limerick
Cork
Waterford
Wexford
Sligo
Athlone
Kilkenny
Queenstown
Killarney
Tralee
Newry
Dundalk
Drogheda
Galway Bay
Donegal Bay
Dingle Bay
Bantry Bay
Clew Bay
Dublin Bay
Lough Neagh
Lough Corrib
Lough Derg
Shannon R.
Malin Hd.
Mizen Hd.
Carnsore Pt.
Longitude West from Greenwich

IRELAND.

Area sq.m...32,605
Pop.....4,458,775

COUNTIES.

Antrim.....E 1
Area sq. m 1,211
Pop.....196,090

Armagh...E 2
Area sq. m...512
Pop.....125,393

Carlow .....E 4
Area sq. m...349
Pop.. 37,748

Cavan.... ....D 3
Area sq. m...746
Pop..... 97,541

Clare..... B 4
Area sq. m.1,332
Pop.....112,334

Cork.....C 5
Area sq. m.2,890
Pop.....404,611

Donegal.....D 2
Area sq. m.1,870
Pop.....173,722

Down..... E 2
Area sq. m...957
Pop.....205,889

Dublin.....E 3
Area sq. m...342
Pop.....157,563

Farmanagh...D 2
Area sq. m...715
Pop..... 65,430

Galway.....C 3
Area sq. m.2,372
Pop.....192,549

Kerry..... B 4
Area sq. m 1,859
Pop..... 165,726

Kildare..... ..E 3
Area sq. m...654
Pop 63,566

Kilkenny.....D 4
Area sq. m...800
Pop.....79,159

Kings.....D 3
Area sq. m...772
Pop.....60,187

Leitrim .....C 2
Area sq. m.. 619
Pop.....69,343

Limerick..... C 4
Area sq. m.1,064
Pop 146,093

Londonderry..E 2
Area sq. m...816
Pop.....144,404

Longford . ...D 3
Area sq. m...421
Pop.....46,672

Louth..... E 3
Area sq. m...316
Pop..... ..65,820

Mayo .....B 3
Area sq. m.2,156
Pop.....199,166

Meath.....E 3
Area sq. m ..906
Pop.....67,497

Monaghan....E 2
Area sq. m...500
Pop.....74,611

Queens.....D 4
Area sq. m.. 644
Pop.....57,417

Roscommon..C 3
Area sq. m...991
Pop.....101,791

Sligo... .....C 2
Area sq. m...707
Pop.....84,083

Tipperary.....D 4
Area sq. m.1,659
Pop.....160,232

Tyrone.....D 2
Area sq. m 1,260
Pop.....150,567

Waterford....D 4
Area sq. m...717
Pop 87,187

West Meath...D 3
Area sq. m...708
Pop.....61,629

Wexford .....E 4
Area sq. m...901
Pop.....104,104

Wicklow.....E 4
Area sq. m. .781
Pop..... 60,824

CITIES-TOWNS

Pop. Thousands.	
348	Belfast....F 2
289	Dublin ... E 3
75	Cork .. .... C 5
39	Londonderry D 2
38	Limerick ..C 4
32	Rathmines.E 3
26	Waterford..D 4
17	Kingstown.E 3
13	Galway.....B 3
13	Dundalk....E 2
12	Drogheda..E 3
12	Newry.....E 2
11	Lurgan.....E 2
11	Lisburn ....E 2
11	Wexford ...E 4
10	Sligo.....C 2
10	Kilkenny...D 4
10	Queenstown C 5

tive radical of a double salt of cyanide of iridium and of potassium.

Irid'ium, *n.* [Lat. *iris*, rainbow, from the various tints which the salts of this metal assume.] (*Chem.*) A white brittle metal resembling polished steel, found in connection with the ores of platinum. It is generally combined with osmium in the native alloy called *iridosmine*, or *osmiridium*. Iridium is insoluble in all acids, but when oxidized the oxide dissolves in nitro-muriatic acid. It is very heavy, having a *sp. gr.* of 21·15. Its equivalent is 198. Iridium has been used for the points of gold pens, its extreme hardness causing it to last for years. *Symbol* Ir.

Ir'idize, *v. a.* To coat or tip with iridium.

Irid'osmine, *n.* [Lat. *iridosmium*.] (*Min.*) The ore of the rare metal iridium, consisting principally of iridium and osmium, though several other metals, as platinum, rhodium, and ruthenium, are usually present. It is metallic in appearance, and tin-white or steel-gray in color. *Sp. gr.* 19·3–21·12. *I.* occurs in small lead-colored scales in the auriferous sands of California, and is with difficulty separated from the gold.

I'ris, *n.*; **I'rises,** *pl.* [Lat. *iris*, *iridis*; Gr. *iris*, *iridos*, the rainbow; Sans. *ir*, to go, to send.] The rainbow; anything resembling the rainbow.

(*Myth.*) In the Homeric Myth., *I.* is the messenger of the gods who carries messages from Ida to Olympus, or from the gods to men. In the Hesiodic *Theogony*, she is a daughter of Thaumas and Electra, and a sister of the *Harpies*. According to later versions, she was married to Zephyrus, and became the mother of Eros. In the *Iliad* the rainbow also was called *I.*; but the personification of *I.* as the goddess of the rainbow seems to be of later growth.

(*Astron.*) An asteroid of the group between Mars and Jupiter, discovered by Hind in 1847.

(*Bot.*) The Flower-de-luce, the typical genus of the ord. *Iridaceæ*. The species are very numerous, and are generally remarkable for their large, yellow, white, or blue flowers, and sword-like leaves. They abound in Europe, but are rare in America. The rhizomes of several species are more or less purgative and emetic. Those of *I. florentina*, *pallida*, and *germanica* possess a violet odor, and are used in perfumery for imparting an

Fig. 1404.
1, FLORENTINE ORRIS. (*Iris Florentina.*) 2, YELLOW WATER-FLAG. (*Iris pseudacora.*)

agreeable odor to the breath, and by the French especially for making issue-peas. These rhizomes, dried and scraped, constitute the *Orris-root* of the shops. The roasted seeds of *I. pseudacora*, the Yellow flag, have been recommended as a substitute for coffee, but they do not appear to have any of the valuable properties of that beverage. The genus is so named on account of the variety of colors exhibited by it.

(*Anat.*) The anterior part of the *choroid* coat of the eye, with superadded muscular fibres.

(*Jewelry.*) The name given by French jewellers to limpid and transparent stones, but chiefly to Rock Crystal when reflecting prismatic colors like Opal, by means of natural internal flaws. Common rock-crystal is sometimes artificially converted into *I.*, but in these cases the fissures are produced in the outer part of the stone, instead of being in the interior.

I'risated, *a.* Exhibiting the color of the rainbow.

I'riscope, *n.* [Gr. *iris*, and *skopeo*, to behold.] (*Optics.*) An instrument prepared by Dr. Joseph Reade for exhibiting the prismatic colors. — *Brande.*

I'rised, *a.* [Fr. *irisé*.] Relating to the iris or rainbow.

I'rish, *a.* (*Geog.*) Pertaining to Ireland, or produced in Ireland.

—*n. pl.* (*Geog.*) The natives or inhabitants of Ireland.

—*n.* The language of the natives of Ireland, a species of the Celtic.

I'rish Language. See GAELIC LANGUAGE AND LITERATURE.

Irish Moss, or CARRAGEEN, *n.* (*Bot.*) See CHONDRUS.

Irish Ripple, in *Pennsylvania*, a post-village of Lawrence co. *Pop.* (1897) about 515.

I'rishry, *n.* The people of Ireland. "The whole *Irishry* of rebels."—*Milton.*

I'rish Sea, a considerable expanse of water, bounded on the W. by Ireland, N. by Scotland, E. by England, and S. by Wales, between Lat. 51° 40′ and 54° 30′ N., and between Lon. 3° and 6° W. It is connected with the Atlantic Ocean by the North Channel on the N.W., and by St. George's Channel on the S.W. It contains many islands, the most important of which are the Isles of Man, Anglesey, and Holyhead. Along its shores are numerous bays and inlets, as Dublin and Dundalk bays, in Ireland, Glenluce, and Wigton bays in Scotland, Solway Frith between Scotland and England, and Morecambe Bay in England.

I'rishtown, a village of Ireland, on Dublin Bay, in the co. of Dublin, just below Ringsend. *Pop.* 1,000.

Irishtown, in *Pennsylvania*, a post-office of Adams co.

I'rite, *n.* (*Min.*) A mineral composed of iridosmine and chromite. It occurs in the Ural Mountains, in black octohedrons, which have a *sp. gr.* of 6·5.

Iri'tis, *n.* (*Med.*) An inflammation of the membrane of the eye. It usually commences with pain in the eye and intolerence of light; afterwards the color of the iris changes, owing to the secretion of coagulable lymph, which spreads over it in a fine flake. Iritis, if it go on, is likely to end in adhesion of the iris to the neighboring parts, in which case there is a loss of the power of contracting and dilating, or it may even be completely closed. Sometimes an abscess forms and bursts, discharging its contents into the interior chamber of the eye, and causing an entire loss of vision. In the treatment of this disease, leeches and cupping, and cold applications to the eye, are to be employed; mercury is also usually administered in large doses.

Irk, *v. a.* [Icel. *yrkja*, *yrki*, to do work, to labor, to suffer, to be oppressed; Sax. *weorc*, work, grief, pain, anguish. See WORK.] To weary; to tire; to trouble; to vex; to give pain to; to harass; to distress. (Used impersonally only.)

Irk'some, *a.* Giving uneasiness; producing weariness; wearisome; tedious; burdensome; troublesome; vexatious; as, an *irksome* task.

Irk'somely, *adv.* In a wearisome or tedious manner.

Irk'someness, *n.* Quality of being irksome; tediousness; wearisomeness.

Ir'kut, a river of Siberia, in the district of Irkutsk, rising in the mountains of Sayansk, near the frontiers of China, and after a course of 220 m., flows into the Angara at the town of Irkutsk.

Ir'kutsk, a prov. of Russia, comprising all the E. part of Siberia, having on the N. the Arctic Ocean; E., the seas of Kamtschatka, Okhotsk, and Anadyr; W., Tobolsk; and S., a vast chain of mountains which separates it from Chinese Tartary; Lat. between 49° 40′ and and 65° 45′ N., Lon. between 96° and 121° E. *Area*, 350,600 sq. m. *Rivers.* Lena, Olonek, Indigirka, and Kovyma, which flow into the Frozen Ocean. *Min.* Silver, lead, zinc, tin, and granite. *Prod.* Rye, barley, hemp, and flax. *Pop.* 372,833.

IR'KUTSK, cap. of the above-named, situated on the Angara river.—*Manuf.* Woollens, linens, hats, leather, soap and glass. In 1879, *I.* was in great part destroyed by fire, the loss estimated at $15,000,000. It has since been largely rebuilt.

I'rock, a town of Slavonia, 12 m. from Peterwardein; *pop.* 6,500.

I'ron, (*i'urn.*) *n.* [Sax. *iren*; Dan. *iern*; Icel. *iarn*; Old Ger. *isarn*; Goth. *eisarns*; W. *haiarn*; Armor. *houarn*; Manx. *iaarn*, iron; Fr. *airain*, brass, copper; old Mid. High Ger. and old Sax. *erin*, Ger. *ehern*, made of brass or copper. The Ger., Old Ger., &c., which introduce the *s*, are based on the Goth. *aiz* = L. *aes*, copper, bronze. Sansk. *ayas*, iron; *ara*, brass, oxide of iron.] A metal. (See below.)—An instrument or utensil made of iron; as, a flat-*iron*, or smoothing-*iron*.

—*pl.* Fetters; chains; manacles; handcuffs; as, he was put in *irons*.

(*Met.*) *I.* is the most important of the metals. When we consider its abundance, its cheapness, the facility with which it may be worked, and the almost infinitely varied uses to which it is applied, for most of which uses no other body could be substituted, it must be regarded as one of the most precious substances known to man, and most intimately connected with the advancement of civilization and the progress of the race. By the alchemists *I.* was regarded as the symbol of war, and received the name of Mars, the god of arms: yet, though from it are fashioned the sword and spear of the warrior and most of the terrible engines of destruction that modern science has introduced into the art of war, it is in the avocations of peace that it has achieved its proudest successes and won its grandest triumphs. Its increasing use is a striking characteristic of this age of wonders, and almost every day sees some new application of it in the arts of life. Though iron is with considerable difficulty reduced from its ores, it seems to have been known and used from a very remote period. From the Scriptures we learn that Tubal Cain, seventh only in descent from Adam, was "an instructor of every artificer in brass and iron," (*Gen.* iv. 22,) and the Canaanites, 1500 B. C., are said to have used great numbers of chariots of iron in their wars. Homer mentions a mass of iron as one of the prizes at the funeral games given by Achilles in honor of Patroclus:

> "Then hurled the hero, thundering on the ground,
> A mass of *iron*, an enormous round,
> Whose weight and size the circling Greeks admire,
> Rude from the furnace, and but shaped by fire."—*Iliad*, B. 23.

The ancient Britons made spears and lances of it, and the Romans during their occupation of Britain smelted iron to a considerable extent: but their processes were so imperfect that the cinder heaps left by them were so rich in iron, that those in the Forest of Dean supplied 20 furnaces with much of their ore for 200 or 300 years. The iron mines of Elba are said to have been worked from the time of Alexander the Great; and Pliny speaks of this region as "inexhaustible in its iron." The mines of Aragon and New Castile in Spain are supposed to have been worked from the times of the later Jewish kings, successively by the Tyrians, the Carthaginians, and the Romans. About 500 B. C. iron was introduced into Greece from among the *Chalybes*, (see CHALYBEATES,) a people dwelling on the borders of the Black Sea. The ores of iron are found in great abundance in almost all parts of the globe. It is their presence in soils and in many rocks that tinges them red, greenish, brown, black, and yellow. Perfectly pure iron has a white color and bright silver-like lustre. Its *sp. gr.* is 7·8, and it is very soft and tough. It may be obtained in cubical and octohedral crystals by careful fusion and gradual cooling. In good bar-iron or wire, when it has been attacked by rust or by an acid, a fibrous texture may be observed which renders it the most tenacious of all the metals. An iron wire $\frac{1}{36}$ of an inch in diameter will bear a weight of 60 lbs. Iron does not oxidize or rust in dry air or oxygen at ordinary temperatures, nor is its polished surface tarnished by pure water free from air and carbonic acid, but under the action of air and moisture, especially if an acid or acid vapors be present, it rapidly changes to *rust*, which is the hydrated sesquioxide of iron. After oxidation commences, the oxide forms the negative pole of a voltaic pair, and the process proceeds more rapidly; or, if another metal be present the parts of iron in contact with it are for the same reason more rapidly consumed. At a high temperature iron burns readily with brilliant scintillations, and in pure oxygen or in the flame of the oxy-hydrogen blowpipe steel is consumed with the production of a dazzling light. It requires an intense heat for its fusion, and before becoming liquid assumes a pasty condition in which two pieces may be united or *welded* by hammering them together so as to be perfectly joined into one. As iron oxidizes rapidly when at a high temperature, it is generally found necessary in welding to sprinkle the heated metal with sand or borax, which, combining with the film of oxide on the surface, forms a fusible silicate or borate which is forced out from between the pieces of iron by the blows of the hammer, thus leaving clean surfaces of the metal in contact. At ordinary temperatures iron is but slightly malleable as compared with gold and silver, but at a red heat it may be forged or rolled into any desired shape. It is strongly attracted by the magnet, but when pure does not retain its magnetism. At a red heat it loses the magnetic property, but regains it on cooling.

(*Chem.*) The symbol of iron is Fe, from its Latin name, *ferrum*, and its equivalent 56. It may be obtained pure by mixing clippings of fine iron wire with about $\frac{1}{3}$ their weight of pure peroxide of iron in a crucible. Powdered glass, free from lead, is added, the crucible closed carefully, and exposed for an hour to a powerful heat. The silicon and carbon of the iron are removed by the oxygen of the oxide, and the pure metal remains. It is also obtained in the form of a fine black powder by heating the peroxide in contact with hydrogen. With oxygen, iron forms four compounds: the *Protoxide*, *Sesquioxide* or *Peroxide*, *Protosesquioxide*, and *Ferric acid*. The Protoxide (FeO) is a powerful base, and unites with acids to form salts. Of these, green vitriol, which is a sulphate of the protoxide, is a type. The hydrated protoxide is formed by dissolving pure sulphate of iron in water that has been recently boiled to expel the air, and adding an alkali. The protoxide is precipitated as a whitish mass, which soon absorbs oxygen from the air, and becomes reddish-brown from being changed into the sesquioxide. When fresh and moist, it is the most effective remedy for poisoning by arsenic. The sesquioxide (Fe_2O_3), called also the peroxide or redoxide, is found in great abundance in nature, and constitutes some of the most valuable ores of iron. (See HEMATITE.) Artificially prepared, it is known in the arts as *Rouge*, *Crocus of Mars*, or *Colcothar*, and is used as a pigment and as a polishing powder. It is this oxide that imparts the reddish color to soils, ochres, burnt clay, &c. The protosesquioxide (Fe_3O_4) called also magnetic, or black oxide, is an abundant natural product. (See MAGNETITE.) The black scales formed during the forging of wrought iron are mainly composed of this oxide. *Ferric Acid* (FeO_3) is an artificial product never obtained in a separate state. By heating 1 part of pure sesquioxide of iron and 4 parts of dry nitre in a covered crucible, a brown mass, the *ferrate of potassa*, is obtained, which, treated with cold water, yields a deep-red or violet-colored solution. With chlorine, iron forms two compounds: the *protochloride* (FeCl) and the *sesquichloride* (Fe_2Cl_3). The first is obtained by passing dry hydrochloric acid gas over red-hot iron, or by dissolving iron in hydrochloric acid. From this solution green crystals of the salt may be obtained. They are soluble and deliquescent, and in the air are rapidly oxidized. The sesquichloride may be obtained by dissolving the sesquioxide of iron in hydrochloric acid. The concentrated solution deposits it in red crystals, which contain water and are very soluble in water and alcohol. It may be produced also in an anhydrous state by the action of chlorine on the heated metal. The *protoiodide of iron* (FeI) is made by digesting metallic iron with water and iodine; a pale-green solution is the result, which is of importance as a medicine. The *protosulphide of iron* (FeS) is formed by heating iron and sulphur together. It is used for obtaining sulphuretted hydrogen gas, which is copiously evolved when it is dissolved by dilute acids. The *bisulphide of iron*, or iron pyrites (FeS_2), is a natural product. (See IRON, ORES OF.)

Carbonate of the protoxide of iron ($FeO.CO_2$) occurs in nature as spathic iron ore, and as the *clay iron-stone* from which most of the English Iron is made. It is found also in some mineral waters, which deposit a coating of rust on the surfaces over which they flow. Such waters are called *chalybeate*. *Nitrate of the protoxide of iron* ($FeO.NO_5$) may be produced in pale-green crystals by the action of dilute nitric acid upon protosulphide of Iron, and the *nitrate of the sesquioxide* is formed by the action of dilute nitric acid upon iron. It is a deep-red liquid used in dyeing. The *sulphate of the protoxide of iron* ($FeO.SO_3+7H_2O$) may be obtained by dissolving iron in sulphuric acid. It is the *green vitriol*, *iron vitriol*, or *copperas* of commerce, and is prepared on a large scale by exposing iron pyrites to the action of air and moisture. Oxygen is absorbed, and oxide of iron and sulphuric acid formed. The sulphate produced is dissolved out and crystallized. It forms large green crystals, which effloresce in the air and become covered with a whitish crust. With tannic acid it forms a permanent black dye, and is much used in dyeing and in the manufacture of ink.

(*Physiol.* and *Med.*) Iron is an essential constituent of the coloring-matter of the blood-corpuscles of all vertebrate animals; and accordiug to the best authorities, 1 part by weight of Iron is found in 230 parts of blood-corpuscles, and the total quantity of this metal in the blood of a man weighing 140 lbs. is about 38 grains. It is the presence of iron in the blood that communicates to the ashes of that fluid their reddish-brown color, the iron being found in them as the peroxide. The ashes of the hair, of birds' feathers, of the contents of eggs, of the gastric juice, of milk, and indeed of most animal fluids, contain traces of this metal. Nothing is known with certainty regarding the chemical condition of the iron in the animal body, that is to say, whether it is present as a protoxide, a peroxide, &c. It is introduced into the system with the food and drink, and any excess beyond what is required is discharged with the excrements. When an insufficient quantity is contained in the nutriment, chalybeate medicines become necessary. The iron that is set free within the system by the constant disintegration of blood-corpuscles is carried out of the system partly by the urine, partly by the coloring-matter of the bile, which is highly ferruginous, and probably is in part eliminated by the hair. The exact part which the iron plays in the body is uncertain; but it is most probable that the power which the blood-corpuscles possess as oxygen-carriers is mainly due to the presence of this substance. In certain conditions of the system iron is of great value as a remedial agent, in which case chalybeate waters or some of the preparations of iron are prescribed, such as the citrate of iron and quinine, tincture of the sesquichloride, &c.

Ores. Native iron is of rare occurrence. It almost always forms part of meteoric stones or *meteorites*, in which it is alloyed with nickel. One of these stones from Texas—now in the cabinet of Yale College—weighs 1,635 lbs., and contains about 90 per cent. of iron. The meteoric iron is malleable, and may be worked like manufactured iron. *Iron pyrites*, or bisulphide of iron, is found in great abundance, and is most widely distributed. It is found crystallized in cubes—octohedrons and dodecahedrons—of a bronze-yellow color. *Sp. gr.* 4·8–5·1. *Comp.* Iron 46·7, sulphur 53·3. Heated before the blow-pipe it gives off sulphur. Magnetic pyrites, or sulphuret of iron, has a reddish-yellow color, and is slightly attracted by the magnet. These ores do not afford good iron from the difficulty of obtaining it free from sulphur but they are of great value,—since from them is obtained the greater part of the sulphate of iron of commerce, which is manufacturod in great quantities at Stafford, Vt., and elsewhere in the U. States. Sulphur is also obtained from them, and in connection with aluminous or clayey slates, they are used in the manufacture of alum. An arsenical iron pyrite is also found, having a silver-white color, and containing iron 34·4, arsenic 46, sulphur 19·6. It occurs at Waterbury, Vt., Franklin, N. J., and at Franconia and Haverhill, N. H. Specular iron ore, or Hematite (*q. v.*), when pure, contains 70 parts of iron and 30 of oxygen. It is a valuable ore, and is found in vast quantities in the U. States. In Missouri, 90 m. S. of St. Louis, are two mountains composed mainly of this ore, the one, "Iron Mountain," being 300 feet high, and the "Pilot Knob," 700 feet. It is also found in inexhaustible quantities in many other localities. Magnetite, or magnetic iron ore, when pure, contains 73 per cent. of iron. It occurs in black crystals or heavy dark masses, is very abundant, and is one of the best of the ores of iron. The celebrated Swedish and Norway irons are manufactured from this ore. In this country it is found in vast deposits in Pennsylvania, New York, and New Jersey, and occurs in many other localities. The Cornwall deposit (Penna.) is unusually rich. Brown iron ore, including brown and yellow ochres, and bog Iron ore, contains about 60 per cent. of iron. It is abundant in Pennsylvania, Missouri, Tennessee, at Salisbury and Kent, Conn., and in many other localities. Spathic iron ore, or carbonate of iron, is extensively used in the manufacture of iron. It is abundant in the coal-formations of England, and yields about 9-10ths of the English iron. It is called *clay iron-stone*, and when containing carbonaceous or coaly matter, is known as *blackband*. Its yield is about 48 per cent. of iron. It occurs in Connecticut, Massachusetts, Vermont, New York, and is abundant in the coal regions of Pennsylvania *Chromic iron* contains oxide of chromium 60·, protoxide of iron 20·1, alumina 11·8, magnesia 7·5. It is of a black color, and is used in the manufacture of chromate and bichromate of potash and other compounds of chromium. Franklinite, found near the Franklin Furnace, N. J., contains peroxide of Iron 66·, oxide of manganese 16·, oxide of zinc 17·. Titanic iron contains oxide of titanium. — See also COLUMBITE, WOLFRAM, VIVIANITE.

Manufacture of Iron. We have seen that the ores of iron are mostly oxides of iron, or iron combined with oxygen, and generally contain other impurities, as silica, sulphur, clay, magnesia, &c. To obtain the pure metal the ores must be fused, and these impurities removed. From the better class of ores, as magnetite, good malleable iron may be directly obtained by heating them with proper proportions of coal in a reverberatory furnace. The carbon unites with the oxygen of the ore, forming carbonic oxide, which, coming in contact with the air, is consumed. The iron remains as a pasty mass, which is fashioned under a hammer into an oblong piece called a *bloom*. This may be worked by rolling or hammering into sheets or bars. A simple process of thus obtaining malleable iron directly from the ore

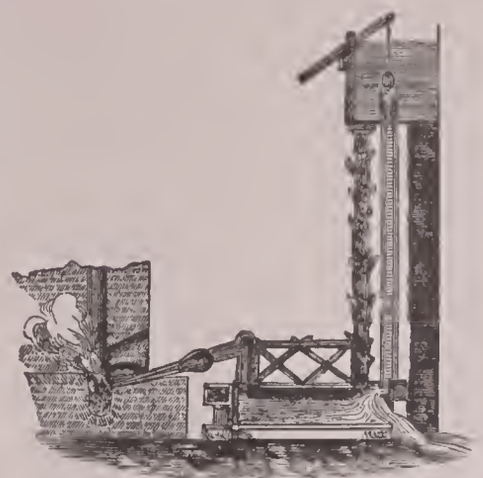

Fig. 1405.— CATALAN FORGE.

has long been in use in Catalonia, and hence called the Catalan method (Fig. 1405). It is a kind of open forge, and receives a blast from air compressed in a close tube by means of falling water. The ore, with a large proportion of charcoal, is placed upon it, and, when reduced, the iron runs down into a crucible beneath, from which it is removed and forged. Only the purer ores can be used in the Catalan forge, and the process requires a large amount of fuel, and is attended with the loss of considerable iron. The American *bloomery forge* is a modernized form of the same process; but the means of reducing iron ore, now almost universally in use, is the *blast-furnace*, (Fig. 1406.) This consists mainly of a four-sided structure of brick and stone, called a *stack*, of the form of a truncated pyramid. The interior has the form of two truncated cones united at their bases. The upper one constitutes the furnace proper, and is sometimes called the *belly*; the lower one is called the *boshes*, and terminates below in a space called the *hearth*. Three of the sides of the hearth descend to the bottom of the furnace or the *hearth-stone*, but on the fourth side is a partial partition of fire brick called the *tymp*, supported by strong bars of iron let into the sides of the furnace. This partition separates the front and back portions of the hearth, but does not extend to the bottom or hearth-stone. The interior has a double lining of fire-brick, the space between them being filled with sand or broken slag to prevent injury to the outer wall by the expansion of the lining by heat. The hearth, hearth-stone, and sometimes the boshes are

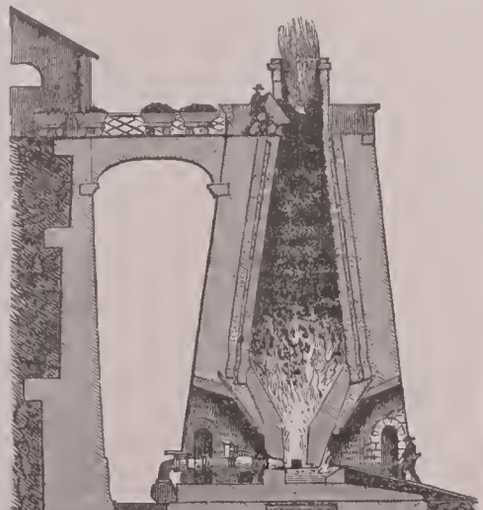

Fig. 1406. — BLAST-FURNACE.

built of the most refractory grit or quartzose rock. On each side of the stack, at the bottom, arched openings extend into the masonry, three of which are called the *tweer* (or *twyer*) arches, and the other the *front* or *working* arch, where the iron and *slag* are withdrawn. The tweers are the ends of the pipes through which the blast is admitted to the hearth, and as they are exposed to a high temperature, they are cast so as to enclose a coil of wrought-iron tubes through which a stream of cold water continually circulates. By means of powerful engines the air is forced into the hearth under great pressure, and to the amount of from 5,000 to 12,000 cubic feet per minute. It is generally heated (see HOT BLAST) to about 600° Fahr. before entering the furnace. When in operation, the furnace is regularly fed with definite proportions of coal, ore, and broken limestone. The latter is added as a *flux*, to render the ore more fusible and, by combining with the impurities in the ore, prevent the formation of compounds containing iron and thus effect a saving of the metal. When quartz and clay, which are common impurities of iron ore, are both present, the lime from the limestone combines with the clay (silicate of alumina), and this with the quartz forms a kind of glass or *slag*; at the same time a portion of the carbon of the fuel combines with the iron, forming a carbide of iron or ordinary *cast* iron. When only quartz is present in the ore, clay must be added. The kind and quantity of flux to be added must of course be varied according to the impurities present in the ore. The workman judges from the appearance of the slag, and regulates the charges accordingly. It should be of a light gray color; if it is very dark, it is bringing away too much iron. In a large furnace in the State of New York, yielding from 160 to 200 tons of pig-iron per week, the hourly charge was, coal 4,000 lbs., ore (much of which was magnetite) 4,900 lbs., limestone 1,050 lbs. A blast-furnace is kept in constant operation often for years until want of repairs renders it necessary to *blow out*. About once in 12 hours the hearth is tapped and the metal drawn off and run into rows of rude moulds of sand called *pigs*. The slag, which is 5 or 6 times the volume of the cast iron, is drawn off at a higher level more frequently and carted away when cold as a waste product, though in some instances it has been run into blocks and used for walls and pavements. An ordinary blast-furnace is about 30 feet square at the base, and from 50 to 60 feet high. To avoid the labor of elevating the immense weight of ore, &c., to this height, they are, when practicable, placed upon the side of a hill, and the materials run to the top of the stack in cars. We have seen that

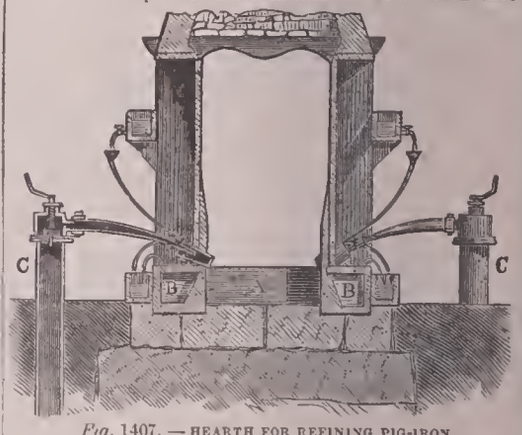

Fig. 1407. — HEARTH FOR REFINING PIG-IRON.

cast-iron is a carbide of iron, or a compound of carbon and iron, and it generally contains other impurities, as silicon, aluminium, sulphur, phosphorus, &c. There are several varieties, the *gray* or No. 1 having a dark color, a granular texture, and capable of being filed, drilled, &c.; and the *white*, which is of a silvery whiteness and exceedingly hard, so that it is not acted upon by steel instruments. The gray iron being very fusible, and possessing great fluidity when fused, is best adapted for castings; the white iron is used for conversion into bar-iron and steel. Cast-iron is fusible at a white heat, while wrought and pure iron are not; it is brittle and can neither be forged nor welded, while bar-iron can be bent, forged, and welded. By depriving cast-iron of a portion of its carbon it may be converted into malleable iron. It then becomes very tenacious and ductile, so that it may be hammered or rolled into thin sheets and drawn into fine wire. It may be welded as before described, and is soft enough to be worked by tools of steel. When heated to redness and plunged into cold water, it does not become harder as is the case with steel. Wrought or malleable iron has a fibrous texture, which accounts for its tenacity, but when subjected for a long time to repeated jars or blows, as in the case of car-axles, &c., it loses its fibrous character and becomes brittle. The atoms seem to change their positions and the texture becomes granular. By heating and reworking such iron, its fibrous texture and its strength are restored. To convert cast into malleable iron, the ordinary processes are *refining*, *puddling*, *shingling*, *hammering* and *rolling*. The refining apparatus consists of a flat hearth, A, covered with sand or loam, and surrounded with metal troughs, B, through which a stream of water is constantly flowing, to keep the sides from melting. C are the tuyeres in connection with the blowing-engine. The cast-iron is melted with coke on the hearth, and a blast of air kept blowing over it, which causes its carbon to unite with the oxygen of the air, and pass off as carbonic oxide gas. Oxygen also unites with silicon to form silica, and with iron to form

the oxide. The silica of the sand uniting with oxide of iron, produces a slag of silicate of iron. The refined metal is finally run out in cakes on a bed of cast-iron, kept cool by a stream of water. Being only partially decarbonized by this process, it is next broken up, and introduced into a reverberatory furnace called puddling furnace (Fig. 1408), where it is exposed when at a high temperature to the action of a current of air; by which means the carbon burns to carbonic acid, a portion of the iron is oxidized, and this oxide unites with the silicon in the iron and forms a fusible slag. The workmen by means of long bars repeatedly stir the heated mass

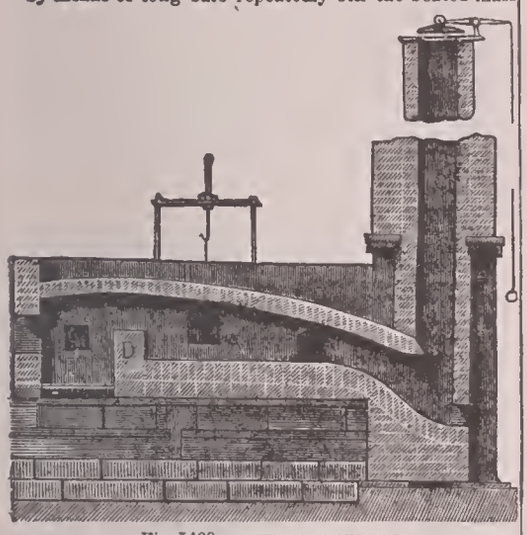

Fig. 1408. — PUDDLING FURNACE.

A, the hearth; F, the grate or fire-place; C, the chimney with a damper at the summit to regulate the draught; D, a bridge separating the grate from the hearth, for preventing the direct contact of the fuel with the iron.

(puddle it), so as to expose all portions of it to the air, and to intimately mix the oxide with the metal. The iron after a time loses its fluidity, a blue flame plays over the surface, and it becomes pasty and finally falls to pieces like a mass of sand or gravel. The fire is now increased and the granular masses soon unite and are collected by the workmen in balls or masses, which are removed and subjected to the action of an immense hammer and shaped into a rude bar. The quality of the metal is improved by cutting up these bars, binding the pieces together, and heating and rolling or hammering them together. In recent iron-making processes one of the most important improvements is the use of the hot blast in the furnace process, a method which greatly economizes fuel. Various forms of oven for heating the air have been invented, the heat being usually obtained from the waste gases that formerly blazed away uselessly from the top of the blast furnace. Other changes have almost done away with the refinery furnace, it being now but little employed in the U. S. Even puddling is rapidly losing its importance on account of the greatly decreased use of wrought iron since the development of the recent cheap steel-making processes. In the U. S. puddling proper, or *dry puddling*, is now but little employed, it being largely replaced by the *boiling*, or *wet puddling*, process. In this process gray-forge pig-iron is charged with puddle or roll cinder and melted at a high heat. The oxidee in the cinder act on the carbon and other impurities, and keep the bath boiling until bright white spots of iron

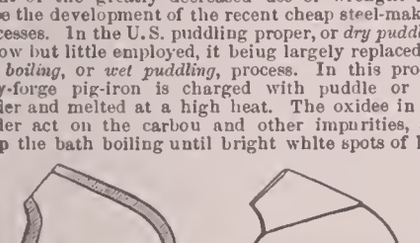

Fig. 1409.—BESSEMER'S CONVERTING VESSEL.

appear. This is called "bringing to nature," while the cinder seems to sink away. The rabble, or puddling bar, is now brought into play, the iron-sponge thoroughly worked, and finally made into balls, from which part of the cinder is forced by squeezing with the rabble. The squeezing is continued in a machine adapted to this purpose, from which the puddled iron is delivered, still hot enough to be worked into bar-iron in the rolling mill.

Bessemer Process. The Bessemer process, formerly used only for steel-making, is also applied to the production of a malleable iron, but pushing oxidation to the highest available limit. If carried beyond this limit, brittleness instead of toughness results. In this process the melted cast-iron is run into a huge crucible, or *converter* (Fig. 1409), lined with fire-clay, and with apertures (A) at the bottom, through which air is blown at a pressure of 15 or 20 pounds to the square inch. The iron burns vividly in the current of air, and the oxide of iron produced is diffused in a melted state through the mass of metal by the rapid current of air. This oxide of iron acts upon the silicon and carbon in the cast-iron, converting the latter into carbonic oxide, which burns with flame at the mouth of the converter, and the former into silicic acid, which enters into the slag, and is carried up as a froth to the surface of the liquid iron. The blast of air is continued for about twenty minutes, when the disappearance of the flame of carbonic oxide indicates the completion of the process; but the remaining purified iron is not pasty, as in the puddling furnace, being retained in a perfectly liquid condition by the high temperature resulting from the combustion of part of the iron, so that the metal may be run out into moulds by tilting the converting vessel. In this way about 85 parts of bar-iron are obtained from 100 of pig-iron. This process, while greatly economizing time and labor, fails to remove the sulphur and phosphorus from the iron, and thus has not superseded the puddling process. Its application to the manufacture of steel will be noticed under STEEL.

Composition of Bar-iron. Even the best bar-iron contains from 0·1 to 0·5 per cent. of carbon, together with minute proportions of silicon, sulphur and phosphorus. Perfectly pure iron is inferior in hardness and tenacity to that which contains a small proportion of carbon. Bar-iron is liable to two important defects, which are technically known as *cold-shortness* and *red-shortness*. Cold-short iron is brittle at ordinary temperatures and appears to owe this to the presence of phosphorus, of which element 0·5 per cent. is sufficient materially to diminish the tenacity of the iron. When the iron is liable to brittleness at a red heat, it is termed red-short iron, and a very little sulphur is sufficient to affect the quality of the iron in this respect. There is much difference of opinion as to the true causes of the variation in the strength of wrought-iron, and this is not surprising when we reflect upon the number of circumstances which may be reasonably expected to exert some influence upon it. Not only the proportions of carbon, silicon, sulphur, phosphorus, and manganese may be supposed to affect the quality of the iron, but the state of combination in which these elements exist in the mass is likely to cause a difference. It also appears certain that the mechanical structure, dependent upon the arrangement of the particles composing the mass of metal, has at least as much influence upon the tenacity of the iron as its chemical composition. The best bar-iron, if broken slowly, always exhibits a fibrous structure, the particles of iron being arranged in parallel lines. This appears to contribute greatly to the strength of the iron, for when it is wanting, and the bar is composed of a confused mass of crystals, it is weaker in proportion to the size of the crystals. The presence of phosphorus is said to favor the formation of large crystals, and hence to produce cold-shortness. There is some reason to believe that the fibrous is sometimes exchanged for the crystalline texture under the influence of frequent vibrations, as in the case of railway axles, girders of suspension bridges, &c. Considering the difficult fusibility of bar-iron, it is fortunate that it possesses the property of being *welded*, that is, of being united by hammering when softened by heat. It is customary first to sprinkle the heated bars with sand or clay in order to convert the superficial oxide of iron into a liquid silicate, which will be forced out from between them by hammering, leaving the clean metallic surface to adhere.

IRON IN THE UNITED STATES.—Iron was made in the U. S. at a very early date in the colonization, some being produced in the James river settlement as early as 1622. It was made in Massachusetts in 1631 and subsequently, bar and cast iron being produced, and saws made as early as 1652. A charcoal furnace was built at Plymouth in 1702 to convert bog-ore into hollow ware. A bloomery was built in New Jersey in 1685, and in Pennsylvania the first forges were built in 1717 and a furnace was erected in 1726. Refining forges were employed here, 9 of which, and 10 furnaces, were built before 1750. In Maryland much bar-iron was produced, its manufacture beginning in 1717. Charcoal blast furnaces were erected in Virginia in 1724, and pig-iron was exported to England. In 1750 the making of bar-iron and steel in the colonies was absolutely prohibited by Parliament as a common nuisance, this manufacture having begun seriously to interfere with the British trade. Some work went on, however, despite this prohibition, and after the Revolution the development of the iron industries was actively entered upon. During the 19th century it increased enormously, the U. S. by the end of that century becoming the leading iron-producer among the countries of the world. The employment of coke in American blast furnaces was initiated in Pennsylvania in 1836 and that of anthracite coal in 1838. By 1840 the puddling furnace had practically superseded the older methods of making merchantable iron, and since 1867 the Bessemer converter has been largely relied on in the production of iron for railroad purposes. Steel has largely replaced wrought iron in very many lines of finished goods, it being now employed in the manufacture of nails, wire, plates, bars, beams, and structural iron generally, and in various other directions. The U. S. is to-day not only the largest producer of iron and steel products in the world, but also the largest consumer, the great bulk of the products being used within the country, though large quantities are exported. To quote from Mr. James M. Swank, a special agent of the 1880 census: "We are the greatest of all nations in the use of iron and steel in bridge building, for railroads and ordinary highways, and the lightness and gracefulness of our bridges are nowhere equalled, while their strength and adaptability are nowhere surpassed. We make more stoves than all the rest of the world, and in the use of iron for piping are probably in advance of every other nation. In the use of iron for ornamental and architectural purposes we probably excel all other nations." This statement might to-day be greatly added to, the U. S. occupying the foremost place in the world in iron manufacture as in iron production. In the one item of locomotives, for example, this country leads the world, and the same might be affirmed of various other classes of goods. The following table will serve to show the world's product for the dates appended:

COUNTRIES.	IRON ORE.		PIG IRON.	
	Years.	*Tons.*	*Years.*	*Tons.*
United States	1893	11,587,629	1895	9,597,449
Great Britain	1893	11,203,476	1895	8,022,006
Germany and Luxembourg	1893	11,457,491	1895	5,788,798
France	1891	3,579,286	1895	2,005,880
Belgium	1892	209,943	1895	829,135
Austria-Hungary	1892	2,050,000	1895	1,075,000
Russia	1892	1,577,015	1895	1,454,298
Sweden	1892	1,293,583	1895	465,000
Spain	1893	5,497,540	1895	206,430
Italy	1892	214,487	1895	10,500
Canada	1893	99,412	1895	38,434
All other countries	1893	1,800,000	1895	375,000
TOTAL.		50,569,862		29,868,239

For iron ore, English tons of 2,240 pounds are used for the United States, Great Britain, and Canada, and metric tons of 2,204 pounds are used for all the continental countries of Europe. For pig-iron and steel, metric tons are used for all.

Iron ore is very widely distributed throughout the U. S., occurring in many isolated deposits, and through certain widely extended areas. The Appalachian mountain range is rich in ore throughout its whole extent, the great ore belt commencing in the Adirondack region of New York and extending to northern Georgia and Alabama, the total length being more than 1,000 m., with an average width of 70 m. The most extensively worked deposits in this great iron field are those of Pennsylvania, but it is very rich elsewhere, as in West Virginia and Georgia, where it is now actively mined. In the central region of the country iron occurs abundantly in Michigan and other States bordering Lake Superior, where it is largely mined; and in Missouri, whose specially rich deposits have been above mentioned. Arkansas possesses an immense deposit of manganese ore, and Colorado has large ore beds south of Pike's Peak, which are worked to some extent. Wyoming possesses iron ore in practically inexhaustible quantity, while there are considerable deposits in the Pacific States, particularly in Washington, the Puget Sound Basin having immense beds of bog-ore, with deposits of magnetic and brown hematite.

Iron (*i'ern*), *a.* Made of iron; consisting of iron.—Resembling iron in color.

"A piece of stone of dark *iron*-gray color."—*Woodward.*

—Harsh; severe; rude; miserable; calamitous.

"Such notes as warble to the string,
Drew *iron* tears from Pluto's cheek."—*Milton.*

—Binding fast; not to be broken; firm; robust; vigorous.

"Him death's *iron* sleep oppress."—*Phillips.*

—*v. a.* To smooth with an instrument of iron.—To shackle with irons; to fetter or handcuff.—To furnish or arm with iron.

I'ron-bound, *a.* Bound or circled with iron.

I'ron-cased, I'ron-clad, *a.* Covered with iron.

I'ronclad, *n.* (*Naval.*) An armor-plated ship. See BATTLESHIP; CRUISER; MONITOR; ARMOR PLATE, &c.

Iron Cross. A Prussian order of knighthood, instituted March 10, 1813, by Frederick William III., consisting of an iron cross with silver mountings.

I'ron Crown, *n.* (*Hist.*) See CROWN.

I'roner, (*i'ern-r*), *n.* One who irons.

I'ron Found'er, *n.* One who founds or casts iron.

I'ron Found'ry, Iron Foundery, *n.* A foundry in which iron-castings are made. See FOUNDRY and IRON.

I'ron-gray, *n.* A color resembling that of iron.

—*a.* Of gray color resembling iron.

Iron'ic, Iron'ical, *a.* Containing irony; given to irony; expressing one thing and meaning the opposite

Iron'ically, *adv.* By way of irony; by the use of irony.
Iron'icalness, *n.* The quality of being ironical.
Ironing, (*i'ern-ing,*) *n.* A smoothing with an iron.
I'roning-board, *n.* A board used by tailors.
I'ronist, *n.* One who deals in irony.
I'ron, (Lough,) a lake of Ireland, in Leinster, abt. 7 m. N.W. of Mullingar.
I'ron Mask, (THE MAN IN THE.) (*Hist.*) See MARCHIALI.
I'ron-mould, I'ron-mold, *n.* A spot in cloth made by applying rusty iron to the cloth when wet.
I'ronmonger, *n.* A dealer in iron wares or hardware.
I'ronmongery, *n.* A general name for all miscellaneous articles made of iron; hardware.
I'ron Mountain, in *Missouri,* a village of St. Francois co. Its P. O. is MIDDLEBROOK. *Pop.* 1,150.
I'ron Mountain, in *Virginia,* a ridge of the Alleghenies, between Grayson and Smyth cos.—WHITETOP MOUNTAIN, its highest summit, is 4,260 feet above sea-level.
I'ron Ridge Junc'tion, in *Wisconsin,* a post-village of Dodge co. Its P. O. is IRON RIDGE.
I'ron-sick, *a.* (*Naut.*) Applied to old vessels when the iron-work becomes loose.
I'ron Ship, *n.* See VESSELS, ARMORED.
I'ronsided, *a.* Hardy; rough; strong.
I'ronsmith, *n.* A worker in iron; a blacksmith.
I'ron Spring, in *Georgia,* a village of Butts co.
I'ron-stone, *n.* (*Min.*) A variety of LIMONITE (*q. v.*).
I'ronton, in *Missouri,* a post-town, cap. of Iron co., 90 m. S. by W. of St. Louis. *Pop.* (1897) about 1,000.
I'ronton, in *Ohio,* a city, cap. of Lawrence co., on the Ohio river and several R. R. lines, 30 m. above Portsmouth; an important manuf. and trade center. *Pop.* (1897) about 12,000.
I'ronton, in *Pennsylvania,* a post-village of Lehigh co. *Pop.* 350.
I'ronton, in *West Virginia,* a post-office of Taylor co.
I'ronton, in *Wisconsin,* a post-township of Sauk co.
I'ronville, in *Pennsylvania,* a village of Blair co.
I'ronville, in *New York,* a post-village of Essex co.
I'ronville, in *Tennessee,* a post-office of Johnson co.
I'ron-wood, *n.* (*Bot.*) The common name for certain species of various genera of plants. See METROSIDEROS, OSTAYA and SIDEROXYLON.
I'ron-wood, in *Michigan,* a township of Gogebic co.
I'ronwood, in *Texas,* a P. O. of Liberty co.
I'ron-work, *n.* The parts or pieces of a building, vessel, carriage, &c., which are of iron; anything made of iron; manufacture of iron; working in iron.
I'ron-wort, *n.* (*Bot.*) See SIDERITIS.
I'rony, *a.* Made or consisting of iron; partaking of iron.—Resembling iron; hard.

—*n.* [Fr. *ironie;* Lat. *ironia;* Gr. *eironeia,* from *eiron,* a dissembler in speech.] Dissimulation; ignorance purposely affected to provoke or confound an adversary; a kind of ridicule which exposes errors or faults by seeming to approve, adopt, or defend them.

(*Rhet.*) *I.,* as defined by Aristotle, is an artful representation of qualities or things as less than they really are. Thus, among the various characters of the human mind as given by him, the *εἴρων* is one who affectedly conceals or depreciates his own good qualities. Quintilian gives to rhetorical *I.* a far more general sense, terming it *diversiloquium,* or the use of expressions contrary to the thoughts of the speaker. He also distinguishes it into two species, treating it as a trope or figure of speech where the opposition of thought to language extends only to a few words; a figure of thought, where it extends to a whole passage or discourse. The Socratic *I.* is employed in argument when one speaker affects to take the positions of the other for granted, in order adroitly to lead him into self-contradiction or obvious absurdity. In the ordinary sense, *I.* is a more delicate species of sarcasm, by which praises are bestowed where it is intended to convey the opposite sense of disapprobation; or assent is notified where the real object is to express dissent.

Iroquois (*ir-o-quoy'*), a group of American Indians originally embracing 5 nations and afterward 6, who planted themselves in western New York and on the shores of lakes Ontario and Erie. These nations were the Mohawks, Oneidas, Onondagas, Cayugas, Senecas, and Tuscaroras. The last named, a North Carolina tribe of the same family, were driven out in 1713 and joined the New York Iroquois. When the French arrived in Canada in 1603, the Iroquois were a mighty nation, at war with the Adirondacks; these last invoking the assistance of the new-comers, the Dutch, spreading themselves along the banks of the Hudson, even as far up as the present city of Albany, drove the Adirondacks before them. During the wars between the English and French, the Iroquois were divided into two great sections, both of which fought alternately on the side of both these nations. In the war of Independence, they were the allies of Great Britain, and severely annoyed the frontier settlements of New York and New Jersey. A powerful expedition was sent against them in 1779 under the command of General Sullivan, and their country was ravaged, and 18 of their villages burned. Since that period, they have been slowly but effectually driven before the advancing white man, and their tribes have become a mere remnant of their former strength. They number about 15,000, of whom several thousand remain in New York, while a large number make their homes in Canada.

Iroquois, in *Illinois,* a N. E. co., adjoining Indiana; *area,* about 1,120 sq. m. *Rivers.* Iroquois river, and several less important streams. *Surface,* mostly level prairie; soil, fertile. *Cap.* Watseka. *Pop.* (1890) 35,167.

—A post-village of Iroquois co., on Iroquois River, about 85 m. S. by W. of Chicago.
Iroquois, in *Indiana,* a township of Newton county.
Iroquois River, rises in Jasper co., Indiana, and flowing S.W. into Illinois, turns to the N.W., and joins the Kankakee River in Kankakee co. Length abt. 100 m. It is sometimes called the PICKAMINE.
Ir'pen, a river of Russia, in the govt. of Kiev. It flows into the Dnieper, 20 m. above the town of Kiev. Length 100 m.
Irra'diance, Irra'diancy, *n.* An illuminating; a sending forth rays of light on an object.—Beams of light emitted; lustre; splendor.
Irra'diant, *a.* [Lat. *irradians.*] Emitting rays of light.
Irra'diate, *v. a.* [Lat. *irradio, irradiatus—in,* and *radio,* to furnish with beams or rays, from *radius,* a beam, ray. See RAY.] To brighten; to make splendid; to adorn with lustre.—To enlighten intellectually; to illuminate.

"Celestial light
Shine inward, and the mind . . . *irradiate.*"—*Milton.*

—To animate by heat or light.

"Ethereal or solar heat must digest, influence, *irradiate.*"—*Hale.*

—To decorate with shining ornaments.

"Our shrines *irradiate.*"—*Pope.*

—*v. n.* To emit rays; to shine; to beam forth light.
—*a.* Adorned with rays of light, or with brightness, or with anything shining.
Irradia'tion, *n.* [L. Lat. *irradiatio.*] Act of irradiating or emitting beams of light; illumination; brightness; intellectual light; act of emitting minute particles, or effluvia from some substance.
Irradiation, (*ir-rād-e-ai'shun,*) *n.* [Fr., from Lat. *irradio,* I shine.] (*Optics.*) A phenomenon in virtue of which white objects or those of a very bright color, when seen on a dark ground, appear larger than they really are. With a black body on a white ground, the converse is the case. The two circles given in Fig. 1410 illustrate this. The black one and the white one are just of the same size, but the former appears to be the smaller. *I.* arises from the fact that the impression produced on the retina extends beyond the outline of the image. It bears the same relation to the space occupied by the image that the duration of the impression does to the time during which the image is seen. A star, for instance, seen with the naked eye, seems to be a disc of sensible magnitude. On account of its distance it would appear to be a point, if the rays of each pencil of light produced no effect beyond the axis of convergence. Thus, the discs of both the sun and moon are in like manner conceived to be apparently enlarged. When the moon is new, the part which is rendered luminous by the sun appears to be a portion of a larger sphere than the part which is more faintly illuminated by the reflected light from the earth: this phenomenon is also accounted for by the apparent enlargement, by irradiation, of the part enlightened by the sun. A kind of irradiation may also be produced, more or less, in a telescope, from defects in the object-glass, the irrationality of dispersion and diffraction, all of which give an apparent magnitude to a luminous point. The apparent magnitudes of celestial bodies were very erroneously estimated before the invention of the telescope. Tycho Brahe estimated the diameter of Venus to be twelve times, and Kepler, seven times, greater than it is now known to be. The cause of such mistakes is not removed by the telescope, but, by increasing the seen diameters without magnifying the effect of radiation, a proportional diminution is made in the error caused by the apparent enlargement. Objects which are of equal size, through the effect of irradiation, often appear to differ in size; this effect depends either on the color or the quantity of light which falls upon them. It was remarked by Sir William Herschel, that when a bright circle was viewed together with a dark one on a bright ground, the former always appeared larger than the other; and in order to correct the error in estimating the magnitudes of the columns about temples, when seen against a bright ground, the ancients made the thickness of the columns to increase proportionately to the distance between them. Vitruvius, in his work on architecture, explains this practice by saying that the columns with wide intervals, being more surrounded by the air, appear on that account to be more slender than those which are closer. The perceptions of magnitude, however, depend partly on those of distance, and a contrary effect frequently takes place with objects viewed against the sky, when they are believed to be more distant than is really the case.

Fig. 1410.

Irrad'icate, *v. a.* [Lat. *in,* in, and *radix,* a root.] To fix by the root; to insert firmly. (R.)
Irra'tional, *a.* [Lat. *irrationalis.*] That is void of reason; not rational.—Unreasonable; absurd; contrary to reason; unwise; foolish.

(*Math.*) Applied to numbers or quantities whose roots are incommensurable with unity, and which cannot, therefore, be accurately extracted. Thus the root of 2, or $\sqrt{2}$, is irrational, because it cannot be expressed by any finite number. If the side of a square be equal to 1, then $\sqrt{2}$ will be its diagonal, and will consequently be irrational; for geometry teaches us that the diagonal of a square is incommensurable with its sides. In algebra, irrationals are termed *surds;* and although they cannot be expressed in any finite numbers, yet close approximations can be made to their intrinsic values. Nothing shows this more plainly than the evolution of binomial surds, which gives us near a value as possible to the result aimed at. The theory is as follows: Assume $\sqrt{x}+\sqrt{y}=\sqrt{a}+\sqrt{b}$; then by squaring each side we gain $x+y+2\sqrt{xy}=a+\sqrt{b}$; $\therefore x+y=a$, and $2\sqrt{xy}=\sqrt{b}$. From these two equations we find x and y thus: $\left.\begin{matrix} x^2+2xy+y^2=a^2 \\ 4xy \quad\quad =b \end{matrix}\right\} \therefore x^2-2xy+y^2=a^2-b$

And, $x-y=\sqrt{a^2-b}$; but $x+y=a$

$$\therefore x=\frac{a+\sqrt{a^2-b}}{2}, \text{ and } y=\frac{a-\sqrt{a^2-b}}{2};$$

which gives us the nearest approximation to the value of the root $\sqrt{a}+\sqrt{b}$.

Irrational'ity, *n.* Want of rationality or reason, or the powers of understanding.
Irra'tionally, *adv.* Without reason; in a manner contrary to reason; absurdity.
Irra'tionalness, *n.* The quality of being irrational; irrationality.
Irrawadi, Irravady, Irrawaddy, Irawadi, or **Airavati,** (said to mean, like Mississippi, *father of waters.*) The principal stream in Further India, E. of the Brahmapootra. It rises in Lat. 28° N., Lon. 97° 30 E.; and, directing its course W.S.W., passes the cities of Amarapura and Old Ava. In Lat. 21° 45′ it is joined from the N.W. by the Kyan-quayn river; and in Lat. 17° 50′ it divides into two branches, one of which, running to the S.W., passes the town of Persaim or Bassem; the other, running to the S.E., passes Rangoon; but these branches again subdivide into many streams, which are met by the tide. The intermediate space is formed into a delta, similar to that of the Nile. Along the banks of this river, the greater part of the Burmese dominions is settled; and it is navigable for vessels of 200 tons burden as far up as Ava. Length, abt. 1,200 m.
Irrebut'table, *a.* That cannot be rebutted.
Irrecep'tive, *a.* That not receives, or cannot receive.
Irreclaim'able, *a.* Not to be reclaimed; that cannot be recalled from error or vice; that cannot be brought to reform; irrecoverable; incorrigible; untamable.
Irreclaim'ably, *adv.* So as not to admit of being reclaimed or of reformation.
Irrecog'nizable, *a.* That cannot be recognized.
Irreconcilabil'ity, *n.* Quality of being irreconcilable; incongruity.
Irreconcil'able, *a.* Not reconcilable; not to be called to amity, or a state of friendship and kindness; retaining enmity.—That cannot be made to agree or be consistent; incongruous; incompatible; as, opinions or propositions.
Irreconcil'ableness, *n.* Quality of being irreconcilable; incompatibility; incongruity.
Irreconcil'ably, *adv.* In a manner that precludes reconciliation.
Irreconcile'ment, Irreconcilia'tion, *n.* Want of reconcilement; disagreement.
Irrecord'able, *a.* [Lat. *irrecordabilis.*] Not to be recorded.
Irrecov'erable, *a.* Not to be recovered or repaired; irreparable; that cannot be regained; irretrievable; that cannot be obtained by demand or suit; not to be remedied.
Irrecov'erableness, *n.* The state of being irrecoverable.
Irrecov'erably, *adv.* Beyond recovery; beyond the possibility of being regained, repaired, or remedied; beyond the possibility of being reclaimed.
Irrecus'able, *a.* [Fr. *irrécusable.*] Not liable to exception.
Irredeemabil'ity, *n.* The quality of being irredeemable.
Irredeem'able, *a.* That cannot be redeemed; that is not subject to be paid at the nominal value; as, "an *irredeemable* paper currency."
Irredeem'ableness, *n.* Quality of being irredeemable.
Irredeem'ably, *adv.* So as not to be redeemable.
Irredu'cible, *a.* Not to be reduced; that cannot be brought back to a former state; that cannot be reduced or changed to a different state.

Irreducible Cases. (*Algebra.*) The name given to those peculiar cases in the solution of cubic equations where Cardan's theory, or formula, fails in its application, on account of its imaginary expression. This unfortunate circumstance caused great difficulties to arise in the paths of early analysts; and even up to the present day all efforts may be deemed unsuccessful. In order to show in what consists the difficulty, let the proposed cubic equation be $x^3+ax+c=0$; then, by Cardan's rule, we have

$$x=(\tfrac{1}{2}c+\sqrt{\tfrac{1}{27}a^3+\tfrac{1}{4}c^2})+\tfrac{1}{3}+(-\tfrac{1}{2}c-\sqrt{\tfrac{1}{27}a^3+\tfrac{1}{4}c^2})^{\frac{1}{3}}.$$

now if, in this expression, a is negative, and $\frac{1}{27}a^3$ is greater than $\frac{1}{4}c^3$, then $\frac{1}{27}a^3+\frac{1}{4}c^3$ will be a negative quantity, and, consequently, the extraction of a square root will be impossible, as the expression $\sqrt{\frac{1}{27}a^3+\frac{1}{4}c^3}$ will be imaginary. (See IMAGINARY QUANTITY.) But it is known, from the theory of equations, that every cubic equation must have at least one real root; and it is a circumstance not a little remarkable, that those cubic equations in which this imaginary expression occurs, have not only one real root, but have all the three roots real. It is possible to disengage the expression for the value of x from the imaginary quantities by expanding it by the binomial theorem; for the imaginary quantities, which will be the same in both resulting series, will be positive in the one series and negative in the other; and, therefore, on adding the series together, they will be eliminated. However, the series which results from this source will rarely be what is termed convergent, and, consequently, the method will be deprived of any utility it might have appeared to possess. The following method is, perhaps, the simplest of the many which have been devised wherewith to solve the difficulty of cubic equations. Suppose $x^3-xy=s$ be the proposed equation, an *arc*, a, must then be found in the trigonometrical tables whose natural cosine is $3s\sqrt{3}\div 2y\sqrt{y}$; then the three roots of the equation will be

$$x=2\sqrt{\tfrac{1}{3}y}\times\cos\tfrac{1}{3}a$$

$$x=2\sqrt{\tfrac{1}{3}g}\times\sin\tfrac{1}{3}(90^0-a)$$

$$x=2\sqrt{\tfrac{1}{3}y}\times\cos\tfrac{1}{3}(90^0-a).$$

These formulæ will apply whether S be negative or positive; but when S is negative, it would simplify the elimination if the *arc* a should be chosen, so that its *sine*, and not its *cosine*, be equal to $3s\sqrt{3}\times 2y\sqrt{y}$, when the roots will be found in a much easier manner.

Irredu'cibleness, *n.* The quality of being irreducible.

Irredu'cibly, *adv.* In a manner not reducible.

Irreflec'tive, *a.* Not reflective.

Irrefragabil'ity, *n.* The quality of being irrefragable.

Irref'ragable, *a.* That cannot be refuted or overthrown; incontrovertible; unanswerable; indisputable; incontestable; undeniable.

Irref'ragableness, *n.* The quality of being irrefragable, or incapable of being refuted.

Irref'ragably, *adv.* So as not to be overthrown.

Irref'utable, *a.* That cannot be refuted or disproved; unanswerable; indisputable.

Irref'utably, *adv.* Beyond the possibility of refutation.

Irregen'eracy, *n.* Unregeneracy.

Irreg'ular, *a.* [Lat. *irregularis* — *in*, and *regularis*.] Not regular; not according to common form or rules; not according to established principles or customs; deviating from usage. — Not conformable to nature or the usual operation of natural laws. — Not according to the rules of art; immethodical; anomalous. — Not in conformity to laws human or divine. — Disorderly; intemperate; inordinate; vicious. — Not straight, as a line; crooked; not uniform, as motion; variable; changeable.

(*Gram.*) Deviating from the common rules in its inflections, as a noun or verb.

(*Bot.*) Having the petals which constitute one series in a flower, the petals for example, dissimilar in size and form.

I. Cadence. (*Mus.*) One which does not end upon the essential chord of the mode in which a piece is composed.

I. Troops. (*Mil.*) Troops enlisted, paid, and officered differently from the regular army. So, in the British army of India, there are several regiments of irregular cavalry, raised by voluntary enlistment, and in which the men provide their own horses, arms, clothing, and subsistence.

Irreg'ular, *n.* One who does not follow a settled rule. — A soldier not in regular service.

Irregular'ity, *n.* [Fr. *irrégularité*.] Want of regularity; deviation from a straight line or from any common or established rule; deviation from method or order. — Deviation from law, human or divine, or from moral rectitude; inordinate practice; vice.

"The sinner is ashamed of his *irregularities*." — *Rogers.*

Irreg'ularly, *adv.* Without rule, method, or order.

Irrejec'table, *a.* That cannot be rejected.

Irrela'tion, *n.* Quality of being irrelative; want of relation.

Irrel'ative, *a.* Not relative; unconnected.

Irrel'atively, *adv.* Unconnectedly.

Irrel'evancy, *n.* State or quality of being irrelevant, not being applicable, not serving to aid and support. —*a.* Not applicable; not serving to support.

Irrel'evant, *a.* [*in*, and Fr. *relever*, to raise, from *élever*. Lat., *elevo*, *levo*, to raise.] Not applicable. (*Law.*) Argument, testimony, and evidence are *irrelevant*, when they do not serve to sustain the case.

Irrel'evantly, *adv.* Without being to the purpose.

Irreliev'able, *a.* That does not admit relief.

Irrelig'ion, *n.* [Fr. *irréligion* — *in*, and *réligion*.] Want of religion, or contempt of it; ungodliness; worldliness; wickedness; impiety.

Irrelig'ionist, *n.* One who is irreligious.

Irrelig'ious, *a.* [Fr. *irréligieux*.] Not religious; destitute of religious principles; contemning religion; impious; ungodly; contrary to religion; profane.

Irrelig'iously, *adv.* With impiety; wickedly.

Irrelig'iousness, *n.* Quality or state of being irreligious; want of religious principles or practices; ungodliness.

Irre'meable, *a.* [Fr. *irréméable*, from Lat. *in*, priv., and *remeo*, to return.] Which does not admit of return.

Irreme'diable, *a.* [Fr. *irrémédiable*.] Not to be remedied: that cannot be cured, corrected, or redressed; incurable; irretrievable; irreparable.

Irreme'diableness, *n.* State of being irremediable.

Irreme'diably, *adv.* In a manner or degree that precludes remedy, cure, or correction.

Irremis'sible, *a.* [Fr. *irremissible* — *in*, and *remissible*.] Not to be remitted or pardoned; that cannot be forgiven; unpardonable.

Irremis'sibleness, *n.* The quality of being irremissible.

Irremis'sibly, *adv.* So as not to be pardoned.

Irremis'sive, *a.* Not remitting.

Irremovabil'ity, *n.* Quality or state of being irremovable, or not removable from office.

Irremov'able, *a.* Not removable; that cannot be moved or changed; not legally removable from office.

Irremov'ably, *adv.* So as not to admit of removal.

Irremov'al, *n.* State of being not removed.

Irremu'nerable, *a.* [Lat. *irremunerabilis*.] That cannot be remunerated or rewarded.

Irrenowned', *a.* Not renowned; void of honor.

"And end their days in *irrenowned* shame." — *Faërie Queene.*

Irreparabil'ity, *n.* Quality or state of being irreparable, or beyond repair or recovery.

Irrep'arable, *a.* [Fr. *irréparable*; Lat. *irreparabilis* — *in*, and *reparabilis*.] That cannot be repaired or mended; that cannot be recovered or regained; irrecoverable; irretrievable; irremediable; incurable.

Irrep'arableness, *n.* State of being irreparable.

Irrep'arably, *adv.* In a manner or degree that precludes recovery or repair.

Irrepealabil'ity, *n.* State of being irrepealable.

Irrepeal'able, *a.* That cannot be repealed or revoked.

Irrepeal'ableness, *n.* Irrepealability; quality of being irrepealable.

Irrepeal'ably, *adv.* Beyond the power of repeal.

Irrepent'ance, *n.* Want of repentance; impenitence.

Irreplev'iable, Irreplev'isable, *a.* (*Law.*) That cannot be replevied or delivered on sureties.

Irreprehen'sible, *a.* Not reprehensible; not to be blamed or censured; free from fault.

Irreprehen'sibleness, *n.* The quality of being irreprehensible.

Irreprehen'sibly, *adv.* In a manner not to incur blame; without blame.

Irrepresent'able, *a.* Not representable; of which the idea cannot be imparted by any word or image; as, "God's *irrepresentable* nature."

Irrepres'sible, *a.* That cannot be repressed or restrained.

Irrepres'sibly, *adv.* So as not to be repressed.

Irreproach'able, *a.* That cannot be justly reproached; free from blame; unblamable; irreprovable; innocent; blameless; unblemished.

Irreproach'ableness, *n.* The state or quality of being irreproachable.

Irreproach'ably, *adv.* In a manner not to deserve reproach; blamelessly.

Irreprov'able, *a.* That cannot be justly reproved; blameless; upright.

Irreprov'ableness, *n.* The state or quality of being irreprovable.

Irreprov'ably, *adv.* So as not to be liable to reproof or blame.

Irrepti'tious, *a.* [Lat. *irrepto*, to creep into.] Creeping; crept in.

Irrep'utable, *a.* Not reputable; disreputable.

Irresil'ient, *a.* Not resilient; not recoiling or rebounding.

Irresist'ance, *n.* Forbearance to resist; non-resistance; passive submission.

Irresistibil'ity, *n.* Quality of being irresistible; power or force beyond resistance or opposition.

Irresist'ible, *a.* [Fr. *irrésistible*.] That cannot be successfully resisted or opposed; superior to opposition; resistless.

Irresist'ibleness, *n.* The state or quality of being irresistible.

Irresist'ibly, *adv.* With a power that cannot be successfully resisted or opposed.

Irres'oluble, *a.* Not to be dissolved; not to be broken.

Irres'olubleness, *n.* Resistance to separation of the parts.

Irres'olute, *a.* Not resolute; not firm or constant in purpose; not decided; not determined; given to doubt; wavering; vacillating; undecided; unsettled; unstable; unsteady.

Irres'olutely, *adv.* Without firmness of mind; without decision.

Irres'oluteness, *n.* Quality of being irresolute; want of firm determination or purpose; vacillation of mind.

Irresolu'tion, *n.* [Fr. *irrésolution*.] Want of resolution; want of decision in purpose; a fluctuation of mind.

Irresolvabil'ity, *n.* The state or quality of not being resolvable.

Irresolv'able, *a.* That cannot be resolved.

Irresolv'ableness, *n.* Quality of being irresolvable.

Irresolv'edly, *adv.* Without settled determination.

Irrespec'tive, *a.* Not having regard to; (*with of.*) Not regarding circumstances.

Irrespec'tively, *adv.* Without regard to; not taking circumstances into consideration.

Irres'pirable, *a.* [Lat. *irrespirabilis* — *in*, and *respirabilis*. See RESPIRE.] Unfit for respiration; not having the qualities that support animal life.

Irresponsibil'ity, *n.* Want of responsibility.

Irrespon'sible, *a.* Not responsible; not liable or able to answer for consequences; not answerable.

Irrespon'sibly, *adv.* So as not to be responsible.

Irrespon'sive, *a.* Not responsive.

Irrestrain'able, *a.* That cannot be restrained; unrestrainable.

Irresus'citable, *a.* That cannot be resuscitated.

Irresus'citably, *adv.* In such state as not to be resuscitable.

Irreten'tive, *a.* Not retentive; not capable of retaining.

Irretrace'able, *a.* That cannot be retraced.

Irretriev'able, *a.* That cannot be retrieved, recovered, or repaired; irremediable; irreparable; irrecoverable.

Irretriev'ableness, *n.* Quality of being irretrievable.

Irretriev'ably, *adv.* Irreparably; irrecoverably; in a manner not to be regained.

Irreturn'able, *a.* Not returnable.

Irreveal'able, *a.* That may not be revealed.

Irrev'erence, *n.* [Fr. *irrévérence*; Lat. *irreverentia*.] Want of reverence, or want of veneration; want of due respect; want of a due regard to the authority and character of the Supreme Being.—Disrespect; state of being disregarded.

Irrev'erend, *a.* Irreverent; disrespectful.

Irrev'erent, *a.* [Fr. *irréverent*; Lat. *irreverens* — *in*, and *reverens*.] Wanting in reverence and veneration; not entertaining or manifesting due regard to the Supreme Being; proceeding from irreverence; expressive of a want of veneration; disrespectful. — Wanting in respect to superiors.

Irrev'erently, *adv.* In an irreverent manner; without due respect to superiors.

Irrevers'ible, *a.* That cannot be reversed; that cannot be recalled, repealed, or annulled; irrevocable; unchangeable.

Irrevers'ibleness, *n.* State of being irreversible.

Irrevers'ibly, *adv.* In a manner which precludes a reversal or repeal.

Irrevocabil'ity, Irrev'ocableness, *n.* [Fr. *irrévocabilité*.] State of being irrevocable.

Irrev'ocable, *a.* [Lat. *irrevocabilis* — *in*, and *revocabilis*. See REVOKE.] Not to be recalled or revoked; that cannot be reversed, repealed, or annulled.

Irrev'ocably, *adv.* Beyond recall; in a manner precluding repeal.

Irrhetor'ical, *a.* Not rhetorical; not persuasive.

Ir'rigate, *v. a.* [Lat. *irrigo*, *irrigatus* — *in*, and *rigo*, to water; akin to Ger. *regen*, and Eng. *rain*.] To lead or conduct water or any other liquid to a place; to water; to wet; to moisten; to bedew.

(*Agric.*) To water, as lands, by causing a stream to flow upon it and spread over it.

Irriga'tion, *n.* [Fr.; Lat. *irrigatio*, from *irrigo*, to water.] (*Agric.*) The watering of the earth to increase its fruitfulness. In a more confined sense, the term is applied to that species of flooding which consists in spreading a sheet of water over a field or meadow, in such a manner that it can be readily withdrawn. Water is the most essential of all the substances which concur in the vegetation and growth of plants; no seed can germinate, and no plant receive nourishment, without moisture. No verdure exists in those warm climates where the rains are periodical and the soil is dried up by continual evaporation, unless springs or rivers supply the moisture required; and vegetation is always the most luxuriant where there is abundance of water, a warm temperature, and rapid evaporation. The observation of these circumstances suggested various methods of *I.* The artificial watering of the earth, chiefly to produce increased crops of grass, has been in use for a very remote period. In the Orient, the climate is such that, in various situations, soils now fertile would be sterile, were not the ground enriched with copious supplies of water. In patriarchal times, various hydraulic machines were used for the purpose of supplying the ground with water. Some of these resembled our common water-wheels, and were worked by the feet of men, somewhat after the manner of the modern tread-mill. It is to this custom that Moses alluded when he reminded the Israelites of their sowing their corn in Egypt and watering it with their feet, (*Deut.* xi. 10.) In the sandy soils of Arabia, a similar practice still exists. At the present day, in Egypt, water is sometimes raised, for purposes of irrigation, by means of a wicker basket lined with leather, which is held by cords between two men, who, by this laborious means, swing it over the banks of the Nile into the canal which conveys it to the lands intended to be irrigated. The *Shadoof*, which is a simple contrivance for drawing water (Fig. 1411), is also commonly used for the purpose, over a large portion of the Oriental countries. The early employment of irrigation by the Egyptians and Chinese was most probably the result of the good effects which were observed to be produced by the overflowing of the Nile and the Chinese rivers. In Italy, especially on the banks of the Po, *I.* has been carried on since before the time of Virgil; and the process is still employed in the same district with great care and zeal. After the fall of the Roman empire, agriculture rapidly

declined; but, singularly enough, *I.* contiuued to be practised throughout tbe dark ages with great success. This was more especially the case in Lombardy, where tho princes patronized and followed the example of the various religious establishments. The waters of tho chief rivers of Northern Italy, such as tho Po, the Adige, the Tagliament, and of all the minor streams, are used at the present day for irrigation. No other country possesses so large an extent of rich water-meadows as that portion of Italy. The

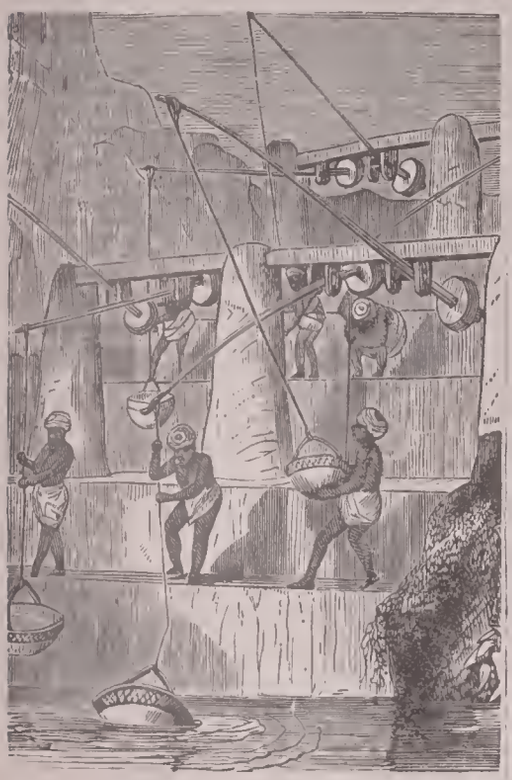

Fig. 1411. — MODERN SHADOOF.

whole country, indeed, from Venice to Turin, may be said to be formed into one great water-meadow. From Italy the practice spread into France and Spain, and lastly into Britain. In Bengal, wells are dug in the highest parts of the fields, and from them, by means of bullocks and a rope over a pulley, water is raised in buckets, and conveyed to all parts of tbe fields in small channels. Long before the discovery of America by Columbus, *I.* was practised by the Mexicans. They collected tho water from mountain torrents, and conducted it to their lands by means of proper channels, with great care and skill. It was not till the end of the 17th century, however, that water-meadows were constructed in Europe upon anything like a scientific system, and it was only towards the conclusion of the 18th century that great improvements took place in this branch of agriculture. With regard to tho precise manner in which irrigation acts, it would seem that much depends upon the chemical properties of the river-water employed. Atmospheric air and water contain all the principal elements of vegetables; namely, oxygen, hydrogen, nitrogen, and carbon; the rest are either present in the soil, or held in solution in the water. Besides, it seems probable that water has an important office with respect to the growth of plants. If the principle discovered by Macairo is admitted, namely, that plants reject through their roots those portions of the sap which form the residue of its elaboration, these portions can be of no further use to the plant, and may, in fact, be injurious to it. It may be, therefore, necessary to remove this residue, or excrement, as it may be called; and the percolation of water through the soil would appear to be the means which nature has provided for this purpose. It can, therefore, be readily supposed that tho simple washing of the roots with pure and soft running water has a beneficial effect upon plants. If water be allowed to grow stagnant, and to evaporate, leaving the hurtful matter in solution to remain in the soil, all the advantages of irrigation are lost. In such cases, rushes and coarse aquatic plants grow instead of grasses, as may be seen in all marshy places. Irrigation, to be effectual, depends, therefore, upon the circulation of the water; and the more porous the soil, and especially the subsoil, the more vigorous is the vegetation. In all cases of irrigation, the water, whether it comes from natural lakes and rivers, or artificial wells and ponds, must first be above the level of the land to be irrigated. This is generally the most important point to be considered. There must also be a ready exit for the water; consequently, the land must not lie lower than the natural receptacle of the water. One of the first and most important steps in *I.* is, therefore, taking the level. This becomes a simple matter when the ground lies along the banks of a running stream. A channel, receiving the water at a higher point than that to which the river flows, may be dug at a less declivity than that of the bed of the stream, and made to carry water higher than the banks of the river; from which level it can be allowed to descend slowly, and irrigate a considerable space before it returns to the stream. This form of *I.* is the most common; and the size, shape, and direction of the channels depend on tho nature of the soil, surface, &c. In all *I.*, the general principle may be described as the supply of an abundance of water to every portion of the surface, and taking it off again with rapidity. Artificial modes of effecting these two results are often necessary. When the surface to be irrigated is flat and level, it is frequently necessary to form artificial slopes for the water to pass over. The whole of the ground is then laid in broad undulating beds, the upper part of which is quite level from end to end where the supply-channel is cut. All the supply-furrows are fed by a main channel at right angles to the beds and somewhat above them. When the flood-gates are opened, the water flows into all the upper channels very regularly, till it fills them to overflowing in their entire length. The best water-meadows are those which have a perfect command of water and a regular supply. During frost, when the vegetation of dry meadows is suspended, the water-meadows are allowed to have a current of water flowing over them. By this means they are protected from the effect of frost, and the grass continues to grow as long as the water flows over it. Whenever the temperature is above freezing, however, the flow of water is stopped, as too much moisture would be injurious to the vegetation. By this means, at the first sign of spring, before the dry meadows have recovered from the effects of winter, the grass grows rapidly in the water-meadows. By careful and judicious management, two or three crops of grass can also be obtained in one season. When the water is suited for irrigation, the land never requires manure. The best soil for a water-meadow is a good gravel. In the northern part of the U. States, meadow lands are often so kept flooded with water in the winter season, the great advantage of this method being not so much the superior quantity and quality of the grass produced, as the early spring crops furnished by them. They thus afford pasturage to ewes and lambs, which can, by this means, be brought earlier into the market. There is, perhaps, no agricultural question of greater importance, in a national point of view, than the improvement of land by *I.*; for, by its means, all the rich organic and other matters diffused through the rivers, which would otherwise be borne to the sea, are saved to agriculture. See IRRIGATION in U. S., SECTION II.

Irrig'uous, *a.* [Lat. *irriguus.*] Supplied with water; well watered; watery; moist; dewy.

Irris'ible, *a.* Not risible.

Irri'sion, *n.* [Lat. *irrisio — in,* and *rideo, risum,* to laugh.] Act of laughing at another; act of deriding or mocking.

Irritabil'ity, *n.* [Fr. *irritabilité,* from L. Lat. *irritabilitas.*] Quality or state of being irritable, or of being easily irritated, excited, or exasperated.

(*Phys.*) Susceptibility of excitement or irritation.

(*Physiol.*) A power, possessed by all living, organized bodies, of being acted upon by certain stimuli, and of moving responsible to such stimuli. It is the ultimate vital property.

(*Bot.*) Tho name applied to many very interesting, but imperfectly understood, phenomena; as the so-called *Sleep of plants;* tho motion of the spores of many cryptogamic plants by means of cilia; the motions of *Oscillatoriæ Diatomaceæ,* and others of the lowest *Algæ;* the successive approaches of the stamens of *Parnassia palustris* to tho pistil; the movements of the leaves of tho *Moving Plant* of India; and those caused by agitation or by the touch of a foreign body in the leaves of *Sensitive Plants* of the *Dionæa* or Venus's Fly-trap, &c., in the stamens of the Barberry, *Schizanthus,* &c., and in the stigmas of *Mimulus,* &c. Many explanations have been proposed of these phenomena, but none satisfactory.

Ir'ritable, *a.* [Lat. *irritabilis,* from *irrito, irritatus.*] Susceptible of irritation or excitement; very susceptible of anger or passion; easily provoked, inflamed, or exasperated.

(*Physiol.* and *Bot.*) Susceptible of IRRITATION, *q. v.*

Ir'ritableness, *n.* Quality of being irritable; irritability.

Ir'ritably, *adv.* In a way to be irritated.

Ir'ritancy, *n.* State of being irritant.

Ir'ritant, *a.* [Fr., from Lat. *irritans.*] Irritating. —*n.* (*Med.*) That which causes irritation or pain, heat, and tension; either *mechanically,* as puncture, acupuncture, or scarification; *chemically,* as the alkalies and acids; or in a *specific manner,* as cantharides.

Ir'ritate, *v. a.* [Lat. *irrito;* akin to Gr. *erethō,* usually *erethizo,* to stir to anger, to provoke.] To rouse to anger; to provoke; to excite; to stimulate; to exasperate; to fret; to vex; to tease; to inflame.

(*Med.*) To excite heat and redness, as in the skin by friction.

Ir'ritated, *p. a.* Excited; provoked; subjected to irritation.

Ir'ritating, *p. a.* Exciting; angering; provoking; causing irritation.

Irrita'tion, *n.* [Fr.; Lat. *irritatio.*] Act of irritating; act of exciting or rousing to anger; incitement; excitement; provocation; exasperation; anger. — Excitement or action produced on organized bodies by the application of stimulants, medicines, &c.

(*Med.*) Tho state of a tissue or organ, in which there is excess of vital movement; commonly manifested by increase of the circulation and sensibility. Bronssais defines sensibility to be: — the condition of an organ, the excitation of which is carried to so high a degree, that the equilibrium resulting from the balance of all the functions is broken. In this signification he also uses the word surirritation, which he considers as a higher degree, and as the essential cause of fever. *I.* is the common precursor of inflammation. — *Dunglison.*

Morbid I.; Constitutional I. (*Med.*) That excitement which occurs after injuries done to the body, or to any part thereof.

Ir'ritative, *a.* Tending to irritate.

Ir'ritatory, *a.* Irritating; stimulating.

Ir'rorate, *v. a.* [Lat. *irroro,* to bedew.] To sprinkle or moisten with atoms, as the earth with dew.

Irrora'tion, *n.* A bedewing; a sprinkling.

Irru'brical, *a.* Not rubrical; contrary to the rubric.

Irrupt'ed, *a.* [Lat. *in,* into, and *rumpo,* to burst.] Forced through.

Irrup'tion, *n.* [Fr.; Lat. *irruptio — in,* and *rumpo, ruptus,* to break. See RUPTURE.] A breaking, rushing, or bursting into; a breaking or sudden violent rushing into a place. — A sudden invasion or incursion; a sudden, violent inroad, or entrance of invaders into a place or country.

Irrup'tive, *a.* Rushing in or upon.

Ir'tisch, a river of N. Asia, rising in the Altai Mountains, Lat. 47° N., Lon. 88° E., and flowing into the Obi at Samarova.

Irupana, (*e-ru-pa'na,*) a town of Bolivia, dept. of La Paz; *pop.* unascertained.

Irus, (*Homeric Myth.*) a beggar of Ithaca, and a sort of dependant at the palace of Ulysses; used by the suitors of Penelope as a messenger between themselves and the chaste wife. Upon the return of the long absent husband, Irus, who had forgotten his master's features, attempted to prevent his entrance into the palace; but though of immense stature and of vast strength, Ulysses struck him dead with one blow of his fist.

Ir'ville, in *Ohio,* a post-office of Muskingum co., about 55 m. E. by N. of Columbus.

Ir'vin, in *Pennsylvania,* a township of Venango co.

Ir'vine, a river in Ayrshire, Scotland, which flows into tho Frith of Clyde at Irvine.

Ir'vine, a seaport in Ayrshire, Scotland, 24 m. S. W. of Glasgow. *Pop.* (1897) about 10,000.

Ir'vine, in *Kentucky,* a post-village, cap. of Estill co., on the Kentucky river, about 70 m. S. E. of Frankfort.

Ir'vine, in *Pennsylvania,* a post-village of Warren co., on the Allegheny river, about 212 m. N. W. of Harrisburg.

Ir'vine, in *California,* a post-office of Calaveras co.

Ir'vine, in *Florida,* a post-office of Marion co.

Ir'vinestown, or LOWTHERSTOWN, a town of Ireland, in Ulster, co. Fermanagh, about 9 m. N. of Enniskillen. *Pop.* (1895) 864.

Ir'ving, EDWARD, a celebrated Scotch divine, and the founder of a sect denominated *Irvingites,* q. v. This clergyman, whose youthful history has been represented as unsettled and vagrant, was born at the village of Annan in 1792, and educated for the ministry at the university of Edinburgh. Many of the earlier years of his clerical life were passed in fulfilling the ordinances of the Church in Haddington, Kirkaldy, and Glasgow, his fervid eloquence and highly figurative style creating for him many admirers. It was not, however, till his arrival in London, about 1820, that his tall, remarkable figure and impressive manner attracted to him that attention that made him so highly popular and esteemed, his church in Hattou Garden being thronged with the *élite* of London Presbyterians, and compelling the erection of a much larger temple in Gray's Inn Road. Soon after, he was accused by the synod of heresy in his doctrine, and after an inquiry that extended over nearly two years, he was superseded, and declared by the presbytery unfit to discharge his functions. The immediate cause of this charge was the introduction into his service of what was called a supernatural manifestation of the Spirit, evincing itself in a rhapsody of unintelligible jargon from some one or other of the congregation, and which received the appellation of the "Unknown Tongues." The curiosity to hear him preach on the occasion of his visiting Scotland between the years 1828 and 1829, rose to a state of the most extraordinary anxiety, the doors of the churches and chapels being crowded for many hours before the time of service. In 1833 he was deposed from his ministry at Annan, his native place, which had such an effect on his health, that he never afterwards rallied. D. 1834.

Ir'ving, WASHINGTON, an American author, b. in New York, 1783. He was the youngest son of Wm. Irving, a descendant of the Erwyns, or Irvings, of Orkney, Scotland, who flourished there in the 15th cent. His father having died while he was still young, his education, which took place at home, devolved upon his elder brothers, young men of considerable attainments. His health, during youth and early manhood, was exceedingly delicate; and though his studies were retarded by this circumstance, his imagination and perceptive faculties gained by it; for, unable to sit closely to his books, he spent a great deal of his time in wandering about Manhattan Island, observing the picturesque aspects of nature in that place, and listening to the odd traditions of the old Dutch and other settlers. It is to these first impressions of his youth that so much of the quaint piquancy of his writings is due. His literary career was commenced in 1802, with a number of sketches contributed to the "New York Morning Chronicle," entitled *Letters of Jonathan Oldstyle.* His health was, however, so frail that he was compelled to travel, with a view to its renovation. He crossed the Atlantic, and visited France, Italy, Switzerland, Holland, and England. On his return to New York, he, together with Mr. Kirke Paulding, commenced a series of humorous and graphic sketches, which were published under the title of *Sal-*

Washington Irving

1783–1859

magundi. This work obtained a considerable degree of popularity, but was suddenly stopped at the end of 1807. After this he wrote a number of tales and essays for the magazines and newspapers, and about the same time began to study the law; but although he was admitted to the bar, he never practised as a barrister. In 1809

Fig. 1412.—WASHINGTON IRVING.

was published the humorous *History of New York, by Dietrich Knickerbocker*, which instantly made *I.* one of the most popular of American writers. On the breaking out of war against England, a few years afterwards, he was attached, with the rank of colonel, to the staff of Gen. Tompkins, governor of New York. On the establishment of peace, he went to Liverpool to represent the commercial house of Irving Brothers, a firm which subsequently failed; whereupon *I.* occupied himself exclusively with literature. After having travelled over England, he commenced his *Sketch-Book*, forwarding his manuscript in instalments to New York, where it was published. The very favorable manner in which the London critics spoke of this work, induced *I.* to seek a publisher for it in England. He was for a long time unsuccessful in this attempt; and having already met with an hospitable reception at Abbotsford, by Sir Walter Scott, he now sought that gentleman's advice. Although Scott could not help him to a publisher, he offered to procure him the post of editor for a periodical then about to be started in Edinburgh. *I.* declined this kind proposal. "My whole course of life," he said, "has been desultory; and I am unfitted for any periodically recurring task, or any stipulated labor of body or mind. I have no command of my talents, such as they are, and have to watch the varyings of my mind as I should those of a weathercock. Practice and training may bring me more into rule; but at present I am as useless for regular service as one of my own country Indians or a Don Cossack." He afterwards purposed to issue an English edition of his *Sketch-Book* at his own risk; but his publisher failed when the first volume only had been produced. The book became so rapidly popular, however, on both sides of the Atlantic, that Mr. Murray resolved to become its English publisher; and henceforth *I.*'s reputation was made. A second volume of the *Sketch-Book*, *Bracebridge Hall*, and the *Tales of a Traveller* succeeded, the last work appearing in 1824; the author's residence during the interval of their composition being alternately at London and Paris. In 1826, he set out for Madrid, for the purpose of examining some important documents relative to Columbus, which had just been discovered in a Jesuit college in that city. His researches in the Spanish archives, as well as his explorations of the old cities of Spain, resulted in the publication of several of his most popular books—the *History of the Life and Voyages of Columbus*; the *Voyages and Discoveries of the Companions of Columbus*; *The Conquest of Granada*; and *Tales of the Alhambra*. In 1829, he was appointed secretary of the American legation in London, the Royal Society of Literature awarding him one of its gold medals, and the university of Oxford conferring upon him its honorary degree of LL.D. about the same time. In 1832, "after an absence of 17 years, he saw again the blue line of his native land," as he has said; and on landing, a most enthusiastic reception awaited him. Leaving New York soon afterwards, in company with Mr. Ellsworthy, the Indian commissioner, he travelled in the far West, his knowledge of Indian and prairie life being reproduced in a series of entertaining works, the chief of which were *Tour on the Prairies*; *Astoria, or Enterprises Beyond the Rocky Mountains*; and the *Adventures of Captain Bonneville*. These were followed by a variety of sketches supplied to the American periodicals. In 1841, he was nominated minister plenipotentiary to the court of Spain, representing his country with distinguished success at Madrid till 1846, when he was, at his own wish, recalled. *I.* hereupon retired to his beautiful estate, Sunnyside, (see Fig. 1413,) on the banks of the Hudson, abt. 25 m. from New York, which he had purchased a few years before. In this charming retreat he lived, engaged in literary labors, till his death; narrating the rise and progress of Mohammedanism in his lives of *Mahomet and his Successors*, and the adventures of Oliver Goldsmith, in his biography of that poet and essayist. Besides these, he revised his complete works, and published a collected edition of them. His last productions were *Chronicles of Woolfert's Roost*, a series of sketches in the style of the old *Sketch-Book*; and the *Life of Washington*, the first volume of which was published in 1855; and this, as well as the concluding volumes, was hailed with an enthusiastic reception in America, while in England it became as popular as the previous efforts of its author. The genius of *I.* has been well depicted by Messrs. Evert and George Duyckinck, from whom we take the following lines:—"In estimating the genius of *I.*, we can hardly attach too high a value to the refined qualities and genial humor which have made his writings favorites wherever the English language is read. The charm is in the proportion, the keeping, the happy vein which inspires happiness in return. It is the felicity of but few authors, out of the vast stock of English literature, to delight equally young and old. The tales of *I.* are the favorite authors of childhood; and their good-humor and amenity can please where most literature is weariness, in the sick-room of the convalescent. Every influence which breathes from these writings is good and generous. Their sentiment is always just and manly, without cant or affectation; their humor is always within the bounds of propriety. They have a fresh inspiration of American nature, which is not the less nature for the art with which it is adorned. The color of personality attaches us throughout to the author, whose humor of character is always to be felt. This happy art of presenting rude and confused objects in an orderly, pleasurable aspect, is one of the most beneficent in literature. The philosopher Hume said a turn for humor was worth to him ten thousand a year; and it is this gift which the writings of *I.* impart. To this quality is allied an active fancy and poetic imagination, many of the choicest passages of *I.* being interpenetrated by this vivifying power. Parallel with the ruder, but more robust and athletic writings of Cooper, the volumes of *I.* improved American society, and rendered the national name beloved and respected abroad." *I.* was never married, in consequence of the death of a young lady, Miss Hoffman, whom he had loved, and whose Bible, "an old and well-worn copy, with the name in a lady's delicate hand," lay on the table by his bedside at Sunnyside, when he died. His death was occasioned by a sudden stroke of disease of the heart, Nov. 28, 1859. On Dec. 1, the day of his funeral, the bells of New York city were tolled, in accordance with the suggestion of the civil authorities, and the flags in the harbor and on the public buildings displayed at half-mast. He was borne to his grave by a road which winds through "Sleepy Hollow"; and near that place, rendered famous by his genius, he now sleeps. His elder brothers were four—William, Peter, Ebenezer, and John Treat. All were engaged in literary or professional life, except Ebenezer, who pursued a mercantile career.

Fig. 1413.—IRVING'S RESIDENCE, SUNNYSIDE.

Ir'ving, in *Illinois*, a post-village of Montgomery co., about 50 m. E.N.E. of Alton, on the C., C., C. & St. L. R.R.

Ir'ving, or **Ir'vington,** in *Iowa*, a post-township of Kossuth co., on the E. Fork of Des Moines river, about 6 m. below Algona.

Ir'ving, in *Kansas*, a township of Brown co.

—A post-village of Marshall co., on the Mo. Pacific and Union Pacific R.Rs. *Pop.* (1897) about 660.

Ir'ving, in *Kentucky*, a village of Pendleton co., about 38 m. S. by E. of Cincinnati, O.

Ir'ving, in *Michigan*, a post-township of Barry co., on the Michigan Central R.R.

Ir'ving, in *Minnesota*, a post-township of Kandiyohi co.

Ir'ving, in *New York*, a post-village of Chautauqua co., about 30 m. S.S.W. of Buffalo.

—A village of Cattaraugus co., on the Erie R.R.

Ir'ving, in *South Dakota*, a post office of Spink co.

Ir'ving, in *Wisconsin*, a post-township of Jackson co.

Ir'vingites, *n. pl.* (*Eccl. Hist.*) A body of Christians improperly called after the name of Edward Irving (*q. v.*). Like the Roman Catholics, they recognize only the Apostles', the Nicene and St. Athenasius' Creeds. Its special peculiarity is that it holds the first form of the church, having apostles, prophets, evangelists and pastors as its permanent ministers. Of these apostles have the highest place, and are rulers of the church universal. They are not elected or ordained by men, but called and sent forth immediately by God. This fourfold ministry, together with the power and gifts of the Holy Ghost, dispensed and distributed among her members, they regard as necessary for preparing and perfecting the Church for the second advent of the Lord. The congregations are placed under the pastoral rule of angels or bishops, with whom are associated in the work of the ministry priests and deacons. The deacons are a distinct and separate order of ministers, chosen by each congregation out of their own number, and ordained either by apostles or angels. The priests are first called to their office by the word through the prophets, and then ordained by apostles; and by a like call and ordination are the angels chosen from among the priests. The Holy Eucharist is celebrated every Lord's Day; and there is divine worship several times daily. The worship is conducted by means of a ritual, which embodies portions of the rituals in use in all different sections of the Church, Greek, Roman, and Protestant. In their ritual, observances, and offices of worship, external and material objects occupy a large place. Music and painting, vestments of divers colors, incense, lights, &c., are all employed to minister through the senses what is conveyed to the intellect and the spirit by words. When the numbers and means admit, the worship is conducted with the greatest magnificence; while it is also capable of adaptation to very narrow circumstances. Besides free-will offerings, members contribute a tenth part of their income to the support of the priesthood. The great object of interest to them is the hope of the speedy coming of Christ. In England, there are about 100 congregations. There are also congregations in Scotland and Ireland, Germany, Switzerland, France, Canada, and the United States, although in these last countries the believers are not numerous. See also article entitled CATHOLIC APOSTOLIC CHURCH.

Ir'vington, in *Illinois*, a post-township of Washington county.

Ir'vington, in *Indiana*, a post-town of Marion co. *Pop.* (1897) about 710.

Ir'vington, in *Iowa*, a township of Kossuth co.

Ir'vington, in *Kentucky*, a P. O. of Breckenridge co.

Ir'vington, in *Nebraska*, a post-village of Douglas co.

Ir'vington, in *New Jersey*, a post-village of Essex co., about 14 m. W. of New York city. *Pop.* (1895) 3,388.

Ir'vington, in *New York*, a post-village of Westchester co. *Pop.* (1897) about 2,600.

Ir'well, a river of Lancashire, England. Length 40 m.; flows into the Mersey.

Ir'win, in *Georgia*, a S. central co.; *area*, about 601 sq. m. *Rivers.* Ocmulgee, Alapaha, and the head-waters of the Little and Santilla rivers. *Surface*, level; *soil*, not fertile. *Cap.* Irwinville. *Pop.* (1890) 6,316.

Ir'win, in *Ohio*, a post-village of Union co., about 30 m. W. N. W. of Columbus.

Ir'win, in *Pennsylvania*, a post-borough of Westmoreland co., on the Penna. R. R., 21 m. E. of Pittsburg; in the gas-coal region. *Pop.* (1897) 2,650.

Ir'win, in *Virginia*, a post-village of Goochland co., on the C. & O. R. R.

Ir'win's Cross-Roads, in *Georgia*, a village of Washington co., about 30 m. S. E. of Milledgeville.

Ir'winton, in *Georgia*, a post-village, cap. of Wilkinson co., about 20 m. S. of Milledgeville.

Is. [A.S. *is, ys*; Lat. *est*; Gr. *esti*; Ger. *ist.*] The third person singular, pres. indic. of the substantive verb, which is composed of three or four distinct roots, which appear in the words *am, be, are*, and *is*.

Isaac, (*i'zak.*) [Heb., laughter.] One of the patriarchal ancestors of the Hebrew nation and of Christ, son of Abraham and Sarah, B. 2053 B. C. At the age of forty he married Rebecca, by whom he had two sons, Esau and Jacob; the former becoming the founder of the Edomites, and the latter, under the name of Israel, the parent of the Twelve Tribes, or the Israelites. Isaac lived to attain his 180th year, dying 1873 years B. C.

Isaac An'gelus, a Greek emperor, who, having obtained the crown in 1185 by the murder of Andronicus Comnenus, was himself deposed by his own brother, thrown into the palace dungeons, and his eyes put out. A counter-revolution, some few years later, drove the brother Alexius from his usurped throne, and the blind Isaac being dragged from his subterranean dungeon, was once again placed on the imperial seat, which he retained till his death in 1204.

Isaac Comne'nus, a Greek emperor, elected to the purple in 1057, in place of Michael Stratiotigus, who was deposed. Having excited a general discontent against him by meddling with the property of the ecclesiastics, he ceded the crown to Constantine Duncas, 1059, and retired to a monastery, where he D., 1061.

Is'abel, a village of Central America. See IZABAL.

Is'abel, ISABEL-COLOR, ISABELLA-COLOR, *n.* A brownish-yellow color, with a shade of dark-red.

Is'abel, in *Illinois*, a flourishing township of Fulton co.

Is'abel, or ISABELLE, in *Wisconsin*, a township of Pierce co.

Isabel, (St.,) (*e'sa-bail,*) a town of Brazil, prov. Matto Grosso, on river Paraguassa, an affluent of the Paraguay, 130 m. from St. Salvador.

Is'abel'la OF BAVARIA, daughter of Stephen II., duke of Bavaria, B. 1371, married to Charles VI. of France, 1385; D. miserably at Paris, after a reign marked by Intrignes and crimes, 1435.

Isabella OF CASTILE, daughter of John, 2d king of Castile, B. 1450. By her marriage, in 1469, with Ferdinand, 5th king of Aragon, the two crowns were united. The subsequent conquest of Granada, and expulsion of the Moors, left Ferdinand and Isabella the first sovereigns of united Spain. *I.* was a princess of remarkable abilities, and such rare domestic virtues, that her life and conduct became the pattern and example to all the queens and married ladies of the age. It was through *I.*'s exertions and influence that Columbus obtained the small armament that enabled him to reach the New World. This amiable sovereign D., universally beloved, in 1504. Very recently, in the old fortress of Simancas, where the archives of Castile are kept, have been found some letters in *I.*'s own handwriting, wherein she boasts

of establishing and upholding the tribunal of the Holy Inquisition; while other official documents disclose the fact that the estates of the unhappy victims who perished by the flames were wholly devoted to the queen's use, leaving the destitute widows and children in absolute

Fig. 1414. — ISABELLA OF CASTILE.

poverty. These letters have been the occasion of staining the hitherto respected character of *I.*; but it must be said, in exoneration of the queen, that, in her time, and chiefly in her country, heresy was generally considered the greatest of crimes, and that the burning of heretics was held as legitimate a thing, as is, in our own time, the hanging of a murderer. It must be recorded, also, that, so far from being avaricious, *I.* had her treasury always empty, and that, if some money came to her by the way of the Inquisition, this bloody inheritance was certainly used in undertakings of general benefit, perhaps to pay some of the bonds of the caravels on which Columbus came to discover America. The 15th cent. was remote from modern civilization, and the public characters of that epoch of relative barbarism must not be weighed in the same balance with those of our time.

Isabel'la II., EX-QUEEN OF SPAIN, was the daughter of Ferdinand VII., and B. at Madrid in 1830, upon which occasion the Salic law, which had previously been in force in Spain, was repealed by the Cortes, in order that Ferdinand's only child might inherit the crown. The death of her father, in 1833, advanced *I.*, at the age of three years, to the throne. Her uncle, Don Carlos, who in his own right, and that of his son, regarding the abrogating of the Salic law as a direct injustice and violation of their interests, refused to take the oaths of allegiance, and a large portion of the Spanish people, deeming it beneath their honor as men to be swayed by a woman, supported Don Carlos in his treason, and a civil war at once broke out; which, after raging for nearly seven years, was finally terminated in 1840, by the defeat of the Carlists, and expulsion of their chiefs and leaders. At the age of thirteen, *I.* was declared of age, and at sixteen was married to her cousin Don Francisco de Assis; the realm being governed, during her long minority, by her mother Donna Christina, and Espartero, Duke of Victory, who were appointed severally to the post of Regent. The principal events of her reign, almost continually disturbed by insurrections and cabals, will be found under SPAIN. Dethroned by the revolution of September, 1868, *I.* left Spain, accompanied in her flight by the king-consort and her four younger children, and took refuge in France, where she has resided since, squandering the treasures she brought with her into exile. Since 1840, when she was married against her will to a man said to be unfit for the conjugal state, the private character of *I.* has been exposed to considerable censure and scandal. She has had five children: 1. Infanta Marie-Isabel-Francoise-d'Assise-Christine-de-Paule-Dominga, born Dec. 20, 1851. 2. Alfonso, Prince of Asturias, born Nov. 28, 1857. 3. Infanta Marie del Pilar, born June 4, 1861. 4. Infanta Maria della Paz, born June 23, 1862; and 5. Infanta Maria Eulalie, born Feb. 12, 1864.

Isabella, (*e-sa-bel'ya,*) an island of Mexico, in the Pacific Ocean; Lat. 21° 45′ N., Lon. 106° W.

Isabel'la, a harbor on the N. coast of Hayti, about 36 m. W.N.W. of Santiago. It was here, in 1493, that Columbus established the first European settlement in the New World.

Isabel'la, in *Georgia*, a post-village, cap. of Worth co., about 20 m. E. of Albany.

Isabella, in *Michigan*, a central co.; *area*, about 580 sq. m. *Rivers.* Chippewa, Pine, and Salt rivers. *Surface*, diversified; *soil*, fertile. *Cap.* Mount Pleasant. *Pop.* (1894) 21,439.

—A village and township of Isabella co., about 75 m. N.E. of Grand Rapids.

Isabella, in *Missouri*, a post-village of Ozark co., about 64 m. S.E. of Springfield.

Isabella the Catholic. (ORDER OF.) A Spanish order of knighthood founded by Ferdinand VII. in 1815. It is conferred for all kinds of merit.

Is'abelle River, in *Wisconsin*, enters Lake Pepin in Pierce co.

Is'abey, JEAN BAPTISTE, a celebrated French painter, B. at Nancy in 1767. He was a pupil of David, but early devoted himself to the practice of miniature-painting, and in 1805 was appointed miniature-painter to the Emperor Napoleon I. In 1814 he accompanied the Empress Maria Louisa to Vienna, returning to Paris the following year. He afterwards visited Russia, and was employed by the Emperor Alexander I. He painted portraits of most of the European sovereigns, and of many distinguished men. Among his works are several large tablets with numerous small figures: the *Table des Maréchaux; Revue de premier Consul dans le cour des Tuileries*, &c. D. 1855.

Isadel'phous, *a.* [Gr. *isadelphos*, like a brother.] (*Bot.*) Noting that the separate bundles of stamens in a diadelphous flower are equal or alike.

Isæ'us, an Athenian orator, the pupil of Lysias and Isocrates. He lived in the first half of the 4th century B. C., was wholly unconnected with public affairs, and devoted himself to the task of instructing others. Eleven of his orations are still extant.

Isagog'ic, Isagog'ical, *a.* [Gr. *eisagogikos.*] Introductory.

I'sagon, *n.* [Gr. *isos*, equal, and *gonia*, an angle.] (*Geom.*) A figure having equal angles.

Isaiah, (*ī'zai-yd.*) (*Script.*) The first in order of the prophetic books of the Old Testament, and called after its author. Isaiah prophesied under the reigns of Uzziah, Jotham, Ahaz, and Hezekiah. According to a Jewish tradition, he was sawn asunder, by order of Manasseh; but this is very doubtful. Down to the latter part of the last century, Isaiah was universally regarded, both by Jews and Christians, as the author of this book; but since that time the German rationalists have been endeavoring to prove that the book is a collection of prophecies made by different persons, and collected and arranged during the Babylonish captivity. For the arguments against this view, see Jahn's *Introduction to the Bible*, Prof. Lee's *Sermons and Dissertations*, Hengstenberg's *Christilogie des Alten Testaments*, Horne's *Introduction to the Holy Scriptures.* The predictions of Isaiah may, according to Horne, be divided into six parts, each containing a number of discourses delivered by the prophet to the various nations or people whom he was commissioned to address. 1. Contains a general description of the estate and condition of the Jews in the several periods of their history; the promulgation and success of the gospel, and the coming of Messiah to judgment (i.–v.), delivered during the reign of Uzziah, king of Judah; 2, comprises the predictions delivered in the reigns of Jotham and Ahaz (vi.–xii.); 3, contains various predilections against the Babylonians, Assyrians, Philistines, and other nations with whom the Jews had any intercourse (xiii.–xxiii.); 4, contains a prophecy of the great calamities that should befall the people of God, — his merciful preservation of a remnant of them, and of their restoration to their country, — of their conversion to the gospel, and the destruction of Antichrist (xxiv.–xxxv.); 5, comprises the historical part of the prophecy of Isaiah (xxxvi.–xxxix); 6, comprises a series of prophecies delivered, in all probability, towards the close of Hezekiah's reign. Isaiah has been denominated the evangelical prophet, on account of the number and variety of his prophecies concerning the Messiah. This prophet, says Lowth, abounds in such transcendent excellencies, that he may be properly said to afford the most perfect model of prophetic poetry. He is at once elegant and sublime, forcible and ornamental; he unites energy with copiousness, and dignity with variety. In his sentiments there is uncommon elevation and majesty; in his imagery, the utmost propriety, elegance, dignity, and diversity; in his language, uncommon beauty and energy, and, notwithstanding the obscurity of his subjects, a surprising degree of clearness and simplicity. To these we may add that there is such sweetness in the poetical composition of his sentences, whether it proceed from art or genius, that if the Hebrew poetry is at present possessed of any remains of its native grace and harmony, we shall chiefly find them in the writings of Isaiah.

Isanot'zkoi, a strait of N. America, uniting Behring's Sea with the Arctic Ocean.

I'santi, in *Minnesota*, an E. co.; *area*, about 450 sq. m. *Rivers.* St. Francis, or Rum River, and numerous smaller streams. *Surface*, diversified; *soil*, fertile. *Cap.* Cambridge.

I'sar, a river of Germany, rising in the Tyrol, 6 m. from Innspruck, and after a course of 190 m., entering the Danube a little below Deggendorf.

I'satis, *n.* [Gr. *isazo*, to make equal; supposed to remove the roughness of the skin.] (*Bot.*) A genus of plants, order *Brassicaceæ. I. tinctoria*, the Woad, is an annual plant, native of Europe, occasionally cultivated here for the sake of its leaves, which yield a dye that may be substituted for indigo. It grows about 4 feet high, with large leaves clasping the stem with their broad bases; flowers yellow, large, in terminal racemes.

I'saure, CLEMENCE, (*e'sor.*) A rich and noble lady of Toulouse, who instituted, about the year 1490, the "Jeux Floureux" of Toulouse, and left to the city a considerable sum to defray the expenses of this concourse of poetry.

Is'ca, *n.* An excrescence on the oak and the hazel; — formerly used as a cautery.

Ischia, (*ees'ke-a.*) [The anc. *Ænaria.*] An island off the coast of Italy, between the Bay of Naples and that of Gaeta; *area*, 24 sq. m. *I.* is a favorite place of summer resort, and is noted for the excellence of its mineral waters and numerous springs, the great richness of its soil, the exquisite flavor of its fruits and wines, and the enchanting character of its scenery. Its highest point is the volcanic Monte Epomeo, 2,574 feet above the level of the sea, of which the eruptions have been numerous and disastrous. The Lake of *I.* appears to occupy an extinct crater of the volcano, and abounds in fish. *Pop.* of Island, 24,496. July 28, 1883, a severe earthquake occurred, destroying several towns, 2,313 lives, and 702 injured. *Ischia*, the cap., on the E. coast, facing the Bay. It is defended by a citadel (Fig. 1415) built on a rock of lava. *Pop.* 3,500, engaged in fishing and vine-dressing.

Fig. 1415. — CASTLE OF ISCHIA.

Ischiadic, (*is-ke-ad'ik,*) *a.* [From Gr. *ischion*, the hip.] (*Anat.*) Pertaining to the hip, or the parts near it.

Ischia'gra, *n.* [Gr. *ischion*, the hip, and *agra*, a catching.] (*Med.*) Ischiadic gout.

Ischi'al, *a.* Belonging or relating to the ischium, or hip-bone.

Ischiat'ic, *a.* Same as ISCHIADIC, *q. v.*

Ischim, (*ees'keem,*) a circle, town, and river in Siberia. The circle lies to the S. of Siberia, embraces a vast extent of barren steppes, and has a scattered population of 130,000. The town is of small importance, with a *pop.* of 1,000; and the river, after flowing through the greater part of the circle, and past the capital of the same name, falls into the Irtisch.

Is'chiom, Is'chion, *n.* [Gr.] (*Anat.*) One of the bones of the fœtal pelvis, and a part of the *os innominatum* in the adult.

Ischnoph'ony, *n.* [From Gr. *ischnos*, thin, and *phone*, voice.] (*Med.*) A term used by pathologists to designate a thin or small voice, loss of voice, and imperfect speech or stammering.

Ischnret'ic, *n.* Medicine for curing ischury.

—*a.* That has the faculty of relieving ischury.

Ischu'ria, Is'chury, *n.* Retention of urine. It is distinguished from dysuria in that, in the latter case, the discharge is attended with much difficulty, whereas in the former case there is a total retention. They are both either acute, arising from inflammation, or chronic, arising from calculus, &c.

Is'chua, in *New York*, a post-township of Cattaraugus co.

Is'chua Creek, in *New York*, enters the Alleghany River in Cattaraugus co.

I'ser, or GISERA, a river of Austria, rising in N. Bohemia, and flows into the Elbe at Alt Bunzlau. Length, 60 m.

Isère, a department of France, and anciently a part of the prov. of Dauphiné, bounded N. by the dep. of the Rhone, Ain, and part of Savoy; S. by the dep. of the Hautes Alpes; W. by those of the Loire and Drôme, and E. by Savoy; *area*, 3,185 sq. m. It is extremely mountainous, especially in the S.E., where spurs from the Alps pierce it for a considerable distance, rising to elevations ranging from 7,000 to 13,158 feet. The vine and mulberry are very extensively cultivated, in addition to the usual cereal crops. Minerals are also abundant, especially iron, copper, and lead. The manufactures are principally coarse woollens, sail-cloths, gloves, leather, &c. *Pop.* 650,000. — Also, the name of a river, which, rising in Savoy, pursues a S.W. course for nearly 200 m., when it enters the Rhone, to the N. of the town of Valence.

Is'erite, Is'crine, *n.* (*Min.*) An iron sand containing titanium. It is a variety of *Menaccanite*, q. v.

Iserlohn, (*ē'ser-lōn,*) an important manufacturing town of Prussia, in Westphalia, situated in a picturesque and mountainous district, on the Baar, 18 m. W. of Arnsberg. The industry of *I.* is chiefly directed to the manufacture of hardware of various kinds, especially of brass and bronze articles.

Iser'nia, a town of S. Italy, at the foot of the Apennines, 30 m. from Capua;

I'set, a river of Asiatic Russia, issuing from a lake on the E. side of Ural Mountains, and flowing into the Tobol, in prov. of Tobolsk; length, 300 m.

Is'ghem, a town of Belgium, in W. Flanders, 18 m. from Bruges. *Manuf.* Linens, cottons, silks, threads. *Pop.* 10,000.

Ish. [A. S. *isc*; Ger. *isch.*] A termination added to an adjective to express diminution; as, *bluish*, tending to blue. It is likewise sometimes the termination of a gentile or possessive adjective; as, *Swedish*, *Danish.* It likewise denotes participation of the qualities of the substantive to which it is added; as, *fool*, *foolish.*

Ish'bi-Be'nob. (*Script.*) A giant who was on the point of killing David in battle, but was slain by Abishai (*2 Sam.* xxi. 16, 17.)

Ish'bosheth, son and successor of Saul. Abner, Saul's kinsman and general, so managed that *I.* was acknowledged king at Mahanaim by the greatest part of Israel, while David reigned at Hebron over Judah. Involved

in a long and unsuccessful war against David, and abandoned by Abner, he was assassiuated.

Ishlm, (*e-sheem'*,) a river of Asiatic Russia, rising in a mountainous district in Lat. 51° N., and Lon. 74° E., and after a tortuous course of 900 miles, joining the Irtiseh near the town of Ishim.

Ish'mael, son of Abraham, by Hagar, who on the birth of Isaac, son of Sarah, was sent forth from his father's house with his mother. After dwelling in the desert for a long time, he became a great hunter and mighty warrior. The Arabs regarded Ishmael as the father of their nation, and the author of their language. He lived 137 years.

Ish'mael I., founder of the dynasty of the Sophis of Persia, was a descendant of Ali, son-in-law of Mohammed, and began his reign in 1502. He gained many victories, and established the Persian throne upon a solid basis. D. 1523.

Ishmael II. (*ish'ma-el,*) succeeded Thomas on the throne of Persia, in 1576. He was a sanguinary prince, and murdered eight of his brothers. He was poisoned in 1577, by his sister, out of religious zeal, *I.* being of a sect held heretical by the other Mohammedans.

Is'ia, a river in Forfarshire, Scotland, flowing into the Tay at Kinelaven. It is noted for a fall of 70 perpendicular feet.

Isias'lan, the name of three grand-dukes of Russia, who reigned, respectively, 1054–1078; 1146–1154; 1157–1161.

Is'idore OF ALEXANDRIA, a saint and partisan of Athanasius, B. in Egypt about 318; D. 404.

Isidore OF MILETUS, a Greek architect, employed by Justinian to erect the church of St. Sophia, at Constantinople, 6th cent.

Isidore OF PELUSIUM, a saint and disciple of Chrysostom, author of letters valued for their remarks on Scripture passages, on theological questions, and on church discipline. D. about 440.

Isidore OF SEVILLE, a saint and ecclesiastical writer and historian, distinguished for his piety and erudition, B. about 570; D. 636.

I'sicle, *n.* See ICICLE.

Isi'li, a town of Italy, in the Island of Sardinia, 35 m. from Cagliari, capital of province of the same name; *pop.* 2,600.

Isinglass, *n.* [Ger. *hausenblase*, the air-bladder of the sturgeon.] A very pure form of *gelatine*, prepared from certain parts of the entrails of several fish. The best is derived from the sturgeon, and is almost exclusively imported from Russia, twisted up in rolls or formed into cakes, which are afterwards torn into shreds or cut into fine shavings in this country. Good isinglass should be free from smell and taste, and perfectly soluble in boiling water.

I'sis. (*Egyptian Myth.*) The wife of Osiris and mother of Horus. She is, however, very variously described, and invested with many different characters. By the Greeks, she was generally identified with Demeter (Ceres). Among the higher and more philosophical theologians she was made the symbol of Pantheistic divinity: see especially the remarkable passage at the end of the *Golden Ass* of Apuleius. By the people she was worshipped as the goddess of fecundity, and in her honor an annual festival was instituted which lasted seven days. The cow was sacred to her. She was represented variously, though most usually as a woman with the horns of a cow, sometimes suckling Horus (Fig. 1416), and sometimes with the lotus on her head and the sistrum in her hand. Her priests were bound to observe perpetual chastity; but when her worship passed into foreign countries, her rites became merely a cloak for sacerdotal licentiousness, which at last reached such a pitch that they were prohibited at Rome. The worship of Isis, however, was repeatedly revived, and furnished a theme for the indignant pen of Juvenal.

Fig. 1416.—ISIS.

(*Astron.*) An asteroid discovered by Pogson in 1856.

Iskand'eroon. (*Geog.*) See ALEXANDRETTA.

Is'kelile, a town of Asiatic Turkey, 106 m. from Angora; *pop.* 10,000.

Isla de Pinos, (*ees'la-da-pee'nose,*) ("Isle of Pines,") an island of the W. Indies, belonging to Cuba, and about 50 m. S. of Havana; Lat. 21° 58′ N., Lon. 83° W. *Area*, about 600 sq. m. *Surface*, diversified by mountains and plains of the former: the Sierra de la Canada attains the height of 1,600 ft. The climate of the island is remarkably salubrious; *soil*, very fertile. *Min.* Silver, quicksilver, sulphur, iron, and a great variety of fine marble. The principal vegetable products are tobacco, pine, mahogany, cedar, besides the ordinary tropical fruits. The island was discovered by Columbus in 1494. For many years it was a rendezvous for pirates. *Cap.* Nueva Gerona. *Pop.* 2,000.

Isla del Rey, (*ees'la-del-ra,*) ("King's Island,") the largest of the Pearl Islands, in the Bay of Panama, belonging to the Republic of Colombia.

Is'lam, *n.* The religion of Mohammed. The body of the Faithful, and the countries in which their religion is professed, are so termed by the Mohammedans. All those who professed the true religion and the unity of God before the arrival of Mohammed, are considered as comprised in the character and privileges of Islamism. The Mufti of Constantinople, or the chief minister of religion in Turkey, bears the title of *Sheikh-ul-Islam*. See MOHAMMEDANISM.

Islamabad', a town of Cashmere, 35 m. from Serinagur; Lat. 33° 43′ N., Lon. 75° 5′ E. *Manuf.* Principally shawls. *Pop.* 25,000.

Is'lamism, *n.* The religion of Mahomet; Islam.

Islamit'ic, *a.* Relating to Islam, or Islamism.

Is'lamize, *v. a.* To conform to Islamism.

Island, (*il'and,*) *n.* [A. S. *eland* — *ea*, water, and *land*, land; Ger. and Du. *eiland*; Fr. *isle*.] A tract of land encompassed with water, whether of the sea, a river, or a lake; — in contradistinction to *continent* or *terra firma*. The detached portions of land separated from each other, and from the larger masses or continents, by water spaces more or less wide and deep, are of two very distinct kinds. Some are elongated and generally parallel to continents, others are detached, rounded, or in groups and systems in open ocean. The former are called *continental*, and the latter *pelagic*. Of the continental islands of Europe, the British Islands, the islands between Italy and Spain, and those of the Grecian Archipelago, are the most important. As connected with Asia and Africa, Formosa, and the Japanese group, the New-Zealand group, Madagascar, and the islands of the Indian Archipelago, are the most characteristic; while the West India Islands, Terra del Fuego, and the chain of islands off the north coast of North America are illustrative examples.

Islands of the Blessed. [Lat. *Insulæ Beatorum*; Gr. *Nesoi Makaron.*] (*Myth.*) The happy islands, supposed to lie westward in the ocean, whither after death the souls of the righteous were transported.

Isl'and, in *Pennsylvania*, a post-office of Clinton co.

Isl'and, in *Washington*, an extreme N.W. co., consisting of a number of islands between the Strait of Juan de Fuca on the W., and the mainland on the S. and E.; *area*, about 220 sq. m.; *soil*, fertile. *Cap.* Coupeville. *Pop.* (1890) 1,787.

Isl'and, *v. a.* To dot with islands; to make an island of.

Isl'and Bridge, a village of Ireland, in Leinster, co. of Dublin, about 2 m. W. of Dublin Castle. *Pop.* 700.

Isl'and City, in *Kentucky*, a post-office of Owsley co.

Isl'and City, in *Missouri*, a post-office of Gentry co.

Isl'and Creek, in *Maryland*, a P. O. of Calvert co.

Isl'and Creek, in *Mass.*, a P. O. of Plymouth co.

Isl'and Creek, in *N. Carolina*, a twp. of Duplin co.

Isl'and Creek, in *Ohio*, a post-village and township of Jefferson co., about 155 m. E. by N. of the city of Columbus.

Isl'and Pond, in *Vermont*, a post-village of Essex co., abt. 149 m. N.W. of Portland, Maine.

Isl'ands, (Bay of,) a considerable bay of British North America, being an arm of the Gulf of St. Lawrence, on the E. coast of Newfoundland; Lat. 49° 20′ N., Lon. 58° 15′ W.

Isl'anded, *a.* Insulated; formed as an island.

Isl'ander, *n.* An inhabitant of an island.

Isl'andy, *a.* Belonging to, or full of islands.

Islay, ILAY, or ILA, one of the Hebrides, or W. Islands of Scotland, S.W. of Jura, belonging to the co. of Argyle. *Ext.* 25 m. long and 24 broad. *Area*, 154,000 acres. *Desc.* The soil is varied, but a small portion being suitable for cultivation. *Prod.* Barley, oats, and flax.

Islay, (*ees'li,*) a seaport-town in Peru, port of entry of Arequipa; Lat. 17° S., Lon. 72° 10′ 5″ W.

Isle, (*ile,*) *n.* [O. Fr. *isle*; Fr. *île*; It. *isola*; Lat. *insula* — *in*, and *salum*, the sea.] Land in the sea, that is, land, or a tract of land, surrounded by the sea or by water; an island.

Isle, (*eel.*) a river rising in dep. of Upper Vienne, France, and joining the Dordogne at Libourne; length, 160 m.

Isle au Haut, (*eel-a-ho,*) in *Maine*, a rocky islet and light-house at the entrance of Penobscot Bay. It exhibits a fixed light, 40 ft. above sea-level, in Lat 43° 59′ N., Lon. 68° 34′ W.

Isle-aux-Coudres, (*eel-o-kood'r,*) an island of prov. of Quebec, in the St. Lawrence River, abt. 57 m. N.E. of Quebec.

Isleborough, (*il'bur-ruh,*) in *Maine*, a township of Waldo co.

Isle-Dieu, (*eel-dee(r,*) an island abt. 15 m. W. of the Court of Vendée, France.

Isle la Motte, in *Vermont*. See LA MOTTE. —A post-township of Grand Isle co.

Isle of France, (Fr. ILE-DE-FRANCE,) an ancient prov. of France, now included in the deps. Oise, Seine, Seine-et-Oise, Seine-et-Marne, and Aisne.

Isle of France. See MAURITIUS.

Isle of Wight. See WIGHT, (ISLE OF.)

Isle of Wight, in *Virginia*, a S.E. co.; *area*, abt. 230 sq. m. *Rivers.* James and Blackwater rivers. *Surface*, diversified; *soil*, not very fertile. This co. was one of the original 8 shires into which Virginia was divided in 1634. *Cap.* Isle of Wight C. H. *Pop.* (1890) 11,313.

Isle Royale (*ile roy'al*), in *Michigan*, an island of Isle Royal co., in Lake Superior, abt. 50 m. N.W. of Keweenaw Point; *area*, abt. 210 sq. m. *Surface*, generally level; *soil*, fertile. *Min.* Copper in considerable quantities. The island has several excellent harbors, but as yet there is no permanent population.

Isles of Shoals, in *New Hampshire*, a group of eight small islands in the Atlantic Ocean, about 8 m. S.S.E. of Portsmouth Lighthouse; Lat. 42° 58′ N., Lon. 70° 37′ 20″ W.

Isl'et, *n.* A little island.

Isle'ta, in *New Mexico*, a post-village of Bernalillo co.

Isle'ton, in *California*, a post-village of Sacramento county.

Isleworth (*i'sel-worth*), a suburb of London, Eng., situated on the banks of the Thames, opposite Richmoud.

Is'lington (anc. called *Iseldone*), a suburb of London, Eng.

Is'lip, in *New York*, a post-town of Suffolk co., about 45 miles N. E. of the city of New York. *Pop.* (1890) 8,733.

Isln'ga, a town and volcano in S. of Peru; Lat. 19° 12′ S., Lon. 68° 50′ W. The town is 13,000 feet above the level of the sea, and the volcano, 4 m. distant, about 18,000 feet.

Ism, *n.* [From the Eng. termination *-ism*, expressing the theory or abstract idea denoted by the word of which it is the affix.] A theory, tenet, or doctrine; — particularly used in a bad sense; a fanatical code of belief or argument; a wild or problematic idea expressed in words; a specious and alluring, but unsubstantial doctrine.

Is'mael Pash'a, KHEDIVE, or VICEROY OF EGYPT, son of Ibrahim Pasha, and grandson of the celebrated Mehemet Ali, was B. at Cairo in 1830, and succeeded his brother, Said Pasha, as ruler of Egypt, in Jan., 1863. He was educated in Paris, and on his return to Egypt, in 1849, he opposed the policy of Abbas Pasha, the then viceroy, who, as it was supposed, for political purposes, made, in 1853, a criminal charge against him, which was not, however, proceeded with. In 1855, *I. P.* visited France on a confidential mission, and proceeded to Rome. He extended his rule over most of the Upper Nile, and actively pursued the internal policy of his predecessor, namely, the development of the resources of his country, and the placing her in a state of real (though not openly avowed) independence of the Ottoman Porte. The most important event which distinguished his rule will be found treated under the head of SUEZ CANAL. His portrait will be found under EGYPT. He was deposed in 1879 and was succeeded by his son, Mahaumed Tewfik. See EGYPT.

Ismail (*is'ma-eel*), or ISMAILOV, a fortified town of the Kingdom of Roumania, province of Moldavia, on the N. bank of the Kilia branch of the Danube, about 40 m. from the mouth of that river. It was taken, destroyed, and its garrison put to the sword by Suwaroff in December, 1790; came into the possession of Russia after the peace of the Bucharest in 1812; but reverted to Turkey by the treaty of Paris, 1856. Since 1878 has been subject to Russia. It has a good river port and carries on a considerable general trade. *Pop.* (1897) about 31,000.

Is'nik, a town of Asiatic Turkey, 65 m. from Constantinople. It was formerly the cap. of Bithynia, but is now a mere village. The lake of same name is 20 m. long, and 6 broad.

Is'obare, *n.* [Gr. *isos*, equal, and *baros*, weight.] (*Phys. Geog.*) An imaginary line connecting together those places on the earth where the mean height of the barometer at the level of the sea is the same.

Isobarometric, *a.* [Gr. *isos*, equal, *baros*, weight, and *metron*, a measure.] (*Phys. Geog.*) Noting lines on the globe connecting places where there is the same mean difference between the monthly extremes of the barometer.

Isochi'mal, Isochim'enal, *a.* [Gr. *isos*, equal, and *cheima*, winter.] (*Phys. Geog.*) Having the same mean winter temperature.

Isochi'mene, *n.* [See above.] (*Phys. Geog.*) An imaginary line connecting together all the places on the earth which have the same mean winter temperature.

Isochromat'ic, *a.* [Gr. *isos*, equal, and *chroma*, color.] Having the same color.

I. Lines. (*Optics.*) When a pencil of polarized light is transmitted along the axis of a crystal, such as mica or nitre, and then received into the eye after passing through a plate of tourmaline, colored rings are perceived. To these colored rings the term isochromatic lines has been applied. If between two plates of tourmaline having their axes at right angles to one another, a plate of nitre be placed, having its surfaces perpendicular to the axis of the natural prism, and highly polished, and the system, held close to the eye, be turned towards the sky or a sheet of white paper, there will be seen a series of oval rings about each of two points or poles, forming together figures resembling the curves called *lemniscata*. The curves receive their name from the circumstance that throughout each the tint is constant.

Isoch'ronal, Isoch'ronous, *a.* [Gr. *isos*, equal, and *chronos*, time.] (*Mech.*) Noting oscillations or vibrations performed in equal times. — *Isochronal lines* are those along which a heavy body descends with a uniform velocity.

Isoch'ronism, *n.* [See above.] (*Mech.*) A remarkable property appertaining to all systems in equilibrium, by which, when slightly disturbed more or less, the oscillations resulting are all performed in the same time, or so nearly in the same time that any retardation or acceleration is imperceptible. When a pendulum, for instance, is allowed to vibrate till it rests, it will be

found that no perceptible difference exists between the vibrations of longer or shorter extent, the same number of vibrations being made in the same length of time. Again, in the sound produced by a musical string, the finest ear cannot detect any difference in the pitch of a note made by a smart blow on the pianoforte key and a gentle touch; yet a very small difference in the number of vibrations per second would be perceptible to the ear.

Isoch'ronon, *n.* A clock or time-keeper designed to keep exactly equal time.

Isoch'rous, *a.* [Gr. *isos*, equal, and *chroa*, color.] (*Bot.*) Uniformly colored throughout; one-colored.

Isoclin'al, *a.* [Gr. *isos*, equal, and *klino*, to incline.] (*Phys. Geog.*) Having equal inclination.—*I. lines* are those lines which pass through places where the magnetic dip or inclination is the same.

Isoc'rates, one of the greatest orators of Greece, was B. at Athens, B. C. 436, and was the son of a musical-instrument maker. His principal teachers were Gorgias, Prodicus, and Theramenes. On account of his weak voice and natural timidity, he took but little share himself in public speaking, but he applied himself with the greatest ardor to instruction in the art of eloquence, and preparing orations for others. He was particularly distinguished for a polished style and an harmonious construction of his sentences his subjects were the most important points of morals and politics, and it is recorded to his honor that he never, by writing or accusation, injured a single individual. He was warmly attached to the liberties of his country, and such was his grief on hearing of the fatal battle of Chæronea, that he took no food for four days, and literally D. of starvation in the 98th year of his age.

Isod'omon, *n.* [Gr. *isodomos*, built alike.] (*Anc. Arch.*) Masonry cut and squared to the same height, so that, when laid, the corners were all regular and equal.

Isodynam'ic, *a.* [Gr. *isos*, equal, and *dynamis*, power.] (*Phys. Geog.*) Applied to lines passing through all places on the globe where magnetic intensity is the same.

Iso'etes, *n.* [Gr. *isos*, equal, *etos*, the year; from its being evergreen.] (*Bot.*) A genus of plants, order *Marsilaceæ*. *I. lacustris*, the Quilt-wort, is a curious aquatic, frequently wholly submerged, found in ponds and rivers in the New England and Middle States. Its leaves or fronds are numerous, tufted and simple, somewhat spreading, containing numerous cells divided both by longitudinal and transverse partitions; thecæ whitish, imbedded in corresponding cavities in the bases of the fronds, traversed within by many threads to which the numerous, small, white, granular spores are attached.

Isogeotherm'al, *a.* [Gr. *isos*, equal, *ge*, the earth, and *therme*, heat.] (*Phys. Geog.*) Noting lines which, in the interior of the earth, pass through all places having the same mean temperature.

Isogon'ic, *a.* [Gr. *isos*, equal, and *gonia*, an angle.] (*Phys. Geog.*) Applied to lines passing through all places on the surface of the earth at which the horizontal magnetic needle makes the same angle with the meridian, or at which the *declination* is the same.

Isog'raphy, *n.* [Gr. *isos*, equal, and *grapho*, to write.] Imitation of handwriting.

Isohy'etose, *n.* [Gr. *isos*, and *yetos*, rain.] (*Phys. Geog.*) An imaginary line connecting all those places on the earth where the mean annual quantity of rain is the same.

Isola, (*e-so'la*,) a town of Austrian Illyria, 7 m. from Capo d'Istria;

Iso'la Bella. See MAGGIORE, (LAGO.)

Isola-del-Giglio, (*-dail-geel'ye-o*,) a town and island of Tuscany, in the Mediterranean, 18 m. from Orbitello; Lat. 42° 20′ N., Lon. 10° 50′ E.; *area*, 8 sq. m.

Iso'la-Gros'sa, or LUNGA, an island of Austria, in the Adriatic, on W. coast of Dalmatia, between Lat. 43° 51′ and 44° 11′ N. It is 27 m. long, and 3 broad. *Pop.* 12,000.

Is'olable, *a.* (*Chem.*) That may be isolated from other substances in combination.

Is'olate, *v. a.* [It. *isolato*, detached, *isolato*, several houses standing separate, from *is-ola* = Lat. *insula*, an island.] To place in a detached situation; to place by itself; to insulate.

(*Chem.*) To separate a substance from a combination by decomposition or substitution.

(*Phys.*) To insulate.

Is'olated, *p. a.* Separated.—Insulated.

Isol'ogous, *a.* [Gr. *isos*, equal, and *logos*, analogy.] (*Chem.*) Applied to a series of carbon compounds, that differ from each other by one or more equivalents of hydrogen, but still bear a close relationship. Thus, the derivatives of ethyl, C_4H_5, are isologous with those of allyl, C_6H_5, both of these radicals commencing a series of acids, ethers, alcohols, aldehydes, &c.

Isome'ria, *n.* (*Algebra.*) A distribution into equal parts.—*Bailey.*

Isomer'ic, *a.* [See below.] (*Chem.*) Noting compounds which contain the same elements in the same ratio, and yet exhibit distinct chemical qualities.—See ISOMERISM.

Isom'erides, *n. pl.* [Gr. *isos*, equal, *meros*, part.] (*Chem.*) Substances which have the same ultimate composition, but different properties, owing to their elements being grouped together in a different manner. Thus, formiate of ethyl and acetate of methyl have precisely the same ultimate composition, but their elements are disposed in a different manner:

Formic acid, C_2HO_3,	Oxide of ethyl, C_4H_5O = $C_6H_6O_4$; and
Acetic acid, $C_4H_3O_3$,	Oxide of methyl, C_2H_3O = $C_6H_6O_4$.

Isom'erism, *n.* (*Chem.*) The quality or state of being isomeric.

Isom'erous, *a.* (*Bot.*) Applied to a flower in which the different parts are equal to each other in number.

Isomet'ric, Isomet'rical, *a.* [Gr. *isos*, equal, and *metrein*, to measure.] (*Perspective.*) Applied to a method of drawing any building, or range of buildings, in such a manner that the height, length, and breadth may be exhibited in the proportion which they really bear to each other, and not as they appear when the drawing is made in accordance with the rules of perspective; in other words, the perspective plane of the paper must be imagined as making equal angles with the three principal dimensions of the figure and the eye, at an infinite distance. Thus lines in the 3 principal directions will be drawn on the same scale, and that scale is the same for all parts of the line. The manner in which an object is represented when drawn in isometrical perspective will be best understood by reference to Fig. 1417, in which a cube (1) is represented in accordance with the rules of perspective, and (2) according to isometrical perspective.

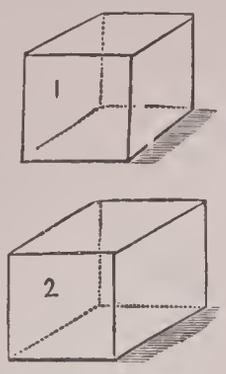

Fig. 1417.

Isomor'phism, *n.* [Gr. *isos*, equal, and *morphe*, form.] (*Chem.*) The state or quality of being isomorphous.

Isomor'phous, *a.* (*Chem.*) Noting substances which resemble each other in their crystalline forms, but differ in their component parts. Thus the phosphate and biphosphate of soda have the same form, or are *isomorphous*, with the arseniate and binarseniate of soda; and in regard to other bases, such as potash and ammonia, each arseniate has a corresponding phosphate possessed of the same form. In these cases there is necessarily an analogy in the atomic constitution of the compounds, which are observed to possess the same number of equivalents of acid, alkali, and water of crystallization, and differ in nothing except that the one series contains an atom of arsenic, and the other an atom of phosphorus.

Isonan'dra, *n.* (*Bot.*) A genus of plants, order *Sapotaceæ*. The species *I. gutta*, the Taban-tree, is a large forest-tree of the Indian Archipelago, growing 60 or 70 feet high, with a trunk 2 or 3 feet in diameter, and abounding in milky juice, which is *Gutta-percha*, q. v. The juice has been obtained by felling the trees, and through this extravagant mode it has become extinct in Singapore, whence the produce was first obtained. The average quantity yielded by each tree is set down at 20 lbs.

Isoperimet'rical, *a.* [Gr. *isos*, equal, and *perimetron*, circumference.] (*Geom.*) A term applied to figures, rectilineal or curvilineal, having equal perimeters.—An *I. problem* originally denoted one in which, of all possible *I.* figures, that one was required which possessed some other assigned property or properties. As an example of an *I.* theorem, to which the solutions of such problems lead, we may cite the well-known one according to which the area of a circle is greater than that enclosed by any other *I.* figure. The term *I.*, however, was soon extended to a more general class of problems regarding the nature of the figure which, having certain properties in common with others, is distinguished from the latter by some maximum or minimum property.

I'sopod, *n.* [Gr. *isos*, and *pous*, a foot.] (*Zoöl.*) A crustacean which has the legs all alike, and adapted only for locomotion and prehension.

Is'opod, Isop'odous, *a.* Relating to an isopod.

I'sopyre, *n.* [Gr. *isos*, equal, and *pur*, fire.] (*Min.*) A grayish or black glassy mineral found at St. Just near Penzance, and on Calton Hill, Edinburgh. *Comp.* Silica 47·09, alumina 13·91, oxide of iron 20·07, lime 15·43, oxide of copper 1·94.

Isos'celes, *a.* [Gr. *isos*, equal, and *skeros*, a leg.] An *I.* triangle is one which has two equal sides.

Isostem'onous, *a.* [Gr. *isos*, and *stemon*, a thread or stamen.] (*Bot.*) A term which, in expressing the proportion that one part bears to another, denotes that the stamens are equal in number to the petals.

Isoth'eral, *a.* [Gr. *isos*, and *theros*, summer.] (*Phys. Geog.*) Applied to lines which pass through those parts on the surface of the earth which have the same mean summer heat.

I'sothere, *n.* (*Phys. Geog.*) An isotheral line.

I'sotherm, *n.* [Gr. *isos*, and *therme*, heat.] (*Phys. Geog.*) An isothermal line.

Isotherm'al, *a.* Having equal heat or temperature.

I. Lines. (*Phys. Geog.*) Are those which pass through those points on the surface of the earth at which the mean annual temperature is the same. *Isothermal zones* are spaces on opposite sides of the equator having the same mean temperature, and bounded by corresponding isothermal lines. On account of the irregular form and disposition of the continental masses, by which the climate of different places is greatly influenced, the isothermal curves are not parallel to the equator, excepting in the very low latitudes. According to Humboldt, the isothermal line which corresponds to the temperature of 32° Fahrenheit passes between Ulea in Lapland, Lat. 66°, and Table Bay on the coast of Labrador, Lat. 54°. The isothermal line of 41° passes near Stockholm, Lat. 59½°, and St. George's Bay, Newfoundland, Lat. 48°. The line of 50° passes through the Netherlands, Lat. 51°, and near Boston in the United States, Lat. 42½°; that of 59° between Rome and Florence, Lat. 43°, and Raleigh in North Carolina, Lat. 36°. In all these cases we see that the isothermal lines, in passing from the western side of the continent of Europe to the eastern coast of America, deviate very considerably towards the south; the deviation in one case amounting to 11½° of latitude. In passing over the American continent, they again recede to the northward; and in California, and to the north of that peninsula, along the western side of the continent, the annual temperature is nearly the same as under similar latitudes in the west of Europe. From the western to the eastern side of the old continent, the flexure of the isothermal curves and the diminution of the mean annual temperature under the same parallels are not less conspicuous. The isothermal line of 55° passes through Nantes, Lat. 47°, and Pekin, Lat. 39½. Edinburgh and Kasan (in the east of Russia) have the same latitude; but the mean annual temperature of the former is 48°, while that of the second is below 38°. For the different causes which affect the parallelism of the isothermal lines, or which produce the differences of the mean annual temperature of places under the same parallel of latitude, see CLIMATE.

Isotherom'brose, *n.* [Gr. *isos*, *theros*, summer, and *ombros*, rain.] (*Phys. Geog.*) An imaginary line connecting all those places on the earth where the quantity of summer rain bears the same proportion to the yearly quantity of rain.

Isoton'ic, *a.* [Gr. *isos*, and *tonos*, tone.] Having equal tones.

Isotrop'ic, *a.* [Gr. *isos*, and *tropeo*, to turn.] (*Physics.*) Applied to bodies the elastic force of which acts equally in all directions.

Ispahan', (anc. *Aspadana*,) a celebrated city of Persia, and formerly the cap. of that empire, 211 m. S. of Teheran, and 263 S.S.W. of Bushire. This city was once so extensive and populous that the Persians said of it, "Ispahan is half the world." It is situated in the prov. Irak-Ajemi, of which it is the cap., as well as of a beglerbeglic of the same name. This city, which was at the height of its glory during the reign of Shah Abbas, in the 17th cent., now presents to the observer little beyond the magnificent ruins of its former greatness. It stands in the midst of an extensive plain, abundantly watered by the Zenderood, a river about 600 feet broad; and is surrounded by groves, avenues, and spreading orchards. Within its limits the city comprises one vast succession of superb mosques, immense bazaars, marble palaces, canals, fountains, and gardens. *I.* has within the last 50 years begun to revive from its long regime of desolation. The manufacture of all kinds of woven fabrics, from the most costly gold brocade of figured velvet, to the most ordinary calico or coarse cotton, is pursued on an extensive scale; many hands are also employed in making trinkets and jewelry, paper, and papier-mache goods, arms, steel sword-blades, glass and earthenware. *I.* is the chief commercial emporium of Persia, and on the great line of communication between India, Cabul, and China on the E., and Turkey, Egypt, and the Mediterranean on the W. The inhabitants are considered the best artificers in Persia, and education is very general. *I.*, under the caliphs of Bagdad, became the cap. of Irak, and under Shah Abbas, the metropolis of Persia. Under this great monarch, *I.* was a city 24 m. in circuit, and contained 160 mosques, 48 colleges, 1,800 caravanserais, 273 public baths, and 12 cemeteries, and was inhabited by 600,000 people. In 1722, *I.* was reduced by the Appans, and in 1727 was retaken by Nadir Shah, who, however, took no steps to restore it to its ancient glory. Within the last 100 years, the cap. has been transferred to Teheran, and *I.* has gradually fallen into a state of decay, from which even its commercial importance has not been able to redeem it. *Pop.* estimated at 60,000.

Ispahan'ee, *n.* A native or inhabitant of Ispahan.

Is'rael, (KINGDOM OF,) one of the two kingdoms into which the Jewish nation were divided on the death of Solomon. Upon that event taking place, the tribes of Judah and Benjamin elected Rehoboam, one of Solomon's sons, for their king, who, making Jerusalem his capital, established the kingdom of Judah; while Jeroboam, his brother, was at the same time nominated king of the remaining ten tribes, who, fixing the royal seat first at Sichem, and afterwards in Samaria, established the kingdom of Israel. For the 250 years which the kingdom existed, 19 sovereigns sat on the throne, beginning with Jeroboam, and terminating with Hoshea, in whose reign Shalmaneser, king of Assyria, took and destroyed the cap., and carried the whole of the people into Mesopotamia as captives, terminating in 721 B. C. the kingdom of Israel. During the two centuries and a half that the independence and power

Fig. 1418.—CHURCH OF ST. JOHN. (Samaria.)

of Israel endured, its people were engaged in almost constant war with the rival kingdom of Judah, as well as with the monarchs of Syria and Assyria. The kingdom of Israel was infinitely more populous and considerably larger than the rival state, and comprehended the whole of Galilee, Samaria, and a portion of Judea. Of the town of Samaria, *q. v.*, the most conspicuous ruin now extant is the Church of St. John the Baptist (Fig. 1418) erected on the spot which an old tradition fixed as the place of his burial, if not of his martyrdom. It was probably built during the crusades, though its erection is attributed to the Empress Helena.

Israel, (*iz'rai-el.*) [Heb., the strong, the struggler.] (*Script.*) The name bestowed on Jacob, after his encounter with the angel in the wilderness. This name was subsequently adopted by the descendants of this patriarch, and still retained by all of the Jewish persuasion.

Is'rael, in *Ohio*, a township of Preble co.; *pop.* abt. 2,400.

Is'raelite, *n.* One descended from Israel; a Jew.

Israelit'ic, Israelit'ish, *a.* Belonging or relating to Israel; Jewish.

Is'rael's River, in *New Hampshire*, enters the Connecticut River in Coos co.

Issaque'na, in *Mississippi*, a W. co., adjoining Louisiana; *area*, 370 sq. m. *Rivers.* Mississippi, Sunflower, and Yazoo rivers. *Surface*, low, and some parts frequently inundated; *soil*, fertile. *Cap.* Mayersville. *Pop.* (1890) 12,318.

Issoire, (*is'swawr,*) (anc. ISSIODURUM,) a town of France, dept. Puy-de-Dome, at the confluence of the rivers Couze and Allier, 20 m. S.E. of Clermont; *pop.* 6,500.

Issoudun, (*is'soo-du(r,*) a town of France, in dept. of Indre, 18 m. N.E. of Chateauroux. *Manuf.* Woollen cloth and yarn. *P* . 12,500.

Is'suable, *a.* That may be issued; as, *issuable* currency.

Is'suably, *adv.* In an issuable manner.

Is'suant, *a.* (*Her.*) A charge represented as issuing or coming up from another charge or bearing; also, a lion or other beast represented as rising from the bottom line of a chief.

Is'sue, *v. n.* [Old Fr. *issir*, to go out; It. *uscire;* Sp. *echár;* Lat *exire* — *ex*, and *eo*, *ire.*] To pass or flow out; to run out of any inclosed place; to proceed, emanate, or spring, as from a source; to go out; to rush out. — To proceed, as progeny; to spring; to be produced; to arise; to grow or accrue. — To come to an issue at law; to close; to end; to terminate.

—*v. a.* To send out; to put into circulation. — To deliver from authority.

"Here he gives audience, *issuing* out decrees."—*Dryden.*

—To deliver for use.

—*n.* [Old Fr. *issu*, fem. *issuë;* Fr. *issue.*] A moving out of any inclosed place; egress; a sending out. — Event; effect; consequence; end or ultimate result. — Progeny; a child or children; offspring. — Produce of the earth, or profits of land, tenements, or other property. — A giving out from a repository; delivery.

(*Med.*) An artificial ulcer; a drain established by art, to keep up a free discharge from a certain place, in the hope of inducing a healthy action in the part beneath. See SETON.

(*Law.*) A word of various significations. Sometimes it denotes the children begotten between a man and his wife; sometimes the profits growing from amercements and fines; sometimes the profits of lands and tenements; but it generally signifies the point of matter in dispute between a plaintiff and defendant in a cause. When, in course of pleading, the parties in a cause come to a point, which is affirmed on one side and denied on the other, they are then said to be at issue. Issues concerning causes are of two kinds, — upon matter of fact, and matter of law. An issue in fact is where the plaintiff and defendant have agreed upon a point to be tried by a jury, and issue in law is determined by the judges. Issues are also *general* or *special.* A general issue is where the defendant denies the whole, or the principal part of the allegations of the plaintiff; a special issue is where some special matter, or material point, is in dispute between the two parties. When a special plea is pleaded, evidence is only admissible as to the truth or falsehood of the particular fact which is the subject of that plea; but in the general issue, the plaintiff is usually compelled to prove his whole case to the satisfaction of the jury; and, at the same time, the defendant is enabled to prove any circumstances whatever which discharge his liability. There must be in every issue an affirmation on the one part and a denial on the other, and the negative should be as full as the affirmative. When either party admits the facts, but denies the law of the other, he is said to demur. The statements and counter-statements of the parties are called the pleadings. — See PLEADING.

Is'sue-peas, *n.* See CITRUS.

Is'suer, *n.* One who issues.

Is'sus. (*Anc. Geog.*) A city of Asia Minor, in the kingdom of Cilicia, situated on the frontiers of Syria, and memorable as the spot where Alexander the Great encountered Darius with his army of half a million, and totally routed his Persian host. Arrian states that 110,000 Persians were left dead on the field.

Issy, (*is'se,*) a town of France, in the department of the Seine, 3 miles from Paris. *Manuf.* Chemicals, lime, whiting, and bricks. *Pop.* 2,100.—Here Cardinal Fleury died, in 1745; and here Fenelon was examined by a conclave of bishops, when he was suspected of heresy.

Istalif', a town of Afghanistan, at the base of the Hindoo-Coosh, 22 m. N.W. of Cabul; Lat. 34° 46′ N., Lon. 68° 58′ E. *Pop.* 15,000.

Istamboul, Stamboul, (*e-stam-bool',*) the Turkish name of CONSTANTINOPLE, *q. v.*

Istapa, (*ees-ta'pa,*) a town of Mexico, near the Pacific Ocean, about 85 m. E.S.E. of Zacatula.

Isthmian Games, (*isth'me-an.*) (*Antiq.*) Sacred games among the Greeks, instituted B. C. 1326. They received their names from the Isthmus of Corinth, where they were observed. They were celebrated in commemoration of Melicertes, who was changed into a sea-deity, when his mother Ino had thrown herself into the sea with him. They were for some time interrupted; but Theseus afterwards reinstated them in honor of Neptune, whom he asserted to be his father. These games were observed every fifth year. Combats of every kind were exhibited, the victors being awarded with garlands of pine-leaves. Some time after, the victor received a crown of withered parsley. The years were reckoned by the celebration of these games. They were abolished under the reign of Adrian, B. C. 130.

Isth'mo, Isth'mus, a dept. of the Republic of Colombia, consisting principally of the isthmus uniting Central and S. America; *area*, about 25,000 sq. m. The chief towns are Chagres, Panama, Puerto Bello, and Veragua. *Pop.* 150,000.

Isth'mus, *n.* [Lat.; Gr. *isthmos*, from *eimi*, root *io;* Sans. *i*, to go; Gr. *eisithme*, an entrance, from *eisimi*, to go into.] (*Geog.*) A narrow passage or entrance; a neck or narrow slip of land by which two continents are connected, or by which a peninsula is united to the mainland. Thus, the isthmus of Darien or *Panama* joins N. and S. America, and the isthmus of *Suez* connects Africa with Asia.

Istib', a town of European Turkey, 60 m. from Ghinstendil; *pop.* 8,000.

Istria, (*ees'tre-a,*) a peninsula of the Austrian empire, formed by the gulfs of Trieste and Fiume, which indents the land from the Adriatic, and bounded on the N. by Carniola. It forms now the southern division of the Coast-land, or Küstenland.

Isturiz, or **Isturitz,** (*ēs-tu-rēēz',*) DON XAVIER DE, a Spanish statesman, B. at Cadiz, 1790, was elected a member of the Cortes of 1812–14. Ferdinand VII. having rewarded his most devoted servants with exile or imprisonment, *I.* offered his house to the malcontents, and presided at the famous rising of Riego, Jan. 1, 1820. After the establishment of the Constitution, *I.* went to Madrid, where he founded several liberal clubs, and contributed, perhaps involuntarily, to the excesses which followed the triumph of the Revolution. In 1823 he was elected President of the Cortes, and at the restoration, fled to London, where he obtained mercantile employment. Having been in exile condemned to death, he was amnestied by Maria Christina, and, in 1834, returned to Spain, again entered the Cortes, and by his ultra-democratic zeal excited the rising of the National Guard, which overthrew the Torreno administration. Under Mendizabel's ministry, *I.* held the office of President of the Chamber of Procuradores, a kind of council of state. After the fall of Mendizabel, *I.*, who became Foreign Secretary, and President of the Council, May 15, 1836, offended all parties by his violence. The outbreak of La Granja, of Aug., in consequence of which the Constitution of 1812 was reëstablished, obliged him once more to seek refuge in England. *I.* received a second amnesty in 1837, was sent to the Cortes in 1838, and was nominated President of the Congress of 1839. During the regency of Espartero, *I.* plotted to enable the queen-mother Maria Christina to return to Spain, and gave him her confidence in the negotiations for the Spanish marriages. He succeeded Narvaez as prime-minister in Feb., 1846, was replaced by his predecessor in the following March, returning to power in April, and was dismissed by a vote of want of confidence carried by the Cortes in December. *I.*, who was three times ambassador in England, signed, with M. De Flakault and Earl Russell, the convention of Oct. 31, 1861, for intervention in Mexico. He was appointed ambassador for Spain at the French Court in 1863, and retired in Oct., 1864. D. 1871.

Iswa'ra. [From Sansk. *is*, lord.] (*Hindoo Myth.*) An epithet applied to different divinities, but more commonly used to designate SIVA, *q. v.*

It, *pron.* [Sax. *hit, hyt;* D. *het;* Ger. *es;* Old Ger. *ez;* Dan. *det;* L. *id, istud;* Gr. *to;* Slav. *to, ta;* Gael. *esa;* Sansk. *tat*, he, that.] A substitute or pronoun of the neuter gender, standing for anything except males and females, and meaning the thing said or spoken of before; used also as the nominative case, or word to verbs called impersonal; as, *it* rains, *it* snows.

Itabaianna, or ITABAHIANNA, (*e-ta-bi-an'na,*) a town of Brazil, prov. of Sergipe, and abt. 50 m. W.N.W. of the São Christovão; *pop.* 3,000.

Itabaian'na, or ITABAHIANNA SIERRA, a mountain of Brazil, the highest of the prov. of Sergipe. They are supposed to contain rich mines of gold, though they have never been worked.

Itabira, (*e-ta-bee'ra,*) a town of Brazil, prov. of Minas-Geraes, on the Velhas River, abt. 18 m. W.N.W. of Ouro Preto; *pop.* 6,000.

—A mountain abt. 10 m. W. of the above town, the soil of which is said to contain a considerable proportion of gold.

Itabi'ra-de-Mata-Dentro, a gold-mining town of Brazil, abt. 60 m. N.E. of Ouro Preto.

Itab'iryte, *n.* (*Min.*) A schist resembling mica schist, but containing much specular iron ore in graine or scales, or in the micaceous form.

Itaborahi, (*e-ta-bo-ra-ee',*) a town of Brazil, abt. 26 m. N.E of Rio-de-Janeiro.

Itacolumi, (*e-ta-ko-loo-mee',*) a mountain of Brazil, abt. 50 m. N.N.W. of Maranhão; Lat. 2° 8′ 38″ S., Lon. 44° 27′ W. It is a conspicuous landmark for mariners, and near it is a light-house to indicate the approach to Maranhão.

—A mountain of Brazil, prov. of Minas-Geraes, immediately S. of Ouro Preto.

—A mountain of Brazil, prov. of Rio Janeiro, in the Sierra dos Orgaos.

Itacolu'mite, *n.* (*Min.*) A sand rock, containing a little talc, but consisting mainly of quartz. It is laminated and granular, and in thin slabs more or less flexible, and is sometimes called *flexible sandstone.*

Ita est. [Lat.] So it is.

Itaguahi, (*e-ta-gwa-ee',*) a town of Brazil, abt. 40 m. W. of Rio-de-Janeiro; *pop.* 5,500.

Itaipu, (*e-ti-poo',*) a maritime village of Brazil, abt. 12 m. E.S.E. of Rio-de-Janeiro; *pop.* 3,000.

Ital'ian, *a.* Pertaining to Italy.

—*n.* A native of Italy. — The language used by the Italians.

Italian Architecture, (*it-ăl'yan,*) a style of architecture founded on the old Roman orders, and the characteristic features of the ancient buildings of Rome, which may be considered to have been initiated in Italy by Brunelleschi and the Italian architects of the day, in the 15th century, and brought to perfection by Palladio and other architects of eminence, in the 16th century, who flourished in the times of the Medici. In buildings designed both for public and private purposes, it is chiefly characterized by the use of the Roman orders of architecture, rather as decorative than constructive features. These are mainly obtained by the use of pilasters placed along the façade of each story of a building at intervals, each row of pilasters being surmounted by an entablature running along the entire length of the edifice, like a string-course. When engaged columns, or columns attached to the wall, and projecting from its face to the extent of one-half or three-fourths of their diameter, were used, the entablature was broken over each column, to prevent the heavy appearance that it would have presented if it had been of the same depth throughout; and this was frequently done in the case of pilasters. The cornices of the entablatures were richly ornamented. The windows and doors were decorated with pilasters or columns, rising from a massive and projecting sill, and surmounted by circular, pointed, or broken pediments, on which recumbent figures were frequently placed. The roof was partially hidden by a balustrade, which crowned the edifice, and rose above the attic story, and the pedestals of the balustrade generally supported statues or sculptured vases. (See BALUSTRADE.) In this, and other respects, *I. A.* seems to bear some slight affinity to the architecture of the Elizabethan period; for in both styles the stories are divided by entablatures supported on pilasters, and carved ornaments are introduced on the summit of the buildings in each. Here, however, all resemblance ends, and these points of similitude are merely suggested here to show that similarity of treatment may be frequently traced in the styles of architecture prevailing in different countries at the same period; although there is no reason to suppose that the architects who have developed and perfected either styles have been influenced by the mode of treatment adopted by those who have originated the other.

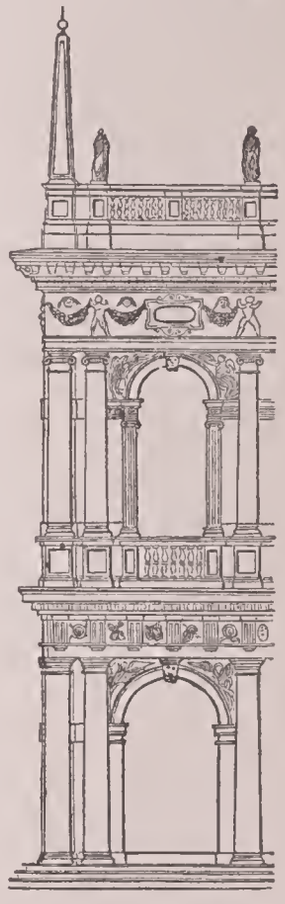

Fig. 1419.—LIBRARY OF ST. MARK'S, VENICE, (by Sansovino.)

Ital'ianism, *n.* An Italian phrase or idiom; an Italicism.

Ital'ianize, *v. n.* To render Italian.—To speak Italian.

Italian Language and Literature. There are many doubts as to the exact origin of the Italian language, and in fact the æra of its birth would seem to be lost in obscurity. Some writers on the subject seem to think that the harmonious tongue spoken by the sons of Italy has originated from the intermixture of the classic Latin with the barbarous dialects of the tribes that overran Italy after her fall. When the subject, however, is fully inquired into, it will be found that the opinion is nearly, if not quite, erroneous, for it will be seen, on reference to the history of Rome, that after the departure of the Huns, the Gothe, and Visigoths, Latin was spoken and written in the Middle Ages long prior to the revival of learning, with a grace and facility which

tend powerfully to impress us with the conviction that there could not have been much intermixture of foreign tongues with the Latin, at least with the educated classes. It must be borne in mind, nevertheless, in considering this point, that the language of the literary and cultivated portion of the Italian community was not the language of the people taken as a whole, and that the latter was composed of many foreign elements. An Italian writer of the 15th century, Leonardo Bruni, surnamed L'Aretino, from his birthplace Arezzo, maintains the theory that the Italian language is coeval with the Latin, and that both were used at the same time in ancient Rome: the Latin by the learned and polished, and the Italian dialect by the common people. Two other writers, Cardinal Bembo, and Francesco Saverio Quadrio, have maintained the same opinion since the time that Bruni wrote. To bear out this assertion, these writers cite the language used in the plays of Plautus and Terence by plebeian personages. There they find many words and expressions which bear some resemblance to the modern Italian, and which have never gained admittance into the works of other classic writers; and from these examples, and from some interchange of letters, such as the use of *o* for *e*, as in *vostris* for *vestris*, and *v* for *b*, as in *vellum* for *bellum*, they draw the ready conclusion, that, as the vulgar Latin was not classic Latin, it must have been Italian. The reader may judge from the following examples of words which are quoted by Quadrio to sustain his opinion:

Vulgar Latin.	*Italian.*	*Classic Latin.*
Essere,	*Essere*,	Esse
Vernus,	*Verno*,	Hyems.
Minaccia,	*Minaccie*,	Minæ.
Batuere,	*Battere*,	Percutere.
Bellus,	*Bello*,	Pulcher.
Russus,	*Rosso*,	Rubeus.
Caballus,	*Cavallo*,	Equus.

From this list it will easily be seen that there are words now in use in the Italian language which were of old in the mouths of the Roman populace, and others which bear a much stronger resemblance to vulgar than to classic Latin. The only conclusion, however, that can be drawn from this evident similarity, is that there was a difference between the classic and the common language; beyond this, the arguments of the writers before mentioned can sustain no foundation. For, if the argument be found proved, it could be deduced from the same hypothesis, that the English language is essentially German, from the fact of many words in the two tongues being similar. The third theory on the subject of the origin of the Italian language is that of the Marquis Scipio Maffei. This writer rejects the opinion of Bruni and his disciples: for he reasonably lays down the argument, that "vulgarisms are not sufficient to form a language, nor to render it adequate to literature." He also rejects the theory first mentioned, that Italian was formed by the intermixture of the classic tongue with barbarous dialects; and the opinion he advances is, that the Italian language, as it stands at present, was formed by the gradual corruption of the classic Latin, without the intervention of any extraneous influence whatever. To quote Maffei: "It originated from abandoning, in common conversation, the classic, grammatical, and correct Latin, and generally adopting in its stead a vulgar mode of speech, incorrect in structure and vicious in pronunciation." So much for the different theories on the subject. The first authentic specimen of the Italian language belongs to the close of the 12th century. It is a *canzone* of Ciullo d'Alcamo, by birth a Sicilian, and the earliest Italian poet whose name is on record. There is no doubt that the new language was opposed to the great variety of dialects which had grown into use after the invasion of the Northerners; but the formation of it was indeed slow, for the learned and the poets (from whom it was necessary for the infant language to receive its stamp and *entrée* into fashionable life) were averse to its introduction, as they deemed it a sorry scion of the classic Latin, which latter was esteemed both for its age and for its recollections of former greatness, which the Italians were only too eager to maintain, after the downfall of their empire. Even at the present time, that idiom which we find in the better class of authors, and which charms us by its harmonious roll, is not to be found as the common idiom of the peasants in any part of Italy. From the 12th century to the close of the 13th, but little was done to ground the Italian language; but shortly after the latter period came the glorious epoch of Dante, Petrarch, and Boccaccio. Their praise is universally upheld by all writers, as men who initiated a new æra for the Italian language and Italian literature. They were emphatically the giants of an early age, when gigantic strength was wanted to fix the uncertain foundations of their national language and literature on a scale broad and deep and massive. In the words of a critic on the subject, they did not strike the first spade into the soil, but they drew the stone from the quarry, set the landmarks, polished the rough marble, and piled and cemented the misshapen blocks, till beneath their hands the noble structure rose, majestic, towering, and beautiful. By such writers was the Italian language brought to the highest point of its literary culture before the close of the 14th century. From the commencement to the end of the 15th, and, indeed, until the middle of the 16th, there is nothing remarkable in its history; but at this latter date, a great contest arose with regard to it, which resulted in the complete triumph of the writings of Dante, Petrarch, and Boccaccio, and the firm establishment of the Italian language as a complete whole, both in the literary world and among the people generally. The Italian language, as it at present stands, is essentially a Latin dialect, although somewhat changed in its grammar and construction, by the infusion of the modern spirit into the antique, as the character of the people underwent the same change. There are seventeen leading dialects in the Italian, which may be ranked in the following order: — the Sicilian, the Calabrian, the Neapolitan, the Roman, the Norcian, the Tuscan, the Bolognese, the Venetian, the Friulian, the Paduan, the Lombardian, the Milanese, the Bergamask, the Piedmontese, the Genoese, the Corsican, and lastly, the Sardinian. Of these the Sicilian is the first of the Italian dialects which was converted to literary uses; and it may be, in fact, called the mother-tongue of the Italian muse, as Sicily is generally called her cradle. It exhibits traces, more or less, of the different dominant rulers of the island, and words may be clearly discovered which are undoubtedly of Grecian, Carthaginian, Roman, Byzantine, Arabian, Norman, German, French, and Spanish origin. The peculiarity in the Sicilian dialect consists chiefly in the use of *u* for *o*, *i* for *e*; as *timu* for *temo*, *culuritu* for *colorito*, *un* for *uno*, and in many other instances too numerous to mention. It would be impossible, within the limits of the present article, to touch in detail upon the different dialects individually. A few general remarks will suffice instead. The Florentine is that in which the greatest portion of the literary monuments of Italy is written, in consequence of the great poets and other authors being born at Florence, and hence using their native dialect. But there cannot be much doubt that the classic Italian tongue is based principally on the Tuscan dialect, which has done more to its formation than any other spoken throughout the length and breadth of Italy. The study of the language in modern times has much increased, and great pains have been bestowed on vocabularies, dictionaries, and other works of an educational class. Considered in any light, the Italian language is one of the most beautiful and harmonious of European tongues, and is rightly deemed to be the true medium for the interpretation of real poetic feeling. The liquid sound of the language is owing to the prevalence of labials and vowels throughout it, which, even in the roughest dialects, as in the Tuscan, which is more composed of gutturals, combined with the soft pronunciation peculiar to the sons of Italy, renders the Italian language the most euphonious in Europe — indeed, in the world. To turn to the second part of our subject — *Italian literature* may, at the commencement, be divided into periods, according to the general plan pursued by historians on the subject. In the first and second periods, which, according to the "Conversations-Lexicon" of Brockhaus, embrace the years between the æra of Charlemagne and the peace of Constance in 1183, not much was done in Italy towards the spread of literature, the principal authors being not of much influence, either in a philological or ethical point of view. They are as follows: — In theology: the popes Eugene, Adrian I., Leo V., Nicholas I., and Sylvester II.; also Paulinus, patriarch of Aquileia, and Theodolphus, bishop of Orleans. In the second period, the principal theologians were, Fulbert, bishop of Chartres, and the two celebrated archbishops Lanfranc and Anselm. Among the historians, both of the first and second periods, may be mentioned Diaconus, Andrew of Bergamo (author of a Chronicle of Italy from 868 to 875), Luitprandus of Pavia, Amalphus, Sire Raoul, and many other obscure writers, too numerous to mention. In the third period, from the peace of Constance to the end of the 13th century, literature gradually underwent a change, which was, step by step, leading to a more pleasing aspect. Attempts were now being made to write works in the *lingua volgare*, instead of in barbarous Latin, and everything pointed on to the glorious æra of Dante, and the enlightened school which he was the means of establishing. The emperor Frederick I. may be said to be the prime mover in this desire for enlightenment, and his court was thronged by the learned in every branch, either of science, of art, or of literature. In philosophy, the most celebrated man we meet with in this æra is Thomas Aquinas, who wrote a commentary on the works of Aristotle. In mathematics, Campano wrote a commentary on the works of Euclid; and many others, as Lanfranco, Leonardo, and Guido Bonatti, followed in his footsteps. The study of law became also greatly improved. In history, the name of Matteo Spinello must be honorably mentioned, as he wrote the first lengthy and complete work in Italian prose. Brunetto Latini, the instructor of Dante, must likewise not be passed over with neglect. The fourth period, which embraces the whole of the 14th century, is, however, the grandest, as it is the starting-point in the real history of Italian literature. Albert, of Padua, Gregory of Rimini, Bonaventure of Perugia, and Ludovico Marsigli, are the theologians of this period. Petrarch is the real philosopher of the times, who does honor to his country, and he wrote numerous Latin works on moral subjects, which reflect the wisdom of his scientific brain. Paolo, surnamed Geometria, is said by Villani to be the first of mathematical discoverers, and he likewise lived in this cent. In history we have also Petrarch, who wrote the *Rerum Memorandarum;* and Boccaccio, who was the author of *De Genealogia Deorum*, and many other works. In this period also occur the first collection of Italian tales and romances; and here, again, we have to thank Boccaccio for his *Decameron* and *Fiametta*, which will always be remarkable in literature. Dante, however, must be given the prime place in the literature both of this period and of his country in general. Of all his works, his *Divine Comedy* must rank highest; but he was also the author of the *Vita Nuova*, the *Convito*, and in another branch of lit., *De Vulgari Eloquentia* (in which he lays down the basis of the new Italian language), and *De Monarchia*. Hallam, in speaking of Dante, in his *Literature of Europe*, says that Varchi, in a passage of the *Ercolano*, having extolled Dante even in preference to Homer, gave rise to a controversy, wherein some Italian critics did not hesitate to point out the blemishes of their countryman. Bulgarini was one of these critics; and Manzoni undertook the defence of Dante in a work of considerable length. However this may be, the poet was, and is, much esteemed in his country, as he is elsewhere; and particularly in the period we are considering, much was done in his honor, and endeavors were made to further his attempts for benefiting his country in literature. In concluding this period, as is well said by an eminent authority, in the early part of the 14th century, according to Lord Macaulay, in his essay on Machiavelli: "The progress of elegant literature and of the fine arts was proportioned to that of public prosperity. Under the despotic successors of Augustus, all the fields of the intellect had been turned into arid wastes, still marked out by formal boundaries, still retaining the traces of old cultivation, but yielding neither flowers nor fruit. The deluge of barbarism came. It swept away all the landmarks, it obliterated all the signs of former tillage; but it fertilized while it devastated. When it receded, the wilderness was as the garden of God, rejoicing on every side, laughing, clapping its hands, pouring forth, in spontaneous abundance, everything brilliant, or fragrant, or nourishing. A new language, characterized by simple sweetness and simple energy, had attained perfection. No tongue ever furnished more gorgeous and vivid tints to poetry; nor was it long before a poet appeared who knew how to employ them. Early in the 14th century came forth the *Divine Comedy*, beyond comparison the greatest work of imagination which had appeared since the poems of Homer. The following generation produced, indeed, no second Dante, but it was eminently distinguished by general intellectual activity. The study of the Latin writers had never been wholly neglected in Italy. But Petrarch introduced a more profound, liberal, and elegant scholarship, and communicated to his countrymen that enthusiasm for the literature, the history, and the antiquities of Rome, which divided his own heart with a frigid mistress and a more frigid muse. Boccaccio turned their attention to the more sublime and graceful models of Greece." We pass over the fifth period, which lasts from 1400 to 1500, and enter upon the sixth, or 16th and 17th centuries, which is the most glorious of any in the literary history of Italy. The power of her republics and the magnificence of her princes had done much to restore the former splendor and greatness of the country, and Italy could well, at the time of which we are speaking, point proudly to herself as an example for the rest of Europe to follow. The number of academies and libraries had increased to such a degree, that few, even of the small cities, were without them, and learning, and a fostering of the arts, had spread likewise in a proportionate manner. Among the popes there were many who promoted this general desire for improvement: and the names of Julius II., Leo X. (the Magnificent), Gregory XIII., and Urban VIII., well deserve the prominence they occupy in history, even on this account alone. Next must the princes be mentioned; for they were by no means behind-hand with the popes in their activity for the spread of literature. Among these latter we come across the names of Gonzaga of Mantua, the Prince d'Este de Ferrara, the Medici of Florence, and Duke Charles Emmanuel of Savoy. In history much was done, and well done too. Carlo Sigonio wrote a general history in Latin: Girolamo Briani, a similar chronicle, but in Italian; Macchiavelli, a *History of Florence*, which latter must ever bear up the reputation of its author, — besides many others who did something for history, but whose names are too numerous to be even mentioned in the present article. In poetry, we have the honorable names of Bernardo and Torquato Tasso (the former celebrated for his Letters and the latter for his Dialogues and Philosophical Essays); also Pietro Badoaro, a poet of no mean repute; Alberto Lollio, and Claudio Tolomei, besides many others. The novelists of this period were numerous, indeed, and criticism was also beginning to be judiciously exercised, as we have evidence of, in the attack and defence of Tasso's *Jerusalem Delivered*. During the seventh period, which lasted from 1650 up to the year 1820, much cannot be said to have been done for Italian literature, the few names that occur, touching on the history of literature *per se*, being Crescimbeni, Quadrio Fontanini. Passing on to the last period, which embraces the years between 1820 and the present time, we must notice the decade of Italian literature, with, however, a hope of its rise again in future years, now that Italy has become once more a kingdom. The restraints which naturally arise in a country entrammelled by politics are undoubtedly one of the chief causes which have led to this fall, combined with the indolence induced by too warm a climate and one too favorable for idleness. Another cause must likewise be noticed, and that is the infringement of the copyrights of one city by another, — one of the greatest drawbacks to the spread of literature. Of the writers of this period, few occupy any prominent place, with the exception of Andrea Maffei, who has done much, both by original works and translations, for the advancement of literature. In science and art, the 19th century has not been unproductive to Italy, but in poetry and literature there has been a sad falling off from the noble æra ushered in by Dante. Perhaps it will not be out of place here to give a short glance generally at Italian poetry, which

is, indeed, one of the most remarkable features in the literature of the nation. If we compare the literature of Italy generally with that of other European countries, we will find reason for believing its characteristic peculiarity to consist in the sedulous cultivation and systematic moulding of the lyric. It is little to say that the number of lyrical poems written in the Italian language has been greater than in the number of poems belonging to any other cultivated nation. The lyric, in one or another of its forms, is the vehicle of expression which naturally suggests itself to minds struggling rather to give vent to poetic feeling than to create works of poetic art. But it is a different thing to assert, what is equally true, that, by the Italians, the lyrical poem has been more thoroughly elaborated into a work of art than by the poets of any other country; and that, in the standard poetical literature of Italy, the lyric holds a more distinguished place than that which belongs to it in the poetry of any other European language. Of the pure lyric, the model was the symmetrical canzone, though several freer forms were allowed as occasional indulgences; the Sicilian sonnet, whose name has passed with its rules to other countries, was the recognized name of a mixed species, in which the lyrical poem was modified by elements borrowed from the didactic. Dante set his hand to the plough, and hosts of young poets followed in his footsteps, anxious to cultivate the soil thus left open to them. It was thus that the poetical literature of Italy put on the aspect of a garden, boasting, indeed, but a few magnificent specimens of those lordly plants that need ample care as well as a kindly climate and a genial soil, but glowing everywhere with the fragrant loveliness which skilful culture imparts to the native wild flowers of the meadow and the wood. So much for Italian poetry. The best references on the language, literature, and poetry of Italy are as follows: —Quadrio, *Storia d'ogni Poesia;* Maffei, *Verona Illustrata;* Nardini, *Saggi di Prose e Poesie de' più celebri Scrilori d'ogni Secolo;* Monti, *Amor Patrio di Dante;* Dante, *De Vulgari Eloquentia;* Macchiavelli, *Discurso in cui si esamina se la lingua in cui scrissero Dante, il Boccaccio, e il Petrarca, si debba chiamare Italiana, Toscana,* o *Florentina;* Ginguène, *Histoire Littéraire d'Italie;* Sismondi, *De la Littérature du Midi;* Corniani, *Secoli della Letteratura Italiana;* Hallam, *Introduction to the Literature of Europe.*

Ital'ic, *a.* Relating to Italy.—Applied particularly to the elegant style of type exhibited in the following line, the invention of which is due to Aldo Manuzio, the celebrated Venetian printer.

"*Like Douglas conquer, or like Douglas die.*"

Ital'icism, *n.* An Italian phrase or idiom.

Ital'icize, *v. a.* To write or print in Italics.

Ital'ics, *n. pl.* Italic letters or characters. See ITALIC.

Italy. [Lat. *Italia;* Fr. *Italie.*] One of the most celebrated and fertile countries of Europe, was the seat of the greatest empire of antiquity, when the surrounding countries were immersed in barbarism. It is finely situated comprising the whole of the central peninsula of S. Europe, with the rich and extensive country to the N. included between the Alps and the Mediterranean. It extends between Lat. 36° 46′ and 46° 30′ N., and Lon. 6° 30′ and 18° 30′ E., having to the N.W. France, N. Switzerland and the Tyrol, N.E. Carinthia, Carniola, and the Austrian Littorale, E. the Adriatic, and on all other sides the Mediterranean. In antiquity this country was known by the names of *Hesperia, Ausonia, Saturnia, Œnotria,* &c.; but these names, though loosely applied to the whole country, were strictly applicable only to particular portions of its surface. Various derivations have been assigned to the term *Italy.* The name is said to have designated originally only its more S. portion; but in the course of time it superseded every other term, and was gradually extended to the whole country, from the Alps southward. In shape *I.* has been familiarly likened to a boot, the heel formed by the Terra d'Otranto, and the foot by Calabria. The general direction of the Italian peninsula is S.E. and N.W.; its length, from Mount St. Gothard to Cape Spartivento in Calabria, is nearly 750 Eng. m.; its breadth varies from abt. 380 m. in N. Italy, to less than 80 m. near its centre. Its S. extremity, called Calabria, forms a complete peninsula, being united to the mass of Lucania or the Basilicata by an isthmus of only 35 m. in width, while that between the Gulfs of Sta. Eufemia and Squillace, which connects the two portions of the province, does not exceed 20 m. The area of the present kingdom of *I.*, exclusive of the large islands, is computed at 93,640 sq. m. Savoy, which until the treaty of 1860 was commonly considered as included in *I.*, on account of its being comprised in the kingdom of Sardinia, as a matter of physical geography unquestionably belongs to France (to which it is now politically united), being separated from the Italian prov. of Piedmont by the main chain of the Alps. But though that great range forms throughout the N. boundary of *I.*, the exact limits of the country at the two extremities of the Alpine chain are not very clearly marked, and have been subject to considerable fluctuation both in ancient and modern times. Ancient geographers appear to have generally regarded the remarkable headland which descends from the Maritime Alps to the sea between Nice and Monaco as the limit of *I.* in that direction, and in a purely geographical point of view it is probably the best point that could be selected. But Augustus, who was the first to give to *I.* a definite political organization, carried the frontier to the river Varus or Var, a few miles W. of Nice, and this river continued in modern times to be generally recognized as the boundary between France and *I.* It was only in 1860 that the annexation of Nice and the adjoining territory to France carried the political frontier farther E., to a point between Mentone and Ventimiglia, which certainly constitutes no natural limit. This new boundary, giving to France the rich department of Nice, has become a sore point with the Italians. Towards the N.E. also the line of demarcation is not clearly characterized. The point where the range of the Julian Alps approaches almost close to the sea-shore (just at the sources of the little stream so celebrated in ancient times as the Timavus) would seem to constitute the best natural limit. But in the constitution of *I.* by Augustus, the frontier was carried farther E. so as to include Targesta (Trieste), and the little river Formio (Risano) was in the first instance chosen as the limit, but this was subsequently transferred to the river Arsia (the Arsa), which flows into the Gulf of Quarnero, so as to include almost all Istria; and the circumstance that the coast of Istria was throughout the Middle Ages held by the powerful republic of Venice tended to perpetuate this arrangement, so that Istria was generally regarded as belonging to *I.*, though certainly not forming any natural portion of that country. The only other part of the N. frontier of *I.* where the boundary is not clearly marked by nature is Tyrol or the valley of the Adige. Here the main chain of the Alps (as marked by the watershed) recedes so far to the N. that it has never constituted the natural limit between populations of different race and language. At the present day the frontier between Austria and the kingdom of *I.* crosses the Adige about 30 m. below Trent.—*Political Division.* The kingdom is divided into sixty-nine provinces, of which the most populous are Piedmont, Lombardy, Sicily and Venice.—*General Description.* While the Alps constitute the northern boundary of *I.*, only a comparatively small portion of the surface of the country is covered with Alpine ramifications. The mountain system exclusively belonging to the peninsula is that of the Apennines, *q. v.* These mountains are much less rugged than the Alps, and abound with rich forests and pasture-land, on which numerous flocks

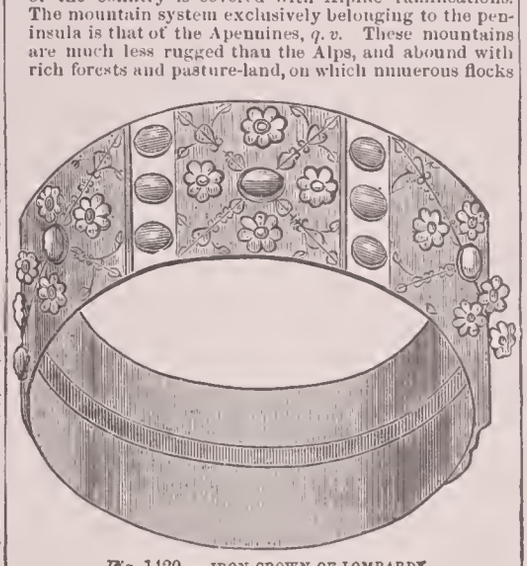

Fig. 1420.—IRON CROWN OF LOMBARDY.
(Worn by Charlemagne and Napoleon I.)

of sheep are fed. *I.* is also famous for its volcanoes; those of Ætna, Vesuvius, and Stromboli, in the Lipari Islands, being, if not the greatest, by far the most celebrated and best known of any on the globe. But though for the most part mountainous, *I.* has some plains of great extent and extraordinary fertility. Of these, the most extensive and richest is that of Lombardy, or of the Po. This noble plain extends from the foot of the Alps, near Susa, to the delta of the Po, in the Adriatic, a distance of about 250 m., with a breadth varying from 50 to 120 m., including the whole of what was formerly known as the Lombardo-Venetian kingdom, and the N. plain of Umbria and the Marches. This great plain is exceedingly well watered by the numerous rivers and streams that rise in the Alps, and pour down into the plain; and from these an infinite number of canals have been cut, that diffuse the fertilizing element over the whole country, and give to its corn- and rice-fields, and its variegated meadows, extraordinary productiveness. The soil, though different in the various parts, is for the most part loamy and very fertile. Probably, on the whole, the plain of Lombardy may be called the garden of Europe; at all events, it is certainly the garden of Italy. The next great plain stretches along the W. central shore of the kingdom for about 200 m. from Pisa down to Terracina, in the *ci-devant* Neapolitan States. Within these limits are included the Tuscan *Maremme*, great part of the Roman *Campagna*, and the *Pontine Marches.* This plain is, in all respects, very different from the former. Though in antiquity, and to a certain extent, also, in the Middle Ages, it was renowned for its fertility, and was highly cultivated and populous, it is now comparatively a desert. This is a consequence of the prevalence of malaria, which infests these districts to such an extent as to render them at certain periods of the year all but uninhabitable. In the Tuscan maremme, the soil has in many places become, from neglect, sterile and unproductive; but in the Campagna and the Pontine Marches the soil is, generally, extraordinarily fertile, is covered with a luxuriant vegetation, and, were it properly cultivated, would yield immense crops. The third great plain of *I.* is that of Capitanata (*Apulia*), having Foggia in its centre. It comprises the greater portion of a tract of flat country, extending from the border of Samnium to Otranto, anciently included in Daunia, Japygia, Peucetia, and Messapia. The lower part of the Apulian plain is arid, the rivers decreasing both in size and frequency as we proceed further S. The upper portion of the plain is more plentifully supplied with water, but it also has, in many parts, a sandy and thirsty soil. The level district around Naples is still well entitled to its ancient epithet of *Campania Felix*, being at once rich, well cultivated, and densely peopled. It is a tract of land 40 m. in length, by 15 or 20 in breadth, presenting a dead level like the surface of the ocean, and probably from 1 to 100 feet above it. With the exception of Vesuvius, and another small elevated tract, the Campania is a dead level, and probably equal in fertility to any spot in the world. Though so flat, it is remarkably dry, and hence free from malaria. The vegetable soil is of great depth, and cultivated like a garden.—*Coastline. I.* has about 3,000 m. of seaboard. Its chief capes and headlands are, Argentaro, Circello, Campanella, Spartivento, and Santa Maria di Leaca, on the Mediterranean, and the Testa di Gargano and Cape Promontorio (Istria) on the Adriatic. Of the gulfs and recesses formed by the sea along the coastline, the principal are the Gulf of Tarento on the S.E., between Apulia and Calabria, those of Genoa, Gaëta, Naples, Salerno, Policastro, Eufemia, and Gioja on its W.; and those of Squillace, Manfredonia, and Trieste on its E. shores.—*Water System.* Few countries are better watered than *I.*, whether in regard to springs, rivers, or lakes. The principal river is the Po, having for its more important affluents the Sesa, Tessino, Adda, Chiesa, and Mincio from the N.; and the Tararo, Bormida, Tribia, and Tanaro on the S. The other large rivers of the N. of Italy are the Adige, Brenta, Piave, and Tagliamento, all flowing S. from the Alps. The Tiber is the principal river in Central *I.*, and also the most celebrated; but, like all the other streams of this part of the peninsula, it is interesting chiefly from its ancient renown, and the classical recollections connected with its name, than from its magnitude or intrinsic importance. Among others of this class are the Arno and Ombrone, in Tuscany. Considerable differences of opinion have occurred as to the identity of the *Rubicon*, the S.E. boundary of Cisalpine Gaul, so famous in ancient history. It is generally, however, believed to be represented by the Fiumicino, which falls into the Adriatic about 20 m. below Ravenna. In the S. of Italy, the only streams meriting the name of rivers are the Volturno, Garigliano (anc. *Liris*), and Ofanto (*Aufidas*). The most considerable of the Italian lakes are situated in the N. of the kingdom; including those of Garda, Como, Maggiore, and Lugano. In Central *I.* are the lakes of Perugia (anc. *Thrasimenus*), Bolsena, Bracciano, Fucino, and Albano, and in the S. those of Averno and others, which, though insignificant in point of size, have acquired imperishable fame. Many considerable salt lagoons line the Mediterranean coast in various parts of Tuscany and the Marches, and the shores of the Adriatic in the Venetian provinces, and around the promontory of Gargano.—*Geol. and Min. I.* may be described as a calcareous region enclosing a schistous band; but volcanic action has been so prevalent that the strata are found disarranged from their original position. The tertiary deposits of the country are very extensive, and form the sub-Apennine region, or low hill ranges, extending along the flanks of the Apennines throughout the whole peninsula, consisting of sandstone, marl, and coarse limestone. The alluvial plain of the Po abounds in fossil remains of mammalia, birds, and amphibia, and similar fossils have been discovered in the Neapolitan States. Several regions in the central and S. parts of the kingdom are almost wholly composed of volcanic products. Such are the Campagna di Roma, which abounds with a volcanic tufa called *travertius*, of which a great part of Rome is built; and the neighborhood of Vesuvius, which is covered with lava and scoriæ. *I.* is less rich in metals than in most other things; it is, however, well supplied with iron; it has also copper and lead ore, and the precious metals have been found, but in trifling quantities. The centre is the chief seat of mining industry, and large quantities of iron are obtained from the island of Elba. The most valuable product of continental *I.* is, however, the fine statuary marble of Carrara. Marble of other kinds is also met with in other parts of the peninsula. Great quantities of borax are found in Tuscany; sulphur, building-stone, salt, nitre, alum, alabaster, and crystal are the other chief mineral products; and the Apennines abound in basalt, dried lava, pozzolana sand, and other volcanic substances. Caverns of stalactites are met with in many parts, and mineral springs and vapors are of very frequent occurrence.—*Climate.* The climate of *I.* is delightful. Owing to its length from N. to S., and the great difference in the elevation of its surface, there is necessarily a considerable variation in the temperature of different parts; but speaking generally, the air is throughout mild and genial: the excessive heats of summer are moderated by the influence of the mountains and the surrounding sea, and the cold of winter is hardly ever extreme. As respects temperature, it may be divided into four regions: the first, extending N. of the Apennines, and of Lat. 43° 30′, and including the plain of Lombardy, has a climate somewhat similar to that of S. Germany, but warmer. In winter, the lakes of Garda and Maggiore, and the lagoons of Venice, are partially frozen; snow often falls, and the thermometer sometimes sinks to 14°; even in summer the N. wind is cold, and oranges, lemons, and

other *agrumi* do not flourish in the open air. The second region, extending between Lat. 43° 30′ and 41° 30′, includes the greater part of Tuscany, Umbria, and the Marches, with the N. part of the Neapolitan provinces. Within this belt, snow and ice are mostly confined to the mountain-tops, and olives and *agrumi* of all kinds

Fig. 1421. — MARKET-WOMEN OF NAPLES.

flourish luxuriantly without culture. The third region, from 41° 30′ to 39°, comprises the middle Neapolitan provinces. Snow is here very rare, and the finest fruits are found in the valleys throughout the winter. The fourth region embraces the S. part of Calabria, with Sicily and the Lipari Islands. Here the thermometer never falls to the freezing-point, and the sugar-cane, Indian fig, papyrus palm, and other plants abound on the low-lands. Throughout most parts of *I.* there are but three seasons in the year: a spring, which more than realizes all that poets have said in its praise; a hot summer, and a short, but not severe winter; most of the vegetable products, even in the N., flower by the end of March. Heavy rains prevail during October and November; W. and N.W. winds are the most prevalent, but the *libeccio* and *sirocco*, the simoom of the Arabs, also occasionally occur, and exert an oppressive, and in the S. an injurious, influence on the animal frame.—*Veg. and Prod.* In respect to its vegetable system, *I.* may be divided into six regions or zones, according to elevation, as follows:—1. The region of the plains, reaching a maximum of 1,200 feet, and producing the lentisk, myrtle, laurel, ilex, and cork trees, citron, fig, olive, vine, and pomegranate; 2. The oak and chestnut zone, elevated from 1,200 to 3,000 feet, and embracing the oak, chestnut, beech, olive, vine, and the cereals; 3. The beech and fir region, 3,000 to 5,000 feet, including within its limits the beech, fir, larch, juniper, and the cereals, to 4,000 feet; 4. The sub-Alpine region, altitude 5,000 to 6,000 feet, comprising the dwarf-pine, arbutus, gentian, and anemone; 5. The Upper Alpine zone, 6,000 to 8,500 feet, yielding the *androsacæ*, saxifrage, and other Alpine plants; and, 6. The snowy region, extending from 8,500 feet and upwards, in which are found the Iceland moss, *Artemisia mutellina*, and a few other plants. There is a much greater diversity of plants in the S. portion of the Apennine chain than in any other part of its extent; this diversity is most noticeable in the 2d, or oak and chestnut region. The Italian or S. slopes of the Alps present a greater variety of vegetation than those facing the N.; and more species of plants are found on them than on the Apennines. On the Alpine summits are seen the dwarf-birch, juniper, and other semi-arctic plants, while at their feet flourish the fig, *Agave Americana*, and *Cactus opuntia*. Mount Vesuvius possesses its own peculiar flora. *I.* is much more an agricultural than a manufacturing country; but the indolence of a great part of the rural population, combined with the backward state of agriculture, render the actual return far inferior to what the country is calculated to yield. Silk has become a most important product, and its culture has increased very rapidly within the last half-century. Its present average yearly exportation is valued at $35,000,000. Wine and olives, particularly the expressed oil of the latter, are also very important products (the latter averaging an annual value of $20,000,000); and there is a great abundance of the finest fruits. Grain is not so generally cultivated in this kingdom as in the more N. countries of Europe; but pulse and other vegetables are extensively raised. Particular parts of *I.* are appropriated to particular products. Lombardy is the chief grain region; in the Genoese and Tuscan territories, the culture of fruit, particularly of olives, predominates; while the malarious districts of the Maremme and Campagna remain chiefly in a state of pasture. Skilled agriculture is principally confined to the N.; in the centre, with the exceptions of portions of Tuscany, and S., it is at a very low ebb; and in the former Neapolitan States the abundance of vegetable productions is owing more to the climate and soil than to the industry of the husbandman. The products of the N. parts of the peninsula are found there in abundance; and whole groves of olives are seen growing in the open country, interspersed with spices and other tropical products.—*Zoöl.* The pastures of *I.* are stocked with large herds of black cattle, sheep, and goats; few horses are reared; and the breed is held in little estimation, excepting in certain parts of the Neapolitan territory. Mules are more common, being found better adapted for the bad and mountainous roads. Agricultural operations are performed by oxen. The buffalo is found in this kingdom, though hardly anywhere else in Europe. They are reared in large herds, particularly in the Calabrian forests. The mountains and forests contain a number of wild animals; among others, the hoar, stag, marmot, and badger. The lynx, or tiger-cat, is not uncommon in the defiles of the Abruzzi; and the crested porcupine is supposed to be peculiar to S. Italy. Foxes, hares, and winged game are sufficiently abundant. From the heat of the climate in the S. provs., snakes and reptiles of different kinds are numerous. The rivers, lakes, and coasts teem with fish. *Manuf. and Trade. I.* is not distinguished for manufactures: the chief are those of silk fabrics and thread, which have their focus in Lombardy. Woollens and silk stuffs, straw plait, gauze, artificial flowers, hats, paper, vellum, leather, gloves, essences, musical instruments, and statuary are among the goods fabricated in this kingdom; but, generally speaking, the raw products of the country form its chief exports, and most manufactured articles, whether of necessity or luxury, are imported from foreign countries. Venice and Genoa engrossed a large proportion of the commerce of Europe till the discovery of the passage to the East by the Cape of Good Hope, and the enterprise of the Portuguese and Dutch, and after them the French and English, diverted European trade into a new channel. From that period, the prosperity of these cities gradually decayed, and the first of them has sunk into comparative insignificance. The extent of its coast and the number and excellence of its ports and harbors, the relation which it holds to the other countries of the Mediterranean sea-board, and the railroad communication which it now possesses with the Transalpine lands, combine to give *I.* an important place as a trading country,—a place which would have been more important if all departments of activity had not fallen into so sad a state during the long period of its political decadence.—*Finances.* The financial affairs of Italy are in a condition the reverse of favorable, and taxation is heavy. Direct taxes are laid on lands, houses and incomes, and indirect ones on importations, manufactures, salt and tobacco. The lottery is also in use as a source of revenue. The heaviest items of expenditure are the interest on the public debt and the cost of the army and navy. The debt is very heavy for a nation with the resources of Italy, reaching the large total of $2,583,983,780. The revenue for the fiscal year 1901–02 amounted to $362,384,902; the expenditures to $358,191,956.—*Army and Navy.* The nominal strength of the army on a war footing is about 2,000,000. The regular army in time of peace is estimated at 226,000; in war, 460,000, with a first reserve of 630,000, a second reserve of 875,000. The navy at the end of 1902 included 15 battle-ships, 5 coast defense ships, 7 armored cruisers, 36 protected cruisers, 24 first class, 138 second and third class torpedo boats, 10 torpedo destroyers. There are in all about 23,000 miles of railway, a large portion of which belongs to the State.—*Constitution and Government.* Previous to the events of 1860–61, which resulted in the formation of the kingdom and the growth of national life, there was but the shadow of popular representation in *I.* The little duchy of Lucca had its senate of 36 representatives, and the Lombardo-Venetian kingdom had also its two provincial assemblies; while the former kingdom of Sardinia succeeded in obtaining a liberal constitution in 1848. But the provincial assemblies of the Lombardo-Venetian kingdom were divested of all legislative powers, and elsewhere the Italian governments were mere petty dependencies. The war and its accompanying revolutionary events, which united the various Italian territories under one rule, entirely changed this state of things by transforming the governments into a constitutional monarchy. The present Italian Constitution is an expansion of the *Statuto fondamentale del Regno*, granted, March 4, 1848, by King Charles Albert to his Sardinian subjects. According to this charter, the executive power of the state belongs exclusively to the sovereign, and is exercised by him through responsible ministers; while the legislative authority rests conjointly in the king and parliament, the latter consisting of two chambers—an upper one, the *Senato* (Senate), and a lower one, called the *Camera de'Deputati* (Chamber of Deputies). The senate is composed of the princes of the blood who have attained their majority, and of an unlimited number of members above 40 years of age, who are nominated by the king for life. The deputies of the lower house are elected by the majority of citizens who are 21 years of age, and pay taxes to the amount of 40 lire, or $8.00. For this purpose the whole of the population is divided into electoral colleges or districts. No deputy can be returned to parliament unless at least one-third of the inscribed electors appear at the polls. A deputy must be 30 years old, and have the requisites demanded by the electoral law, among them a slight property qualification. Neither senators nor deputies receive any salary or other indemnity. The duration of parliaments is 5 years; but the king has the power to dissolve the lower house at any time, being bound only to order new elections, and convoke a new assembly within 4 months. It is incumbent upon the executive to call the house together annually. The Camera de' Deputati, by the last apportionment, numbers 508 members, while the membership of the senate is 390. Each of the chambers has the right of introducing new bills, the same as the government, but all money bills must originate in the House of Deputies.—*Religion and Education.* The Roman Catholic faith, to which the overwhelming majority of the inhabitants belong, forms the state religion, but all other forms of belief enjoy the fullest toleration. Though the territorial authority of the Papal See was abolished in 1870, the fact that *I.*, and Rome most particularly, is the seat of the administrative center of the vast organization of the church, is not without significance to the nation. In the same city in which the administrative functions of the body politic are centralized, there still exists the court of the spiritual potentate, with a total personnel (in 1891) of 1,843 souls. The immense wealth of the N. Italian clergy has been greatly reduced since 1850, in which year a bill annihilating ecclesiastical jurisdiction and clerical privileges passed the Sardinian Chambers. This law was extended, in 1861, over the whole of the kingdom. It appears from an official return laid before the lower house in 1865 that there were still at that period 2,382 religious houses in Italy, numbering 28,991 inmates. An Act for the suppression of all monastic institutions throughout the kingdom was passed by the Chamber of Representatives in the session of 1866. The greater part of the income derived from this confiscation of monastic property has been devoted to the cause of public education, for which besides an annual credit of $3,000,000 is voted by parliamentary grant. Elementary instruction is gratuitous, and the compulsory principle was brought into operation by the law of July 15, 1877. For the higher education, *I.* possesses no fewer than 17 national universities. They are all of more or less ancient date, except that of Rome, which was opened in 1870, and it is a respect for this

Fig. 1422.—THE BRIDGE OF SIGHS (VENICE).

antiquity which is in some cases the chief cause of their preservation, several of them being of comparatively small importance. Yet many of them at one time formed the leading scholastic institutions, not alone of *I.*, but of the entire civilized world. A revival has of later years taken place at some of these time-honored universities, and students flock there as in years gone by.—*Cities and Towns.* Rome, the capital, had a population of 463,000 by the official census taken in 1901. The other cities with a population of more than 100,000, by the same census, are: Naples, with a population of 563,731; Milan, 493,640; Palermo, 310,352; Turin, 145,000; Florence, 204,950; Genoa, 234,800; Venice, 151,841; Messina, 149,823; Bologna, 152,009; Catania, 149,964; and Leghorn, 115,500.—*History.* The ancient history of *I.* will be found sketched out in the article on ROMAN EMPIRE (*q. v.*); while the mediæval is so entirely an agglomeration of events pertaining to the numerous individual sovereignties and states contained within its limits that we refer the reader to those old political divisions as they occur in their due place in this work, contenting ourselves, in the present article, with merely noting those causes and events which have happened within the last 50 years to transmogrify the political and territorial distribution of the country. After the fall of the French empire in 1815, *I.* was partitioned by the Congress of Vienna into the following divisions: the kingdom of Sardinia, with the addition of the provinces of the Genoese republic, reverted to the House of Savoy; the Lombardo-Venetian kingdom was secured to Austria; the principalities of Modena, Reggio, and Mirandola, with the ceded states of Massa and Carrara, were restored to the House of

Este Lucca was created a duchy for the legitimate Duke of Parma, whose patrimonial state was given as an appanage to the ex-empress Maria Louisa: the grand-duchy of Tuscany was given back to its former Austro-Lorraine dynasty; the Papal States were allotted to the Pope; the kingdom of Naples (under the title of the Two Sicilies), to the Spanish Bourbons; the petty state of San Marino was permitted to retain its status as a republic, and the insignificant state of Monaco remained an independent principality under the Grimaldis, princes of Valeutiuois. This disposition of the country, however, but ill accorded with the already awakened spirit of Italian nationality. Secret societies soon became organized throughout the peninsula, and their first-fruits were the popular risings of the Carbonari in Piodmont and the Sicilies in 1820–1. Austrian interventiou suppressed these constitutional eruptions, as also that of 1831 in Modena and the Roman States. In the latter year, ou the accession of Carlo Alberto to the Sardinian throne, the hitherto vague aspirations of the Italian people after liberty and national unity became to assume a defined and tangible form, and the Piedmontese monarch prepared for his dominions that adhesion to the popular spirit which has siuce given them the pre-emiuence in Italy. The accessiou of Pius IX. to the pontificate, in 1848, appeared momentarily to harbinger a uew æra of civilization and constitutional liberty for the Italian peoples; but this autlcipation was soon dissipated. Austrian influence, backed by the old Bourbon obstinacy, had its effect on the pontiff, and all inchoate steps to reform were speedily revoked. The French revolution of 1848, however, imparted a corresponding impetus to the canse of popular rights in the Italian peninsula, and Naples, Piedmont, and the Papal States made concessions to popular demands. The Milanese rose in revolt, and, after a short campaign of a few days' hard fighting, the Austrians were expelled from Lombardy. King Charles Albert now became the avowed champion of Italian independence, but, being disastrously defeated by the Austrians at Novara (23d March, 1848), was forced to abdicate his crown, and retire from the struggle. The reaction was now complete, Austrian and papal domination was restored, and the peoples languished under a crushing and hateful yoke. In 1859, however, Victor Emmanuel, who had succeeded his father, Charles Albert, to the throne of Piedmont, came forward as the regenerator of his country. An alliance with Franco against Austria followed: the great victories of Magenta and Solferino, won by the allies, were succeeded by the Peace of Villafranca, and the surrender of Lombardy to Italy, at the cost of the provinces of Nice and Savoy, which France exacted as the price of her interference. In 1860, Parma, Modena, and the Æmilian states were incorporated with Sardinia; and the grand-duchy of Tuscany immediately followed. On the 17th of March, in that year, Victor Emmanuel assumed the title of *King of Italy*, and in the ensuing May occurred the expedition to, and conquest of Naples and Sicily by Gen. Garibaldi, (*q. v.*) In 1864, the capital of the new kingdom of united Italy was transferred from Turin to Florence, and, in 1866, war was declared (in conjunction with Prussia) against Austria, which resulted in a check given to the Italian army, commanded by the king in person, at Custozza (June 24th). By the Treaty of Peace, signed at Prague, Aug. 23d following, the Venetian provs. (the last of the Austrian possessions in Italy) were ceded to the Italian government; and, on the 9th Oct., 1870, the kingdom of *I.* became consolidated as a whole by the annexation of the territorial jurisdiction of the Holy See, before known as the *States of the Church* capital, Rome. Victor Emmanuel (*q. v.*) died at Rome, 1878; his son succeeded him as Humbert I. In the partitition of Africa between the powers of Europe, Italy acquired a colony on the coast of Abyssinia named Eritrea, its capital being Massowah, the best port in the Red Sea. Abyssinia was subsequently included within the Italian sphere of influence, the foreign affairs of this kingdom, by a treaty concluded in 1889, falling under the control of Italy. Not content with this degree of authority, an invasion of Abyssinia was attempted in 1895, which, in March, 1896, resulted disastrously for Italy, her army suffering a severe defeat and losing a large number of men as prisoners. A treaty of peace was signed in November, in which Italy acknowledged the complete independence of Abyssinia. Thus ended the movement toward colonial dominion in Africa. In consequence of these humiliating reverses in Africa, Signor Crispi, the premier, and his colleagues, were forced to resign, which they did on March 5, 1896. On July 29, 1900, King Humbert was assassinated by an anarchist, while distributing prizes to victorious athletes at Monza. He was succeeded by his son, Victor Emmanuel III. Italy's present colonial possessions consist of Eritrea, with a Red Sea coast of 670 miles, and a protectorate on the Somali coast. *Pop.* (1901) 32,449,754.

Itamaraca', ITAMARCA or MARACA, an Island of Brazil, prov. of Pernambuco, on the Atlantic Ocean; *area*, abt. 50 sq. m. *Chief town.* Conceição. *Pop.* 10,000.

Itamarandiba, (*ee-ta-ma-ran-dee'ba,*) a river of Brazil, joins the Aracuahi abt. 24 m. W. of Minas-Novas.

Itanhaen, (*ee-tan-ya'eng,*) formerly CONCEIÇÃO, a maritime town of Brazil, on an arm of the Atlantic Ocean, about 40 m. S. of São Paulo; *pop.* 1,500.

Itapacoroya, (*ee-ta-pa-co-ro'ha,*) a bay and promontory of Brazil, prov. of Santa Catharina; Lat. 26° 47′ 18″ S., Lon. 48° 20′ W.

Itaparica, (*-ree'ka,*) an island of Brazil, prov., and in the bay of, Bahia; *area*, about 90 sq. m.

Itapemirim, (*-me-reeng',*) a village of Brazil, abt. 65 m. S.W. of Espirito Santo; *pop.* 3,000.

Itapeteninga, (*-ta-neeng'ga,*) a town of Brazil, about 120 m. W. of São Paulo.

Itape'va, a town of Brazil, abt. 160 m. W. of São Paulo; *pop.* 2,200.

Itapicu, (*ee-ta-pe-koo',*) a river of Brazil, enters the Atlantic between the mouth of the Aracari River and Point Itapacoroya.

Itapicuru, (*-koo-roo',*) a river of Brazil, enters the Atlantic about 90 m. N.E. of Bahia.

Itapicuru-de-Cima, (*-da-see'ma,*) a town of Brazil, about 110 m. N.N.E. of Bahia.

Itapicuru-Grande, (*-gran'dā,*) a town of Brazil, on the Itapicuru, about 45 m above its mouth.

—A river of Brazil, prov. of Maranhão, enters the river São José a short distance S. of Maranhão Island.

Itapua, (*-poo'a,*) YTAPUA, or ITAPURA, a town of Paraguay, on the Parana River, about 175 m. E.N.E of Corrientes.

Itas'ca, in *Minnesota*, a county adjoining British North America; *area*, about 5,430 sq. m.—*Rivers.* Rainy Lake, Deer, Swan, and Willow rivers, and the head-waters of the Mississippi. *Surface*, uneven; *soil*, generally tertile. *Cap.* Grand Rapids. *Pop.* (1895) 3,965.

Itasca, in *Illinois*, a post-village of Dupage co., on C., M. & St. P. R. R.

Itasca, in *Kansas*, a township of Sherman co.

Itasca, in *Texas*, a post-village of Hill co., on M., K. & T. R. R. *Pop.* 548.

Itas'ca Lake, in *Minnesota*, a lake of Cass co., forming the source of the Mississippi; Lat. 47° 10′ N., Lon. 95° 54′ W. It is about 1,575 feet above the level of the Gulf of Mexico. The outlet is about 1½ feet deep, and about 12 feet wide. Discovered by Schoolcraft in 1832, July 13.

Ita'ta, or CHIL'LAN, a river of Chili, enters the Pacific Ocean abt. 60 m. N.N.E. of Concepcion.—Also, a town on the above river, abt. 20 m. above its mouth.

Itati, ITATY, (*e-ta-tee',*) a town of the Argentine Republic, abt. 35 m. N.E. of Corrientes.

Itawam'ba, in *Mississippi*, a N.E. county, adjoining Alabama; *area*, abt. 1,000 sq. m. *Rivers.* Tombigbee River, Oldtown and Bullmouth creeks. *Surface*, level; *soil*, very fertile. *Cap.* Fultou.

Itch, *n.* [A. S. *gicctha*; Dut. *jeukte.* A word of doubtful origin.] (*Med.*) A diseaso of the skiu, consisting in au eruption of minute itching vesicles, which are commonly rendered more inflamed and troublesome by scratching. The parts chiefly attacked are between the fingers, at the wrists, bends of the elbow, between the shoulders, the thighs, ankles aud toes, and the roots of the hair, or where the skin is thin or lax; while in very severe cases it infects the whole body. The *I.* is very contagious, and arises from the presence of a minute insect, called *Acarus*, or the *Sarcoptes hominis*, engendered by dirt and neglect, and which burrows in the skin, and there deposits its eggs. The itching, always severe on approaching the fire or getting warm in bed, often becomes intolerable,—this irritation inducing *papillæ*, which soon pass into vesicles, and finally into pustules, which eventually break under the patient's scratching; and the poisonous lymph, loaded with animalcutæ, being effused, still further propagates the eruption, the face being the only part of the body free from this insect's attack. The treatment of *I.* was, before the nature of tho disease was understood, extremely complex and tedious. All that is now necessary is to exclude the air from the insect by rubbing in plenty of firm grease, such as spermaceti ointment, so as to block up the pores of the skin, and exclude air from the *Acari*, when in a few hours the disease will be cured by the suffocation of the hateful little enemy. Sulphur ointment is the article generally employed for the purpose, in the belief that the sulphur exercises a corrective influence on the skin; but strictly speaking, it is not necessary. Whichever article is used, it should be so well rubbed over the parts as to smear the skin effectually with the grease. The body should be then enveloped in a sheet, the hands and feet covered with gloves and socks, and the patient put to bed. In the morning, a warm bath and plenty of yellow soap are to be employed to remove the grease; and the same plan repeated night and morning for one or two extra occasions, to make sure of a successful result. A sulphur-bath the following day, and a final hot-bath, should be employed to make assurance doubly sure. At the same time, there should be a complete change of diet. If a rapid cure is desired, and the patient can command the means, he should take a hot-bath, and while in the water be vigorously scrubbed with *yellow soap and fine white sand*, so as to break all the pustules and force out the parasites. He is then to be quickly dried, and the body anointed with sulphur ointment, wrapped in a sheet as already described, and put to bed. The warm-bath in the morning, and a sulphur-bath some hours later, will effect a radical cure. He must be careful, however, to wear no garment formerly used till purified by washing. Those who object to the smell of sulphur may sponge the body with a lotion of the iodide of potassium, made with rose or elder-flower water.

—The sensation in the skin occasioned by the above disease.—Figuratively, a constant, teasing desire; as, an *itch* for novelty.

—*v. n.* [Ger. *jucken.*] To feel a particular uneasiness in the skin, which inclines the person to scratch the part.—To have a constant desire or teasing inclination.

Itch'less, *a.* Free from itch.

Itch'y, *a.* Infected with the itch.

I'tem, *adv.* [Lat.; Sans. *ittham*, so.] Also.—A word used when something is to be added.

—*n.* An article to be added or included; a separate particular in an account.—A hint; an innuendo.

—*v. a.* To make a note or memorandum of.

I'temize, *v. a.* To state in items, or by particulars; as, to *itemize* the cost of a railroad. (Local U. S.)—*Webs.*

I'te mis'sa est. [Lat., Go, it is dissolved.] (*Eccl.*) In the Roman Catholic Church, a formula by which, on joyful feasts, the end of low-mass is announced to the people, and the assembly is dismissed. The priest steps into the centre of the altar, and sings these words after the *Deus vobiscum.*

It'erant, *a.* [Lat. *itero*, to repeat.] Repeating. (R.)

It'erate, *v. a.* [Lat. *itero, iteratus*, to repeat, from Sansk. *itara*, another; from demonst. base *i* = Goth. *is*, that; Ir. *itir*, again.] To repeat; to utter, or do, another or a second time.

It'erately, *adv.* Repeatedly.

Itera'tion, *n.* [Lat. *iteratio.*] Repetition; recital or performance a second time.

It'erative, *a.* [Fr. *itératif.*] Repeating.

Ith'aca, [Mod. Gr. *Theaki,*] an island belonging to Greece, the 6th in size of the Ionian Islands, 2 m. E. of Cephalonia, and 17 m. W. from the mainland of Greece; *area*, 44 sq. m. It is 12 m. long, by 4 broad, except in the middle, where it is nearly divided by the Gulf of Molo. *Prod.* Olives, currants, corn, almonds, oranges, honey, and wine. The inhabitants, however, derive the greatest portion of their sustenance from the sea, being mostly fishermen. *I.* has always been noted for its rugged and barren aspect. It is believed to be the island of that name celebrated in the Homeric poems as the kingdom of Ulysses. At the foot of a white cliff, on the S.E. coast of the island, there is a beautiful perennial spring, traditionally identified with the famous fountain of Arethusa.

Ith'aca, a town of British Guiana, near the Berbice River; *pop.* 2,000.

Ith'aca, in *New York*, a city, cap. of Tompkins co., on D., L. & W. and Leh. Valley R. Rs., 37 m. S. of Auburn. Its trade is extensive, and it has manuf. of agricultural implements, paper, glass, leather, machinery, &c. On an eminence in the N.E., rise the handsome buildings of Cornell University, opened in 1868, and characterized by the prominence given to the study of agriculture and the mechanical arts. The neighborhood of *I.* is remarkable for the number of its waterfalls, of which Ithaca Falls, 160 high by 150 feet broad, is the chief. *Pop.* (1897) about 12,200.

Ith'amar, (*Script.*) The 4th son of Aaron, consecrated to the priesthood (*Ex* vi. 23; *Num.* iii. 2, 3.) His posterity took charge of the tabernacle in the wilderness. (*Ex.* xxxviii. 21; *Num.* iv. 28.) Some of this line, namely, Eli, Ahitub, Ahiah, Ahimelech, and Abiathar, held the office of high-priest, but under Solomon it reverted to the family of Eleazar. (1 *Kin.* ii. 7.)

Ithome, (*e'tho-mee,*) a mountain of Greece, in Messenia, 25 m. N.W. of Kalamata, 3,865 feet high. On its S. slope are the remains of a village (Fig. 1423), which

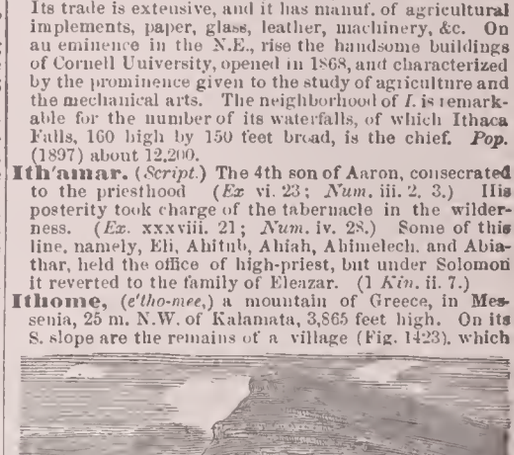

Fig. 1423.—ITHOME.

in ancient Greece was the stronghold of the Messenians against the Lacedemonians. The first Messenian war ended with the fall of Ithome, B. C. 724.

Itin'eracy, *n.* Practice of itinerating.

Itin'erancy, *n.* A journeying; a passing from place to place.

Itin'erant, *a.* [L. Lat. *itinerans*, from Lat. *iter, itineris*, a going.] Passing or travelling about a country, or from place to place; journeying; wandering; not settled.

—*n.* One who travels from place to place, particularly a preacher; one who is unsettled.

Itin'erantly, *adv.* In an unsettled or wandering manner.

Itin'erary, *n.* [Fr. *itinéraire*; L. Lat. *itinerarium.*] (*Lit.*) A work containing a list of the stations and halting-places on a road between two places, with a statement of the distances between them. Of the most important itineraries of antiquity are—1. the *Itineraria Antonini*, including the *Itinerarium Provinciarum*, or a list of the routes through the Roman provinces of Europe, Asia, and Africa, and the *Itinerarium Maritimum*, exhibiting the most frequented tracts along the coasts and at sea; and 2. the *Itinerarium Hierosolymitanum*, made by a Christian in A. D. 333, for the use of travellers from Burdigala (Bordeaux) to Jerusalem.

The edition of these Itinerarles by Pinder and Parthey (Berlin, 1848) has superseded all others.

—a. [L. Lat. *itinerarius.*] Pertaining to a journey; travelling; passing from place to place, or done on a journey.

Itin'erate, *v. n.* [L. Lat. *itinero, itineratus*, from Lat. *iter*, a going, *eo, itum*; Sansk. *i*, to go.] To journey; to travel from place to place, particularly for the purpose of preaching, lecturing, &c.; to wander without a settled habitation.

Itin'erating, *n.* The practice of travelling from place to place.

—*p. a.* Journeying; travelling; wandering.

Itinerating Libraries. The name given to small collections of books for popular readiug contained in boxes, one of which, after being stationed in a village for a certain length of time, is transferred to another village, when another takes its place; and so on with any assigned number of boxes, each with its special assortment. This economical method of establishing libraries in a country district, and the principle of readers paying a small sum per annum, has been very successfully put in practice in England.

Itiniyini, (*e-te-ne-ve'ne,*) a river of Venezuela, joins the Rio Negro abt. 40 m. N.E. of the mouth of the Cassiquiare.

-I'tis, [Gr., from *iemai*, denoting violent or impetuous action] (*Med.*) A termination added to the genitive case of the Greek name of an organ, to indicate inflammation of that part; as, *gastritis, hepatitis, carditis*; meaning inflammation of the stomach, liver, or heart.

Itself', *pron.* The neuter reciprocal pronoun or substitute applied to things. — See IT.

Itt'nerite, *n.* (*Min.*) A mineral of a gray or bluish color, and found massive or in dodecahedrons. *Sp. gr.* 2·40. *Comp.* Complex. It consists mostly of silicate of alumina, but contains also lime, soda, potash, sulphuric acid, chlorine, and water. Found at Kaiserstuhl, near Freiberg.

It'tria, *n.* See YTTRIA.

It'trium, *n.* See YTTRIUM.

Itu, ITITU, or YTU, (*e-too,*) a town of Brazil, abt. 70 m. W.N.W. of São Paulo; *pop.* 12,000.

Itucambira, (*-kam-bee'ra,*) a river of Brazil, joins the Jequitinhonha in the prov. of Bahia.

Itunama, TUNAMA, (*-na-ma',*) a river of Brazil, joins the Guapore in Lat. 12° 20′ S.

Iturbide, (*e-tōōr-be-dā',*) AUGUSTIN DE, emperor of Mexico, b. in Valladolid de Michoacan, 1784. He was the son of a Spanish colonist, and early in life entered the Mexican army, where he speedily became distinguished by his courage and energy. In 1810 he exerted himself to suppress the insurrection initiated by Don Miguel Hidalgo, and for his services therein was made commander of the army of the N. Subsequently, being placed in command of the army of the S. at Acapulco, in 1819 he there inaugurated the commencement of a revolution to emancipate Mexico from the Spanish yoke. In this he was entirely successful, and on the 27th of Sept., 1821, by a treaty entered into with the Spanish viceroy, a junta was formed in the city of Mexico for the government of the country, with *I.* at its head. In April, 1822, however, a rupture taking place between congress and the executive, *I.*, having the army at his disposal, effected a *coup d'état*, and on the 18th of May following, the people and garrison of the city proclaimed him emperor. This measure was shortly afterward legalized by the voice of the congress, who declared the crown hereditary in *I.*'s family, invested his father and his sons with the rank of princes, gave the newly-appointed sovereign a civil list of $1,500,000, and instituted an order of knighthood called the *Order of Guadalupe*. *I.*'s imperial power was, however, of but short duration; Gen. Santa Anna (*q. v.*) proclaimed a republic at Vera Cruz, and subsequently entered into a convention with Gen. Echevarria, Feb. 2, 1823, for the purpose of reconstructing the congress which had been dissolved by *I.* On the 20th of March following, the emperor resigned his crown. He was then allowed to depart the country on an annual pension of $25,000. He accordingly proceeded to Europe, where he resided in Italy and in England for several months. On May 11, 1824, *I.* embarked in England for Mexico, with a view to recover his lost crown, and landed in the latter country in disguise, July 14. The Mexican government having been apprised of his quitting Europe, proscribed *I.* as a traitor and public enemy, and soon after his arrival caused him to be arrested, and condemned to death. He was accordingly shot at Pudilla on the 19th of July. The widow and children of the fallen general were allowed by the Mexican government to repair to Philadelphia, U. S., where they took up their residence. Within the last few years, it is believed that at least two of *I.*'s sons have been residents in Mexico, where they were inducted into honorable positions.

Itz'ac, a lake of Central America. See PETEN.

Itzeoe, (*it'sai-ho,*) a town of Denmark, in Holstein, on the Stor, 32 m. from Hamburg. *Manuf.* Cards, tobacco, soap, hats, &c. *Pop.* 7,000

Iu'ka, in *Illinois*, a post-village of Marion co.

Iu'ka, in *Kansas*, a post-township of Pratt co.

Iu'ka, in *Mississippi*, a post-town, cap. of Tishemingo co., about 22 m. E.S.E. of Corinth. *Pop.* (1897) 1,120.

Iuli'dæ, *n. pl.*; IULUS, *n.* (*Zoöl.*) A family and genus of Myriapodous insects, characterized as follows: Antennæ with seven joints, slightly enlarged toward the end; mandibles two, thick, without palps, each divided into two by a middle joint; provided with imbricated teeth; an inferior lip formed by the confluence of two maxillæ; feet attached in double pairs to most of the joints; body long, cylindrical, capable of being contracted into a discoidal spire. The common gally-worm (*Iulus terrestris*) is an example of this genus.

Iva, *n.* [A name of barbarous origin.] (*Bot.*) A genus of plants, order *Asteraceæ*. They are perennial herbs or shrubs, with lower leaves opposite. *I. frutescens*, the High-water Shrub or Marsh Elder, is found on the borders of salt marshes from Mass. to La.; leaves numerous, 3-veined, upper ones entire; flowers green, small, drooping, in close, leafy clusters.

I'vaarite, *n.* (*Min.*) A lustrous black mineral from Ivaara, Finland. It consists of silica, oxide of iron, titanic acid, and lime. *Sp. gr.* 3·69. It is a variety of SHORLOMITE.

Ivahi, (*e-va-hē'*,) or UBAHI, a river of Brazil, joins the Paraua in Lat. 23° 20′ S., Lon. 54° W.

Ivan, (*ē'van.*) [The Russian form of John.] The Russian sovereigns of this name are: — IVAN I., who succeeded his father in the principalities of Vlodomir, Moscow, and Novogorod, 1328, and n. 1340. — IVAN II., his grandson, reigned 1353–1358.—IVAN III., the conqueror of the Tartars under Achmet Khan, the first to adopt the black eagle, and claim the sovereignty of all the Russias, 1438–1505. — IVAN IV., surnamed the *Terrible*, b. 1529, ascended the throne at the age of 4 years, in 1533. His mother was appointed regent, and sustained, in his name, a great struggle against the nobles of the kingdom. He attained his majority in 1544, and made war against the Poles, the Swedes, and the Tartars, all of whom were in turn vanquished. He committed numberless cruelties upon these peoples, as well as upon his own subjects. He killed with his own hand his eldest son; but his reign was marked by a great advance in civilization. He definitively adopted the title of "czar," and added to it that of "autocrat." D. 1584. — IVAN V., Alexovitch, b. 1661, succeeded to the throne on the death of his brother, Feodor Alexiowitz, in 1682. But being of weak intellect, he was placed in a monastery, and the sceptre given to his brother Peter. The Princess Sophia, hoping to reign in the room of Ivan, excited an insurrection, which ended by the appointment of Ivan and Peter joint sovereigns, and Sophia co-regent. This government lasted six years, when Sophia having projected the death of Peter, that she might reign alone, the conspiracy was discovered, and the princess confined in a convent. From that time Peter reigned sole monarch. D. 1696. — IVAN VI., of Brunswick-Bevern, was declared czar when but three months old, after the death of his great-aunt, Anne Ivanovna, in 1740. Anne left him to the guardianship of the duke de Biren, who being deposed shortly after, the regency was transferred to the emperor's mother. In 1741 he was dethroned and confined in a fortress, whence he was carried away by a monk; but was retaken and placed in a monastery. Murdered in prison, 1764, by the orders either of the Empress Catharine II., or of her counsellors. See *Ralston's Early Russian History* (London, 1874).

I'vanhoe, *n.* (*Lit.*) The name of a celebrated novel, written by Sir Walter Scott.

I'vanhoe, in *Iowa*, a village of Linn co.

Ives, St., a seaport town and borough of England, co. Cornwall, at the W. extremity of the bay of the same name, 18 m. W. of Truro, and 250 W. by S. of London. The pilchard fishery is extensively carried on here, and mining occupies a large number of the inhabitants. The port has a pier and breakwater, within which ships are protected from the northwest winds. *Pop.*, 6,094.

Ives, St., a market town of England, co. Huntingdon, on the Ouse, 5 m. from Huntingdon. The markets for cattle or other live stock held in this town are among the largest in Great Britain. *Pop.* about 3,000.

Ivi'ca, IVIZA, IBICA, or IMZA, (*e-bē'sa.*) (Anc. *Ebusus.*) An island in the Mediterranean, forming one of the Balearic group belonging to Spain, 50 m. E. by N. of Cape Nao, Valencia, and 42 S.W. of Majorca; Lat. 38° 53′ 16″ N.; Lon. 1° 26′ 32″ E. It is of an irregular five-sided figure; its length from N.E. to S.W. being 27 m., and its average breadth 15. *Surface.* Hilly and irregular; *soil*, fertile. *Clim.* Temperate, though warm. *Prod.* Olives, wine, corn, flax, hemp, fruits, and salt. The latter item is largely exported, as is also fish and lumber. The cap. of same name is fortified, and possesses a good harbor. *Pop.* of island 24,057; of town, 6,106. See BALEARIC ISLANDS.

Ivi'za, in the Balearic Islands. See IVICA.

I'vory, *n.* [Fr. *ivorie.*] The substance which composes the teeth or tusks of elephants. Ivory is largely used in the arts for making or ornamenting a great variety of small articles in general use. The western coast of Africa and Ceylon are the districts from which the principal supplies of elephants' teeth are obtained. Although the ivory made from elephants' tusks is the best, varieties are also made from the teeth and tusks of the hippopotamus, wild boar, and narwhal. The fossil mammoth of Siberia furnishes the Russians with a kind of ivory very similar to that furnished by the elephant of the present day. Mammoth tusks are sometimes obtained ten feet long, weighing nearly 170 lbs., and solid to within six inches of the end. The white keys of planofortes are frequently veneered with this kind of ivory. For manufacturing purposes, ivory is cut up by means of saws with sharp but coarse teeth, set in steel frames. Great art is required in cutting the tusks, as their peculiar turns and twists render them liable to be cut to waste. Veneers can be cut in a ratio of thirty to an inch thickness of ivory; and as the sawdust and scrapings afterwards effect a waste of one-half, it frequently happens that sixty finished ivory veneers will not be more than an inch in thickness These thin plates are principally used for painting miniatures upon, and making memorandum-books. Ivory forms a fine and delicate substance for making graduated scales for mathematical instruments. It is liable, however, to expansion and contraction in changes of weather. After being cut with the saw, ivory is smoothed and polished in a variety of ways. Fine glass-paper is sometimes used; at others, emery-paper, whiting and water, oil on a piece of rag, putty-powder, Flanders brick, powdered chalk, &c. It is also sometimes scraped and rubbed on list-wheels, consisting of ten to twenty circular pieces of woollen cloth screwed tightly between two wooden discs of rather smaller diameter: the cloth forms a pliant edge projecting beyond the wood. Such wheels, when moistened with Trent sand, are used for polishing parasol-handles and similar articles. The chief consumption of ivory in Europe is in the manufacture of knife-handles and combs. Ivory is frequently engraved by French artists. Having covered the surface with a wax or composition coating, they etch the design in it, by means of a dilute solution of nitrate of silver; the etching is then bitten in, the whole washed in distilled water, dried with blotting-paper, and exposed to the sun's rays. When the ground is removed, the design is seen as a series of brownish lines, which speedily become black. Sometimes the ivory is itself engraved, and the lines filled in with hard black varnish. Hitherto, no European artist has been able to cut concentric balls of ivory after the manner of the Chinese; and their boxes, chessmen, and other ivory articles, far surpass those of any other nation. *Vegetable ivory*, as it is called, is the seed of a genus of plants named *Phytelephas* (Gr. *phuton*, a plant; *elephas*, ivory), occurring in South America. The natives have used these seeds from time immemorial for making buttons, and various trinkets. It is only within a recent period that they have been brought into the U. S. They are not so useful as ivory for delicate purposes; but they are used in the manufacture of a number of articles. For ARTIFICIAL IVORY, see CELLULOIN.

Ivory, *a.* Consisting of ivory; made of ivory; white, hard, or smooth, like ivory.

Ivory-black, *n.* (*Chem.*) When bone is burnt, it forms a mixture of charcoal and phosphate of lime, which is sold under the name of *ivory-black*. Like other forms of animal charcoal, it is very effective in depriving certain substances of their color and odor. When ivory-black is prepared by calcining the shavings and dust of ivory, and then ground and levigated on a porphyry slab, it gives the velvety black material which forms the principal ingredient of the ink used in copper-plate printing.

Ivory Coast, the name given to a portion of the coast of Guinea, in W. Africa, inhabited by a number of small negro tribes, living in a state of independence, except those which are subject to the Ashantees; Lat. between 3° 20′ and 7° 40′ N.

Ivory-nut, *n.* The fruit of the *Phytelephas macrocarpa*. — See IVORY.

Ivrea (*ē-vrā'ah*). (Anc. *Eporedia.*) A fortified town of N. Italy, cap. prov. of same name, on the Doire, 30 m. N.N.E. of Turin. *Manuf.* Silks and cotton stuffs. This place, under the French empire, was the cap. of the dept. Doire. *Pop.* (1897) 9,415.

Iv'ry, Battle of. See ANET.

I'vy, *n.* (*Bot.*) See HEDERA.

Ivyed, Ivied (*i'vid*), *a.* Overgrown with ivy.

Ivy Mills, in *Pennsylvania*, a post-village of Delaware co., about 88 m. E. by S. of Harrisburg.

Ixelles (*ēks'el*), a town of Belgium, 2 m. from Brussels. *Manuf.* Linen. *Pop.* (1897) 46,054.

Ix'iolite, *n.* (*Min.*) Same as TANTALITE (*q. v.*).

Ixion (*iks-ī'on*). (*Myth.*) A treacherous king of Thessaly, who, having basely destroyed his father-in-law, was so execrated by his subjects that Jupiter in pity took him to heaven; but *I.* becoming enamored of Juno, Jupiter hurled him with his thunder into the infernal regions and had him chained to a wheel in perpetual motion, his punishment thus being eternal.

Ix'olyte, *n.* [Gr. *ixos*, gluey, and *luo*, to dissolve.] (*Min.*) A fossil resin found in small pieces in a bituminous coal-bed at Oberhart in Austria. It has a greasy look and a hyacinth-red color. Crumbled in the fingers, it is a yellowish-brown. At a temperature of 170° it softens, but at 212° is still tenacious. *Sp. gr.* 1·008.

Ixonia (*ix-ō'ne-a*), in *Wisconsin*, a post-township of Jefferson co.

I'za, a town of Peru. See ICA.

Iz'abal, or ISABAL, a village of Central America, in the Republic, and abt. 90 m. N.E. of the city of Guatemala.

Izal'co, ISALCO, or YSALCO, a volcano of Central America, Republic of San Salvador, and about 10 m. N. of Sonsonate.—A town situate 40 m. W. by S. of San Salvador. *Pop.* (1897) 4,120.

Iz'amal, a city of Mexico, State of Yucatan, about 45 m. E. of Merida.

Iz'ard, in *Arkansas*, a N. county; *area*, about 547 sq. m. *Rivers.* White river, and numerous smaller streams. *Surface*, diversified; *soil*, fertile. *Cap.* Melbourne. *Pop.* (1890) 13,038.

Izium (*e-zē-oom'*), a town of Russia in Europe, 70 m. from Kharkov. *Trade.* Agricultural. *Pop.* estimated at 12,600 on July 1, 1897.

Iz'mid, a seaport town of Asiatic Turkey, 50 m. S.E. of Constantinople; Lat. 40° 45′ 30″ N., Lon. 30° E.

Iznajar (*ez-nā'har*), a town of Spain, prov. Andalusia, on a height near the Genil, 38 m. from Cordova. *Manuf.* Soap, tiles, coarse linen, hempen tissues, oil and flour. *Pop.* (1897) about 4,300.

Iztaccihuatl (*ez'tach-chē-hōō-at*), a Mexican volcano, 30 m. from La Puebla. Height, 15,705 feet above sea-level

Iz'zard, *n.* [Etymol. uncertain.] A former name of the letter Z.

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BADGES AND DECORATIONS OF HONOR

PLATE I.

1 ORDER OF CHRIST (Pontifical).
2 SOCIETY OF THE CINCINNATI (United States).
3 ORDER OF THE THISTLE, with Collar Attachment (Great Britain, Scotland).
4 ORDER OF THE GARTER—the George Badge, with Collar Attachment (Great Britain).
5 ORDER OF ST. GREGORY THE GREAT (Pontifical).
6 ORDER OF THE GOLDEN FLEECE (Spain).
7 GUELFIC ORDER OF HANOVER.
8 ORDER OF THE BATH, Military Class (Great Britain).
9 GRAND ARMY OF THE REPUBLIC (United States).
10 ORDER OF ST. MICHAEL AND ST. GEORGE (Great Britain).
11 ORDER OF THE ROSE (Brazil).
12 ORDER OF ST. PATRICK, with Collar Attachment (Great Britain, Ireland).
13 ORDER OF THE HOLY GHOST (France).
14 ORDER OF THE TOWER AND SWORD (Portugal).
15 ORDER OF THE HOLY SEPULCHRE (Pontifical).
16 LEGION OF HONOR (France).
17 LOYAL LEGION (United States).
18 ORDER OF THE STAR OF INDIA (England, India).
19 ORDER OF ST. ANDREW (Russia).

BADGES AND DECORATIONS OF HONOR.

PLATE II.

20 ORDER OF THE OAK CROWN (Luxembourg).
21 ORDER OF THE CROWN OF WURTEMBERG.
22 ORDER OF ST. JOHN OF JERUSALEM.
23 ORDER OF THE ELEPHANT (Denmark).
24 THE IRON CROSS (Prussia).
25 THE NICHAN BADGE (Tunis).
26 ORDER OF THE BLACK EAGLE (Prussia).
27 APOSTOLIC ORDER OF ST. STEPHEN (Austria, Hungary).
28 MILITARY ORDER OF WILLIAM (Netherlauds).
29 ORDER OF THE SUN AND LION (Persia).
30 ORDER OF ST. OLAF (Sweden).
31 ORDER OF THE NISHANI-MEDJIDIE (Turkey).
32 CONGRESSIONAL MEDAL OF HONOR, WAR DEPARTMENT (Uuited States).
33 KNIGHTLY ORDER OF ST. HUBERT (Bavaria).
34 FAMILY ORDER OF LOYALTY OF BADEN (Germany).
35 ORDER OF LEOPOLD (Belgium).
36 ORDER OF THE BUST OF BOLIVAR (Venezuela).
37 ROYAL AMERICAN ORDER OF ISABELLA THE CATHOLIC (Spain).
38 ORDER OF THE REDEEMER OR SAVIOR [reverse] (Greece).
39 ORDER OF THE SERAPHIM (Sweden, Norway).
40 ORDER OF THE GOLDEN FLEECE (Austria, Hungary).
41 ORDER OF THE EASTERN RISING SUN (Japan).
42 THE VICTORIA CROSS (Great Britain).
43 ORDER OF THE GARTER, PRINCIPAL KING OF ARMS (Great Britain).
44 ORDER OF THE RUE CROWN (Saxony).

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I.—SECTION II.

Ibe'a, *n.* (*Geog.*) An early name for the British East Africa Protectorate, formed from the initials of the Imperial British East Africa Company, which exercised control over the territory from its formation, Sept. 3, 1888, until the establishment of a formal protectorate in 1895.

Ibe'ria, in *Louisiana*, a S. parish; *area*, 580 sq. m. Intersected by Bayou Teche; bounded on the N. E. by Grand Lake, and on the S.W. by Vermilion Bay. *Surface*, level, partly covered with forests of cypress and live oak; *soil*, fertile. *Products*, cotton, corn, sweet potatoes, rice, sugar, and molasses. *Cap.* New Iberia. *Pop.* (1890) 20,997.

Ib'sen, Henrik, dramatist, was born at Skien, Norway, March 20, 1828; studied medicine, but later adopted the profession of literature, especially dramatic composition; was a student at the University of Christiana in 1850; a theatrical manager for the succeeding fifteen years (at the Norwegian theatre in Bergen, 1851–1857, and at Christiana, 1857–1866). During this time he wrote many plays of historical interest and romantic charm. In 1866 he was pensioned by the Norwegian Storthing, and thereafter resided in Germany and Italy, until 1891, when he returned to Christiana. Wrote voluminously on (1) Norse historical subjects, (2) weird romantic themes, and (3) social problems. Of the latter group, *A Doll's House* has attracted popular attention and invited severe criticism; *Peer Gynt* is known widely by association with the music of Grieg. He wrote various other dramas of the same type, psychological in their interest but vividly realistic in language, and giving rise to much critical controversy. Died May 23, 1906.

Ice'-breaker, *n.* A pile of masonry or other material so placed as to break up and turn off masses of floating ice, and thus protect piers, shipping, &c. See Iceboat.

Ice'man, *n.* One who is skilled in travelling over or through ice.—One who sells or delivers ice.

Ichnog'raphy, *n.* [Gr., *ichnographia.*] The art or practice of drawing or tracing plans and figures.

I'con, *n.* See Eikon.

Ic'terus, *n.* (*Bot.*) Yellowness in the leaves of plants; distinguished from *chlorosis*.

Ic'tus, *n.* [Lat., stroke.] (*Pros.*) A stress of voice or rythmic accent in one part of a metrical foot. In classical poetry, the ictus fell on a long syllable; in English verse, it is stress on an accented syllable.

(*Path.*) A blow or stroke; as, *ictus solis*, sun-stroke; *ictus sanguinis*, apoplexy.—The sting of an insect.—The pulsation of an artery.

Ide'alism, *n.* A seeking after the ideal; an endeavor to attain perfection by selecting all the excellencies of individual forms, improving and uniting them in one whole.

Ide'al-re'alism, *n.* (*Philos.*) A doctrine which, while admitting the teachings of idealism in reference to the nature of thought and knowledge, holds also that the phenomenal universe has an existence apart from mental conceptions and cognitions.

Id'ioticon, *n.* [Gr.] A glossary of the words and phrases peculiar to any district or section of a country.

Id'iotype, *n.* [Gr., *idios*, peculiar, and *type.*] (*Chem.*) A term applied to bodies derived by replacement from the same substance, including the typical substance itself. Thus, ammonia is idiotypic with ethylamine and all other organic bases derived from it by substitution.

Igle'sias, Miguel, lawyer, statesman and soldier, was born at Cajamarca, Peru, Aug. 18, 1822; a landed proprietor and an active politician (1861–1879). Appointed by Pierola Minister of War; commanded a division in the defense of Lima against Chilean invasion in 1878; was an influential leader of the party favoring peace negotiations; through Chilean favor was recognized as President, and as such signed the treaty of peace with Chile, Oct. 20, 1883. Caceras, his predecessor, disputed the claim, and after a sharp factional war a general election was held, June, 1886, reinstating Caceras in office. *I.* soon afterward left Peru, and lived in retirement in Spain.

Igna'cio, Joaquin José, born at Lisbon, Portugal, July 30, 1808; went to Brazil in childhood; entered the navy in 1822, and was thenceforth identified with political and military affairs of Brazil. He was made Minister of Marine in 1861. In the war with Paraguay (1867–1868) he commanded the victorious Brazilian flotilla; received the titles of marquis and viscount, and was promoted full admiral. Prostrated by sudden illness, he went on sick-leave to Rio de Janeiro, where he died March 8, 1869.

Ignatieff', Nicholas Paulovitch, soldier and diplomatist, was born at St. Petersburg, Jan. 29, 1832; educated among the imperial pages; entered the guard in 1849; was sent to London as military attaché at the Russian Embassy, where his ability was recognized; he thereafter received many diplomatic appointments; was sent on a mission to Khiva and Bokhara (1858); Ambassador to Pekin (1860); to Constantinople (1864); was Minister of the Interior by appointment of Alexander III. until 1882; member of the Council of the Empire, and notable as a leader of the Pan-Slavic party.

Ig'norantism, *n.* Opposition to the diffusion of knowledge; obscurantism.

Ignora'tio elen'chi. [Lat.] (*Logic.*) A fallacy that consists in overlooking, either intentionally or inadvertently, the point at issue.

Ignora'tion, *n.* Lack of discrimination between the objects of thought.

Ihlang'-ihlang', *n.* [Malay, flower of flowers.] A perfume obtained from the flowers of the *Canauga odorata*, a Malayan tree of the *Anonaceæ*, or custard-apple family. Sometimes spelled *ylang-ylang*.

Illinois', Univer'sity of. (*Educ.*) This institution, located at Urbana, was chartered in 1867 and

Fig. 2936.—INAGA PALM.

opened in 1868. The leading purpose of its foundation was the teaching of agricultural methods and mechanical arts; but its curriculum includes liberal education in all the sciences and the classics. By the aid of land grants from Congress, amounting to 480,000 acres, the endowment fund has reached $600,000. The buildings are costly, substantial, and commodious. A new Engineering Hall was occupied in 1895; a new Library Hall was finished in 1897; and a Biological Station was established in 1895, at Champaign, for the continuous observation of aquatic life in the adjoining waters. Elaborate experimental work has been undertaken by the laboratory staff with a view to destroying the chinch bug, more particularly by the dissemination of contagious diseases of that insect. The State grants have recently reached $325,000 annually. The grant of 1895 included a provision for creating a department of Economic Geology, for the study of soils; also, a provision for the purchase of the College of Physicians and Surgeons and its consolidation with the University. The number of students is now over 4000, of whom a considerable number are women.

Ilwa'co, in *Washington*, a post-town of Pacific co., at the mouth of the Columbia river, 128 m. N. W. of Portland, Ore., on L., R. & N. R. R. *Pop.* (1900) 584.

Im'lay City, in *Michigan*, a post-village of Lapeer co., 34 m. W. of Port Huron, on the Grand Trunk and P., O. & N. R. Rs.; has flour mills, foundry, elevators and planing mills, and is the shipping center of an agricultural and lumbering district. *Pop.* (1894) 1,191.

Implo'sion, *n.* [Analogous to *explosion.*] A sudden bursting inwards.

(*Phonet.*) The pressure of air caused by the closing of the vocal organs in the production of certain consonant sounds; as, b or d.

Impresa'rio, *n.* [Ital.] One who organizes, manages, or conducts a concert or an opera company.

I'naga, or **I'naja Palm,** *n.* (*Bot.*) The *Maximiliana regia*, a South American palm, common in the countries near the Amazons; has a lofty, massive stem; very long, drooping, pinnate leaves, with leaflets in groups of three, four, or five at intervals along the midrib, from which they stand out in different directions; numerous spadices; large, woody spathes; and densely clustered, elongate fruit, with a hard, stony seed, a layer of soft pulp, and a tough skin. The leaves are sometimes more than 50 feet long. The great woody spathes are used by hunters as cooking utensils, for which purpose they stand the fire well enough when filled with water. They are also used as baskets and as cradles by the Indians. The fruit is eaten by the Indians, and is particularly attractive to monkeys and some kinds of birds. It is also called the *jagua* palm.

Incandes'cent Lamp, *n.* See Electric Lighting.

Incanes'cent, *a.* [Lat. *incanescens.*] (*Bot.*) Becoming white; growing hoary.

Inci'to-mo'tor, *a.* (*Anat.*) Of or belonging to that function of the nervous system by which an impression is transmitted from a center so as to produce a contraction of a muscle; the opposite of *excito-motor*.

Inclinato'rium, *n.* [See Incline.] (*Physics.*) An inclination-compass, or dipping-needle (*q. v.*)

Inclined' Planes. (*Mech.*) In 1586 the fundamental principles of the inclined plane were established by Sterinus, in his treatise on equilibrium, in which he solved the value of forces acting obliquely. In mechanics the inclined plane occupies an important position. Stated practically, the use of an inclined plane is to diminish the weight of an incumbent load, thus enabling it to be moved with greater ease in consequence of the inclination of the plane. Technically stated, the power gained is in the proportion of the length of the plane to the length of its base. An inclined plane may justly be considered a mechanical power, because a weight can be rolled up a slope and so *raised* to a given height that could not be *lifted*. Thus, a force that would just raise 300 pounds if applied vertically, would, on a smooth inclined plane, with a gradient of 5 in 13, keep 780 lbs. in equilibrium. Stated in another way, the mechanical gain is as 1·72 to 1. This gain in power is accompanied by a loss in velocity, for the ratio of the latter is the proportion of the distance through which the power moves to the vertical height through which the weight is raised. Thus, to move a weight of, say, 30 lbs. up a given inclined plane to a vertical height of 1 foot, a power of 17·4 lbs. must be exerted through a distance of 3·38 feet.

The use of inclined plane in engineering dates back to a very remote period, for in many parts of Europe and Asia are still to be found the remains of great undertakings. It is considered that the canal which united the Red Sea and the Nile was overcome by a sluice, an inclined plane probably, down which the water ran. It is possible that it may have been an inclined plane like that which crossed the Isthmus of Corinth some centuries later. This ancient work dates back to the period of Sesostris (Rameses II) B. C. 1500, whose public works bear witness to the engineering skill of those days. The sluice was the forerunner of the lock in Europe, and it was also used, in all likelihood, in the great canal of China in the 6th century A. D. The lock was not invented till the 14th century and was first used in Italy. Inclined planes were used for raising the Greek galleys and triremes from the waters of the Corintbian Sea and transporting them across the Isthmus of Corinth.

The principal adaptation of the power of the inclined plane is to railroads and canals, and in mining operations, where steep grades have to be overcome. The methods employed vary in almost every case, but the principle is invariable. Some of the most important and familiar applications are here noted. Previous to the completion of the tunnel on the Mont Cenis Rail-

way, the mountains were crossed between Savoy and Italy by a series of inclined planes with mechanical devices by which the rails was gripped instead of depending upon frictional contact for the tractile effect of the motor. The Callao, Lima & Oroya Railway, in Peru, affords a magnificent illustration of the operation of the power of inclined planes. The grades are 211 feet to a mile, with curves limited to 400 feet radius. The longest ascent is about 6 miles. This plane is between Lima and Callao, and has a fall of 511 feet, or 1 in 60. The ascent from the Konkan or flat country of Bombay to the tablelands of the Deccan, by way of the Western Ghauts, is known as the Bhore Ghaut incline, where the railway rises 2,000 feet over a series of elevations 16 miles long. The famous Rigi railway, so well known to travellers in Europe, rises 1,170 feet in 4,700. The locomotive used on this incline is of very peculiar construction and presents a level floor to the inclined road-bed. The Burgenstock incline, in Switzerland, has a grade of 57 per cent. over a length of 3,071 feet. The longest inclined railways are in Italy, the one ascending Mt. Vesuvius being 10,500 feet, divided into two planes of 6,900 and 3,600 feet respectively; and that which ascends the Supurga Mountain having a length of 10,243 feet, with a maximum grade not exceeding 20 per cent.

In most of these, and in many of the other cases, precautionary measures are taken to insure safety, such as the use of track-brakes or grip-wheels, or a ratchet-rail on mid-track. The rack-rail system employs a locomotive with toothed wheels on driving axles that engage with the teeth of the rack-rail on the track. The inclined plane is used for railways that have too steep a grade for ordinary locomotives, and where cables, rack-rails or grip-wheels are needed. All roads known as "switchbacks," "cable planes," "gravity roads" and "rack planes" involve in their construction the principle of the inclined plane. As has been previously mentioned, the method of operating inclined roads varies. In some cases stationary engines and cables are used, while in others the locomotive is the tractile power employed. In America there are many familiar inclined railroads, and the most interesting is that of Pike's Peak. This road is about 8¾ miles long, and has a maximum grade of 25 per cent. for 10,229 feet of the distance, the remainder varying in gradient from 12 to 22 per cent. Still steeper, at some points, is the Catskill Railway, which was finished in 1892, the length of the incline being 7,000 feet, with a maximum gradient of 34 per cent., but averaging over its entire length only about 12 per cent. The incline on the Lookout Mountain, in Tennessee, was completed in 1887. Its grade over 4,360 feet of road is 26 per cent. Near Mauch Chunk, Pa., is one of the pioneer railroads in the U. S.; it was completed in 1827, and has a length of 9 miles. Its grade is 1 foot in 82, or 96 feet per mile. It is one of the roads known as gravity roads, the empty cars being hauled back by mules. This method was in use until 1844, when a stationary engine hauled the returned empty cars up two inclined planes. The Mount Pisgah plane, in Pa., has a length of 2,322 feet with an elevation of 664 feet. The Mount Jefferson road has a length of 2,070 feet, with a grade of 23 per cent. The Allegheny Portage Railway, in Pa., was completed in 1833; its length was 36 miles, the total ascent being over 2,500 feet, of which 10 inclined planes overcame 2,000 feet. At New Hollidaysburg, on the old line of the Pennsylvania Railroad, there were formerly in operation a series of inclined plane roads by which several steep gradients were overcome by means of stationary engines placed at the summit of each grade, which hoisted and lowered the cars by means of ropes. At Mahanoy City, Pa., there is a plane road over which coal-laden cars are hauled from the mines in the valley. Stationary engines supply the power through the medium of wire ropes. This plane is 2,400 feet long, and has a vertical height of 360 feet. Lastly, the inclined railway at Fort Washington is operated similarly to that of the Rigi in Switzerland, already referred to.

The inclined plane in connection with canal traffic is often used instead of locks for raising and lowering boats from one level to another, especially in England, where a rise of as much as 80 feet is thus overcome. A stationary engine at the summit of the plane, working in connection with a drum and an endless chain, hauls up the boat in its cradle over, in general, a wide railroad track, from the lower to the higher level. Often the power is a turbine motor, worked by a head of water from the higher level, with large horizontal pulleys fixed at head and foot of planes of each pool and attached to a winding drum. The boats are floated into the carriage or cradle, which, on reaching the other level, sinks; and the boats float away when detached from the cradle and are again made fast to the towing rope. The planes are sometimes single- and sometimes double-tracked. Another method is to convey the boats in caissons instead of in cradles. At the upper end of the plane the caisson is drawn into a chamber of masonry which makes a water-tight connection with the projecting end of the caisson. Upon the door of the chamber and that of the caisson being opened, the boat flows into the pool of the canal. This system is in use on the Chesapeake and Ohio Canal, near Georgetown, D. C., as well as in many places in Europe.

On the Morris and Essex Canal, in New Jersey, forming a connection between the Hudson and Delaware rivers, there are thirteen planes over which boats were formerly hauled without locking. The summit level at Stanhope is 900 feet above tide-water and the changes in grade are very frequent. At one point there is a fall of 200 feet in the canal, 80 of which are overcome by one plane 800 feet long. The track is laid with heavy rails, over which the boat, resting in its cradle, is hauled by power furnished by a water-wheel motor. A plan was invented in England for hauling canal boats up planes while preserving their horizontal position.

In'come Tax. (*Law and Econ.*) In 1861 and the following year Congress, forced by the exigencies of war, first undertook to enact an income tax law. By the Act of July 1, 1862, a tax was levied on all incomes between $600 and $10,000 of 3 per cent. and 5 per cent. on those in excess of $10,000. On incomes accruing to Americans residing abroad, the tax was 5 per cent. The provisions were so complicated and the methods of collection so inquisitorial that the commissioner of internal revenue reported that they deprived the law "of all claims to public favor." The amount realized by the law in 1863 was only $20,294,000. In 1864 a more efficient law was enacted. The receipts in 1866 amounted to $72,892,000, contributed by 460,179 persons. The tax was levied on net incomes after deduction of all other taxes. The rate imposed under this act was 5 per cent. on incomes not exceeding $5,000 and 10 per cent. on those in excess thereof, subject to exemption in respect of incomes under $600, as in the previous act. In 1867 the exemption clause was extended to incomes not exceeding $1,000, and a uniform rate of 5 per cent. on all incomes exceeding that sum; but the tax was to end in 1870. By the act of July 14, 1870, the tax was renewed for one year, but at the rate of 2½ per cent. on all incomes in excess of $2,000. A bill was passed by the Senate on Jan. 26, 1871, to repeal the income tax, but the House refused to accept this bill till March 3, 1871, when the tax was repealed. The last tax levied was in 1871, but collections were made as late as 1874. Only 72,949 persons contributed income tax in 1872, out of a total population of 39,000,000. The sum total of income tax received under this legislation was $346,911,760.

The constitutionality of the income tax was not questioned under the Act of 1864, as the Supreme Court had already ruled that direct taxes are only such as fall upon land or polls; hence, the economic definition of such a tax was not involved. It is urged that an income tax is really a tax on the property from which the income is derived; hence, that income derived from land would be taxable under the constitutional definition of a direct tax, and should be apportioned among States in proportion to population. Similarly, the internal revenue laws recognize the principle that a tax upon an income is in reality a tax upon the property yielding the income. So, too, by statute law, a grant or devise of real estate income, in perpetuity, is a grant or devise of the fee itself. The courts have held that a tax upon the income or profit of real estate is a direct tax; on the principle that a tax on the income of anything is equivalent to a tax on the thing itself.

No further legislation in this direction was attempted until that provided for in the Tariff Act which became a law on August 13, 1894, without the President's signature. The income tax feature was, however, declared to be unconstitutional by a decision of the Supreme Court of the United States, rendered on May 20, 1895, four of the Associate Justices voting to sustain the measure, while the other four and the Chief Justice held otherwise. This act provided for a tax on all incomes over and above $4,000 of 2 per cent., and was to have remained in force from January 1, 1895, to January 1, 1900.

The income tax is a universally hated tax. This sentiment arises not so much from the nature of the tax, *per se*, as from the inquisitorial character with which it is inevitably invested. According to the maxims accepted by the majority of eminent economists and jurists, it is in principle a perfect form of taxation, answering to the conditions of equity and justice. Yet in every country where it has been enforced evasion and misrepresentation have been common. Owing to the peculiar circumstances created by the Federal and State conditions, the imposition of a Federal income tax presents unusual difficulties apart from the mere question of constitutionality; for in spite of decisions already rendered, it is by no means certain that future rulings would invalidate legislation in favor of an income tax. One of the chief of these difficulties—one too that has not been made the most of—is the fact that a contributor to a Federal income tax would often be called on to pay perhaps three contributions in respect of the same income: first, to the Federal government; then to the State, and next on the property or business producing the income in virtue of its location and consequent jurisdiction of State. Take a citizen of Massachusetts: he would be a contributor to the Federal income tax, he would be subject to the Massachusetts income tax law, and he would be taxed again in another State in which his property or business was situated. Furthermore, the objection that an income tax is against the spirit of the nation, and is "class legislation" wherever any citizens are exempted from contribution, has caused bitter opposition. The exemptions that have been made and that proposed in the lately invalidated tax have been of such a liberal nature as to exempt from any direct contribution a very large proportion of income earners. In twenty States the imposition of an income tax has been expressly forbidden either by constitutional provision or by popular vote, and unquestionably its operation in the States in which it is a law is far from satisfactory. In Boston, Mass., it is estimated that not more than one-quarter is paid of what should accrue to the city from the income tax.

The history of income tax legislation in England commences in 1798, when the Pitt administration secured legislation providing for a tax on incomes over $1,000, of 10 per cent., and lower duties on smaller incomes. This tax was created purely as a provision for the expenses of carrying on war. In 1802 it was accordingly repealed, but the exigencies of war called for its reimposition in 1803, when 5 per cent. was levied on incomes exceeding $750, and lower duties on incomes of less amount; and it continued in force until after the Peace of 1815. In 1842 financial pressure resulted in the reënactment of the income tax, under the government of Sir Robert Peel; since which time, and though frequently denounced, it has held its place in the English system of taxation and seems to be likely to continue as the chief source of national income. The average rate levied for the last ten years has been about 6¼ d. per pound sterling, or about 2½ per cent. Except that exemption is allowed in the case of incomes of less than $750, and a rebate allowed of $600 in the case of incomes beyond this and not exceeding $2,000, the income tax is uniformly laid upon all incomes from whatever source arising. It is classed, for administrative reasons, under five schedules: A; comprises rents from lands and houses, proceeds of tithes, royalties, &c.; B, includes land-occupiers' tax, except nursery gardeners, who are assessed like traders and professional persons; C, embraces income tax from the public funds; D, comprises salaries, earnings, trading profits, companies' profits, such as gas and water, railroads, &c., interest on colonial and foreign investments, profits on mines and from fishing and shooting rents; E, includes salaries from official appointments, whether in public service or with corporate bodies.

Adam Smith says: "the subjects of every state should contribute toward the support of government, in the proportion to their respective abilities; *i. e.*, in proportion to the revenue they respectively enjoy under the protection of the state." Thorold Rogers declares that "taxation in proportion to benefits received is sufficiently near truth for practical operations of government." Sismondi believed "every tax should fall on revenue and not on capital," and further, "should never touch what is necessary for the existence of contributor." Senator Sherman asserts "that a system of taxation casting the whole burden of taxation on consumption is intrinsically unjust." In the same spirit are the utterances of Thiers, John Stuart Mill and other leading economists.

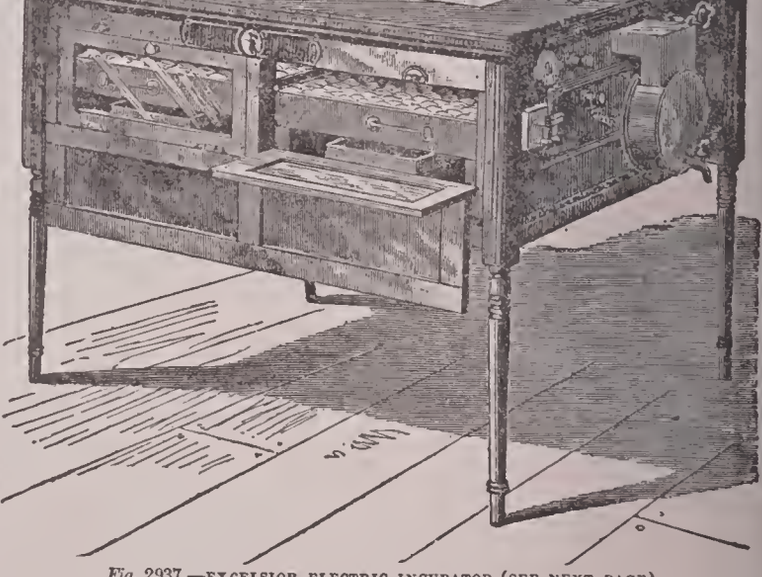


Fig. 2937.—EXCELSIOR ELECTRIC INCUBATOR (SEE NEXT PAGE).

Inconcin'nity, *n.* Unfitness; incongruity.

In'cubator, *n.* [From *incubate.*] That which incubates; specifically, an apparatus for hatching eggs by artificial heat, now generally employed by poultrymen when hatching is to be done in winter or on a large scale. Incubators are of two classes—those warmed by hot air and those warmed by radiation from a tank of hot water, the heat in either case being generated by a lamp-flame or gas-jet. The heat is to be maintained at 102° to 104° Fahr. This is the temperature, not of the egg-chamber, but of the upper surface of a fertile egg. The eggs are placed in trays, which are portable and so

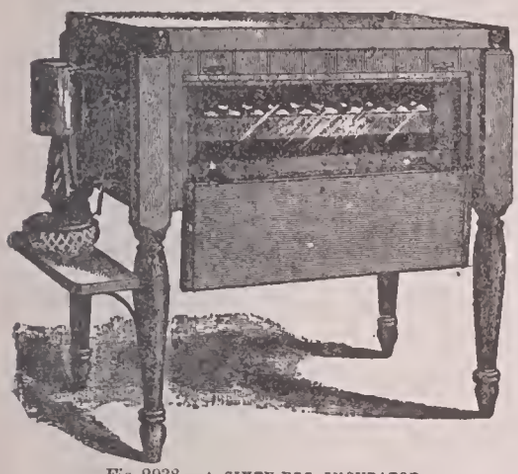


Fig. 2938.—A SIXTY-EGG INCUBATOR.

arranged as to be removed easily for airing or turning the eggs. Some machines have an apparatus for turning the eggs automatically. Several hundred eggs may be hatched in a single incubator. An electrical incubator has been recently introduced, the heat being supplied and automatically regulated by the electric current.

Indehis'cent, *a.* (*Bot.*) Not dehiscent; not opening the seed-vessel when ripe, as the hazel-nut.

Independ'ence, in *Kansas,* a city, cap. of Montgomery co., 85 m. S.W. of Fort Scott, on Mo. Pac. and A., T. & S. Fé R.Rs.; has steam grist mills, planing mills, brick-yards, brewery, and grain elevators, manufactures of tobacco, candy, brooms and wagons; in the natural-gas belt. *Pop.* (1895) 3,665.

Independence Day. The Fourth of July; celebrated in the United States as the anniversary of the Declaration of Independence made July 4, 1776.

In'dex-plate, *n.* (*Mech.*) A perforated disk used with various machines to aid in dividing a gear-wheel or other piece into a given number of circumferential parts.

In'dex re'rum, *n.* [Lat., a list of things.] A book for memoranda, quotations, references, &c., in alphabetical order.

In'dex-wheel, *n.* (*Mech.*) A wheel with a notched and graduated edge, used to control the amount of advance of the set-works in a saw mill.

In'dian Bu'reau, or Offices. (*Govt.*) The office in the Department of the Interior, of the U. S. Government, where is transacted the business pertaining to the Indians—their reservations, schools, supplies, &c.

In'dian Corn, *n.* (*Agric.*) Though this familiar plant is simply *corn* in the United States, in Europe, where *corn* is a general word for all grains, it is distinguished as Indian corn, but more often called by its original West Indian name, *maize.* Like other grains, it is a grass, but one sufficiently peculiar to be placed in a family (*Maydeæ*) and genus (*Zea*) by itself, as *Zea Mays.* Botanically described, it is monœcious, the male flowers forming a terminal panicle (the tassel) and the female flowers springing in thick sessile spikes from the axils of the large, sheathing, gracefully drooped leaves, whence the fruit develops. This fruit consists of hard kernels, each grain representing a blossom, forming rows around a central woody *cob* (the rachis of the spike), the whole ensheathed in leaf-like bracts called *husks.* Under favorable cultivation, the stalks reach a height of 12 feet. Although supposed by early European writers to have been derived from Asia, there is no doubt that its native home is the tropical parts of America, where it was found in extensive cultivation among the aborigines, from the Great Lakes to Chile, by the European discoverers of this continent, who quickly sent its seeds to the Old World. Until recently it was unknown in its wild state, but has lately been found in western Mexico, growing as a natural native plant about 3 feet high, on open highlands. Everywhere the native red men depended chiefly upon it, of all their simple crops; and much of the early exploration of the continent would have been impracticable for white men had not stores of this food been accessible. They were especially fond of it when the kernels were fully formed, but not yet hardened, and the "green-corn" festivals at that period were an institution of all the tribes. Naturally many interesting legends and pretty myths grew up in regard to it, many of which have been recorded by historians of Indian life.

The addition of this plant to the grains of the civilized world was one of the most important ever made, since it will flourish over at least half of the earth's surface, requires comparatively little attention in cultivation or care in preparation for use, and is exceedingly nutritious for both man and beast. It is cultivated in all the Mediterranean countries, where it has such local names as Roman, Sicilian, Spanish, Barbary, Guinea, Egyptian or Syrian corn—each name always being applied in some other region than the one mentioned, showing that everywhere it was thought to have been obtained from a neighbor. The widespread names "Turkey corn" or "Turkey wheat" can no more be explained than how the American bird of Thanksgiving Day fame came to be known in France as the Indian cock, and in England as the turkey. Maize is also cultivated in India (but only within 50 years), in China and in parts of the Malay Archipelago. In Australia it is an extensive and successful crop. It nowhere else, however, reaches the importance, as a crop, attained in the United States of America, where it stands first in value among agricultural products, wheat coming second in a ratio of about 3¾ to 5; and the central part of the Mississippi Valley is especially devoted to its culture. The center of production is now not far from St. Louis, Mo. The total annual average in 1895 was 82,075,830 acres; while the total annual yield averages over 2,000,000,000 bushels, worth about $550,000,000.

Taking the whole world together, Indian corn probably ranks next to rice in economic importance. Innumerable local varieties are grown, and should be chosen wisely in seeding any new locality. These fall under a few general heads, such as "flint," most commonly grown in the Eastern and Northern districts, of which one small and very oily sort is pop-corn; "dent" the common form of the South and West; and "horse-tooth" in the South. These are not specific differences, and pass into one another by indefinite gradations. When grown for use ripe, these are usually spoken of as "yellow" corn. When intended to be eaten in the green, milky state, some more early, delicate, "sweet" variety is planted; and this is chosen also for fodder, for which purpose the seed is sown broadcast or closely in drills, when little or no fruit forms, but instead a luxuriant growth of stalk and leaf, containing an excess of sugar and oil, valuable as fattening elements. More than 300 varieties are known, some reaching ten times the height of stalk or bigness of kernel of others, and some requiring three times as long a period of growth. Careful selection of seed, before cutting the corn, is of high importance, and the crop ought to have a more careful cultivation than it usually gets to insure its highest yield. The plant requires considerable moisture, but not a wet soil, and will grow if carefully cultivated upon a comparatively poor soil. It is not an exhaustive crop, and in the absence of regular manuring occasional alternation with wheat, followed by clover, will restore the fertility of fields that have grown corn several years in succession. In the Southern States it is usual simply to cut off the heads and let the stalks be plowed in again; but in the North, where live stock must be winter-fed, the stalks are cut close to the ground, gathered into stooks, and taken to the barn after curing in the sun. In small fields pumpkins are commonly planted among the corn, maturing later. A yield of 100 bushels to the acre is not unusual on the Ohio and Mississippi bottom-lands. The average yield per acre in the United States from 1871 to 1881 was 26 bushels; and Ohio has twice reached an average of 40 bushels to the acre. The cultivation of corn is limited by isothermal lines, since it is easily killed by frost.

Though serviceable in many other ways, as will presently be mentioned, the principal value of corn is as human food, in which respect it takes almost first rank among the vegetable products of the globe. It is, indeed, the staple substance of large classes of people. This experience of its highly nutritious quality is sustained by chemical analysis, which shows that the grain contains an extraordinary amount of the nitrogenous and fatty substances that constitutes the highest nutrition. Hog and hominy form a proverbially simple fare; but it is one in fact extremely serviceable. The soldiers of the Confederate States made their marches and fought their battles chiefly upon green corn and corn meal, and the Union soldiers learned the value of *pones* before they conquered their antagonists. The grain is made edible in various forms. The sweet varieties are delicious boiled on the cob when in the soft, immature, milky state called *green corn;* and in this condition, removed from the cob, vast quantities are preserved, cooked in tin cans. The kernels may simply have the hulls removed, or be coarsely broken, and then are called *hominy* (an Indian term), when they are cooked and eaten after the manner of rice; or be more finely crushed into *samp* (another Indian term and preparation), suitable for porridge. The ordinary utilization, however, is in the form of meal, more or less finely ground, which is boiled into a thick porridge (hasty-pudding or corn-mush), and eaten with milk; or baked into corn-bread or *johnny-cake* either either after a simple mixture with water or in a more elaborate manner. This meal does not, however, make a good bread, properly speaking; but may be mixed with rye flour to form a coarse bread frequently seen among the peasants of Europe, or enter in various better culinary compositions.

Maize also forms a staple food in all its forms for domestic animals. Vast quantities of cornstalks and leaves are grown or utilized as fodder, being in many circumstances more profitable than hay; this is fed green, sun-dried, or in the form of ensilage. An enormous amount of forage may be produced in this way, an acre yielding 50,000 to 80,000 pounds of green fodder, which makes 8,000 to 12,000 pounds cured. Dried husks have also considerable value as packing for fruit (especially European oranges), as stuffing for mattresses, horse-collars, pack-saddles and similar articles, and for making door-mats, fancy baskets, &c., while the pith of the stalks is now used in the manufacture of an improved form of cellulose (*q. v.*). A large proportion of every crop is fed in the grain, also, to cattle, and especially to swine, making the best pork. The use of grain exported to Europe is largely, if not mainly, as feed for horses. More oil is contained in this than in any other known cereal (3·5 to 9·5 per cent.), and is obtained in the course of various processes, as of distilling; it is limpid, yellow, and a good lubricant, but thus far too costly for general use. Glucose, on the other hand, is an important commercial product of maize-grains, derived by crushing, boiling and fermenting them, and having a large use as a sweetener, an adulterant of syrup, in brewing, vinegar-making, &c. Great quantities of this grain are also devoted to the making of starch, both for use as food (corn-starch, corn-flour) and for laundry purposes. Edible sugar has been made from the plant, but not cheaply enough to compete with cane and beet sugar. This richness in sugar and starch, however, gives maize a high rank among cereals as a source of alcohol and spirits, and an enormous quantity is thus consumed—more than of any other American grain. The meal and malt of this grain are also largely used in the manufacture of American ale and beer, a practice frowned upon by European brewers. Finally, it has frequently happened in the treeless parts of the West that the store of grain on hand was so large and the cost of coal or wood so high that it became profitable to burn corn in the ear—the cobs are usually saved for that purpose in the West—as fuel, 100 bushels being equal in heating power to a cord of hard, dry wood. Year by year chemistry and the arts are finding new and additional means of utilizing this commonplace but exceedingly important plant.

In'dian Gift. A present made with the expectation that it will be given back, or an equivalent rendered.

In'dian Lake, in *New York,* a post-town of Hamilton co., 50 m. W.N.W. of Whitehall. *Pop.* (1897) 1,150.

In'dian Sum'mer. An American term, applied to the short season of summer-like weather that is almost invariably enjoyed at the close of October and sometimes even as late as the middle of November, and usually lasting for a period of from 10 to 14 days. During this time the weather is extremely mild, there is no rain, and the atmosphere is generally somewhat hazy. The brief spell seems to give a new impulse to nature, and birds, insects, and plants seem to receive renewed life under the influence of the genial warmth and to enjoy their short-lived glory before dying under the cold breath that speedily announces the coming of winter's rigors. The nights, however, during this Indian Summer, are sharp and frosty, and suggest the comfort of fires. By the early settlers the hazy atmosphere was supposed to be smoke caused by prairie fires kindled by the Indians in the West, hence the name. It is also suggested that the term is connected with the corn-harvest of the red man, whose traditions declare that they always had a second summer of 9 days just before winter set in. In Europe the season is known as "St. Martin's Summer," as it occurs about St. Martin's Day, *i. e.,* November 11.

In'dic Languages. The languages of India, living or dead; the former including the Hindu and Gipsy dialects, and the latter the Sanskrit, Prakrit and Pali.

In'dican, *n.* [Lat. *indicum.*] (*Chem.*) A clear brown syrup of bitter and purgative taste, existing in many plants, especially in Dyers' Wood (*Isatis tinctoria*). It is extracted from the dried leaves with alcohol, the resulting greenish tincture being allowed to evaporate. The residue is treated with water, filtered, and the filtrate shaken with cupric hydrate, and again filtered. On the removal of the copper by means of sulphydric acid, the clear solution is found to contain almost pure *I.* It is soluble in water, alcohol and ether, and on boiling with dilute acids, it is decomposed into indigo-blue and indiglucin. It cannot be dried without decomposing. *I.* has been found in the urine and blood of man and of the ox.

In'digene, *n.* [Fr. *indigène.*] An animal or plant that is native to the soil; an aboriginal.

In'digo Bird, *n.* (*Ornith.*) A North American bird of the family *Fringillidæ,* a native of the U. S. as far north as the Missouri, which it visits in summer, and of Central America, where it spends the winter. It is about 5½ inches in length, of a beautiful blue color, variously tinged and shaded, the lores and angles of the chin velvet black. It frequents open places on the edges of woods, and delights to sit singing on the top of a high tree. Its song is very sweet. It is easily domesticated, and is much in request as a cage-bird.

In'do-an'iline, *n.* (*Dyeing.*) Any one of a series of artificial blue dyestuffs that resemble and are substituted for indigo.

In'do-Chi'na. (*Geog.*) This name has been loosely applied to the whole of the eastern of the three great peninsulas of Asia, but recently the French possessions in the Annamese peninsula, consisting of protectorates established over native rulers, have been combined under the name of Indo-China, or French Indo-China, and placed under the direction of a governor-general, M. Roussean, with a seat at Hanoi, which is an agglomeration of towns having a population of about 150,000 people. The territory includes the dependencies of Cochin-China, Tonquin, Annam, and Cambodia, with an area of about 300,000 sq. m. A superior council has been established to fix the budget or statement of

revenue and expenditures of Indo-China, and to advise as to the budgets of the dependencies named. Cambodia came under French protection in 1863, Annam by the treaty of June 6, 1884, and Tonquin the same year, together with about 110,000 sq. m. of what was formerly Siam. The arrangement with these dependencies was made by treaty with the native rulers, but the extent of French control, as between China and France, by a treaty signed June 25, 1895, by which France acquired the right to extend the Annamite Railway into Chinese territory. A dispute at once arose between France and Great Britain, as the latter controlled the contiguous territory of Kiang-Hung and Kiang-Kheng, and by treaty of January 5, 1896, the Mekong or Cambodia river was made the boundary line between their possessions. The population of Indo-China is almost wholly native, and is estimated at 20,000,000, or more. The natives are related more or less to both the Chinese and Hindoos. They are short in stature, yellow-skinned, have black hair, very little beard, and small oblique eyes. The climate is tropical, resembling that of India, there being two seasons, divided by the monsoons. Several hundred miles of railway have been built, and several thousand miles of telegraph lines. Post-offices are established at all principal towns. A considerable import and export trade is carried on, the annual imports being about $18,000,000, and the exports $24,000,000. Rice and sugar are the most important exports, others being cotton, hides, salt fish, pepper, beans, tobacco, &c. There are also iron, copper, and silver mines. The manufacture of silk is a flourishing industry in Annam, and coal and petroleum are found in both Annam and Tonquin.

In'dra, *n.* [Sanskrit.] An ancient Hindoo god of the sky and of rain. In Vedic times he was a supreme deity, corresponding to Zeus of the Greeks or Jupiter of the Romans. He encompasses the water and the sky, reaches up to heaven, has placed the sun in the sky, grasps the thunderbolt, is worshipped by libations, is a bestower of wealth, &c. At a later period he was represented as a man with four arms and hands, riding on an elephant.

In'dustry, in *Pennsylvania,* a village of Allegheny co. Its post-office is SCOTTHAVEN. *Pop.* (1897) about 750.

Infec'tious Diseas'es. (*Path.*) It will be as well to state at once that the artificial distinction frequently made between *contagious* diseases and those called *infectious* has no justification in fact. The former have been described as those communicated by one person to another by contact, while infectious diseases have been limited to those cases where the poison of the disease was considered as conveyed by the atmosphere from a sick person to others at a greater or less distance. Hence the familiar expression: "It is a contagious but not an infectious disease," and *vice versa.* This may be illustrated by reference to diphtheria. This disease is undeniably a contagious one, for it is often spread by actual contact, but it is equally certain that the poison can be disseminated through the atmosphere and so infect those who inhale it; hence it is also infectious. Again, if the virus of small-pox be introduced under the skin of a person capable of being affected by it, he will most certainly fall a victim to the disease, while the same result would probably follow were that person in close attendance upon a small-pox patient. The latter result would be called an infectious and the former a contagious communication, according to the artificial distinction spoken of. Thus it will be seen that the two terms should be regarded as synonymous.

Infectious diseases, however, are those which are communicated by means of living particles or organisms, including those called contagious and also miasmatic diseases. Scarlet fever is an infectious disease, and in the same category are small-pox, measles, typhus, influenza, whooping-cough, diphtheria, typhoid and cholera, which are the principal infectious diseases. These are each and all separate and distinct as regards causation. Thus scarlet fever will never give rise to small-pox in those exposed to infection, neither does any one of the diseases first named ever pass into another. There are, moreover, subordinate distinctions: the virus of scarlet fever, contained probably in detached particles of skin, clings for months to articles of wearing apparel, more particularly to woollen clothes; the poison of small-pox may be collected from the eruption and preserved for years between pieces of glass, while that of typhus is easily robbed of its power by ventilating freely.

As to the contagious elements, there seems ample evidence in support of the view that they are living atoms, and not, as was formerly almost universally supposed to be the case, the outcome of foul air, and that the effluvia arising from putrid decomposition was an all-sufficient propagator of small-pox, fever, &c.; though it is true that some gaseous matters, notably sulphureted hydrogen, may convey poison to persons directly and create serious symptoms, yet it has never been proved that infectious diseases originate in this manner. The inhalation of noxious vapors or the swallowing of deadly poisons, while fatal to an individual, cannot be considered capable of increase and propagation after inhalation or swallowing, and therefore they cannot give rise to infection. The poisons of infectious diseases are then of an entirely different nature; it is known that they multiply almost infinitely in the system, and that each of the myriads of infecting atoms is as powerful as the one from which it originated. This, with other known properties, makes it clear that the agents of contagion are independent, living organisms, capable of growth and reproduction. Contagious organisms are chiefly spread through air and water. In the case of scarlet fever the germs attach themselves to clothing and furniture, and are often carried to distant points. In the cases of cholera and typoid fever the discharges from the sick person finding their way into water propagate the diseases. Food may also be contaminated, milk especially having been proved to be the channel by which the infectious poison of typhoid, scarlet fever, and diphtheria has been conveyed. The virus of scarlet fever and diphtheria are probably transmitted to the milk from the skins and throats of convalescent or hardly recovered persons employed in the dairy. The germs of certain other diseases enter the system through broken skin. See DISINFECTION; GERM THEORY OF DISEASE.

Infin'itant, *a.* [Lat. *infinitans.*] Denoting merely negative attribution; applied to terms that simply exclude from a class and propositions that use them as predicates; as the word *invisible,* or the predicate in the following sentence: The mind *is invisible.*

Infla'tionist, *n.* Colloquially, one who favors the issue of an abnormally large amount of currency, especially of bank or treasury-notes not convertible into coin.

Influen'za, *n.* [Ital. *influence;* so called from the belief that it was due to some atmospheric influence; known in France as *la grippe,* from *agripper,* to seize, indicative of its sudden attacks.] (*Path.*) An epidemic febrile disease, of a catarrhal nature, but differing from common catarrh in the greater suddenness and severity of its attacks and in other particulars. It is also known as *epidemic catarrh, epidemic bronchitis,* and *epidemic catarrhal fever.* In addition to the ordinary symptoms of catarrh, this disease produces a sudden and striking debility and depression of spirit, persons apparently well often finding themselves overcome by weakness in a few minutes. The mucous membranes, especially those of the respiratory channels, are greatly affected. The tongue becomes of a creamy color, taste and appetite are lost, the pulse grows weak, the skin, at first hot and dry, becomes moist, and pains and soreness appear in various parts of the body. If the case is simple and uncomplicated with other disorders, convalescence will supervene in about a week, or perhaps sooner. But bronchitis or pneumonia are apt to follow, and often with dangerous or fatal results. Catarrhal symptoms occasionally appear in the stomach or intestines, or the bladder and kidneys. In other instances no symptoms of catarrh may appear, nervous depression alone being manifested. The disease often ends as suddenly as it began—after a continuance of from 3 to 10 days—the final symptom being a profuse perspiration or diarrhœa. There is, however, a great proneness to relapses on the slightest exposure, even after the patient feels perfectly recovered, and rest and care are imperatively demanded. Mortality from influenza in previously healthy persons, and where it is uncomplicated with other diseased conditions, is very rare. Yet few diseases increase the death rate to so great an extent as influenza, largely from the great number of persons who are affected in a severe epidemic, and the resulting weakness and tendency to develop other troubles. Where death is not occasioned, long-continued debility may occur, due to aggravation of some previously hidden weakness. And, unlike other epidemics generally, an attack of influenza does not seem to give immunity from other attacks—unless to some extent during the same season—but rather to render the person more susceptible to attacks, which may recur indefinitely.—*Epidemics of Influenza.* Influenza affords an excellent example of an epidemic disease, often spreading in a few hours over a whole community. It seems to be connected with some peculiar state of the atmosphere, though what that state may be is not known. If it be due to an atmospheric microbe, which is carried by the winds, no satisfactory trace of such an organism has been discovered, and the rapidity of its dissemination and its sudden appearance far out at sea do not suggest such a cause. Many believe that it is due to electric and magnetic disturbances of the atmosphere. It has appeared in all kinds of weather, hot and cold, wet and dry, in case of a sudden thaw or after a thick, ill-smelling fog. Its recent prevalence seems confined largely to the winter season, but this has often been widely departed from. History records many instances of epidemic influenza. It apparently appeared in ancient times. It is described in the 10th century, and later in 1311, 1387, and 1403, but the epidemic of 1510 is the first of which the record is sufficiently explicit to prove its character. Since then it has reappeared nearly 100 times, the attacks being variable in date and severity. Usually the disease appears first in the north of Europe, rarely in India or the north of Asia, and moves to the west. Its rise is sudden and its movement rapid, the whole of northern Europe being quickly invaded and America often reached. Occasionally it appears in the equatorial regions and extends to the southern hemisphere. Its movement does not seem dependent upon surface currents of air, it often travelling against the prevailing wind. In 1836 it appeared simultaneously at places as far apart as London and Cape Town, but such a wide dissemination is not common. A majority of the people of an affected community are attacked, and so rapidly that the attacks do not seem due to contagion, though in some cases the disease has seemed to be contagious. Influenza is not confined to man, but attacks the domesticated animals, especially the horse, in which it produces the catarrhal disease known as *epizoöty,* which attacks cows and dogs also. The epizoötic epidemic of 1872–73 was an instance of this character, man being attacked with influenza at the same time, though with less severity. The most recent and one of the most persistent attacks of influenza was that which appeared in an epidemic form in Europe and the U. S. in the winter of 1889–90, and which has recurred with more or less severity every winter since, producing great mortality, which has been due, in a considerable measure, to lack of sufficient care.—*Symptoms.* In severe cases the attack is sometimes attended by a marked rigor, often by an alternation of chill and feverish heat. General lassitude and nervous debility follow, attended with soreness and stiffness of the limbs. There may be headache; pain in the orbits, root of the nose and cheek-bones; copious flow of tears, which are often hot; sneezing and tingling of the nose, followed by watery and often acrid discharge; soreness of the throat and ear region, indicated in swallowing; a frequent and annoying cough, with slight expectoration; and a slight fever, remittent in character. If the case takes a very severe form, there may be bronchial inflammation, with serious danger of pneumonia. In this lies the greatest danger of the disease.—*Treatment.* The most important requisite in the treatment of influenza is to carefully avoid depressing the vital powers of the patient. He should be kept in bed, his bowels gently opened, his skin slightly acted on, if dry, and if the cough prove troublesome, a mustard-plaster should be applied to the chest. The majority of cases are mild, and require no treatment beyond care. In persons of weak constitutions, ammonia, beef-tea, and wine and water should be given, and in the occasional long debility that supervenes, preparations of iron, quinine and strychnia should be used. The favorite popular treatment by the free use of brandy or whisky should not be encouraged. For the relief of headache and other pains or restlessness, small doses of antipyrin or phenacetin, with Dover's powders, may be used, but the depression likely to result from the use of these and similar remedies needs to be counteracted by stimulants, such as quinine and strychnia. During epidemics of influenza it is important that the aged or enfeebled should keep in well-warmed rooms, and strengthen themselves by nourishing diet and stimulating medicine, as a preventive measure.

In'fra dig. [Lat.] An abbreviation of *infra dignitatem,* beneath one's dignity. (*Colloq.*)

In'galls, JOHN JAMES, lawyer and politician, was born at Middleton, Essex co., Mass., Dec. 29, 1833; graduated at Williams College (1855); admitted to the bar (1857); removed to Kansas in 1858, and became active in State politics until the Civil War. Was major, lieutenant-colonel and judge advocate of Kansas troops (1863-1865); elected U. S. Senator (1873) and twice successively re-elected, until defeated in 1891 by the Farmer's Alliance. During the last three years of his term in the Senate, he was President, *pro tempore,* of that body. Died August 16, 1900.

Ingalls, RUFUS, soldier, was born at Denmark, Me., Aug. 23, 1820; graduated from West Point (1843); rendered distinguished service in the Mexican war, and in the Civil War. After a short service in the defense of Fort Pickens, he was sent to Washington and made chief quartermaster of the rapidly arriving volunteer army (1861). He provided for the embarkation of the Army of the Potomac to the Virginia Peninsula, and was present at nearly all the important battles fought by that army, receiving successive brevets from lieutenant-colonel to major-general. After the war he served at the headquarters of the army, and was chief quartermaster of the military division of the Atlantic (1867). In 1882 he became Quartermaster General, U. S. Army; retired in 1883, and died Jan. 15, 1893.

Ingelow (*in'jē-lō*), JEAN, poet, was born at Boston, England, in 1820; author of several volumes of verse, including some powerful ballads, of which *The High Tide on the Coast of Lincolnshire* is a popular example. *A Story of Doom* is the most successful of her longer poems, and the *Songs of Seven* the most widely known of the shorter poems. Her prose works of fiction include: *Tales of Orris; Off the Skelligs; Studies for Stories,* &c. Her most popular juvenile book is *A Sister's Bye-Hours.* Died July 20, 1897.

In'gersoll, CHARLES JARED, politician and author, was born in Philadelphia, Pa., Oct. 3, 1782; received a college education; was admitted to the bar, and became a member of Congress in 1813; was U. S. district attorney (1815–29), and held other important offices; reelected to Congress (1841–47). He was the author of *Chiomara,* a poem; *Inchiquin's Letters; Historical Sketch of the Second War with Great Britain,* and various other works. Died May 14, 1862.

Ingersoll, ERNEST, naturalist and author, was born at Monroe, Mich., March 13, 1852; educated at Oberlin College and at the Harvard Museum of Comparative Zoölogy; was connected with the Hayden Survey (1874–79), and the U. S. Fish Commission (1880-81). During the latter connection he was detached as a special agent of the tenth census for the investigation of oysters and oyster culture, and produced the large and detailed report upon "The Oyster Industries of the United States." He has published *Nests and Eggs of American Birds; Friends Worth Knowing; Knocking 'Round the Rockies; Crest of the Continent; Country Cousins; The Ice Queen; Silver Cañon,* and other stories for young people, and a large number of magazine articles. His latest book (1897) is *Wild Neighbors,* a series of studies of the life of North American mammals. Mr. Ingersoll is a resident of New York city.

Ingersoll, ROBERT GREEN, lawyer, politician, and lecturer; was born in Dresden, N. Y., Aug. 11, 1833; received part of his education in an academy in Tennessee; taught school for a time, and in 1857 began the practice of law in Peoria, Ill. In the Civil War he commanded the 11th Illinois Cavalry. Was Attorney-General for Illinois in 1866. Of late years he has prac-

ticed law in New York, and has been chiefly known as a lecturer who has gained notoriety by his severe and uncompromising arraignment ot the Bible and the Christian religion. Died July 21, 1899.

Ing'hamites, *n. pl.* The followers of Benjamin Ingham (1712–1772), who left the Methodists, joined the United Brethren, and afterward founded a sect whose creed was a combination of Methodism aud Moravianism.

In'gleside, *n.* (*Scotch.*) The fireside.

In'graham, Duncan Nathaniel, born at Charleston, S. C., Dec. 6, 1802; became a midshipman in tho U. S. navy (1812), and was made captain in 1855. In the Martin Koszta affair at Smyrna, in 1853, he made himself famous by his boldness and courage, and Congress voted him thanks and a medal for his conduct in this matter. He was subsequently (1856) appointed chief of the ordnance bureau of the Naval Department, a position which he held until the ordinance of secession was passed by South Carolina, in 1860, when he resigned his commission in the U. S. navy and entered the service of the Confederacy, in which he rose to the rank of commodore. Died Oct. 16, 1891.

Ingraham, Joseph Holt, author, born at Portland, Me., in 1809; in early life a sailor, but subsequently a teacher of languages in a college in Mississippi. His first published writings were wild romances, such as *Captain Kyd* and *Lafitte*. In 1855 he was ordained to the Protestant Episcopal ministry, and from that date he chose Bible themes for his stories. His sacred romance, *The Prince of the House of David*, issued in 1855, was the first of this series, and also the first story of its class, dealing familiarly with Bible characters. *The Pillar of Fire* is another narrative in similar vein. Died in December, 1860.

Inject'or. (*Mech.*) A contrivance for feeding water into steam-boilers, particularly locomotive boilers. Feed-pumps are difficult to keep in order when driven at high speed. The very rapid action of tho valves severely tries their durability. In the case of locomotives, inconvenience was often occasioned by the fact that their feed-pumps acted only when they were running; and thus, if an engine happened to stand still for any length of time, the water occasionally got too low in the boiler. The injector acts equally well whether the engine is running or at rest. The accompanying illustration (Fig. 2939) will give an idea of the essential principles of the Giffard injector. A is the steam-boiler, B being the water-level, C D F a pipe into which steam is admitted; this pipe terminates in a cone D F, which is enclosed in a larger cone H H. In the cone D F the pointed plug E can be raised or lowered so as to increase or diminish the area of the aperture at its lower end F. G is a pipe communicating with the water cistern, and admitting water into the external cone H H. K is a pipe communicating with the boiler under the water-level. On opening communications between the boiler and this apparatus, it might be expected that steam would rush out at F, and water at K, both currents meeting with great force, and escaping into the atmosphere between the two openings. Paradoxical as it may appear, the outflowing stream of water at K, although it is actually flowing under a greater pressure than the current of steam escaping at F, due to the *head* of water arising from the difference of level between the aperture at K and the water-level at B, is overpowered and driven back into the boiler; and not only is the outflowing current of steam at F able to drive back the stream of water trying to escape at K, but the torrent of steam drags with it a large quantity of water with which it comes into contact as it is passing through the cone H H. This water finds its way into the cone H H through the pipe G, from the tender or cistern, and constitutes the feed-water. The steam rushing from the aperture at F will necessarily be condensed by the cold water with which it comes into contact in the cone H H. The explanation offered of the action of this apparatus is as follows: The opening at F, through which the steam escapes, has nearly twice the area of the opening into which the water is to be forced at K. The opening in the cone H H is also larger than the aperture at K, and it appears that the mechanical power

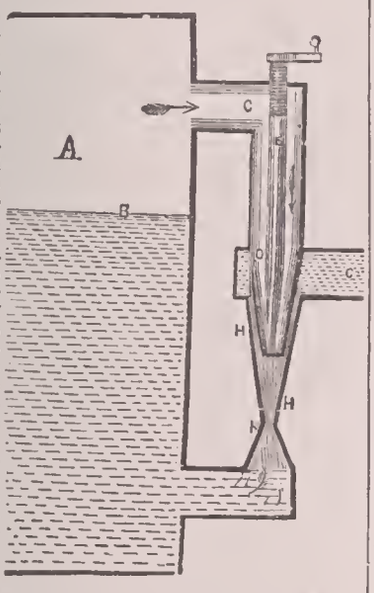


Fig. 2939.—GIFFARD'S INJECTOR.

contained in the flow of steam from F is, as it were, transformed from a large area to a smaller, with a corresponding increase in its intensity. This diminution of its volume arises from its condensation by the cold water through which it has to rush in the cone H H. We get thus the mechanical into a small area, with a corresponding increase in its velocity, and to this increase of velocity is due the fact that a current issuing at F H will enter at K, in spite of the counter-pressure at K. Fig. 2940 shows a sectional view of the International injector, in which the current of water to tho boiler is established against atmospheric pressure instead of against direct boiler pressure. This is accomplished by the combination of overflow valve K and pressure valve L. The steam passes through the steam jet F and suction jet G, down through tho

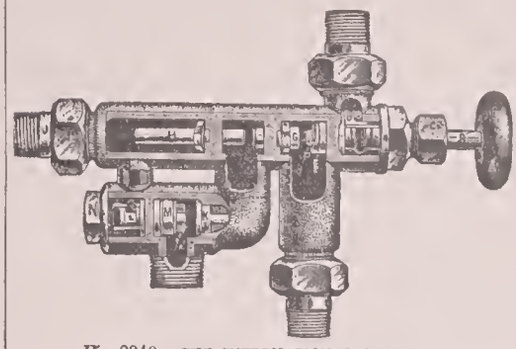


Fig. 2940.—THE INTERNATIONAL INJECTOR.

overflow chamber, forcing valves K and L away from their seats, and opening a passageway through the overflow for the escape of the steam, which, by its pressure against the valves, holds them away from their seats. By the vacuum thus created between the jets F and G, the water is lifted, and passing through the suction jet G and the combining and delivery jet H on its way to the boiler, passes down through the secondary outflow and ont through the passageways between the pressure valve L and its collar M. As the pressure increases in the delivery chamber around the delivery jet H, valve I is gradually forced to its seat against its collar M, but does not finally close until the current to the boiler is well established. The valve K, in the meantime, is closed by the vacuum in the overflow chamber.

In'man, Henry, painter, was born in Utica, N. Y., October 28, 1801; studied with John Wesley Jarvis; resided successively in Boston, Philadelphia, and New York. Among his works are some notable landscapes, as *Birnam Wood*, *Rydal Water*, *Trout Fishing*, &c.; but his fame was won by his portraits, his sitters including many of the most distinguished men of the day in America and England. Died January 17, 1846.

In'ness, George, landscape painter, was born at Newburg, N. Y., May 1, 1825; studied for a short time with Regis Gignoux, and afterward, in three different periods, continued his studies without a master in France and Italy. Noted for his color and sensitive suggestion of the moods of nature. In 1868 he became a National Academician, and at the Paris Exposition of 1869 received a third-class medal. Died in Scotland, August 3, 1894.

In'ogen, *n.* (*Physiol.*) A complex nitrogenous substance, which, according to the hypothesis of some physiologists, is decomposed in the muscles when in action and reproduced during repose.

Inouye, Kaoru, Count, statesman; born in the province of Choshu, Western Japan, in 1839. During a secret journey to Europe, with Count Ito, the necessity of Japanese patriots adoptiug the Western civilization was strongly impressed upon him, and this policy they advocated, at the risk of their lives, on their return. From the time of the restoration, in 1868, with the exception of short periods, *I.* has been continuously in office; he succeeded Ito as Minister of Public Works in 1878, and was subsequently appointed to the foreign office, remaining for seven years. He was made a member of the peerage in 1885; retired from public life in 1887, but was recalled as Minister of the Interior in 1892.

In'-patient, *n.* A patient who receives board and lodging as well as medical treatment in a hospital or an infirmary.

In'ro, *n.* (*Jap.*) A set of small, lacquered boxes, carried at the girdle, to contain small articles, as medicine, &c.

In'sect-gun, or **Pow'der-gun,** *n.* A small, bellows-like instrument for throwing insect powder into crevices, diffusing it in the air, &c.

Insect'icides, *n. pl.* (*Agric.* and *Chem.*) In the ordinary acceptation of this term it is applied to the preparations used in the destruction of insects of all kinds. The importance of the preservation of tree and plant life from the ravages of the countless enemies that attack it has raised the question of insecticides to the level of an important branch of economic science. Important investigations have been made into all the phases of insect life, with the result that the researches of scientists and practical agriculturists and horticulturists have brought to light in recent years the most valuable information as to the destruction of these pests. In no country is the question so important as in the U. S., and to no class have the results been more beneficial than to horticulturists. Not merely has the discovery been gained of the practical effectiveness of various insect destroyers, but there have been devised practical means of applying these on a large scale. The principal advance has been in the spray-pump, the use of which has been of almost revolutionary benefit to horticulture. It will be in place to remark here that the experiments that have been made of importing the insect enemies of the pests that prey upon plants have been found successful, and the extension of this method will probably receive increasing attention from year to year. The most prominent experiment has been that made with the Australian lady-bird beetle (*Vedalia cardinalis*), which has destroyed, over a large area in California, a very injurious orange-tree scab insect.

Insecticides may be divided into two classes—stomach poisons and contact poisons. Some few fall under both heads, such as hellebore and tobacco. The principal poisonous agent is arsenic; it is the destructive element in most of the commercial preparations, but these are generally so much diluted that, while rendered non-poisonous to man, they are not infrequently also made ineffective, or partially so, as insecticides. Moreover, they are, in consequence of over dilution, too expensive for use to any considerable extent. The arsenic preparations are: Paris green (arsenite of copper); London purple (arsenite of lime); and gypsine (arsenite of lead). While these preparations have individual merits in particular uses, their value depends on their active principle, arsenic; the various added substances are for the purpose of rendering the poison insoluble, for it must be observed that arsenic is as deadly to the plant as to the insects. Paris green and London purple are the most valuable agents to use for the rodent insects, such as beetles and caterpillars. The sucking pests—the bugs—are best attacked by kerosene emulsions; especially is this the case with plant-lice (*Aphides*). Sulphur and soap washes are the best agents in the case of scale insects. Tobacco fumigations are of inestimable advantage when used in the greenhouse against the terrible pest that infests it—the plant louse—though emulsions will also be found to be beneficial. Bichloride of mercury, or corrosive sublimate, is a very powerful poison, but its use is not recommended, as it is injurious to plants to such an extent as to jeopardize its value as an insect destroyer. The Bordeaux mixture is a highly valuable preparation for use against flea beetles, hence it is peculiarly desirable in application to egg-plants, tomatoes, potatoes and other plants attacked by this pest. Where a combined fungicide and insecticide is desired, either Paris green, London purple, or white arsenic may be added.

Arsenite Preparations.—Paris green is a combination of arsenic and copper. As a fractional quantity of arsenic remains in an insoluble state, this insecticide should be applied on a cool day or late in the afternoon rather than when the sun is strong. One lb. to 200 gals. of water will be generally effective, but for such pests as plum curculio, codling moth, and potato beetle, use only about 120 to 150 gals. of water. London purple is less powerful in the active principle than Paris green, and more of the arsenic is soluble, hence there is greater danger of its burning foliage than Paris green. In both cases the preparation may be rendered innocuous by adding an equal weight of quicklime when mixing. Slake the lime, and while hot thoroughly mix the poison and lime. Every particle of arsenic will then be rendered insoluble. In many cases it will be found more satisfactory to apply both these insecticides in a dry form. This can be done without any injury if mixed with plaster of Paris, flour, or air-slaked lime. For practical use mix one lb. of Paris green with 100 lbs. of plaster or lime. This form of application is better than spraying, in the cases of the cotton plant or potato beetle. The mixture should be thoroughly dry and very fine, and distributed with all possible evenness. If used in water, the mixture must be stirred very frequently, as the substance is very heavy. London purple should always be mixed with lime as already described, before using it. Used with water, 1 lb. of the preparation should be mixed with 180 gals. of water in most cases; but for the plum curculio and the codling moth 1 lb. to 150 gals. is more effective, and for the potato bug 1 lb. to 100 gals. of water. It is lighter than Paris green, hence requires less stirring. When used dry it is effective and harmless to plants if carefully mixed with air-slaked or dry hydrate of lime, as previously indicated. Arsenate of lead acts in the same way as the two preceding preparations, but it must always be prepared only as required for use, using 4 oz. of soda to 11 oz. of acetate of lead. These quantities can be mixed in a gal. of water, to be diluted as required, or if used at once be diluted with 100 gals. of water. The advantage of this preparation is that whatever its strength it is non-injurious to plants and foliage. Even peach trees have been sprayed with a mixture of 15 oz. of this preparation to 2 galls. of water. It is much cheaper than the other arsenical preparations; but, containing as it does less of the active agent, it is not much less expensive in results. It will be found effective against most insects, including the elm-leaf beetle in all its stages, the web-worm, the canker-worm, and the codling moth. For extensive use, this insecticide can be made in concentrated form and the stock diluted as required. It is, as has been said, entirely harmless to plants. Pure white arsenic is used and recommended by some agriculturalists as the cheapest as well as the most active of its class. One lb. to 250 to 500 gals. of water makes a mixture equal to the Paris green preparation of 1 lb. to 200 gals. of water. It has, however, the disadvantage of a greater

quantity of soluble arsenious acid than either of the others; hence, unless mixed with twice its weight of quicklime, it will seriously injure, if not destroy, foliage. If carefully mixed, it is as safe and effective as they. In order to obviate the difficulty which is sometimes experienced in making liquid mixtures adhere to, and evenly spread over, very smooth or hairy leaves, 1 lb. of soap may be added to each 40 or 50 gals. of water used. A quart of molasses or of glucose added to each 50 gals. of water will also aid in rendering adhesive, as well as contribute to the lasting properties of the mixtures. These acids act only through the stomach, and wherever it is sufficiently important they should be used in preference to others. They may be mixed with bran, and many insects will become victims to the mixture. Mix thoroughly 1 lb. of Paris green, or ½ lb. of white arsenic, with 50 lbs. of bran, moisten with water throughout so that the compound can be ladled without dripping. Sugar or molasses can be added, as before stated.

The arsenites—Paris green, London purple and white arsenic—are of the greatest service against all gnawing insects, such as larvæ and beetles, as well as giving most satisfactory results when employed against most leaf feeders, and they are the best wholesale destroyers of codling moth. White arsenic does little, if any, injury when mixed in the proportion of 1 lb. to 150 gals. of water, except, perhaps, in the case of the plum, for which it should be diluted to 200 gals., and in application to the peach still further dilution is necessary, and even then there is danger of damaging the foliage. Bordeaux mixture is prepared according to the following formula:

Sulphate of copper	6 lbs.
Quick-lime	4 lbs.
Water	22 gals.

The sulphate of copper should be dissolved in a gallon of hot water; the lime is to be slaked with a gallon of water in another vessel; add the milk of lime slowly to the solution of copper, stirring the mixture constantly, and then strain through a sieve or coarse gunny sack. Finally, add 20 gals. of water, and the mixture is then ready for use. This is the standard strength, but any reduced strength can be made by the proportionate addition of water.

Contact Poisons.—Of the contact poisons, the kerosene preparations are perhaps the most important. Used without diluting, they are fatal to all insects, and also injurious in a greater or less degree to plants. Kerosene emulsions can be used against all sucking insects, such as true bugs, and especially against plant-lice and scale insects, and even against many of the mandibulate or rodent insects in cases where it is not advisable to use the arsenites. The following formulas are reliable:

1. Soft soap ..... 1 qt.
   (Or hard soap—whale-oil soap is preferable—¼ lb.).
   Hot water ..... 2 qts.
   Kerosene ..... 1 pt.

Stir until thoroughly mixed and reduce by adding water to one-half to one-third of above strength. The emulsion can be rendered permanent by repeatedly pumping back into the receptacle.

2. Hard soap ..... ½ lb.
   Boiling water ..... 1 gal.
   Kerosene ..... 2 gals.

Stir the ingredients vigorously for 15 or 20 minutes. When used, dilute to one-tenth of strength. The addition of 2 ounces of balsam of fir increases the efficiency and renders it more adhesive. Sometimes half a pint of spirits of turpentine is added. This preparation may be varied by substituting for the pure kerosene a decoction obtained by filtering 1 gallon of kerosene through 2½ pounds of pyrethrum. This is known as the *Hubbard orange-scale preparation.*

3. Sour milk ..... 1 gal.
   Kerosene ..... 2 gals.

Add water to make 30 gals.

The following is excellent for scale insects and plant-lice:

4. Kerosene ..... 2 gals.
   Condensed milk ..... 3 pts.
   Milk ..... 6 pts.

Whale-oil soap is an excellent preparation for general use. It is well to note that the term covers any kind of fish oil that can be obtained cheap. One lb. of whale-oil soap to 5 gals. of water makes a useful mixture. Pyrethrum is used as an insecticide, and if applied pure it causes convulsions, generally followed by speedy death. It is a very light powder of a light-brown color, and is sold under the names of *Persian Insect Powder, Dalmatian Insect Powder,* and *Buhach.* Care must be taken to obtain these preparations pure and fresh, or their value is greatly diminished. The last-named is considered the most reliable. Pyrethrum becomes useless on being exposed to the air. In solution, 1 ounce should be used with 3 gals. of water. If used dry, it can be applied pure, or mixed with flour or any light finely pulverized substance in proportion of 1 part of the pyrethrum to about 20 parts of the diluting substance. As a fumigant it may be simply scattered on hot coals, or made into balls by wetting and shaping with the hand, and then set on the coals. This is an excellent treatment for flies and mosquitoes. As a remedy for greenhouse pests, 1 part of pyrethrum (buhach) to 4 parts of alcohol by weight may be enclosed in any closed vessel; shake occasionally, and after eight days filter. Apply with an atomizer. Dilute where deemed necessary. A second plan is to dissolve 4 ounces of the powder in 1 gill of alcohol, adding 12 gallons of water.

Sulphide of Soda Ash (Hilgard's).—Dissolve 30 lbs. of whale-oil soap in 60 gallons of water by heating thoroughly together. Then boil 3 lbs. of American concentrated lye with 6 lbs. of sulphur and 2 gals. of water. When thoroughly dissolved it is a dark-brown liquid, chemically known as sulphide of soda. Mix the soap mixture and sulphide thoroughly, and boil for half an hour. Add 90 gals. of water and the preparation is ready. If used warm, its action is improved and a less quantity can be used than if cold. It is to be sprayed for scale on deciduous trees in summer. Sulphur fumigation is destructive to some insects, but as it may injure plants, extreme care must be taken in adopting this remedy. The sulphur should be evaporated over an oil-stove until the vapor fills the room. Never burn sulphur, as it will kill plants. It is frequently spread over the heating pipes in greenhouses, but in this way it is used chiefly as a fungicide.

Lye Wash.—One-pound can of concentrated lye, or one pound and a quarter of potash, mixed with three gallons of water. Use for scale insects and bark-louse of apple trees. Home-made lye is frequently diluted with water and applied with a brush to apple-trees as a remedy for the bark-louse. It is not less valuable in the case of the cabbage-worm, when sprinkled over the cabbage. If concentrated lye be used, the wash must be in the proportion of 1 lb. of the lye to a barrel of water.

Carbolic acid is a valuable insecticide and can be used in the form of an emulsion, like kerosene. Dissolve 1 lb. of hard soap in a gallon of boiling water, pour into this 1 pint of crude carbolic acid, and with a force pump form the mass into an emulsion by churning it for a few minutes.

Bisulphide of Carbon is a valuable poison for root insects, but being very inflammable, it should never be used near a lamp or fire. It volatilizes at a very low temperature and its vapor is very injurious to animal life. In using it a hole should be made, into which the fluid should be poured and at once closed up, when it will permeate the soil in every direction. As an insecticide for use in loose soils it is most efficient. Thus, nests of ants may be destroyed by pouring an ounce of the fluid into several holes, covering them with a wet blanket for ten minutes, and then exploding the vapor at the mouth of the holes by applying a torch. To destroy onion, cabbage and radish maggots, make a hole with a sharp stick at the base of the plant, pour in a teaspoonful of the liquid, then fill up the hole with earth.

Resin Washes belong to the class of contact insecticides, and in the case of scale insects they kill also by forming a coat within which the pest is smothered. These washes vary in efficacy according to the insects treated, and also, it would seem, according to the locality. While success has been experienced in treating scale insects in some of the Pacific States, for some reason the results have not been so satisfactory in the East, whether due to the fact that the insects form thicker scales, or that they are completely dormant during the winter, does not seem clear. The following are approved formulas:

Resin	18 lbs.
Caustic soda (70 per cent.)	5 lbs.
Fish oil	2½ pts.

Add water to make 100 gals.

The ingredients should be placed in a kettle and a quantity of cold water added sufficient to cover them; they should then be boiled until quite dissolved, stirring them occasionally. After they are dissolved the boiling should be continued over a strong heat for about an hour, keeping the preparation in a brisk state of ebullition; should the mixture show signs of boiling over, cold water should be added in small quantities. When the boiling is sufficient the preparation will readily mix with cold water, of which the indicated quantity should be added; but only slowly at first and accompanied by occasional stirring. The addition of the water turns the preparation from a pale yellowish tint to a very dark brown color. Before using it with the spray, it should be strained through a fine sieve or a piece of Swiss muslin. This insecticide may be used at any time during the growing season. For the San José scale a stronger spray is necessary, and the best results are obtained from the following preparation:

Resin	30 lbs.
Caustic soda (70 per cent.)	9 lbs.
Fish oil	4½ pts.

Add water to make 100 gals.

The ingredients must be put into a kettle and covered with water to a depth of four or five inches, and boiled for about two hours, or until the compound can be thoroughly dissolved with water. Then the kettle may be gradually filled with cold water, taking care, however, not to chill the wash. Dilute it thus to about 40 gals., the additional water being added from time to time as used. This preparation is to be used only during winter, or the dormant period.

For *subterranean insects:*

Caustic soda (77 per cent.)	5 lbs.
Resin	40 lbs.

Add water to make 50 gals.

The soda must be dissolved over the fire in 4 gals. of water; add the resin, to which, when dissolved and while boiling slowly, add water to make 50 gals. For use, dilute to 500 gals. Dig hollows about the vines 6 inches deep and about 2 feet in diameter, then apply 5 gals. of the wash to each vine. It will be found better to apply this treatment early in spring, in order that the rain may the better disseminate the wash about the roots. The resin compounds are very useful applications to the grape phylloxera, the apple-root louse, and other underground insects. Mention has been made of agents that are effective both as stomach poisons and contact poisons. The principal are:

White hellebore, a light-brown powder prepared from the root of the white hellebore plant (*Veratrum album*), one of the lily tribe. It is used both dry and diluted with water. When used dry it is usually unmixed, but the addition of flour will add to its adhesiveness. For spraying, steep 1 oz. of the powder in a pint of boiling water, then gradually add sufficient cold water to make, say, 3 gals. of the mixture. The powder should always be *fresh,* as its effectiveness is quickly lost. It will be found of chief value when used against the saw-fly larvæ. Its range of usefulness is somewhat limited, but being less poisonous than the arsenites, its use in the case of nearly ripe fruits or vegetables is preferable.

Tobacco is useful over a wider range than hellebore, and is equally effective against the saw-fly larvæ. Flea-beetles and other insects will avoid any plant that has been well sprayed by this agent. It may be applied in the same manner as the hellebore. As a fumigant, the stems should be moistened and then burned; the stems may also be steeped in water and the liquid evaporated. As a decoction, the stems or dust should be boiled thoroughly, then strained, and cold water added until the decoction contains 2 gals. of liquid to 1 lb. of tobacco. In many cases it will be found useful against borers and root-feeders; the cabbage-maggot may be kept away by putting a handful of tobacco dust at the base of each plant. While chiefly beneficial as a contact poison, it may be used against plant-lice, either as a dry powder or in the shape of a decoction. In the former case it should be exceedingly fine. All contact poisons kill through the breathing pores.

General Caution as to the Use of Insecticides.—Great care should be taken in using the arsenical and kerosene preparations, inasmuch as some plants are far more delicate than others. In experimenting it is desirable at first to dilute considerably. It may be remarked that tender young foliage is more susceptible to injury and should be carefully treated. The same is the case with thin-leaved, hairy plants; but the thick-leaved, smooth species are less delicate. Fruit trees should never be sprayed with arsenical poison until the blossoms have fallen, if any consideration is had for the honey bees. Whale-oil soap should not be used on very tender plants.

Household Insects.—The chief insect enemies of domestic peace are mosquitoes, flies, fleas, bed-bugs, roaches, ants, centipedes, crickets, and mites. The best treatment for mosquitoes in the house is the burning of pyrethrum powder, or catching the pests on the ceiling in cups containing kerosene. The same remedy will be found beneficial in dealing with flies, and it can be supplemented by the use of the common arsenic paper or sticky papers to be had everywhere. The most common flea is that of dogs and cats. Frequent sweeping of rooms prevents their development. Benzine may be sprinkled about rooms with good results. The obnoxious and filthy bed-bug can only be exterminated by diligent search, and frequent applications of benzine or kerosene. The latter is a certain exterminator, and if the oil is injected with a syringe into all the cracks and corners where the pest is apt to be, its banishment will be the reward. Benzine, corrosive sublimate, and turpentine will also be found effective if used in the same way. Centipedes are best destroyed by abundant use of pyrethrum about the water-pipes and in the storerooms. Crickets are very destructive to woollen clothing, especially when damp. A very useful remedy to employ is to set a trap, consisting of beer placed in a vessel, which will attract the victims to their doom. Roaches are among the most wary of household insects. They are banished by rendering a room as nearly air-tight as possible, and allowing the fumes of bisulphide of carbon to take possession. A trap, made by partly filling a deep jar with stale beer, and resting a few sticks against the jar so that they project into the jar a few inches, will entice the roach pest. Other traps of considerable merit can be purchased almost anywhere. Copious doses of kerosene will also banish the roach. Wafers of red lead, flour and water, mixed, rolled out thin, then dried and baked on a baking sheet, will kill roaches. The wafers should be kept out of the reach of children, as they are very poisonous. Ants' nests can be exterminated by pouring into each of several openings an ounce or two of bisulphide of carbon and then stopping up the holes. If within the house, small bits of sponge should be moistened with sweet water, and these collected frequently and plunged into hot water. Diluted ammonia sprinkled about the holes will also be effective. In pantries infested by mites the only effective remedy is to thoroughly cleanse the same, fumigate it with sulphur, and wash it with kerosene emulsion. Red roaches may be banished by sprinkling powdered borax freely about their haunts. The ravages of the clothes moth need not be described. While the remedy for preventing such ravages may not be an insecticide, it may with propriety be included in this article. When possible, garments should be carefully folded in paper, so as to leave no chance for the moth to enter. Boxes of camphor wood or red cedar are valuable in protecting articles, but where such are not to be had, oil of cedar may be poured on paper and so rolled that the oil shall not grease the

garments. Several of such prepared rolls may be scattered through any box, taking care to renew them two or three times during the summer, and the receptacle will be moth-proof. Camphor should never be placed near sealskin, as it causes the fur to change color.

The *buffalo moth* is the special ravager of carpets. It cuts the material as sharply as if done by a scissors. Following as it does the line of seams in the floor, these should be filled during the winter with cotton saturated with benzine. Kerosene, naphtha and gasolene are also offensive to the carpet moth, but benzine is the simplest and safest preventive.—The *death watch* attacks books, furniture and food. Articles liable to be attacked may be washed in a solution of corrosive sublimate in alcohol; or object like books may be exposed to the odor of carbolic acid or benzine, or fumigated with burning sulphur. Moths may be kept away from drawers, boxes or closets containing furs or other articles favored by these pests, by placing therein camphor, cedar-wood, Russia leather, hog-myrtle or any other strongly aromatic substance. The use of kerosene in all cases where it can be safely applied is recommended as one of the most powerful and convenient of insecticides.

Insec'tifuge, *n.* [Lat. *insectum*, and *fuge*, to put to flight.] A substance intended to drive away insects.

Insecto'rium, *n.* [Lat. *insectum*.] A place for keeping and breeding insects for scientific or economic study of entomology.

In'sect-pow'der, *n.* See INSECTICIDES.

Insid'er, *n.* One who is on the inside; hence, one who has advantages or means of knowledge not possessed by others who are *outsiders*. (*Colloq.*)

In'sole, *n.* The inner sole of a boot or shoe; opposed to *outsole*.—A thickness of cork, felt, flannel, leather, or paper, placed inside a shoe for warmth or other comfort.

Insom'nia, *n.* [Lat.] (*Path.*) Sleeplessness, or inability to sleep, frequently becoming chronic. It is due to various causes—overwork, mental strain or anxiety, congestion of the brain, indulgence in alcoholic drinks, &c. It is a serious condition, sometimes preceding insanity.

In'spirator, *n.* [L. Lat.] (*Mech.*) A kind of injector for steam-boilers, in which the water is raised by a jet of steam and supplied to another jet which delivers it to the boiler.

In'stitor, *n.* [Lat. *insisto*.] An agent, one who has in charge the interests of another.

Institu'tionalism, *n.* The spirit that pays homage to established institutions, especially those of a religious character.

In'ter-cit'izenship, *n.* The political condition of citizens of the United States, by virtue of which a citizen of one State has the right of citizenship in any State where he may reside.

In'ter-colle'giate, *a.* Existing, occurring, or carried on between or among colleges or universities.

Intern', *v. a.* To place for safety in an interior town or fortress; to put under restraint; to confine to a particular locality; as, to *intern* troops; to *intern* a prisoner.

Inter'nal Improve'ments. The construction of roads and canals; the improvement of river navigation, deepening of harbors, and increasing of any facilities for internal communication.

Inter'nal Rev'enue. Revenue derived from excise and licenses, and from taxes on personal property.

Interna'tional, The. A secret and communistic society, founded in London, in November, 1847, and definitively constituted in 1864 by Dr. Karl Marx and Friedrich Engels, upon the following "Declaration of Principles" and provisional rules:

"Considering that the emancipation of the working-classes must be conquered by the working-classes themselves; that the struggle for the emancipating of the working-classes means, not a struggle for class privileges and monopolies, but for equal rights and duties, and the abolition of all class rules; that the economical subjection of the man of labor to the monopolizer of labor—that is, the sources of life—lies at the bottom of servitude in all its forms, of all social misery, mental degradation and political dependence, that the economical emancipation of the working-classes is therefore the great end to which every political movement ought to be subordinate as a means; that all efforts aiming at that great end have hitherto failed from the want of solidarity between the manifold division of labor in each country and from the absence of a fraternal bond of union between the working-classes of different countries; that the emancipation of labor is neither a local nor a national, but a social problem, embracing all countries in which modern society exists, and depending for its solution on the concurrence, practical and theoretical, of the most advanced countries; that the present revival of the working-classes in the most industrial countries of Europe, while it raises a few hopes, gives solemn warning against a relapse into the old errors, and calls for the immediate combination of the still disconcerted movements; for these reasons the undersigned members of the Committee, holding its power by resolution of the public meeting held on Sept. 28, 1864, at Martin's Hall, London, have taken the steps necessary for founding the International Workingmen's Association. They declare that this international association, and all societies and individuals adhering to it, will acknowledge truth, justice, and morality as the basis of their conduct toward each other, and toward all men, without regard to color, creed, or nationality. They hold it the duty of a man to claim the rights of a man and of a citizen, not only for himself, but for every man who does his duty. No rights without duties; no duties without rights. And in this spirit they have drawn up the following provisional rules of the International Association: This association is established to afford a central medium of communication and coöperation between workingmen's societies existing in different countries and aiming at the same end—viz., the protection, advancement, and complete emancipation of the working-classes. The name of the association shall be *The International Workingmen's Association*. A General Congress, consisting of representatives of such workingmen's societies as may have joined the international association, is to meet once a year. On its annual meetings the General Congress shall receive a public account of the annual transactions of the Central Council. The Central Council, yearly appointed by the Congress, shall have power to add to the number of its members. In case of urgency, it may invoke the General Congress before the regular yearly term. The Central Council shall form an international agency between the different coöperating associations, so that the workingmen in one country may be constantly informed of the movements of that class in every other country; that an inquiry into the social state of the different countries of Europe be made simultaneously, and under a common direction; that the question of general interest mooted in one society be ventilated by all; and that when immediate practical steps should be needed, as, for instance, in case of international quarrels, the action of the associated societies be simultaneous and uniform. Whenever it seems opportune, the Central Council shall take the initiation of proposals to be laid before the different national or local societies. Each member of the International Association, on removing his domicile from one country to another, will receive the fraternal support of the associated workingmen. While united on a perpetual band of fraternal coöperation, the workingmen's societies joining the International Association will preserve that existing organization intact."

The work of this propaganda did not progress quite as fast as was at first hoped. The General Congress held at The Hague, in Sept., 1872, was a complete failure, resulting in the secession of an important section of the Council. Dr. Marx, one of its most influential members, resigned, and the society dissolved, but its theories are not abandoned, and are still sustained by most of the trades-unions.

Interstate' Com'merce. (*Law.*) After several futile attempts to obtain legislation in respect to the regulation of transportation, a bill was enacted by Congress, which received the approval of the President on Feb. 4, 1887. The law is somewhat a misnomer, inasmuch as its provisions apply only to that branch of commerce relating to the transportation by interstate railroads, or railroads and water-lines. Prior to Federal legislation, acts had been passed by several States dealing with the same subject; but, owing to the radical differences in the regulations provided and lack of means for effective controlling power, such measures only made the necessity of Federal legislation the more imperative. The only remedy against the unsatisfactory regulations of the railroad managers was the scope of the common law. The enormous development of business, its changed methods, and the new conditions created by the rapid growth and extension of the population called for regulations of a more uniform character and a more efficient check upon the management of transportation agencies. The instability of tariffs, the conflicting classifications, the discrimination made—not merely between individuals, but also between localities, both as regarded charges and facilities—were a source of constant complaint. Glaring instances of favoritism were disclosed, favoritism that encouraged the growth of monopolies and threatened to destroy the business of smaller shippers to the advantage of the more important customers. Special rates were cloaked under the form of secret rebates, while both published and secret tariffs were constantly changed at the will of managers, thus seriously interfering with the natural course of business. Further, in many sections of the country the railroads charged very low rates for long hauls, and for the carriage of the same classes of merchandise exacted relatively much higher rates for much shorter hauls. These were the principal abuses that Federal legislation was designed to banish. The underlying principles of the Interstate Commerce Law are practically only two: The rates for transportation should be reasonable and just; no unjust discrimination should be permitted by those subject to its provisions. It should be noted that the last condition does not prevent the charging of what might be called bulk rates—that is to say, per hundredweight, ton, car-load, or even train-load.

Before the passage of the Interstate Commerce Law neither the Federal common law nor the State laws could be judicially applied to commerce crossing the boundaries of individual States. Neither the friends of the law nor its enemies have been satisfied with its operations; the former because of its moderate success, the latter because it has been successful at all. It is charged that the railroads have conspired to defeat the advantages that were embodied in it favorable to their customers. Local rates have been maintained at relatively higher figures than the through rates. The law has, however, in the judgment of impartial observers, been productive of considerable benefit. The fault lies in the inadequacy of the powers conferred on the Commission. Called upon to act in a judical way, it has not the constitution of a court, nor, while empowered to make decisions, has it the power conferred upon it of enforcing its decisions. It is moreover to be observed that the courts have not come to its assistance in the matter of securing evidence that has been essential to its duties. The original act provided that five Interstate Commissioners should be appointed by the President, with the advice and consent of the Senate, the term of office of each member of the Commission to be six years after the original appointees, one retiring annually. An amendment to the Act was approved on March 2, 1889.

The chief result accomplished by the law has been an approach to uniformity of classification, and whereas at the time of the passing of the Act there were forty general classifications, besides an innumerable host of local ones, there are now practically only three, viz.: the official, the Western, and the Southern. Another result has been the disappearance of very many unjust discriminations against the short-haul traffic. The classification changes and the abolition of the discriminations just mentioned have had an important influence in the shrinkage of railroad receipts, and this result in some degree justifies the opposition that railroad managers have generally manifested toward the law. There have been fewer complaints of discrimination between shippers and between localities since the law has been applied. Rate-wars have been one of the most damaging results of this legislation. Another result has been an aggregate increase of rates for long hauls, imposed as some compensation for the abolition of unreasonable discrimination in the case of short hauls. One of the most important cases that have arisen under the law involved the question of material injustice to American interests. That question is, whether a less rate could be charged for the transportation of imported goods than for domestic merchandise. The Commissioners held that it was an unlawful discrimination and ordered the practice to be discontinued. Some of the railroad companies refused to obey the order, and a final appeal was made to the Supreme Court, which decided against the Commissioners, who as a result condemned the insufficiency of existing means to correct unlawful practices in the handling of domestic products, much less to prevent injustice to these if foreign imports are to be taken into account in fixing the relative rates for home and foreign traffic; declaring further that, in view of the complexity of the question, the public policy should be declared and enforced by positive enactment, and finally the Commission appeal for suitable legislation to provide the necessary regulations. The experience of the Interstate Commission has resulted in various recommendations as to necessary amendments in the law. A better summary of the defects in the statute cannot possibly be given than that suggested by the Commissioners' officially recommended amendments, the principal of which briefly given are:

That power be conferred upon the Commission to prescribe *minimum* as well as maximum rates. That provision be made for establishing through routes and through rates; the lack of this entails a loss of many millions of dollars annually upon the trade and carrying interests. That the Commission be directed to prescribe a uniform classification of freights, with power to change same from time to time on proof, after investigation, of a change being necessary. That it be empowered to prevent over- or undercharges for interstate transportation, and that provision should be made for connecting the contract of shipment and its performance of carriers with their duty to charge or receive only such rates as have been put in force according to law. That the statutory provisions for the enforcement of the orders of the Commission be amended. That it be made a misdemeanor, punishable by suitable fine, to mutilate, destroy or remove any tariff or schedule of rates, fares or charges, posted by any carrier subject to statute, as in force over his line. That provisions of Act be extended so as to cover all transportation of Interstate commerce over rail or rail and water lines, and also to all persons in any way engaged in such transportation. That authority be conferred on the Commission to require connecting carriers to establish through and continuous lines and carry traffic thereover at reasonable through rates, the same to be divided by agreement between themselves or by the final decision of the Commission. That the Commission be authorized not merely to prescribe the form of carriers' schedules, but also to control the contents and arrangement thereof. That greater force and finality be accorded to the findings and decisions of the Commission, based upon complaint involving rates or practices put in force by many carriers and alleging violations of those portions of the Act requiring reasonable and impartial treatment of the public.

On the subject of pooling, the Commission declares that without other remedial legislation, it would be inadvisable; but under conditions approved by the Commission and rendered capable of easy and direct legislation, it might safely be tried, if accompanied by effective remedial legislation. The Commission further urges amendments to give that degree of completeness and effectiveness for which it was designed. No amendments involving rate-making, however, are asked, but the Commission appeals for finality and binding character to its decisions after proper and safeguarded investigation has been had of excessive or relatively unjust nature of rates now in force. It also suggests an amendment requiring common carriers to adopt, within unreasonable time, a uniform classification of freights, with authority to the Commission, in case of their failure to comply, to prescribe such classification and compel its adoption by the carriers.

Such is the experimental nature of this inadequately framed law, and so complex are the questions involved that early amendment seems an unavoidable necessity.

In'tima, *n.* [Lat.] (*Physiol.*) The internal coat of an organ, as of an intestine, a blood-vessel, or an artery.

Intinc'tion, *n.* [L. Lat. *intinctio.*] Act of dyeing or tingeing.

(*Eccles.*) A method or practice, in the Greek Church, of administering both elements of the Eucharist at the same time, by dipping the bread into the wine. It was condemned by the Council of Braza in A.D. 375 (point being added to the condemnation by the remark that Judas is the only example in the gospel of communion by intinction); by Pope Urban (A.D. 1088–99), and his successor, and by the Convocation of Canterbury (A.D. 1175); though the practice forbidden may have been as much the consumption of the superabundant elements as that of intinction.

Intran'sigent, *a.* [Lat. *intransigens.*] Refusing to agree, uncompromising, irreconcilable; applied especially to political factions.

Invis'ible Green. A very dark shade of green, hardly distinguishable from black.

Ir'wood, in *New York*, a post-village of Queens co., 7 m. S.E. of Jamaica. *Pop.* (1897) 1,540.

Iod'yrite, *n.* (*Min.*) Iodic silver; a yellow and sometimes brownish mineral, containing iodine 54, silver 46. *Sp. gr.* 5·5 to 5·7. When it is fused by the blowpipe on charcoal, it yields the fumes of iodine and metallic silver; or, when melted with bisulphate of potash in a glass tube, it gives the violet vapors of iodine. It is found in this country at the Cerro Colorado mine, in Arizona.

Iowa, Univer'sity of. (*Educ.*) A very popular institution, located at Iowa City; was incorporated in 1847, and opened in 1860. Its departments, in addition to the regular classical and scientific courses, are as follows: Law, Dental, Medicine (allopathic and homœopathic), Pharmacy, and Civil Engineering. The faculty in 1897 comprised 101 professors; the students enrolled numbering 1,331. Charles A. Schaeffer is the president of the University. The endowment fund is $230,000, and the library, previous to June 19, 1897, contained 42,000 volumes, but a fire on that date destroyed at least 25,000 of these. The curriculum of the institution includes, in addition to the branches already mentioned, a collegiate course, and the government is vested in a Board of Regents, which includes the Governor of the State and the Superintendent of Public Instruction as members *ex-officio*, and one member from each Congressional district.

Ip'so fac'to. [Lat.] In or by the fact itself; used adverbially, as *ipso facto* condemned.

Ips'wich, in *South Dakota*, a post-village, cap. of Edmunds co., 26 m. W. of Aberdeen, on C., M. & St. P. R.R.; has a creamery and flour mills, and some other manuf. *Pop.* (1895) 417.

Iren'ical, *a.* [Gr. *eirene*, peace.] Promoting peace; pacific. (R.)

Ire'stone, *n.* (*Mining.*) A name commonly given to any very hard rock.

Ire'ton, Henry, an English republican general, born 1610, son-in-law of Oliver Cromwell. He distinguished himself in the Civil War; was one of those who signed the warrant for the death of Charles I., and was Lord Deputy of Ireland after the establishment of the Commonwealth. Died in 1651.

I'ridal, *a.* Same as Irisated (*q. v.*).

Iridec'tomy, *n.* (*Surg.*) The name given to various operations for the formation of artificial pupils; also called *coretomia.*

I'rion, in *Texas*, a W. central co.; *area*, 970 sq. m. Intersected by the Middle Fork of Colorado river. *Surface*, hilly in the north, level in the south; *soil*, a rich, red sandy loam; some timber. *Products*, grain, cotton, corn, alfalfa; stock raising. *Cap.* Sherwood. *Pop.* (1890) 870.

I'riscope, *n.* [Gr., *iris*, rainbow, and *skopeō*, to see.] An instrument invented by Dr. Reade for examining prismatic colors. It consists of a plate of polished black glass, smeared with a solution of soap and dried by wash-leather. If the breath be directed through a tube upon the glass, the vapor will be deposited in colored rays.

I'rish-Amer'ican. *n.* An Irishman who has settled in America, or a United States citizen of Irish birth.

I'ron, in *Michigan*, a N.W. co.; *area*, 1,187 sq. m. Intersected by the Menominee river. *Surface*, hilly; *soil*, fertile. *Min.* Iron, gold, graphite. *Timber*, plentiful. *Industries*, lumbering and mining. *Cap.* Crystal Falls. *Pop.* (1894) 5,293.

I'ron, in *Missouri*, a S.E. county; *area*, about 550 sq. m. *Rivers.* Big creek and some smaller streams. *Surface*, mountainous. Pilot Knob and Iron Mountain, two remarkable mountains, are situated in the N.E. part of the county. *Soil*, fertile. *Min.* Iron in abundance, with gold, platinum, nickel, lead, granite and marble. *Cap.* Ironton. *Pop.* (1890) 9,119.

I'ron, in *Utah*, a S.W. county, adjoining the States of Colorado and Nevada; *area*, about 3,436 sq. m. *Rivers.* Colorado, Grand, Green and Unka Weep rivers, besides numerous lakes and salt water sinks. *Surface*, diversified; *soil*, in some parts fertile. *Cap.* Parowan. *Pop.* (1897) about 3,500.

I'ron Bluff, in *Nebraska*, a village of Sarpy co., on Elkhorn river.

Iron Gate of the Danube. This name is applied to the narrowest of the eight rapids that formerly impeded the navigation of the Danube, and it is so called because of its extremely formidable character. The length of its passage is 1½ miles, and it is situated below Orsova, where the middle course of the river ends. These eight rapids occur within a distance of 75 miles beyond Upjalanka; they are formed by the jutting out of the rugged spurs of the Transylvanian and Servian Mountains, which contract the river to a passage which at the "Iron Gate" is only 129 yards wide, with a depth of 168 feet. At Semlin, near Belgrade, the Danube presents a majestic surface, whose breadth is 1,706 yards, while the depth of the river is 46 feet. Along the rapids the torrent rushes between towering masses of rock, while dangerous shoals of limestone, crystalline schists and granite form a dangerous obstruction to navigation. The scenery of some of these rapids is very picturesque, notably that of the lower Khssura, but the "Iron Gate," long opposed the terrors of its passage to navigation. Here the pent up waters rush and swirl with destructive energy, breaking against forbidding ledges of rock that thrust their dentated surfaces above the raging river that seethes and boils around them, forming dangerous whirlpools, countless eddies and counter-eddies, and considerable cataracts, which, combined with the rapid fall of the river, presented an impassible barrier to free navigation. The utilization of this most important waterway has been one of the burning questions that have troubled the peace of European statesmen, and various international arrangements have been made with respect to its control and the means for keeping it open. Under the terms of the famous Berlin Treaty, Austria undertook to remove the "Iron Gate;" and after many years of labor the important work was successfully accomplished, and this part of the Danube opened to navigation. The event was celebrated with great ceremonies carried out by the Emperor of Austria on Feb. 27, 1896. It should be explained that the "Iron Gate" proper consisted of a reef called the Prigada, forming a wall 350 yards wide that was exposed at low water and ran for nearly a mile along the left bank of the river, where it crossed diagonally to a point immediately above Sibb, forming with some smaller reefs a dangerous cataract throughout the entire length of the reef. The improvements effected the removal of the obstructions between Bazias and the "Iron Gate," and cutting a channel through the Prigada and other reefs for a length of two miles, providing a course 260 feet broad and 10 feet deep along the Servian bank. These improvements enable the Danube to be navigated by the largest river steamers from the Black Sea to Vienna. The cost of the work was about $10,000,000. See Danube, and Canal.

Iron Hall, Or'der of. A mutual benefit association which first came into public notice, about 1881, at Indianapolis, Ind., whence it organized branches throughout the Union. Its system was most attractive, and in comparatively few years it grew to be seemingly one of the most prosperous concerns in the West, with a membership of nearly 70,000. It had a maturity fund into which members made small weekly payments, receiving at the end of seven years, sums of $1,000, $800, $600, or $400, as they had elected. It provided, also, a disability fund, upon which members could draw, the sums withdrawn to be deducted from the sum to which they were entitled at maturity. In 1892 attention was drawn to the association's financial condition, and in July a complaint was filed at Indianapolis, charging insolvency and asking that a receiver be appointed. The complaint alleged reckless salaries, with fictitious expenditures for travelling and pretended claims to the amount of $50,000. It was charged that the corporation had accrued debts for the remainder of the year, for maturing benefits, over $1,000,000 and for disability benefits over $325,000; that for 1893 its debts amounted to $4,650,000; for 1894, to $6,650,000; and for 1895, to $9,650,000. Its assets were set forth to be a reserve fund of $1,200,000, only one-seventh of which was available every year, with real estate to the value of $1,000,000. $720,000 of these funds had been placed in a Philadelphia bank of which Freeman Somerby (chief justice of the order) was vice-president, and Hayes (a supreme trustee) secretary and treasurer. The books showed only $440,000 of the sum to be accounted for. It was shown also that Somerby had failed to call a meeting of the supreme sitting for a number of years, and that at the last one he had coerced it into increasing his salary from $5,000 to $10,000 a year. In October, 1892, indictments were found against the supreme officers who had voted this transfer of money, charging embezzlement to the amount of $200,000; many arrests followed, and receivers were appointed in eight States, who, after much obstruction and litigation, wound up the affairs of the order, distributing the remaining assets among members. The arrested officers were never brought to trial. The Order, with various others founded on the same questionable principle, no longer exists.

Iron Moun'tain, in *Michigan*, a city, cap. of Dickinson co., 72 m. N.W. of Menominee, on the C. & N.W. and C., M. & St. P. R.Rs.; has extensive iron mines and ships large quantities of ore. *Pop.* (1894) 7,638.

Iron River, in *Michigan*, a post-village of Iron co., 40 m. N.W. of Iron Mountain, on the C. & N.W. R.R.; has large iron mining interests. *Pop.* (1894) 882.

Iron'ton, in *Alabama*, a post-town of Talladega co., on Louisville & Nashville R.R. *Pop.* (1897) about 700.

I'ron-clad, *n.* Strong, rigorous, severe, exacting; as an *iron-clad* oath, agreement, or constitution.

I'rondale, in *Ohio*, a post-village of Jefferson co. *Pop.* (1897) about 750.

Iron'dequoit, in *New York*, a post-town of Monroe co. *Pop.* (1890) 2,415.

I'roning-machine', *n.* A machine for ironing clothes, &c. Specific forms are made for laundry work, hat ironing, hosiery, &c.

I'ronwood, in *Michigan*, a city of Gogebic co., 6 m. S.W. of Bessemer, on the C. & N.W. and Wis. Central R.Rs. Iron mining is the principal industry. *Pop.* (1894) 9,324.

Irreden'tist, *n.* [Ital. *irredenta.*] In Italian politics, one of the party of the Left, in whose accession to office, in 1876, the cry of "Italia Irredenta" and pledges in favor of the recovery of the unredeemed territory were powerful factors. By "Italia Irredenta" were meant regions Italian in speech and race, but subject to other governments. Such were Trieste and the Trentino, held by Austria; Ticino, by Switzerland; Nice, by France, and Malta, by England. The movement caused slight alarm, but seems to have had no solid support from the Italian people.

Irriga'tion, *n.* (*Eng. and Agric.*) This term, in its full sense, is applied to the artificial use of water for promoting the growth of crops. The adoption of some method of irrigation in Oriental countries is indispensable to the existence of the people, and its application dates back to remote antiquity. The most important results of irrigation to any country as a whole are probably experienced in Egypt, for on the inundation of the land by the Nile depends the entire wealth of the country. Over about 7,000 square miles of land the dreariness of a desert falls almost annually in May, and soon man and beast are tortured by thirst and a scorching, dry atmosphere. With the overflow of the river is brought a fertile deposit of mud, which, remaining after the river has subsided, forms the rich soil from which spring the agricultural riches of Egypt. The dykes constructed along the Nile are the usual footpaths for traffic during the period of inundation. While this instance of irrigation is largely that of a natural process, much artificial work is done to utilize its benefits and admit of its operation.

The adoption of irrigation methods to agriculture has been attended with enormous benefits, not merely in arid regions, but also in districts where there is a natural rainfall. In the latter case the increased productiveness of the soil amply compensates for its cost, especially where fruits and vegetables are raised, and, generally, irrigation softens the soil, rendering it more easily worked and more penetrable by the roots of plants. In dry climates 400 or 500 cubic yards of water to the acre are frequently applied before plowing, this quantity serving to moisten and soften the soil to a depth of about 12 inches. The quality of the soil is strengthened by air and other gases and vegetable and mineral substances held in solution by the irrigating water. Upon arable land irrigation aids the decomposition of the soluble organic and inorganic matter it contains, and distributes the same.

Irrigating canals are generally supplied from rivers, the water being raised to the required level by means of weirs or dams built across the rivers, and the head of the canals placed above the dams. This method of irrigating is necessarily costly, as frequently the construction of canals many miles in length is needed to bring the water to the level of the irrigating area, where it is distributed by smaller canals through the various lands. Where the upper sections of these canals pass through broken country, then the labor and expense of their construction are largely augmented. The cases of the Ganges, and other important irrigating systems in Northern India demonstrate this fact. Where the land to be irrigated is nearly on the same level as the river, the irrigating is much less costly and difficult. In the Madras Province of British India the deltas of the Cauvery, Godavery, and Kistna rivers present illustrations of this; in this case the area to be irrigated is easily reached from the enclosing banks.

The amount of irrigation water required depends principally on the nature of the soil, the locality, and the crop. In Northern India, where the rivers are fed from the snow reservoirs and where there is a considerable rainfall, the area irrigated is generally somewhat over 200 acres for a cubic foot of water per second, rising in some cases to even 400 acres. This applies in cases where there is both winter and summer cultivation and principally refers to cereal crops. In the district named one cubic foot of water per second for twenty-four hours will irrigate four acres, covering them to a depth of nearly six inches, or 400 acres if supplied for 100 days. Thirty acres of rice can be matured by a supply of one cubic foot of water per second during the season, and where the land receives heavy downfalls of rain even 90 acres may be so watered.

During recent years great progress has been made in the United States in respect to irrigation. In the Western States large tracts of fertile land have been converted into productive areas that could not formerly be cultivated successfully without its adoption, and considerable areas of otherwise useless lands have been made available. Viewed as an economic feature, irrigation is perfect, while as a social question it is of the very highest importance, providing as it does for the wants of the citizens of our rapidly growing city populations and furnishing an outlet for the energies of the crowded communities of the East, thus serving as an operative force of no small value in relation to wages and the comforts of life. The general question of the methods of irrigation best adapted to the various sections is still warmly debated, some authorities urging that the most successful plan is obtainable by individual effort, others by State or even national enterprise, and again others urge that the work can only be undertaken to proper advantage by capitalists on a large scale. Ex-Governor Ross, of New Mexico,

considers that the days of corporate irrigation have passed and that individual irrigation will solve the question. One thing is clear: the cultivable area of farms is often largely reduced by irrigation which enables crop results to be doubled and trebled. Where larger areas had previously been cultivated at great labor, expense, and not infrequently with relatively low results, the adoption of irrigation has encouraged the limiting of cultivable area of farms from 5 to 25 acres, and to the raising of truck or garden stuff. In this way estates of hundreds of thousands of acres in California have been subdivided into thousands of small farms. The result has been to reduce the physical labor of the farmer, provide certain and profitable crops—a sure step forward in the direction of agricultural freedom and independence. In the arid districts fed by the watershed of the Rocky Mountains, from three to six crops a year are raised. The growth of fodder that was formerly impossible in arid regions is now successfully promoted, and winter crops and fruits and vegetables secured. The plan of irrigation is, in the main, that already mentioned, of dams in which the river water is impounded and carried to the lower lands by a main canal. This system is what is known as the "gravity system," and the chief drawbacks that have been experienced are: First, the excessive cost of water, caused by the heavy first outlay, lack of competition, and the cupidity of water-owners; second, the insufficient size of the canals, or the exhaustion by users higher up the stream; third, the inability to irrigate land at a higher level than the ditches. To obviate these difficulties a system of wells and river pumping has been adopted, manual, horse, wind, and for larger pumps, gasoline and steam-power being used. The relative cost is estimated to average over $11.50 per acre for first cost and $3 per acre for annual maintenance and interest in the case of the "gravity" system; and $3.50 per acre as first cost, with $1 per acre for yearly maintenance, in the case of the pumping system. The chief drawback in many districts has been the lack of water; that is to say, that while irrigation means have been promised, the water has failed when most needed from the cause already mentioned or from a natural insufficiency. In addition to this, however, the prejudice of the farmers has been an important drawback, this cause often resulting from the unfulfilled promises made and from the ignorance generally prevailing on the whole subject of irrigation. Efforts have been made in some districts to secure a perennial supply of water by building canals along the rivers, constructing them at a grade less than that of the rivers and continuing them laterally up the river until they penetrate the water-bearing sand or gravel. This has been done on the Platte and Arkansas rivers.

Whatever may be said of irrigation in the sub-humid districts, it is not a problem as to the arid regions—it is a necessity. The sub-humid States are North Dakota, South Dakota, Nebraska, Kansas, and Texas. The western parts of these States lie well within the arid region, and the eastern fall within the humid regions. The soil of the sub-humid region is unsurpassed in richness by that of any part of the U. S., but at the most critical period in the development of cereals moisture is lacking. This, with the terrible hot winds that then prevail, defies the ordinary methods of farming. The variation in the yearly rainfall in this region makes the farmers' lives too often a continuous succession of promise belied by results. Whatever else may be done, the only satisfactory solution of the irrigation problem seems to be in jealously saving all the available water in every locality: storm, spring, and well. The canals in the large river valleys cannot be made available to other than limited areas.

The construction of ditches leading from creeks, by a few persons in a neighborhood, has frequently been effected, but such works have generally failed to realize the hopes formed, and after a short experience they have been abandoned. These empty ditches are frequent in western Kansas, and may also be found in other parts of the sub-humid districts. Wells have been sunk through the clay or marls, and water is found in the water-bearing sands and gravel at from 50 to 300 feet; but pumping has in general to be resorted to. In the sub-humid States this source of supply furnishes seemingly inexhaustible supplies for cattle, garden and domestic use, but the value of such means for irrigation is relative to the cost of working as compared with the value of product, and this is mainly a question of an available market for products. Storm water stored in reservoirs has proved available for irrigating, but this plan can only be adopted where the surface of the land admits of their construction. The large area comprised in the sub-humid regions is mainly dependent for its irrigation on the supply of water from the rivers rising in the Rocky Mountains, flowing easterly across the plains to the Missouri and Mississippi rivers. While in wet seasons large bodies of water flow in these rivers, yet in the vital season their beds are tiny trickling streams, utterly useless for irrigating the immense tracts of country through which they pass. The head of water is lost by evaporation, combined with the tapping of the water of streams for ditch supplies.

There were in the U. S. in 1900, as estimated in the census returns of that year, over 8,500,000 acres under irrigation. This includes 724,600 acres in Hawaii, the great bulk of the remainder being in the arid and semi-humid States and Territories. Of these, Colorado presented the greatest area, aggregating 1,611,271; while California closely approached, with 1,446,114 acres. Montana had 951,054 acres under irrigation. Other States with large areas were Idaho, Nevada, Utah, Wyoming, Oregon, New Mexico &c. The total cost of construction of these works has been, in round numbers, $65,000,000. The annual cost of maintenance varied from 82 to 16 cents per acre, and the cost of water per acre from $127.00 to $3.00.

The arid region of U. S. exists, wholly or partly, in Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington and Wyoming, the total arid area embracing 550,000,000 acres. Of this immense tract it is estimated that only 60,000,000 acres can be irrigated, there being no known water supply that can be used upon the remaining 490,000,000 acres, unless subterranean sources of water, not now known, are discovered. For years past the Geological Survey has had in view the irrigation problem. In its full breadth it seems far beyond the reach of private enterprise, and the lack of system and the hostile relations which have attended private attempts at irrigation have led to a vigorous desire for a government handling of the problem.

In response to this demand, a bill was passed by Congress, and signed by the President on June 17, 1902, providing for a systematic irrigation of the available lands in the arid region at government expense and under careful and systematic engineering supervision. All moneys received from the sale of public lands, except those reserved by law for other public purposes, are to be employed in the survey of the arid regions and the building of dams and construction of irrigation reservoirs and canals, wherever sufficient water for this purpose exists. All suitable lands are to be withdrawn from entry until they are irrigated, when they will be opened for settlement and sold in tracts of not more than 160 acres to any one holder, the money received for their sale to be added to the irrigation fund.

In addition to the utilization of the mountain streams, the Government proposes to drive many artesian wells in the desert, in order to test the underground water supply. It is quite possible that in many districts that seem to forbid irrigation, sufficient water may be found in this way to convert large tracts of desert into fertile territory. It is estimated that Government land now practically valueless may be so improved by irrigation as to be worth at least $20 per acre, and land capable of supporting many millions of people be added to the habitable territory of the U. S. It is estimated, indeed, that the section now inhabited only by the prairie-dog, may in time support a population of perhaps 50,000,000, nearly two-thirds the present population of the U. S. finding homes in the Great American Desert.

Ir'ving, HENRY (stage name of JOHN HENRY BRODRIBB), actor, was born at Kelnton, England, Feb. 6, 1838. He adopted the dramatic profession in 1856; made his first London appearance in 1859, at the Princess' Theatre. His first marked success was in 1870, when he played *Digby Grant*, in the drama of *Two Roses*. In 1874 he appeared in *Hamlet;* the independent originality of his interpretation aroused critical interest and provoked discussion, but his high rank as a tragedian was very generally admitted. His career was progressively successful, until he held unquestioned first place among recent actors. In 1878 he assumed the management of the Lyceum Theatre in London, which was afterward associated with his name and which became the scene of his most brilliant efforts. He revived many old dramas and presented some very successful new plays, gaining distinction in *Hamlet, Merchant of Venice, Othello, Richelieu, The Bells, &c.* and from his highly artistic stage settings. He visited America on numerous occasions, his company including as leading lady the gifted Miss Ellen Terry, who long shared his artistic labors and the honors of his career. Irving was made a Knight Bachelor in 1895. He died Oct. 14, 1905.

Isabnor'mals, Ther'mic. (*Meteor.*) Dové has published a series of maps indicating the deviation of the temperature of different regions, from the temperature due to the latitude, for different months. He calls the lines joining places in which the deviation is the same *thermic isabnormal.*

Isagogics, (*ī-sa-goj'-ics*), *n.* [Gr. *eisagōgikos.*] (*Theol.*) That part of Biblical science which is introductory, having to do with the literary history of the books, their authorship, genuineness, date and place of composition, &c.; preliminary to hermeneutics and exegesis. See HIGHER CRITICISM.

Ish'peming, in *Michigan*, a flourishing city of Marquette co., 15 m. W.S.W. of Marquette, on C. & N. W.; D., S. S. & A., and L. S. & I. R. Rs. Here are very rich iron mines; also smelting furnaces, large foundry, boiler shops, and carriage factories. There are deposits of gold, silver, and marble in the vicinity. *Pop.* (1894) 11,687.

Isle Roy'ale, in *Michigan*, a N. co.; formed by a group of islands in Lake Superior. The largest of these islands is called Isle Royale, and is about 40 m. long. Copper is found here. *Cap.* Minong. *Pop.* (1890) 135.

Ison'omy, *n.* (*Polit.*) Equality of civil rights.

I'sonym, *n.* [Gr. *isōnymos.*] (*Philol.*) A paronym, or paronymous word. See PARONYMOUS.

I'sotely, *n.* Parity with citizens in taxation or immunities; granted to a favored class of Athenian aliens who were not enrolled as citizens.

Is'tle, *n.* A fiber obtained from istle-grass (*Bromelia sylvestris,*) a tropical American plant; also from several species of *Agave* found in Mexico.

Itagaki, TAISUKE, COUNT, soldier and statesman, was born in the province of Tosa, island of Shikoku, Japan, in 1838; educated for the army; served in the imperial army as general during the war of the restoration, in 1868; became a privy councilor in 1871, and for several years, with intervals of retirement, served in that position. In 1877 he was active in aiding in the suppression of the Satsuma rebellion. He was appointed Minister of Public Works (1878) and Minister of the Interior (1880). Not being in sympathy with the politicians of the Satsuma and Choshu clans, he resigned. A peerage which was conferred upon him in 1887 was accepted with great unwillingness.

It'aka-wood, *n.* A finely mottled cabinet-wood from *Machærium Schomburgkii*, a large tree growing in British Guiana. Also called TIGER-WOOD.

It'ala, *n.* A Latin version of the Scriptures, older than the Vulgate.

Ith'aca, in *Michigan*, a post-village, cap. of Gratiot co., 42 m. N. of Lansing, on the D., G. R. & W. R. R.; has some manuf. of wooden ware. *Pop.* (1894) 1,968.

I'to, HIROBUMI, COUNT, statesman, was born in the province of Choshu, Japan, in 1840. A secret journey to Europe convinced him of the superiority of Western civilization, and he has since been, like Inouye, a leading spirit in Westernizing Japan. He visited the U. S. (1871) to investigate the coinage system, and after his return to Japan aided in establishing the mint at Osaka. On the death of Okubo (1878) he was transferred from the office of Minister of Public Works, which he had previously held, to the Home Office. He again visited foreign countries in 1879–80. During this journey he became indoctrinated with strong German opinions, for which he was called the "Japanese Bismarck." He became the leader in the Japanese cabinet in 1886, and instituted such sweeping reforms that the name of "earthquake" has been applied to that period. In 1888 a conservative reaction resulted in Ito's retirement from the premiership; he was recalled in 1892, but was again retired in 1895. He was the father of the Japanese Constitution which was promulgated in 1889. In 1897-98 he visited the United States and Europe on a tour of general observation. He resumed the premiership in 1900, but his financial measures aroused opposition, and he retired, with the entire cabinet, on May 2, 1900. He has earned the reputation of being a wise and very astute diplomatist.

Ivory-type. See HELLENOTYPE.

Ix'ia, *n.* [Gr. *ixos*, bird lime.] (*Bot.*) A genus of South African bulbous plants of the *Iridaceæ*, or iris family, many of which are cultivated.

Ixiolir'ion, *n.* A genus of bulbous plants of the *Amaryllidaceæ*, or Amaryllis family—the ixia lilies, bearing blue or yellow flowers.

Ix'ora, *n.* See RUBIA.

J is the tenth letter and seventh consonant of the English alphabet, and has in our language the sound or power *dzh*. It is a modern acquisition to the alphabet, the letter *i* having been formerly employed in cases where *j* is now used. *J* may be in fact termed a *semivowel;* and, doubtless, the sound of this letter, given by the Romans in the form of II or *ii*, corresponded with the Eng. sound of *y* (as in *young*), still applied so in the Teutonic dialects. It was the Dutch writers and printers of the 16th and 17th centuries that first originated the distinction between *i* and *j*. This distinction is, however, ignored by physicians, who in their prescriptive formulæ, when the symbol for unity terminates with numerals, write *j*, instead of *i*; as, *viij*. In French, *j* has the power of *zh;* and in Arabic and Spanish, a guttural property which is interchangeable with *x*, as *Truxillo*, or *Trujillo*. In the Italian, the character *j* is represented by *gi* or *ggi;* as *maggiore*, from Lat. *maior* (major).

Jaäl'-goat, *n.* (*Zoöl.*) The Abyssinian Ibex, *Capra jaala*.

Jaar, *n.* (*Bot.*) See HOLCUS.

Jabal. (*Script.*) Son of Lamech and Adah, and a descendant of Cain. He is supposed to have been the first to adopt the nomadic mode of life, and to have invented portable tents. (*Gen.* iv. 20.)

Jabary, XABARY, YAVARY, or HYABARY, (*ha-ba-ree'*,) a river of S. America, rising about Lat. 8° S., Lon. 72° W., and flowing a general N E course between Brazil and Peru, joins the Amazon near Tabatinga. *Length*, about 450 m.

Jabbee, (*jab'be,*) a town of Bambara, in W. Africa, on the Niger, 55 m. from Sego; *pop.* unascertained.

Jab'ber, *v. n.* To talk rapidly or indistinctly; to talk senselessly; to chatter; to prate.

—*v. a.* To utter rapidly with confused sounds.

—*n.* Rapid talk with indistinct utterance.

Jab'berer, *n.* A person who jabbers.

Jab'beringly, *adv.* In a jabbering manner; confusedly.

Jah'bernowl, *n.* Same as JOBBERNOWL. *q. v.*

Ja'ben, a town of Spain, prov. Valencia, 48 m. from Alicante. Grapes and silkworms are extensively grown and reared in the vicinity. *Pop.* about 4,000.

Jabi'ru, *n.* (*Zoöl.*) A genus of aquatic birds, of the Stork family. Three species are known, respectively inhabiting South America, W. Africa, and Australasia. It is the *Mycteria* of Linnæus. It is somewhat larger than the swan; the head is large; the neck thick; and the bill is long, conical, smooth, and pointed. The body is entirely white; the head and neck are very bare of feathers, and covered with a thick black skin; the tail is broad and short; the legs are 2 feet long, and the bill and feet are black.

Fig. 1424. — SENEGAL JABIRU. (*Mycteria Senegalensis.*)

Jaborandi, *n.* A plant found in Brazil, known to botanists as the *Pilocarpus pinnatus*, and recommended to medical men for producing rapid and intense salivation, and in treatment of rheumatism, asthma, &c. Its active principle is termed *pilocarpine*. Two prizes were granted in 1876 in Europe, of $300 each, for essays upon its application and its active principle.

Ja'ca, in Spain. See XACA.

Jac'amar, *n.* (*Zoöl.*) A genus of Insessores birds (*Galbula* of Brisson), closely allied to the Kingfishers, except that their feet are quite different, and they inhabit moist woods, whereas the Kingfishers are only found on or near the banks of rivers. Their plumage has a metallic lustre, which it is extremely difficult to imitate. Most of the true *J.* are natives of S. America.

Jaca'na, *n.* (*Zoöl.*) A genus of Grallatores birds (*Parra* of Linnæus), family *Rallidæ*, distinguished by the extraordinary length of their toes and their spine-like claws, especially that of the hinder toe. They are very light birds; and the wide surface over which their toes extend enables them the more easily to procure their food, consisting of worms, small fishes, and insects, by walking on the leaves of aquatic plants which float on the water. Various species of the *J.*, which in contour and habit resemble the English Moor-hen, are spread over the tropical regions both of the Old and New World.

Jacarehi, (*ja-kär-a-hē'*,) a town of Brazil, prov. and 50 miles E.N.E. of São Paulo. It carries on a considerable trade in coffee and tobacco. *Pop.* estimated at 7,300.

Jacchus, (*jăk'us,*) *n.* [Gr. *iacho*, I cry.] (*Zoöl.*) A name given to the sapajous of the genera *Hapale* and *Midas*, also commonly known as Marmozets, Ouistitis, and Tamarins. They are monkeys of small size, with short muzzle, flesh-colored face, and round head. The five fingers are armed with claws, except the thumbs of the posterior extremities, which have nails; fur very soft; tail full and handsome. Length of body about 8 inches; tail 11. General color olive-gray; head and shoulders nearly black; the tail and lower part of the back are annulated with pale-gray; and two tufts of pale hair grow round the ears. They are squirrel-like in their habits, and omnivorous; feeding on roots, seeds, fruits, insects, snails, and young birds. Natives of Guyana and Brazil.

Fig. 1425. — JACCHUS. (*Hapale chrysomelas.*)

Jac conet, *n.* See JACONET.

Ja'cent, *a.* [Lat. *jaceo.*] Lying at length.

Ja'chin. (*Script.*) The name of the right-hand brazen column at the entrance of Solomon's temple.

Jaci d'Aquila, (*jä'che dä'kē-la.*) a sea-port of Sicily, in the Val di Demona, on the Acis, 13 m. from Mount Ætna. *Manuf.* Linens. *Pop.* 11,000.

Jacinth', *n.* [Fr. *jacinthe.*] (*Bot.*) See HYACINTHUS.

(*Min.*) See HYACINTH.

Jacin'to, in *Arkansas*, a post-office of Dallas co.

Jacinto, in *California*, a post-village of Glenn co.

Jacinto, in *Mississippi*, a post-village of Alcorn co.

Jacinto, in *Texas*, a post-office of Rusk co.

Jack, a nickname, or diminutive for the name *John*, which is used in various ways. It is difficult to explain why, in the principal modern languages, *John*, or its equivalent *Jack*, is a name of slight or contempt. The Italians use the word *Gianni* in this sense; from which *Zani* is derived. Among the Spaniards, *bobo Juan*, foolish John, and the French *Jean*, have a similar signification. The term *Jack-fool* is used by Chaucer as the *bobo Juan* of the Spaniards; and probably Jack-ass is derived from the same source. Among the Germans, *Hans*, the nickname for John, is used in the same way; as, *Hans-narr*, Jack-fool; *dummer Hans*, stupid Jack, &c. It is also singular that most nations give the name of their favorite dish to the mountebank's jesting attendant. Among the Italians he is called *Macaroni;* among the Dutch, *Pickle-herring;* among the French, *Jean potage;* among the Germans, *Hans-wurst*, Jack-sausage; and among the English, *Jack-pudding*. — In England, also, *Jack Ketch* has long been the generic nickname for the hangman. The terms boot-jack and roasting-jack seem to have been derived from the circumstances that boys were formerly employed to pull off boots and turn spits. Many of these boys had the common name of Jack; hence, when instruments were invented for these purposes, the common name of the boys was applied to them. The ordinary *roasting-jack* used for turning a spit consists of a double set of wheels, a barrel, round which the chain attached to the weight, or moving power, is wound, a perpetual screw, and a fly, which secures a steady, uniform motion. Occasionally, a multiplying-wheel is added, in order that the weight may be longer in running down. The *smoke-jack* is used for the same purpose as the roasting-jack, and is so called because it appears to be moved by the smoke in the chimney. It is in fact moved by means of a fan placed horizontally in the chimney, which is carried round perpetually by the current of heated air from the fire. It requires no machinery to wind it up, and the motion may be obtained in various ways. Sometimes spiral fliers, coiling about a vertical axle, are used, and sometimes a vertical wheel, with sails like the float-board of a mill. In former times, the term *Jack* was applied to a coat of mail; and *jack-boots* were large boots to cover the legs. It has also several other diverse applications: thus, it signifies a horse, or wooden frame to saw timber on; a large leathern pitcher, in which drink was formerly put; the small bowl which is used as a mark in the game of bowling; and also a young pike. In sea-language, a *Jack* is a sort of flag displayed from a mast at the outer end of the bowsprit of a ship.

(*Mech.*) A sort of crane for lifting heavy weights. It consists of small pinions worked with a common winch. The pinion works in the teeth of a large wheel, on whose axis there is fixed a small pinion with teeth working in a rack. By turning the pinion, the rack is raised, and with it any weight attached to it. If the length of the handle of the winch be 7 inches, and the pinion which it drives contain 4 leaves, working in the teeth of the large wheel having 20 teeth, then 5 turns of the handle will cause one revolution of the wheel. But the length of the arm of the winch being seven inches, the circumference through which the handle moves will be about 44 inches, and from one turn of the wheel the handle must pass through $5 \times 44 = 220$. Say that the wheel carries a pinion of 3 leaves of a pitch of $\frac{1}{3}$ of an inch, working the rack that carries the weight, one turn of the pinion will therefore raise the rack 1 inch, and 220 will be the power of the *J.*, as the power moves through 226 in the same time.

Jack, *n.* (*Arch.*) Applied to rafters which, in a hipped room, are shorter than the remainder.

Jack, Jack'-tree, *n.* (*Bot.*) A species of the bread-fruit tree, *Artocarpus integrifolia*. See ARTOCARPUS.

Jack, or **Jacque-of-defence,** *n.* (*Mil.*) A piece of defensive body-armor, worn in the 14th and 15th centuries. It appears to have been of four kinds: a quilted coat; or of leather and canvas in many folds; or formed of mail; or of small plates. It was sometimes covered with velvet, and lined with silk.

Jack, in *Texas*, a N. co.; *area*, about 1,000 sq. m. *Rivers.* West Fork of the Trinity river, and numerous smaller streams. *Surface*, mostly level; *soil*, fertile. *Cap.* Jacksborough. *Pop.* (1897) about 10,000.

Jack'-a-dan'dy, *n.* A dandiprat; a dandy; a jackanapes; a coxcomb.

Jack'al, *n.* [Sp. and Fr. *chacal;* Ar. *jakal;* Hind. *shighal;* Pers. *shoghál.*] A wild species of dog, the *Canis aureus* of Linnæus, of gregarious habits. They hunt in packs, rarely attacking the larger quadrupeds, whose presence they are said to indicate to the lion by the piercing cries which they set up in chorus while scenting their tracks. They feed on the remnants of the lion's prey, on dead carcasses, and the smaller animals and poultry. The *J.* interbreeds with the common dog; its period of gestation is the same, and the hybrid progeny is fertile. The wild jackal emits a highly offensive odor, which is scarcely perceptible in the domesticated animal. The *Canis aureus* is abundant in the warmer parts of India and Africa, but is not found in America, where it is represented by the Aguara dogs of Brazil.

Fig. 1426. — JACKAL, (*Canis aureus.*)

Jack'alent, *n.* [For *Jack in Lent*, a poor, starved fellow.] A simple, sheepish fellow.

Jack'anapes, *n.* A monkey; an ape. — A coxcomb; an impertinent fellow.

"Such a young upstart *jackanapes*."—*Arbuthnot.*

Jack'-arch, *n.* (*Arch.*) An arch which has only the thickness of a brick.

Jack'ass, *n.* The male of the Ass. — A dolt; a blockhead.

Jack'block, *n.* (*Naut.*) A block used in sending top-gallant-masts up and down.

Jack'-boots, *n. pl.* A sort of large boots reaching up over the knee, and used as a kind of defensive armor for the legs.

Jack'-cross'tree, *n.* (*Naut.*) An iron cross-tree at the head of a long top-gallant-mast.

Jack'daw, or DAW, *n.* (*Zoöl.*) The *Corvus Menedula* of Linnæus, a common European bird of the Crow family, which frequents church-steeples, old towers, and ruins, in flocks, where it builds its nest. The female lays five or six eggs, paler and smaller than those of the crow. The daw may be readily tamed, and taught to imitate the sounds of words. Like other species of the crow genus, they have the singular habit of stealing and hiding glittering and metallic substances.

Jack'et, *n.* [Fr. *jaquette*, from *jaque*, a jacket; L. Lat. *jaquetum*, a kind of robe or garment; *jacke*, a military cloak, worn over a leather cuirass.] A short, close, garment; a short coat.

Jack'eted, *a.* Wearing a jacket.

Jack'flag, *n.* (*Naut.*) See JACK.

Jack'-fruit, *n.* (*Bot.*) See ANTOCARPACEÆ.

Jack Ketch, *n.* [From the name of a London hangman, famous in former days for his superior mode of strangulation.] A public executioner; a hangman. (Colloq.)

Jack'-knife, *n.* A pocket whittling-knife with a large blade.

Jack'man's Sound, a harbor of British N. America, in Frobisher's Strait, Arctic Ocean.

Jackmel', or JACQUEMEL, a town on the S. coast of the island of Hayti, W. Indies, about 30 m. S.W. of Port au Prince; Lat. 18° 13′ N., Lon. 72° 33′ W. *Pop.* 6,000.

Jack-of-the-dust, *n.* (*Navy.*) A petty officer in the paymaster's department, whose duty it is to serve out (under the supervision of the paymaster's clerk) the rations to the crew.

Jack'-plane, *n.* A fore-plane.

Jack'-pudding, *n.* A merry-andrew; a buffoon; a zany.

Jack'rafter, *n.* (*Arch.*) See JACK.

Jack'-sauce, *n.* An impudent or impertinent fellow; a saucy-jack.

Jack'-saw, *n.* (*Zoöl.*) A name of the Merganser.

Jacks'borough, in *Tennessee*, a post-village, cap. of Campbell co., about 155 m. E. by N. of Nashville.

—A village of Warren co.

Jacksborough, in *Texas*, a post-village, cap. of Jack co., about 225 m. N. of Austin.

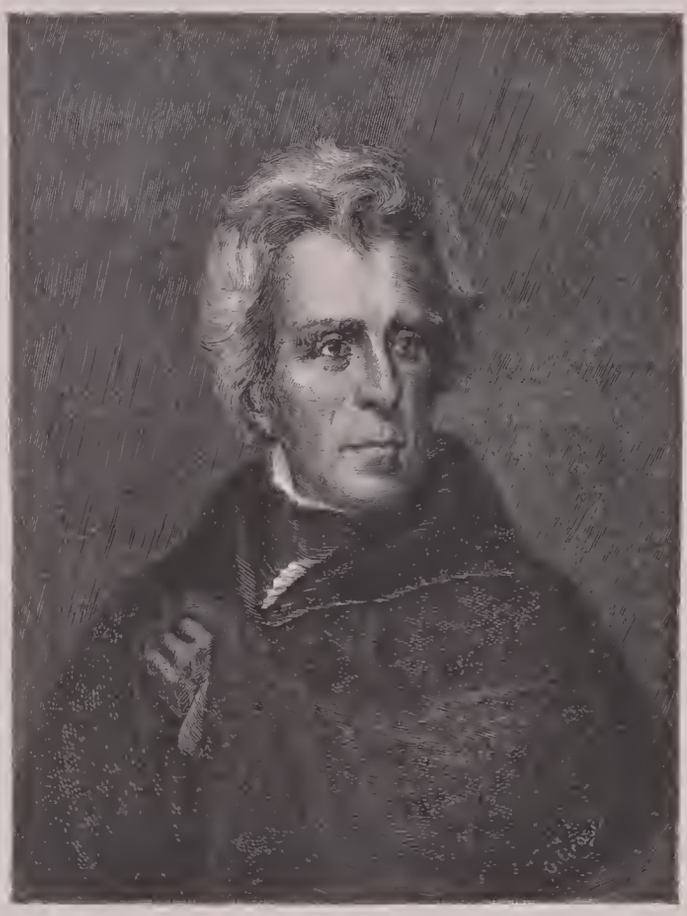
Jack'-screw, *n.* A SCREW-JACK, *q. v.*

Jack'-slave, *n.* A low servant; a vulgar fellow.

Jack'-smith, *n.* A smith who makes jacks for the kitchen.

Jack'-snipe, *n.* (*Zoöl.*) The Judcock.

Jack'son, ANDREW, an American general, and 7th president of the U. States, b. March 15, 1767, in the Waxhaw settlement, N. C., of parents who migrated from Ireland. Losing his father at an early age, and his mother



Andrew Jackson

1767–1845

being in comparatively poor circumstances, *J.* grew up to adolescence without derivlng many educational advantages, indeed, it may he said, he evinced no particulnr inclination towards scholastic pursuits. While yet a youth, he entered the military service during the Revolutionary epoch, and after seeing some operations in the field, was taken prisouer by the British and imprisoned at Camden, where he was a spectator of Gen. Greene's defeat at Hobkirk's Hill. Shortly after his release, his mother died, and *J.* earned nn indifferent subsistenco by successively laboring in a saddler's store, and teaching in a school. In his 18th year, ho entered upon the study of the law at Salisbury, N. C., in the office of an eminent jurist, Mr. Spenco McKay. Completing his legal education in the office of Col. Stokes, yonng Andrew, before attaining his 20th yenr, obtained a license to practise law in the courts of his native State, and in 1788 was appointed prosocuting attorney of the W. division of N. C., including the present State of Tennessee. He soon obtained a lucrative practice at Nashvillo, and, in the summer of 1791, entered upon the matrimonial state. In 1796, ho was chosen one of the committee to draft the constitution of the new Stnte of Tennessee, and the fall of the same year, was sont to Congress as its first representative. In Congress, *J.* nttached himself to the Republican (in that day Democratic) party, nnder the leadership of Mr. Jefferson, then filling the office of vice-presideut of the United States His career in the Lower House was marked by much independence of character, and met with the approval of his constituents, who, in Nov., 1797, electedhim to the Senate. Of his senatorial career, absolutely nothiug can be said, except that he resignod his seat in April of the following year. *J.*was next elected to the beuch of the Supreme Court of his adopted State, where he distinguished himself hy becoming involved in not a few pugnacious outbreaks of temper. In 1801, he was elected major-general of the militia of the State. In 1804, he resigned his judicial functions, and entered into business as a cotton-planter and general trader. In 1806, *J.*'s warm temper led to a duel between himself and a Mr. Dickinson, which took place on the hanks of the Red River, in Logan co., Ky., and ended in *J.*'s being wounded, and his adversary killed on the spot. This unhappy affair entailed considerable odium upon *J.*, until the lapse of time, and his brilliant after-achievements, caused it to sink into ohlivion. For some years, Gen. *J.* devoted himself to the management of his estate, but on the outbreak of war with Great Britain, in 1812, he promptly came forward to the front with a tender

Fig. 1427.— ANDREW JACKSON.

of his services, and those of 2,500 men of his hrlgade of militia, which offer was as promptly accepted by govt. About the end of March, *J.* was notified by the secretary of war to disbnnd his command, then located at Natchez, Miss. He evaded obedicnce to the order, however, so far as to return with his men to Tenn., before complying therewith. From the obstinacy of will, evinced on this occasion, Gen. *J.* derived the well-known *sobriquet* of "Old Hickory," by which ho is still remembered. In 1813, he became involved in another fracas, this time with Mr. Jesse Benton, a brother of the Missourian senator, Col. Benton. Shots were exchanged between the parties, and *J.* fell, severely wounded. In the same year, on Tennesseean volunteers being called out to avenge the massacre at Fort Sims by the Creek Indians, *J.*, though still suffering acutely from his wounds, hastened with his force (hastily called together) to the scene of conflict, and entering the Indian territory, inflicted signal chastisement npon the murderous redskins in a series of actions. The latter made a final stand at Tohopeka, on the Tallapoosa River, where, March 27, 1814, *J.* attacked them at the head of 2,000 troops, captured the position, and next to annihilated its defenders. This put tho finishing stroke to the Creek War. On tho 31st of May following, *J.* was appointed major-gen. in the U. S. army, and was assigned to the command of the S.W. dept, then threntened by the British. Marching upon Pensacola with a force of 3,000 men, he took that place, the British blowing up the fort that commanded tho harhor, and retiring to their small squadron of vessels. On December 2, Gen. *J.* arrived at New Orleans, where he assumed the chief command. The van of the British troops, under Gen. **Keane**, landed on the 16th, and arrived withiu 9 miles of the city on the 23d. Assembling a force of some 2,200 strong, *J.* sallied out and attacked the enemy, inflicting upon them, after a hotly-fought action, a decided check. *J.* then fell bnck behind his fortified lines, and on the 28th was there attacked by the British under Sir Edward Pakenham, whom he repulsed. On the 8th Jan., 1815, another attack made hy the enemy experienced a similar result. Both sides were by this time reinforced; the British force consisted approximatively of 14,000 effective meu; but their authorities place it as low as 8,000. On the other hand, the total American force, although exaggerated by the English to the number of 25,000, was not above 4,000 in effective strength. *J.*'s position was strong and well-chosen, with batteries manned by American seameu, supported by Kentucky militia. The British attack caused the latter to give way, and the gunners to abmndon their batteries; but on the left of the American position they were received with so hot a fire that they were driveu back, with the loss of their commander-iu-chief killed, and two generals wounded, one mortally. The attack was repeated, but without success. The weight and precision of the American fire was such that no troops in the world could have stood against it. One British regiment, the 93d Scots Highlanders, alone lost more than half its uumber. The British troops never fought better, but they were badly handled, nnd were powerless, in the face of so tremendous a musketry-fire, to use their favorite weapou, the hayonet. On the right of the American position, meanwhile, the enemy's assault was successful; the Americans retiring before them. This advantage, however, availed them nothing, taking into consideration the severe repulse they had sustained on the other bank. The British general, therefore, who succeeded to the command after the fall of his superior officer, proposed an armistice, which was acceded to. So ended the battle of New Orleans. The British loss on the left bank was about 2,000 killed, wounded, nnd prisoners; the American loss, 7 killed and 6 wounded. On the right hank, the loss was also mostly on the side of tho enemy. The brilliant success of his defence of New Orleans naturally made *J.* immensely popular throughout the country; he received the thanks of Congress for his services, and was nppointed commander-in-chief of the S. military dept. of the U. S. in the following April. In 1817, on the breaking out of the Seminole War, *J.* took the command of a large force, and speedily extinguished it. In 1821 he was nppointed first governor of the State of Florida, upon its cession by the Spaniards to the American nation. In 1824, Gen. *J.* was nominatod for the presidency, but failed in opposition to Mr. Adams. In 1828, however, this decision was reversed, and after a bitter contest, the general succeeded Mr. Adams in the presidential chair, on the 4th of Mar., 1829. To this office he was re-elected in 1833, and at the expiry of his second term, March 4, 1837, he quitted public life for ever. D. at the "Hermitage," near Nashville, Tenn., June 8th, 1845.

Jack'son, CHARLES THOMAS, M. D., an eminent American chemist and geologist, n. at Plymouth, Mass., 1805. He graduated at Harvard College in 1829, and, after three years' of European travel. commenced practice in Boston, in 1833, but being obliged, owing to ill health, to relinquish this, he presently becnme state geologist for Maine and Mass., and, in 1839, land-surveyor and state geologist of R. I. After this, he perfected the state survey of New Hampshire; a report of which he published in 1844. In 1847, Dr. *J.* was appointed to survey the Lake Superior copper-mining district, which duty he satisfactorily accomplished. He claimed to have been the first to point out, in 1832, the applicability of electricity to telegraphic use. Dr. *J.* also claimed to be the discoverer of the anæsthetic effects of the inhalation of ether, in 1842, for which, in 1849, he received the Cross of the Legion of Honor, and in 1852 the Monthyon prize of 2,500 francs from the French Academy of Sciences. King Oscar of Sweden awarded him a gold medal, and he was decorated with the Red Eagle of Prussia, and other European orders. Died August 29, 1880.

Jack'son, THOMAS JONATHAN, an American Confederate general (popularly called "STONEWALL" JACKSON),

Fig. 1428.—STONEWALL JACKSON.

B. at Clarksburg, Va., Jan. 21, 1824, was appointed in 1844 a cadet at West Point, where he graduated in 1846. Brevetted 2d lieut. in the 1st U. S. Artillery, he served under generals Taylor and Scott during the Mexican war, being ultimately promoted to the rank of major for his distinguished gallantry. Returning home invalided, he resigned his command in 1852, and accepted the duties of professor of mathematics in the Virginia Military Institute, where he remained until the inauguration of the civil war, when he embraced the cause of secession, and, on the 3d of May, 1861, was appointed to the command of the Confederate "Army of Observation," at Harper's Ferry, which he soon after resigned to Gen. Joe Johnston, retaining, however, command of the infantry. He bore a distinguished part in the battle of Bull Run, where, in the language of a leading general, "Jackson stood liko a stone wall;" whence his popular sobriquet, and also thnt of his corps, the famous "Stonewall Brigade." In October following, Gen. *J.* was assigned the command at Winchester, where, on the 23d, he attacked the Union army under the command of Gen. Banks, but was repulsed. On the 8th of May, he ngain encountered the National forces (under Gen. Milroy), and inflicted a damaging defeat. He then pushed forward in pursuit of Gen. Banks, who, however, after a continuation of severe fighting, succeeded ultimately in reaching the Potomac. After successively baffling the efforts of Gens. Bnnks, Fremont, and McDowell to cut him off, "Stonewall" effected a masterly retreat, hotly pursued by Fremont, whom he engaged at Cross Keys on the 8th of June, checking that general's advance, and securing his own passage across the Shenandoah. This raid, which made his name celebrated, for a while turned the scale against the success of the Union arms in Virginia. On the 26th and 27th of June, he routed General Porter's command at Gaines' Mill, and moved across the Chickahominy, to share in the signal defeat of the Confederates at Malvern Hills, where his corps sustained a loss of several thousand men in killed and wounded. On the 9th of Aug. he defeated General Banks in the hotly contested battle of Cedar Mountain, and, on the 18th, moving rapidly N., captured a Union force at Manassas Gap. This place he evacuated on the 28th, toward Gainesville, where he was brought to bay by the Nationals, and after heavy fighting nnd suffering proportionate loss, retreated, effecting a junction with Gen. Lee, and sharing in the bloody battle of the 30th, which occasioned Gen. Pope's retrent across Bull Run. On the 5th of Sept., Gen. *J.* crossed the Potomac and entered Maryland, and on the 14th, attacked Harper's Ferry, which, next day, surrendered. On the 16th he commanded the Confederate left wing at Antietam, and though driven back by the Nationals opposed to him, the ground was gained at a cost of life never exceeded during the war. On the 18th he destroyed the Baltimore and Ohio Railroad track for a distance of 30 miles. On the 13th of Dec., *J.* commanded the Confederate right wing in the bloody battle fought on the Rappahannock, and was afterwards promoted to be lieut.-gen. On the 2d of May, 1863, he executed his celebrated flank-movement on the Union right wing on the Rapidan, falling like a thunderbolt on Gen. Hooker's rear, and inflicting a disastrous rout. On the evening of the same day he was fired at by his own pickets in the growing darkness, and received mortal wounds. His left arm was amputated the same night, and on the 10th he died. Gen. Lee is said to have exclaimed, on learniug of the misfortune which had befallen his favorite general: "He is better off than I am. He has lost his left arm, but I have lost my *right*."

Jack'son, a village of Carleton co., New Brunswick, about 50 m. N.W. of Fredericton.

Jack'son, in *Alabama*, a N.E. co., adjoining Tennessee; *area*, about 1,144 sq. m. *Rivers.* Tennessee river, and several less important streams. *Surface*, diversified; *soil*, fertile. *Cap.* Scottsborough. *Pop.* (1897) 29,100.

—A post-village of Clark co.

Jack'son, in *Arkansas*, a N.E. co.; *area*, about 619 sq. m. *Rivers.* Black, White, and Cache rivers. *Surface*, level. *soil*, fertile. *County-town*, Newport. *Pop.* (1890) 15,179.

—A township of Crittenden co.

—A village of Randolph co.

—A township of Monroe co.

—A township of Newton co.

—A post-office of Lafayette co.

—A township of Sharp co.

—A township of Union co.

Jack'son, in *California*, a post-village, cap. of Amador co., about 50 m. S.E. of Sacramento. *Pop.* (1897) 1,650.

Jack'son, in *Florida*, a N.W. co., adjoining Georgia and Alabama; *area*, about 990 sq. m. *Rivers*, Chattahoochee, Appalachicola, and Chipola rivers. *Surface*, nearly level; *soil*, not fertile. *Cap.* Marianna. *Pop* (1897) 21,950.

Jack'son, in *Georgia*, a N.E. central co.; *area*, about 328 sq. m. *Rivers.* Oconee and several of its tributaries. *Surface*, uneven; *soil*, in some parts fertile. *Min.* Granite, iron, soapstone, and asbestos. *Cap.* Jefferson. *Pop.* (1890) 19,176.

—A post-village, cap. of Butts co., about 45 miles S.S.E. of Atlanta, on the Southern R.R. It is in the midst of a cotton-growing district, and has n considerhle local trade in that and other staples. *Pop.* (1897) 1,250.

Jack'son, in *Illinois*, a S. co., adjoining Missouri; *area*, about 580 sq. m. *Rivers.* Mississippl and Big Muddy rivers. *Surface*, diversified, a remarkable ovoid eminence lu the S.W. part of the co., called Fountain Bluff, rises to the height of 300 feet; *soil*, fertile. *Min.* Coal In abundance, and also salt. *Cap.* Murphysborough. *Pop.* (1890) 27,809.

—A village of Stephenson co., about 140 m. W.N.W. of Chicago.

—A township of Will co..

Jack'son, in *Indiana*, a S. co.; *area*, about 510 sq. m. *Rivers.* Driftwood, or the East Forks of White River, be-

sides numerous smaller streams. *Surface*, mostly undulating; *soil*, in general, exceedingly fertile. *Min.* iron ore. *Cap.* Brownstown.

Jack'son, in *Indiana*, a township of Allen co.
—A township of Bartholomew co.
—A township of Blackford co.
—A township of Boone co.
—A township of Brown co.
—A township of Carroll co.
—A township of Cass co.
—A township of Clay co.
—A township of Clinton co.
—A township of Dearborn co.
—A township of Decatur co.
—A township of De Kalb co.
—A township of Elkhart co.
—A township of Fayette co.
—A township of Fountain co.
—A township of Green co.
—A township of Hamilton co.
—A township of Hancock co.
—A township of Harrison co.
—A township of Howard co.
—A township of Huntingdon co.
—A township of Jackson co.
—A township of Jasper co.
—A township of Jay co.
—A township of Kosciusko co.
—A township of Madison co.
—A township of Miami co.
—A township of Morgan co.
—A township of Newton co.
—A township of Orange co.
—A township of Owen co.
—A township of Parke co.
—A township of Porter co.
—A township of Putnam co.
—A township of Randolph co.
—A township of Ripley co.
—A township of Rush co.
—A township of Shelby co.
—A township of Spencer co.
—A township of Stark co.
—A township of Steuben co.
—A township of Sullivan co.
—A village of Clay co., on the Terre Haute & Ind. R. R. 3 m. from Brazil.
—A township of Tippecanoe co.
—A post-village of Tipton co.; about 4 m. N.N.W. of Tipton.
—A township of Washington co.
—A township of Wayne co.
—A township of Wells co.
—A township of White co.

Jack'son, in *Iowa*, an E. co., adjoining Illinois; *area*, about 612 sq. m. *Rivers.* Mississippi, Maquoketa, and Fall rivers. *Surface*, uneven; *soil*, fertile. *Min.* iron and lead in considerable quantities. *Cap.* Maquoketa. *Pop.* (1895) 23,471.
—A township of Adair co.
—A township of Benton co.
—A township of Boone co.
—A township of Bremer co.
—A township of Butler co.
—A township of Calhoun co.
—A township of Clarke co.
—A township of Crawford co.
—A township of Des Moines co.
—A township of Guthrie co.
—A township of Hardin co.
—A township of Harrison co.
—A township of Henry co.
—A township of Jackson co.
—A township of Jones co.
—A township of Keokuk co.
—A township of Lee co.
—A township of Linn co.
—A township of Lucas co.
—A township of Madison co.
—A township of Monroe co.
—A township of Montgomery co.
—A township of Poweshiek co.
—A township of Sac co.
—A township of Shelby co.
—A township of Taylor co.
—A township of Van Buren co.
—A township of Warren co.
—A township of Washington co.
—A township of Wayne co.
—A township of Webster co.
—A township of Winneshiek co.

Jack'son, in *Kansas*, a N.E. co.; *area*, about 658 sq. m. *Rivers.* Kansas river, and Soldier, Straight, and Bill's creeks. *Surface*, diversified; *soil*, very fertile. *Cap.* Holton. *Pop.* (1895) 15,273. The former name of this county was Calhoun.
—A township of Anderson co.

Jack'son, in *Kentucky*, an E. central co.; *area*, about 305 sq. m. *Rivers.* Rock Castle river, and several smaller streams. *Surface*, hilly; *soil*, fertile. *Cap.* McKee. *Pop.* (1890) 8,261.
—A post-village, cap. of Breathitt co., about 100 m. E.S.E. of Frankfort.

Jack'son, in *Louisiana*, a N. central parish; *area*, about 580 sq. m. *Rivers.* Washita river, and several of its affluents. *Surface*, undulating; *soil*, fertile. *Cap.* Vernon. *Pop.* (1890) 7,453.
—A post-town of E. Feliciana parish, on Thompson's creek, about 20 m. N. of Baton Rouge: seat of Centenary College (Methodist). *Pop.* (1897) 1,350.

Jack'son, in *Maine*, a post-town and township of Waldo co., about 45 m. N.E. of Augusta. *Pop.* (1897) 580.

Jack'son, in *Michigan*, a S. central co.; *area*, about 720 sq. m. *Rivers.* The head-waters of the Grand, Kalamazoo, and Raisin rivers. *Surface*, mostly level; *soil*, very fertile. *Min.* Coal, iron, limestone and sandstone. *Cap.* Jackson. *Pop.* (1894) 46,527.
—An important manuf. city, cap. of the above co., on 4 R. R. lines, 75 m. W. of Detroit. Here are the machine shops of the Mich. Central R. R. and numerous other manuf.; coal and fire-clay near by; trade center of a rich region. *Pop.* (1897) about 23,000.

Jack'son, in *Minnesota*, a S.S.W. co., adjoining Iowa; *area*, about 720 sq. m. *Rivers.* West fork of the Des Moines river, and several smaller streams, besides numerous lakes, the largest of which, Heron lake, covers an area of about 30 sq. m. *Surface*, diversified; *soil*, fertile. *Cap.* Jackson. *Pop.* (1895) 12,324.
—A post-village, cap. of Jackson co., about 70 miles S.W. of Mankato. *Pop.* (1895) 1,356.

Jack'son, in *Mississippi*, an extreme S.E. co., bordering on Alabama and also on Mississippi Sound, an arm of the Gulf of Mexico; *area*, about 1,072 sq. m. *Surface*, low; *soil*, sandy and sterile. *Cap.* Scrantou. *Pop.* (1897) about 12,200.
—A city, seat of justice of Hinds co., and cap. of the State, on Pearl river, about 45 m. E. of Vicksburg, and 1,010 m. S.W. of Washingtou; Lat. 32° 23′ N., Lon. 90° 8′ W. The town is well laid out on a level plain, and contains a handsome State House, a State Lunatic Asylum, a Penitentiary, and some other edifices. It is an important depot for the shipment of cotton. *Pop.* (1897) about 6,400.

Jack'son, in *Missouri*, a W. co., adjoining Kansas; *area*, about 630 sq. m. *Rivers.* Missouri, Big Blue, and Little Blue rivers. *Surface*, undulating; *soil*, extremely fertile. *Cap.* Independence. *Pop.* (1897) about 190,000.
—A post-town, cap. of Cape Girardeau co., about 110 m. S. by E. of St. Louis. *Pop.* (1897) 1,000.

Jack'son, in *Nebraska*, a township of Hall co.

Jack'son, in *New Hampshire*, a post-town of Carroll co.

Jack'son, in *New York*, a township of Washington co.

Jack'son, in *North Carolina*, a W. co., adjoining South Carolina and Georgia on the S.; *area*, about 552 sq. m. *Rivers.* Tuckaseegee river and numerous smaller streams. *Surface*, mountainous, lying between spurs of the Iron or Great Smoky Mountain on the N.W., and the Blue Ridge on the S.; *soil*, in general, fertile. *Cap.* Webster. *Pop.* (1890) 9,512.
—A post-village, cap. of Northampton co., about 95 m. N.E. of Raleigh. *Pop.* (1897) 770.

Jack'son, in *Ohio*, a S.S.E. co.; *area*, about 392 sq. m. *Rivers.* Little Scioto river, Salt and Symmes's creeks. *Surface*, undulating; *soil*, fertile. *Min.* Stone coal, iron, and marble, besides salt in considerable abundance. *Cap.* Jackson. *Pop.* (1897) about 29,200.
—A township of Allen co.
—A township of Ashland co.
—A township of Auglaize co.
—A township of Brown co.
—A township of Champaign co.
—A township of Clermont co.
—A township of Coshocton co.
—A township of Crawford co.
—A township of Darke co.
—A township of Franklin co.
—A township of Guernsey co.
—A township of Hancock co.
—A township of Hardin co.
—A township of Highland co.
—A post-village and township, cap. of Jackson co., about 75 m. S.E. of Columbus.
—A township of Knox co.
—A village and township of Mahoning co., about 37 m. E. of Akron.
—A township of Monroe co.
—A township of Montgomery co.
—A township of Muskingum co.
—A township of Noble co.
—A township of Paulding co.
—A township of Perry co.
—A township of Pickaway co.
—A township of Pike co.
—A township of Preble co.
—A township of Putnam co.
—A township of Richland co.
—A township of Sandusky co.
—A township of Seneca co.
—A township of Shelby co.
—A township of Stark co.
—A township of Union co.
—A township of Vinton co.
—A village of Wayne co., about 96 m. N.E. of Columbus.
—A township of Wood co.
—A township of Wyandot co.

Jack'son, in *Oregon*, a S.W. co., adjoining California; *area*, about 3,000 sq. m. *Rivers.* Rogue river, Antelope and Big Butte creeks. *Surface*, in the E. part mountainous, the Cascade Range forming the entire E. border, and attaining at one point (Mount Pitt) an elevation of about 11,000 feet; *soil*, in the valleys very fertile. *Min.* Gold, iron and coal. *County-Seat.* Jacksonville.

Jack'son, in *Pennsylvania*, a township of Butler co.
—A township of Cambria co.
—A township of Columbia co.
—A township of Dauphin co.
—A township of Greene co.
—A township of Huntingdon co.
—A township of Lebanon co.
—A township of Luzerne co.
—A township of Lycoming co.
—A township of Mercer co.

Jack'son, in *Pennsylvania*, a township of Monroe co.
—A township of Northumberland co.
—A township of Perry co.
—A township of Snyder co.
—A post-township of Susquehanna co.
—A village and flourishing township of Tioga co.
—A township of Venango co.
—A township of York co.

Jack'son, in *South Dakota*, a township of Charles Mix co.

Jack'son, *Tennessee*, a N. central co., near the Kentucky line; *area*, about 280 sq. m. *Rivers.* Cumberland and some smaller streams. *Surface*, diversified; *soil*, fertile. *Cap.* Gainesborough. *Pop.* (1890) 13,325.
—An important city, cap. of Madison co., 90 m. N.E. of Memphis, on the Ill. Central and 2 other R.R. lines. Here are extensive manuf. industries, including railroad repair shops, cottonseed-oil factory, foundries, flour and planing mills, wagon works, &c. A large trade is done in packing and shipping cotton and grain. *Pop.* (1897) about 13,500.

Jack'son, in *Texas*, a S.E. co., bordering on Lavacca bay; *area*, about 885 sq. m. *Rivers.* Lavacca and Navidad rivers. *Surface*, mostly undulating prairie; *soil*, in some parts fertile. *Cap.* Edna. *Pop.* (1890) 3,281.

Jack'son, in *Virginia*, a post-office of Louisa co., about 37 m. N.W. of Richmond.

Jack'son, in *West Virginia*, a W. co., adjoining Ohio; *area*, about 470 sq. m. *Rivers.* Ohio river, Big Mill and Sandy creeks. *Surface*, hilly; *soil*, moderately fertile. *Cap.* Jackson. *Pop.* (1890) 19,021.
—A post-village, cap. of Jackson co., on the R. & M. C. V. R. R., 32 m. N.N.W. of Charleston. *Pop.* (1897) 780.

Jack'son, in *Wisconsin*, a W. co.; *area*, about 992 sq. m. *Rivers.* Black river, and the head-waters of several other important streams. *Surface*, diversified; *soil*, fertile. *Cap.* Black River Falls. *Pop.* (1895) 16,722.
—A township of Adams co.
—A village of Monroe co., about 15 m. E. of Sparta.
—A post-township of Washington co.

Jack'sonborough, in *Ohio*, a post-village in Butler co., about 100 m. W.S.W. of Columbus.

Jack'sonborough, in *South Carolina*, a post-village of Calletou co.

Jack'sonburg, in *Indiana*, a post-village of Wayne co., about 60 m. E. by N. of Indianapolis.

Jack'sonburg, in *New York*, a village of Herkimer co., about 75 m. N.W. of Albany.

Jack'son Center, in *Pennsylvania*, a post-borough of Mercer co., on the Penna. R. R.

Jack'son Cor'ners, in *New York*, a post-village of Dutchess co.

Jack'son Court'-House, in *West Virginia*. See JACKSON.

Jack'son Fur'nace, in *Ohio*, a village of Jackson co., about 90 m. S. by E. of Columbus.

Jack'son Hall, in *Pennsylvania*, a village of Franklin co., about 5 m. S.E. of Chambersburg.

Jack'sonham, in *South Carolina*, a post-office of Lancaster co., about 80 m. N.N.E. of Columbia.

Jack'son Hill, in *North Carolina*, a post-village of Davidson co., about 132 m. W. of Raleigh.

Jack'sonport, in *Arkansas*, a post-town, the former capital of Jackson co., at the confluence of the White and Black rivers, about 90 m. N.E. of Little Rock.

Jack'sonport, in *Wisconsin*, a post-village of Door co.

Jack'son's Gap, in *Alabama*, a post-village of Tallapoosa co.

Jack'son's Mills, in *New Jersey*, a post-village of Ocean co.

Jack'son's Riv'er, in *Virginia*, is formed by the union of two streams, North and South, which rise in Highland co., and unite in Bath co.; thence following a tortuous S. course into Alleghany co., and receiving Pott's Creek, *J.'s R.* turns to the N.E., and joins the Cowpasture river in Rock Bridge co., to form the James river (*q. v.*). *Total length*, about 100 m.

Jack'son's Springs, in *North Carolina*, a post-office of Moore co.

Jack'sontown, in *Ohio*, a post-village of Licking co.

Jack'sonville, in *Alabama*, a post-village, cap. of Calhoun co., 125 m. N. by E. of Montgomery. *Pop.* (1897) about 1,350.

Jack'sonville, in *Florida*, the largest and most commercial city in the State, cap. of Duval co., situated on St. John's river, about 40 m. from its mouth. It has large and elegant hotels, and has become a highly popular winter resort. It has extensive trade with the interior towns, and a large lumber business is done in *J.* The city has recently inaugurated a system of good drainage and supply of water. Many of its streets, which are laid out at right angles, are wide and beautifully shaded with water oaks. *Pop.* (1897) about 30,000.

Jack'sonville, in *Georgia*, a post-village of Telfair co., about 100 m. S. of Milledgeville.

Jack'sonville, in *Illinois*, a city, cap. of Morgan co., about 32 m. W. of Springfield. It is pleasantly and handsomely built in the midst of an undulating and fertile prairie, at the intersection of three lines of R. Rs. It is the seat of the State institution for the education of the deaf and dumb; of the blind; for the education of feeble-minded children. There are also Illinois College (Congregational), Illinois female college (Methodist), and several other institutions of learning. *Pop.* (1897) about 13,900.

Jack'sonville, in *Kentucky*, a P. O. of Bourbon co.

Jack'sonville, in *Maryland*, a post-office of Baltimore co.

Jacksonville, in *Missouri*, a post-village of Randolph co.

Jack'sonville, in *New Jersey*, a post-village of Burlington co.

Jack'sonville, in *New Jersey*, a vill. of Middlesex co. —A post-village of Burlington co.

Jack'sonville, in *New York*, n post-village of Tompkins co., about 9 m. N.N.W. of Ithaca.

Jack'sonville, in *Ohio*, n post-village of Athens co., on the K. & M. R.R. *Pop.* (1897) 850.

—A village of Darke co., nbt. 100 m. W. by N. of Columbus.

Jack'sonville, in *Oregon*, a post-village and township or precinct, cap. of Jackson co., about 200 m. S. of Salem. *Pop.* (1897) 1,020.

Jack'sonville, in *Pennsylvania*, a post-village of Centre co., about 9 m. N.E. of Bellefonte. Tho name of the post-office is WALKER.

—A village of Greene co., about 16 m. W. of Waynesburg.

—A borough of Indiana co., nbout 40 m. E. of Pittsburg.

—A post-village of Lehigh co., about 82 m. E.N.E. of Harrisburg.

Jack'sonville, in *Tennessee*, a village of Obion co., about 150 m. W. of Nashville.

Jack'sonville, in *Texas*, a post-town of Cherokee co., about 16 m. N.N.W. of Rusk. *Pop.* (1897) 1,050.

Jack'sonville, in *Vermont*, a post-village of Windham co., about 115 m. S.S.W. of Montpelier.

Jack'sonville, in *Virginia*, a village of Floyd co., about 230 m. W. by S. of Richmond.

Jack'sonville, in *W. Va.*, a post-village of Lewis co.

Jack'-reef, in *New York*, a post-village of Onondaga co. *Pop.* (1897) 138.

Jack'-staff, *n.* (*Naut.*) See JACK.

Jack'-stays, *n. pl.* (*Naut.*) Ropes, or strips of wood or iron, stretched along the yard of a ship, to which the sails are bound.

Jacks'town, in *Kentucky*, n post-office of Bourbon co.

Jack'-straw, *n.* A servile dependant. (*Milton.*)—A provincial Anglicism for the Black-cap Warbler.

(*Games.*) One of a set of straws thrown promiscuously on n table, nnd caught up by some hooked instrument without derauging the rest of the mass;—a game played by children.

Jacks'ville, in *Penna.*, a post-village of Butler co.

Jack'-timber, *n.* (*Arch.*) One of the timbers in n bay which, being intercepted hy others, is shorter than the rest.

Jack'-towel, *n.* A long towel placed over a roller, and joined to n wall.

Jack-with-a-lantern, *n.* (*Meteorol.*) See IGNIS FATUUS. (Often written JACK O' LANTERN.)

Jack'-wood, *n.* See *Bot.* art. JACK.

Jacob, (*jā'kob,*) the son of Isaac and Rebecca, the grandson of the Jewish patrinrch Abraham, and the twin, but younger brother of Esau, was the father of twelve sons, from whom the twelve tribes of Israel were descended. He was the favorite of his mother, by whose advice he imposed upon his father, and obtained his blessing, having before taken an advantage of Esau, hy purchasing his birthright. To avoid his brother's fury, he fled to Padan-nram, where he resided with his uncle Laban, whom he served fourteen years for his daughters Leah and Rachel. He afterwards returned to Canaan with great wealth, and n reconciliation took place between him and his brother Esau. His name was altered to Israel by an angel; whence his posterity have been called Israelites. He lived to the age of 147 years. D. in the land of Goshen, about 1680 B. C. His body was buried beside Abraham and Isaac, in the cave on the field of Machpelah, in the land of Canaan.

Jacobi, FRIEDRICH HEINRICH, n German philosopher and poet, B. at Düsseldorf, 1743. In 1779 he was appointed to a government office at Munich; retired during the early years of the French revolutionary war, to Wandsbeck and Hamburg; returned to Munich in 1804, and assisted in the organization of the Academy of Sciences, of which he became president in 1807. Jacobi's first work was a philosophical poem entitled *Waldemar*, and published in 1777. Among his other writings, chiefly devoted to the criticism of existing systems of philosophy, are *David Hume, or Idealism and Realism; an Essay on the Doctrine of Spinoza; Letters to Fichte;* and a treatise *On Divine Things, and on Revelation. J.* led the reaction which followed on the various scepticisms arising from the speculations of Kant, and chiefly relating to the question — how far are we entitled to infer the existence of an eternal reality, from the existence of n primary conception? Jacobi opposed to them an imperturbable dogmatism, — asserting, with unshrinking confidence, the legitimacy and sufficiency of such conclusions as the following: — "I *think*, or have an idea of the Supreme Being — therefore he exists." No German in modern times has attained a style of greater lucidity and beauty. His expositions are elsewhere distinguished by acuteness, and adorned by so remarkable a grace, that his disciples have named him the modern Plato. D. 1817.

Jacobi Islands, (*ja-ko'bee,*) in *Alaska*, one of the Sitka Islands, of George III. Archipelago.

Jac'obin, *n.* An advocate of extreme democratical opinions; a demagogue; — a name that took its origin from the members of the JACOBIN CLUB, *q. v.*

(*Eccl. Hist.*) A Dominican friar. See DOMINICANS.

(*Zoöl.*) A variety of the common pigeon distinguished by a kind of hood formed by a rank of feathers on the back part of the head; a jack.

Jacobina, (*zha-ko-bee'na,*) n town of Brazil, abt. 210 m. W.N.W. of Bahia.

Jac'obin Club. (*French Hist.*) A political club, which bore a well-known part in the first revolution. It was formed by some distinguished members of the First Assembly, particularly from Brittany, where revolutionary sentiments ran high. They took at first the name of Friends of the Revolution; but, as at the end of 1789 they held their meetings in the hall of a suppressed Jacobin monastery in the Rue Saint Honoré, the name of Jacobins, at first familiarly given to them, was finally assumed by themselves. The history of the Jacobin Club is, in effect, the history of the Revolution. It contained at one time more than 2,500 members, and corresponded with more than 400 affiliated societies in France. The club of the Cordeliers, formed by a small and more violent party out of the general body of Jacobins, was reunited with the parent society in June, 1791, but continued to form a separate section within its limits. The Jacobin Club, which had almost controlled the first assembly, was thus, during the continuance of the second, itself divided between two contending parties; although the name of Jacobins, as a political party, is commonly given to that section which opposed the Girondists or more moderate party in the club no less than in the assembly. After the destruction of the latter under the Convention, the club was again exclusively governed by the more violent among its own members, until the downfall of Robespierre. After that period it became unpopular; and its members having attempted an insurrection on behalf of the subdued Terrorists, Nov. 11, 1794, the meeting was dispersed by force, and the club finally suppressed.

Jacobin'ic, Jacobin'ical, *a.* Relating to the political principles of the Jacobins; revolutionary.

Jac'obinism, *n.* The demagogical principles advocated by Jacobinism.

Jac'obinize, *v. a.* To spread the revolutionary principles of the Jacobins.

Jac'obinly, *adv.* Like the Jacobins.

Jac'obite, *n.* [From Lat. *Jacobus*, James.] (*Eng. Hist.*) This term was first applied in England to the party which adhered to James II., after the revolution of 1688, and afterwards to those who continued to maintain sentiments of loyalty toward the house of Stuart, and sought to secure the restoration of that family to the English throne. The unsuccessful rebellions of 1715 and 1745 in Scotland, were brought about by the agency of the Jacobites. In Scotland the party maintained its strength until the failure of the rebellion of 1745 put an end to its political existence. It is said that some of the party carried on a correspondence with Charles Edward, until his decease in 1787. The cardinal of York, his brother, died in 1807; and it has been said, that by his death the adhesion of the Jacobites, if any existed, was transferred to the reigning family as his next heirs. This, however, is an error; the royal house of Italy, and other families, intervening between the house of Brunswick and the crown of England, according to the strict rules of hereditary descent.

(*Eccl. Hist.*) A Christian sect which arose during the 5th century, and maintained that Christ had but one nature. They were thus named from Jacob Baradæus, Bishop of Edessa, and apostle of the East, who restored the sect about 545. From this man, Mosheim remarks, as the second father of the sect, all the Monophysites in the East are called *J.* Baradæus died in 578. A small section of the *J.* joined the Roman Catholics in the 17th century, but the majority remained firm in the faith of their ancestors. Riddle enumerates among the remains of oriental sects or Christian communities existing in 1037, the Syrian Jacobites living under their patriarch at Antioch. Roger of Wendover mentions a new sect of preachers called *J.*, because they imitated the life of the apostles, who sprang up in 1198, under the auspices of Pope Innocent III. They were mendicants, and suffered great privations. Mosheim believes the sect ceased to exist soon after the Council of Lyons, in 1274.

Jac'obite, *a.* Pertaining to the partisans of James the Second, of England, and his descendants.

Jacobit'ic, Jacobit'ical, *a.* Belonging to the Jacobites.

Jac'obitically, *adv.* After the manner of a Jacobite.

Jac'obitism, *n.* The principles of the Jacobites.

Jacob Rifle. (*Gun.*) A description of rifle invented by Henry Jacob, an English general of the Scinde Irregular Horse. D. 1858. The barrel of this musket is rifled by cutting in the interior four grooves of tolerable depth, each being about the 8th part of the circumference of the interior of the barrel in breadth; or, in other words, equal to the lands in breadth. Although excellent shooting has been made with rifles grooved on Jacob's principle, the depth of the grooving has proved to be an objection, as it reduces the strength of the barrel unless it be made of great weight and thickness, and necessitates the formation of projections on the ball, besides rendering the rifle tedious to load.

Ja'cobsburg, in *Ohio*, a post-village of Belmont co., abt. 10 m. S. of St. Clairsville.

Ja'cobsburg, in *Pennsylvania*, a village of Northampton co., abt. 11 m. N.W. of Easton.

Ja'cob's Creek, in *Pennsylvania*, enters the Youghiogheny from Westmoreland co.

Ja'cob's Creek, in *Pennsylvania*, a post-office of Westmoreland co.

Jacob's Ladder, *n.* (*Bot.*) A species of PHLOX, q. v.

(*Naut.*) A rope-ladder with wooden steps or spokes, by which the outside of the shrouds, (and therefore the means of ascending the mast,) is reached from the deck.

(*Masonic Her.*) A ladder with three steps, emblematic of Faith, Hope, and Charity.

Ja'cobsport, in *Ohio*, a village of Coshocton co., about 80 m. E.N.E. of Columbus.

Jacob's Staff, *n.* A pilgrim's staff. — A staff concealing a dagger. — An instrument used by surveyors in measuring height and distance when expedition and little accuracy are required. It was formerly used at sea for the same purposes as the astrolabe, although entirely different from it; — called also *cross-staff.*

Ja'cobstown, in *New Jersey*, a post-village of Burlington co., about 12 m. E.N.E. of Mount Holly.

Jacob's Well. See SHECHEM.

Ja'cobsville, in *Nevada*, a village of Lander co., about 6 m. W. of Austin.

Jaco'bus, *n.* (*Numis.*) An English coin, of which there were two kinds, viz., the old *J.*, worth 25 shillings, and the new *J.*, also called *Carolus*, valued at 23 shillings, struck in the reign of James I. (1603–25.)

Jac'onet, *n.* (*Com.*) A light, open, and soft kind of fabric, rather stouter than muslin, used for dresses, neckcloths, &c.

Jac'opone, or JACOPO DA TODI, an Italian monk, whose real name was JACOPO DE BENEDETTI, author of ascetic writings and hymns, which have given him a place among the poets of Italy. The best known of these is the famous *Stabat-mater Dolorosa;* D. 1306.

Jacquard, MARIE JOSEPH, (*jack'ar,*) celebrated as the inventor of a loom for the weaving of damasks, B. at Lyons, 1752. He was the son of a common workman, and first exhibited his machine in 1801, since which time it has been adopted in every manufactory of Europe and America, and is admitted to mark an epoch in the weaving art. He was appointed by Napoleon to an employment in the "Conservatoire des Arts et des Métiers," and the city of Lyons has erected a statute to his memory. D. 1834.

Jacquard Loom. (*Mach.*) A loom fitted with an apparatus for pattern-weaving, named after its inventor, M. Jacquard (*q. v.*) The Jacquard apparatus can be adjusted to almost every kind of loom, its office being merely to direct those movements of the warp-threads which are required to produce the pattern, and which previously were effected by the weaver's fingers; its arrangements generally are very complicated, but its principles are remarkable for their extreme simplicity and certainty. In ordinary weaving the alternate threads of the warp, or longitudinal arrangement, are raised so as to enable the weaver to throw the shuttle containing the weft-thread transversely across from his right to his left hand between the warp threads so raised and those left at rest. When the weft is so passed through, the raised warp threads are lowered, and the other set raised, the shuttle having then passed through from left to right. This is the most simple idea of plaiting or weaving. If, however, a pattern has to be produced either in plain materials or varied colors, it is necessary, instead of raising and depressing the whole threads of the warp, in two sets, as above described, to raise only such as are required to develop the various parts of the figure, and this, of course, must be done with great exactness, as the position of every thread tells upon the formation of the pattern. The *J. L.* is for the purpose of regulating these movements, and its mode of action is as follows: The warp-threads are each (as in the common weaving process) passed through a small loop in the lifting thread, so as to be raised by means of the treadles, which act directly upon the lifting-bars; these lifting threads (Fig. 1429, *i, i, i, i,*) are

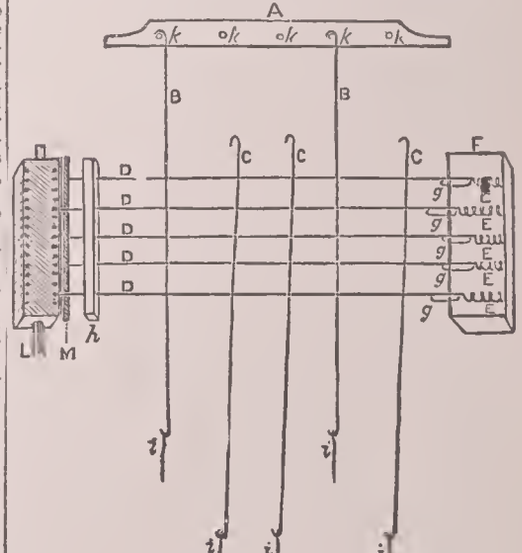


Fig. 1429. — JACQUARD LOOM.

attached to certain wires in the *J. L.*, which form a rigid continuation ending in a hook, which, when nothing interferes, is caught and raised by each upward motion of the lifting-bar; thus, A is the lifting-bar, and it has five projections (*k, k, k, k, k,*) upon which the hooks of the wires catch when in a straight position, as at B, B, but which miss them if they be thrown out of the perpendicular, as at C, C, C. There are only five of these wires given, to prevent confusion, but practically there must be one for every thread of the warp — that is, one for every thread in the width of the cloth to be woven. Each of the lifting wires passes through a horizontal needle placed at right angles, D, D, D, D, D, which has a loop formed for the purpose, thus, at F (Fig. 1429). This needle passes freely through an opening, in the frame at *h*, and is so looped on to another rod, *g*, on the spring-box F, that it moves freely without fear of displacement, and if pushed back into the spring-box, is made to press upon one of the spiral springs E, which

restores it to its place as soon as it is freed from pressure. In the diagram (Fig. 1429), this pressure is supposed to be exerted upon three of the lifting wires, C, C, C; consequently if the lifting-bar A is simultaneously raised, those three wires are missed, while the other two, B, B, being in position, catch the projections *k*, *k*, on the bar, are drawn up with it, and thus raise the threads of the warp to which they are attached. Now, the regulation of this pressure upon the horizontal needles is effected by a revolving square roller, which has each of its four sides perforated with rows of holes, which, like the needles and lifting wires, correspond in number to the threads of the warp. This roller, when in its place, receives into one row of perforations the whole row of needles where they project through the frame at *h*, and it has a motion given by the machinery which brings each row on its four surfaces in regular order into the same position, and if no impediment is offered, all the needles are undisturbed, and the upright wires lift the entire set of warp-threads to which they are attached. But in order to produce the necessary variations of motion required by the pattern, a set of cards are made, each of the width of the square roller; these also are so perforated that when placed on the surface of the roller their perforations correspond with those on the roller; hence, when the roller L (Fig. 1429) is brought up to the frame *h*, some of the needles will find entrance into the holes of the roller through the corresponding perforations in the covering card, seen in section M, (Fig. 1429); but others will be prevented entering by the absence of such perforations, and the card, by the resistance it offers, will force the needles thus opposed back upon the springs, E, E, E, removing thereby the hooks of the lifting-wires from the action of the lifting-bar. The cards are looped together at the corners, and move as one endless chain on the rollers, and the entire set of perforations on the whole chain of cards exactly represents the pattern to be produced; the same as the notes represent the air in a piece of music. Of course the simple operations here described require mechanical arrangements of great nicety to regulate them, and these are so complicated that mere verbal description would hardly help much to explain them; indeed, even with the loom and its apparatus, and its cumbrous arrangement of hundreds, and even thousands of cards before us, the unpracticed eye finds great difficulty in comprehending its movements. *Ch. Ency.*—The divers contrivances lately proposed as simplifications of the *J.* loom will be found under WEAVING.

Jacqueric, (The,) (*zhāk'er-ai.*) (*Hist.*) The name popularly given to a revolt of the French peasantry against the nobility, which took place while King John was a prisoner in England in 1356. *Jacques Bonhomme* was a term of derision applied by the nobles to the peasants, from which the insurrection took its name. It began in the Beauvoisie, under a chief of the name of Caillet, and desolated Picardy, Artois, and Brie, where savage reprisals were executed against the nobility for their oppressions. It was suppressed after some weeks by the dauphin, and Charles the Bad, king of Navarre. A similar spirit in England produced, not many years afterwards, the Rebellion of Wat Tyler.

Jacques-Cartier, (*zhak-kar-te-a'*,) a river of prov. of Quebec, enters the St. Lawrence River from Port-Neuf co., abt. 22 m. W.S.W. of Quebec. — A co. of same prov.

Jacta'tion, *n.* The act of throwing; jaculation.

Jactita'tion, *n.* Tossing; motion; restlessness; heaving. — Vain boasting. — A term in common law for a false pretension to marriage.

Jacuhy, (*zha-koo-ee'*,) a river of Brazil, prov. of São Pedro do Rio Grande; *length*, abt. 250 miles.

Jac'ulate, *v. a.* [Lat. *jaculor.*] To throw, as a missive weapon.

Jacula'tion, *n.* [Lat. *jaculatio*, from *jaculor.*] Act of throwing missive weapons.

"Hurl'd to and fro with *jaculation* dire." — *Milton.*

Jacula'tor, *n.* One who darts.

(*Zoöl.*) The *Chætodon rostratus*, a species of Indian fresh-water fish, said to procure the insects upon which it feeds by ejecting a drop of liquid through its tubular snout with such force as to disable them.

Jac'ulatory, *a.* [Lat. *jaculatorius.*] Darted out; ejaculatory.

Jade, *n.* [Icel. *jalda*, a mare, *jodi*, to roll food in the mouth, as a toothless child. from *jad*, loss of teeth.] A mean or poor horse; a tired horse; a worthless nag; a worn-out hack.

"Tir'd as a *jade* in overladen cart." — *Sidney.*

—A mean woman;—a word of contempt noting sometimes age, but generally vice.

"She shines the first of batter'd *jades*." — *Swift.*

—A young woman, in irony or slight contempt.

"You see now and then some handsome young *jade* among them." *Addison.*

(*Min.*) A name somewhat vagnely applied to a number of minerals, not very dissimilar—nephrite, axestone, serpentine, &c. Nephrite and axestone appear to be the minerals of which *Jade* ornaments are generally made But Yu, or Chinese *J.*, of which very beautiful vases and other articles are made in China, is supposed to be Prehnite (*q. v.*) *J.* has a greenish color, and when polished, has a rather dull and greasy aspect.

—*v. a.* To tire; to weary with hard service; to fatigue; to harass; to crush; to dispirit; to subject to harassing employments or occupations.

—To weary with attention or hard study.

"These are the seasons when the brain is overtired or *jaded* with study or thinking." — *Watts.*

—*v. n.* To become weary; to lose spirit; to sink; to falter.

"But they fail and *jade* and tire in the prosecution." — *South.*

Jad'ery, *n.* Jadish tricks. (R.)

Jad'ish, *a.* Vicious; bad, as a horse. — Unchaste; incontinent, as a woman.

Jael, (*jā'el,*) a Jewish woman, wife of Heber the Kenite. When Sisera, the general of Jabin, king of Hazor, sought refuge in her tent after the defeat of his army, and had lain down to sleep, she drove a nail through his head, and killed him.

Jaen, (*hā-en',*) a prov. and former kingdom of Spain, in Andalusia, between Lat. 37° 30′ N., and Lon. 2° 50′ and 4° 20′ W. It is bounded N. by the Sierra Morena and La Mancha, W. by Cordova, S. by Granada, and E. by Murcia. Greatest length, 85 m.; breadth, 78 m.; area, 4,340 sq. m. *Surface.* Situated in the upper part of the valley of the Guadalquivir, this prov. is encircled by a belt of rocky mountains, and is, consequently, very rugged in a great part of its surface. *Clim.* Healthy. *Soil.* Rich in the valleys. *Prod.* Olives, wine, fruits, sumach, honey, &c. Cattle and horse-breeding is largely carried on. *Min.* Lead, iron, and copper. *Manuf.* Pottery, and silk and woollen fabrics. *Cap.* Jaen. *Pop.* 398,388.

JAEN, a city, and cap. of above prov., on an affluent of the Guadalquivir, 37 m. N. of Granada, and 124 m. E.N.E. of Madrid. Though an ancient and considerable place, it is so surrounded by mountains of the great Sierra de Susana range, that few travellers visit it; the railway from Madrid to Cadiz has, however, made it more easy of access. *Manuf.* The city, which was celebrated under the Moors for its manufactures, still maintains numerous fabrics of silk, linen, and woollen cloths, and is generally thriving. *J.* was originally a Roman station, and under the Moors it rose to considerable importance, and successfully resisted the attacks of the Castilian kings. It was the theatre of war during the final struggles between the Moors and Spaniards in the 15th cent., since which time it has never recovered its ancient greatness. *Pop.* 25,731.

Jaen de Braeamoros, (*-da-bra-ka-mo'roce,*) a town of Ecuador, on the Chinchipe, near its junction with the Amazons; *pop.* 4,500.

Jaffa, or YAFFA, (anc. *Joppa.*) a seaport-town of Palestine, near the coast of the Mediterranean, 30 m. S. of Cæsarea, and about 35 m. N.W. of Jerusalem. It stands on a small eminence in the form of a sugar-loaf (Fig. 1430); on the summit is a small citadel, which commands the town, while the bottom of the hill is surrounded by a wall, without a rampart. The general appearance of the place is now very desolate. Its harbor is one of the worst in the Mediterranean. The commerce consists in the importation of grain, particularly of rice, from Egypt. Jaffa has always been a favorite resort of pilgrims to the Holy Land. The Latins, Greeks, and

Fig. 1430.—ANCIENT JOPPA, OR JAFFA.

Armenians have each small convents for the reception of pilgrims. To the west is the celebrated tower of Ramlah, 120 feet high, where an extensive view is obtained. *Pop.* (1897) 16,250.—Joppa was a seaport in the time of Solomon. It was the port of Jerusalem, and the landing-place of the cedars with which the temple in that city was built. It was captured by the caliph Omar I. in 636, and by the Crusaders in 1099. It was the scene of a great battle between the Saracens and King Baldwin I. of Jerusalem in 1102. Richard I. (Cœur de Lion) encamped here in 1191. Saladin attacked Jaffa, July 26, 1192. He was compelled to retire, but gained possession of the town in 1193. It was retaken and strongly fortified by Louis IX. of France, in 1252. The Mameluke sultan Bibars took it in 1267. Napoleon Bonaparte invested Jaffa, March 4, 1799, and took it by storm, March 7. Mehemet Ali obtained possession of the town in 1832; but it was restored to the Turks in 1840. It suffered greatly from an earthquake Jan. 21, 1837, and again July 17, 1845.

Jaffna, JAFFNAPATAM, a fortified seaport of the island of Ceylon, near its N. extremity, 190 m. of Colombo; Lat. 9° 36′ N., Lon. 79° 50′ E. As a commercial emporium, *J.* is the third in Ceylon, taking rank after Colombo and Point de Galle, and also contains a strong British garrison. *Pop.* Estimated at 8,000, chiefly Mohammedans.

Jaffrey, in *New Hampshire*, a post-village and township of Cheshire county, about 45 miles S.W. of Concord.

Jag, Jagg, *v. a.* [Ger. *zacke*, a prong, tooth, jag, *zacken*, to dent, jag; Sw. *tagg*, a point; Gael. and Ir. *eag*, a notch, an incision.] To cut into notches or teeth like those of a saw; to notch.

—*n.* A notch; a ragged protuberance; a denticulation.

(*Bot.*) A cleft or division.

Jag'ellons, *n. pl.* (*Hist.*) A Polish dynasty, founded by Jagellon, or Jagiello, Grand Duke of Lithuania, who married Hedwig, daughter of Louis of Hungary, in 1385, and succeeded to the throne of Poland as Ladislaus V. The house became extinct on the death of Sigismund II., in 1572.

Jägerndorf, KARNOW, (*yai'jern-dorf,*) a town of Austrian Silesia, on the Oppa, 14 m. N.N.W. of Troppau. *Manuf.* Cloth, linen, &c.

Jagg, *v. a.* and *n.* See JAG.

Jag'gedness, *n.* The state of being denticulated; unevenness.

Jag'ger, *n.* A tool used by pastry-cooks; a jagging-iron.

Jag'gernaut, in India. See JUGGERNAUT.

Jag'gery, Jag'ghery, *n.* (*Com.*) A species of coarse, dark-colored sugar, obtained from the palm of the cocoa-nut.

Jag'ging-iron, *n.* Same as JAGGER, *q. v.*

Jag'gy, *a.* Set with teeth; denticulated; uneven.

Jag'hire, *n.* The term in India for a portion of land, or a share in its revenue, assigned by the government to an individual.

Jago, (St.,) (*e-ăh'go,*) in Chili. See SANTIAGO.

Jago, (St.,) in Cuba. See SANTIAGO DE CUBA.

Jagua, (*ha-gwa,*) or XAGUA, a river of Honduras, Central America, enters the Caribbean Sea about 40 m. W.N.W. of Trujillo. Length about 120 m.

Jagua, (Bahia de,) (*ba-ee-a da ha'gwa,*) or XAOUA, an excellent bay on the S. coast of Cuba, about 45 m. N.W. of Trinidad.

Jaguar', *n.* (*Zoöl.*) The *Felis onça* of Linnæus, a ferocious animal of the genus *Felis*, one of the most powerful and dangerous of American beasts of prey; commonly called the American Tiger, and native from Texas to Patagonia. The form of the *J.* is robust, stouter than that of the leopard, and strongly and almost clumsily built. The body is thicker, the limbs shorter and fuller, and the tail barely reaches the earth when the animal

Fig. 1431.—THE JAGUAR.

stands well upon its feet. The head is larger and somewhat shorter than that of the leopard, and the profile of the forehead is more prominent. The animal is said to measure from 4 to 5 feet from the nose to the root of the tail when full grown. The *J.* is a most adroit climber, and Sonnini states that he saw the scratches left by the claws of one on the smooth bark of a tree nearly 40 feet high, without branches. Baron Humboldt also heard the yell of the *J.* from the tops of the trees, followed by the shrill whistle of the terrified monkeys. Possessed of such tremendous powers, the *J.* becomes the terror of the inhabitants of the countries which he infests. None of the living quadrumana, or quadrupeds, seem to come amiss to its voracious appetite, and it devours with relish birds, fish, and even reptiles. The shells of turtles which had been emptied by *J.* were pointed out to Humboldt. Notwithstanding all its ferocity, the *J.* seldom attacks the human race, though he will not shun man when he meets him. Indeed, according to Sonnini and Humboldt, he will often follow travellers. His favorite prey seems to be the larger quadrupeds, such as oxen, horses, sheep, and dogs, which he attacks indiscriminately, and in the same treacherous manner as the rest of the *Felidæ*. When he has made choice of a prey, he springs on its back, and placing one of its paws upon the back of the head, while he seizes the muzzle with the other, twists the head around with a sudden jerk, dislocating the spine, and thus killing his victim at once. The inhabitants of S. America hunt the *J.* in various ways, either with a pack of dogs or by means of the lasso; the latter mode, however, can only be adopted upon plains or open grounds Notwithstanding the strength and ferocity of the *J.*, he finds a powerful opponent in the great ant-eater. Although the latter animal has no teeth, whenever he is attacked by the *J.*, he lies on his back, and suffocates or strangles his opponent with his long claws.

Jaguari, (*zha-gwa-ree',*) a town of Brazil, prov. of Minas-Geraes, and on the W. slope of Sierra de Mantiqueira.

Jaguari'be, a river of Brazil, rising in the mountains of Boa Vista, prov. of Ceara, and flowing into the Atlantic Ocean in about Lat. 4° 8′ S., Lon. 37° 50′ W.

Jaguari'pe, a town of Brazil, about 45 m. W.S.W. of Bahia.

Jah, *n.* [Heb.] A contraction for JEHOVAH, *q. v.*

Jahicos, (*zha-ee'koce,*) a town of Brazil, about 70 m. E.S.E of Oeiras; *pop.* 3,000.

Jahn, (*yähn,*) FRIEDRICH LUDWIG, a German man of let-

ters and gymnasiarch, n. In Brandenburg, 1778. After graduating with distinction at the universities, be, in 1809, went to Berlin, where he became teacher at the Kölnisches Gymnasium, and published his *Deutsches Volksthum*. He then set about the establisbment of gymnasia throughout the "Fatherland," whence is derived the "Turnkunst," or system of physical education so well known and appreciated in the U. States. In 1813 *J.* received from the king of Prussia a military command, and entered Paris with the allies. After the peace, he re-continued the dissemination of his gymnasia, or *Turner* schools, but, it being considered that they contributed to the spread of liberalism, they were suppressed by the Prussian govt. in 1819, and *J.* himself was made a state prisoner for 5 years. Upon his release, *J.* went to Freiburg, where he exercised a professorship for many years. In 1848, he was elected a member of the national assembly convened at Frankfort-on-the-Main. D. 1852.

Jail, *n.* [Fr. *geole*. See GAOL.] A prison; a building or place for the confinement of persons arrested for debt or for crime. — See PRISON. (Written, in England, *gaol*.)

Jail'-bird, *n.* One who has been confined in a jail.

Jail'-delivery, *n.* The release of persons confined in jail. (Also written *gaol-delivery*.)

Jail'er, GAOLER, *n.* The keeper of a jail or prison.

Jail'-fever, *n.* (*Med.*) A severe form of typhus, which, owing to improved sanitary regulations, is now almost unknown, but was formerly very common in prisons and other places crowded with people.

Jains, or **Jainas,** (*jainz, jaï'nās,*) *n.* [Sansk. *jins*, victorious.] The name of a religious sect among the Hindoos. They are very numerous in the S. and W. provinces of Hindostan, and are principally engaged in commerce. It is believed that Jainism is of much later origin than Buddhism or Brahmaism, and that it did not rise into importance till the 8th and 9th century of our æra. It seems to partake of both of these earlier worships, and was probably an attempt to reconcile Buddhism with Brahmaism. The principal points of difference between them and the Brahmanical Hindoos are:— 1. A denial of the divine origin of the Vedas; 2. The worship of certain holy mortals, who, by living exemplary lives here and by self-mortification, had raised themselves superior to the gods; and, 3. Extreme tenderness for animal life; in all of which points they resemble the Buddhists. Their moral code, or "great duties," are,— 1. Refraining from injury to life; 2. Truth; 3. Honesty; 4. Chastity; 5. Freedom from worldly desires. Their four "merits" are — liberality, gentleness, piety, and penances. They number about 1,500,000, and are found throughout Hindostan.

Jakes, *n. sing.* [Etymology uncertain.] A privy; a necessary.

Jalacho, (*ha-la'cho,*) or XALACHO, a village of Yucatan, between Merida and Campeachy.

Ja'lap, *n.* [Fr., from Jalapa, or Xalapa, a town of Mexico, whence it originally came.] (*Med.*) The root of *Exogoniam Purga* (fig. 1432), a plant of the genus EXOGENIUM, *q. v.* It is a well-known drug, which acts on the body as an aperient, and a mild or drastic purgative, according to the dose or form in which it is given. The active principle of jalap consists in an alkaloid called *jalapine*, the dose of which, as a drastic purgative, is from one-eighth to half a grain; the ordinary dose of the powdered jalap root is from 15 to 20 grains for an adult, and from 2 to 10 grains for children, according to their age. The extract, when given as a pill, requires from 5 to 8 grains for a dose, and the tincture from 2 to 4 drachms. Next to the simple powder, the best prescription is that of the compound powder, made by mixing one-third of powdered jalap with two-thirds of cream of tartar, and taking from half a drachm to 1 drachm for a dose.

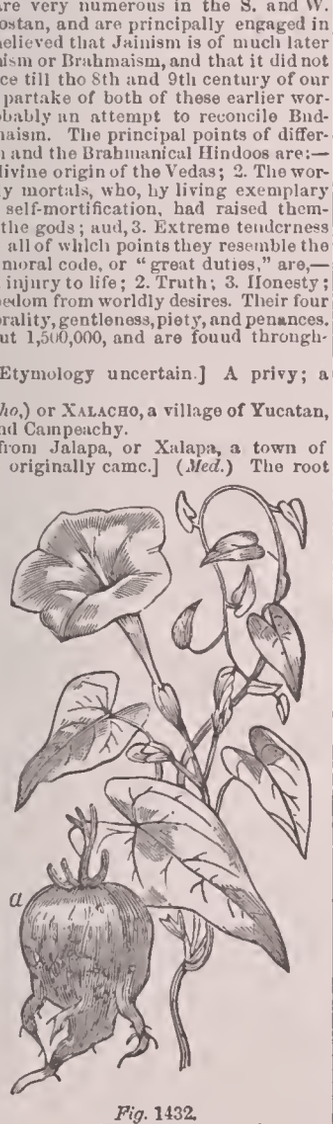


Fig. 1432.
JALAP (*Exogonium purga*).
a, the root.

Jalapa, (*ha-la'pa,*) or XALAPA, a city of Mexico, about 50 m. W.N.W. of Vera Cruz. The city is beautifully located, at an elevation of 4,340 feet above the sea-level, and contains a magnificent cathedral, and the vast convent of St. Francisco. The climate is salubrious. It is a favorite resort for invalids.

Jalap'a, in *Illinois*, a village of Greene co., about 12 m. S.E. of Carrollton.

Jalapa, in *Indiana*, a post-village of Grant co., about 80 m. E. by W. of Indianapolis.

Jalap'a, in *So. Car.*, a post-village of Newberry co.

Jalapa, in *Tennessee*, a post-office of Monroe co.

Jal'apic, *a.* Relating to jalap.

Jal'apin, CONVOLVULIN, RHODEOCETIN, *n.* (*Chem.*) A resin insoluble in ether, found in jalap, and supposed to constitute the purgative principle of that substance.

Jalisco, (*ha-lees'ko,*) or XALISCO, or GUADALAJARA, one of the finest provinces of Mexico, bordering on the Pacific Ocean, between Lat. 18° 45′ and 24° N., and Lon. 101° 15′ and 106° 15′ W. *Area*, about 45,000 sq. m. *Rivers.* Tololottan and numerous smaller streams, besides several considerable lakes. Among the latter is that of Chapala, which covers an area of about 1,400 sq. m. *Surface*, much diversified; *soil*, extremely fertile, some of the districts along the coast being covered with a vegetation so luxurious and rank as to render the atmosphere unhealthy. *Cap.* Guadalajara. *Pop.* 810,000.

Jalomnitza, (*ya-lom-nitz'a,*) a river of Europe, rising in the Carpathian Mountains, and after a course of 170 m. falling into the Danube, 9 m. from Hirschova.

Jalon, (*ha'lone,*) a river of Spain, rising in the prov. of Soria, Old Castile, and after a course of 120 m. joining the Ebro, 12 m. above Saragossa.

Jalousie, (*zhal'oo-zee,*) *n.* [Fr.] A slatted or Venetian window-blind.

Jam, *n.* [Ar. *jamd*, congelation, concretion; *jamid*, concrete, congealed.] A conserve of fruits boiled with sugar and water, which congeals on becoming cold.

—*v. a.* [Sans. *yam*, to hold, confine, repress, stop; the probable origin also of *hem*, q. v.] To press; to crowd; to squeeze tight; to wedge in.

Jamai'ca. [Ind. *Xaymaca.*] One of the Greater Antilles, and the largest and most valuable of the W. Indian Islands belonging to Great Britain. It lies in the Caribbean Sea, between Lat. 17° 44′ and 18° 30′ N., and Lon. 76° 12′ and 78° 25′ W., about 100 m. S. of Cuba, and 120 m. W. of Hayti, from which it is separated by the Windward Channel. Shape nearly oval; greatest length, E. to W., 150 m.; average breadth, about 41 m. *Area*, 6,400 sq. m. *Gen. Desc.* The Blue Mountains, a lofty range, runs through the island in its whole length, rising in some places to upwards of 7,200 feet in height. On the N. and S. sides of this range the aspect of the country is extremely different. On the former the surface rises gradually from the shore in undulating hills, separated by spacious valleys, watered by numerous rivulets, and clothed with pimento groves. The scenery on the S. side is much bolder. The shore is skirted by abrupt precipices and inaccessible cliffs; and the hill ranges toward the interior are more abrupt and less fertile. Between these ranges and the foot of the central chain are extensive savannahs, and wide plains cultivated with sugar-cane, the luxuriant beauty and verdure of which is set off by a boundless amphitheatre of forests, the outline of which melts into the distant blue hills. The island is well watered. There are about 100 streams dignified with the name of rivers, but none of them are navigable except for boats. Black River, which debouches on the S.W. coast, the largest, is only available for flat-bottomed boats and canoes for about 30 m. Like all the other streams, its current is very rapid. *Clim.* The medium temperature of the year near Kingston ranges between 70° and 80°; at about 4,200 feet above sea-level it usually ranges between 55° and 65°; in the winter falling even as low as 44°. The atmosphere is generally humid, and subject to dense fogs. The N. side of the island is more healthy than the S.: but all insalubrity is supposed to cease at an altitude of 1,400 feet. *Geol. J.* contains no active volcano, but the traces of former volcanic action are sufficiently obvious. Micaceous schist, quartz, and rock spar are common; but limestone, containing numerous shells, is the most prevalent geological formation. The island contains argentiferous lead, copper, iron, and antimony ores; and the Spaniards are reported to have wrought both copper and silver mines. Mining industry is now, however, quite extinct. *Soil and Prod.* The turf-clad hills on the N. side of the island are chiefly composed of a chalky marl; elsewhere the soil is chiefly of a deep chocolate color, or a warm, yellow, or hazel. The latter, called the *Jamaica brick mould*, retains a good deal of moisture, and is among the best adapted for the sugar-cane throughout the W. Indies. But though the soil be in some parts deep and fertile, *J.* is not generally productive, and requires both skilful labor and manure to make it yield heavy crops. Indigo, cotton, and cocoa were formerly important staples; but these have mostly given way to other articles. Maize, Guinea corn, and rice are the principal grains cultivated. The plantain, banana, yam, cassava, and sweet potato are indigenous; the first named is the principal support of the colored population. The forests abound with dye-woods and guiacum, iron-wood, braziletto, mahogany, greenheart, and other valuable kinds of timber and cabinet woods. Various grasses are cultivated; the principal is Guinea grass, a product of so much importance, and growing so luxuriantly, that the grazing farms are for the most part covered with it. *Zoöl.* Horned cattle are found here in numbers, and better and cheaper beef is not met with in any part of the world. Oxen or mules are used for farm labor. Horses — an active and hardy breed — are reared for saddle and harness. Sheep, goats, and hogs are numerous. The Europeans found many indigenous quadrupeds on the island, but none worthy of notice now exist, except the agouti, some monkeys, and rats; which last are in such immense numbers, and so destructive of the sugar-canes, that from 8 to 10 per cent. per annum of the sugar crop, while standing, is supposed to be consumed by them. Alligators haunt some of the larger rivers, and many varieties of lizards and snakes are found, some of which are accounted edible by the natives. The emancipation of the negroes has had, generally, a disastrous effect upon the state of agriculture in this island. From the passing of the Slave Emancipation Act, in 1832, till the year 1848, no fewer than 653 sugar and 456 coffee plantations were abandoned, and their works entirely broken up. It was found, — from the difficulty experienced in inducing the freed colored people to work on the soil, — advisable to try the experiment of importing free coolie laborers from India; this, however, failed in effect, owing to the influence of climatic changes. A few free Africans are, however, introduced yearly into the island, who make serviceable laborers. The Imports consist principally of provisions for consumption, a considerable portion coming from the United States. The principal ports (all of which are free) are Kingston, Port Royal, Morant Bay, Black River, and Savanna-la-Mar on the S. coast; and Lucca, Montego Bay, Falmouth, St. Ann, Ports Maria and Antonio, and Annotto Bay on the N. *Pol. Div.* and *Govt.* The island is divided into 3 counties: Middlesex in the center, Surrey in the E., and Cornwall in the W. Spanish Town was at one time the seat of government; but Kingston is now the capital of the island. The executive power is vested in a governor, appointed by the British Crown, who is assisted by a council of 4 members. There is besides a legislative council, consisting of 13 members, inclusive of the governor, who is president *ex officio*. All religious are freely tolerated, and education is widely diffused. The island is garrisoned by about 1,000 regular troops, exclusive of the insular militia. *Hist.* This island was discovered by Columbus in 1495, and settled in 1503. In 1655, England took it from the Spaniards, and has ever since held possession. In 1832 the British Parliament abolished slavery in the island, paying an indemnity to the colonists of $30,809,635. In Nov., 1865, an insurrection of the negroes was suppressed after much bloodshed. A severe hurricane did great damage in Aug., 1880, and in Jan'y, 1907, the city of Kingston and its vicinity were devastated by a severe earthquake, Kingston being almost wholly destroyed, with much loss of life. *Pop.* (1901) 771,900.

Jamai'ca, in *New York*, a former post-village and township of Queen co., about 12 m. E. of Brooklyn; since 1897 a part of Greater New York.

Jamai'ca-pep'per, *n.* See ALLSPICE.

Jamai'ca Plain, in *Massachusetts*, a former post-village of Norfolk co.; now part of the 23d ward of Boston.

Jamari, (*zha-ma're,*) or CANDEAS, a river of Brazil, enters the Madeira about Lat. 8° 40′ S., Lon. 63° 20′ W.

Jamb, *n.* [Fr. *jambe*; It. *gamba*; Gr. *kamp-e*, a bending, the bending of a limb, a joint.] (*Arch.*) One of the sides of an aperture which connect the two sides of the wall. The two vertical linings of a doorway or aperture, which connect two walls, are called the *jamb-linings*. Jamb-posts are such as are introduced sometimes on the side of a door, in order to fix the jamb-linings. They are particularly used when the partition is of wood.

(*Mining.*) See JAM.

—*v. a.* [See JAM.] To squeeze tight; to fix by pressure.

Jambee, Jambi, (*jam'be,*) a town of Sumatra, cap. of a district of same name, about 60 m. from the sea, on a river which, after a course of 100 m., falls into the China Sea in Lat. 1° S. The town is large, but the air unwholesome; Lat. 1° 24′ S., Lon. 103° 39′ E. *Pop.* unknown.

Jam'blichus, a philosopher of the 4th cent. — See IAMBLICHUS.

James, (St.) [Gr. *Jakobos*, the same word as Jacob.] Two, if not three, persons of this name are mentioned in the New Testament: 1. JAMES, the son of Zebedee, and brother of the Evangelist John. Their occupation was that of fishermen, probably at Bethsaida, in partnership with Simon Peter (*Luke* v. 10). On comparing the account given in *Matt.* iv. 21, *Mark* i. 19, with that in *John* i., it would appear that James and John had been acquainted with our Lord, and had received him as the Messiah some time before he called upon them to attend upon him statedly — a call with which they immediately complied. Their mother's name was Salome. We find James, John, and Peter associated on several interesting occasions in the Saviour's life. They alone were present at the Transfiguration (*Matt.* xvii. 1; *Mark* ix. 2; *Luke* ix. 20); at the restoration to life of Jairus's daughter (*Mark* v. 42; *Luke* viii. 51); and in the garden of Gethsemane during the Agony (*Mark* xiv. 33; *Matt.* xxvi. 37; *Luke* xvi. 37). With Andrew they listened in private to our Lord's discourse on the fall of Jerusalem (*Mark* xiii. 3). James and his brother appear to have indulged in false notions of the kingdom of the Messiah, and were led by ambitious views to join in the request made to Jesus by their mother (*Matt.* xx. 20-23; *Mark* x. 35). From *Luke* ix. 52, we may infer that their temperament was warm and impetuous. On account, probably, of their boldness and energy in discharging their Apostleship, they received from their Lord the appellation of Boanerges, or *Sons of Thunder*. James was the first martyr among the Apostles. Clement of Alexandria, in a fragment preserved by Eusebius, reports that the officer who conducted James to the tribunal was so influenced by the bold declaration of his faith as to embrace the Gospel, and avow himself also a Christian; in consequence of which he was beheaded at the same time. He is the patron-saint of Spain, there being a groundless legend of his having planted the Gospel in that country. — 2. JAMES, the son of Alphæus, one of the twelve Apostles, (*Mark* iii. 18; *Matt.* x. 3; *Luke* vi. 15; *Acts* i. 13). His mother's name was Mary (*Matt.* xxvii. 56; *Mark* xv. 40); in the latter passage he is called James *the Less*, either as being younger than

James the son of Zebedee, or on account of his low stature (*Mark* xvi. 1; *Luke* xxiv. 10).—3. JAMES, "the brother of the Lord," (*Gal.* i. 18.) Whether this James is identical with the son of Alphæus, is a question which Dr. Neander pronounces to be the most difficult in the Apostolic history, and which cannot be considered as decided. It is probable, however, that he was a different person.—See JAMES, (EPISTLE OF.)

James I., king of Scotland, son of Robert III., B. 1393, was taken by the English on his passage to France, and kept in confinement 18 years. In 1424 he obtained his liberty, on condition of marrying the daughter of the earl of Somerset. He severely punished those who had governed his country in his absence, for which he was murdered in his bed, in 1437.

JAMES II., B. 1431, succeeded the preceding king, his father, at the age of seven years. He assisted Charles VII. of France against the English, and punished rigorously those lords who had revolted against him. Killed at the siege of Roxburgh, 1460.

JAMES III., B. about 1453, was the son and successor of the above, and ascended the throne in 1460. He put to death his brother John, and committed so many cruelties that his subjects revolted. Killed 1488.

JAMES IV., B. about 1473, succeeded his father, the last-mentioned, at the age of about 15 years. He defeated the rebellious lords, and assisted Louis XII., king of France, against the English; but was slain at the battle of Flodden Field, in 1513.

JAMES V., the son of the above, B. 1512, was only a year old at the time of his father's death. At the age of 17 he assumed the government, and assisted Francis I. of France against the emperor Charles V., for which the French king gave him his daughter Margaret in marriage. On her decease, he married Mary of Lorraine, daughter of Claude, duke of Guise. On his death, James left his crown to Mary Stuart, his daughter. D. 1542.

James I., of England, and VI. of Scotland, B. at the castle of Edluburgh, 1566, was the son of Henry Stuart, Lord Darnley, by Mary, Queen of Scots, daughter of James V. When only a year old, he was proclaimed king, on the forced resignation of his mother, and in 1603 he succeeded Queen Elizabeth on the English throne. A plot was soon after discovered to seize on him, and place his cousin, the Lady Arabella Stuart, upon the English throne in his stead, for which Lords Cobham and Grey, and Sir Walter Raleigh were indicted. But, in 1605, the more desperate attempt to blow up the king, prince, and both houses of parliament, known as the Gunpowder Plot, was discovered, for which Guy Fawkes and many other persons were executed. In 1606, he established episcopacy in Scotland, and made peace with Spain. In 1612, his son, Prince Henry, by Anne of Denmark, died, and the same year his daughter was married to Frederick, the elector-palatine. One of the greatest blots of his reign was the execution of Sir Walter Raleigh. D. 1625.

JAMES II., B. in London, 1633, was the second son of Charles I. He was declared duke of York soon after his birth. During the rebellion he resided in France, where he imbibed the principles of Popery. At the Restoration he returned to England, where he secretly married Anne Hyde, daughter of the earl of Clarendon, by whom he had two daughters, who afterwards became queens of England; viz., Mary and Anne. In the Dutch war he signalized himself as commander of the English fleet, and showed great skill and bravery. On the death of his first wife, he married Mary Beatrix of Modena. He succeeded to the throne on the death of Charles II. in 1685; but his zeal for his religion leading him into measures subversive of the constitution, the Prince of Orange, who had married his daughter Mary, was invited to England by several of the English nobility, and the king, finding himself abandoned by his friends, withdrew to France. D. at St. Germain, 1706.

JAMES FRANCIS EDWARD STUART, B. 1688, known as the *Chevalier de St. George*, or the *Old Pretender*, was the son of James II., by his second wife, Mary d'Este. In Dec., 1686, the queen fled with him to France, and on the death of James, his father, in 1701, he was acknowledged as king of England by Louis XIV., which led to the recall of the English ambassador, and war with France. He was also acknowledged as king by the Pope, the king of Spain, and the duke of Savoy, while he was attainted of high treason in England, in 1702. In 1708 he sailed from Dunkirk with a French fleet for the invasion of Scotland, but the vigilance of the English admiral, Sir George Byng, prevented the execution of the plan, and the prince returned to France. On the death of Queen Anne, he was refused an interview with Louis XIV., and ordered to leave France. In the following year, 1715, a rebellion in his favor, headed by the earl of Mar, broke out in Scotland, and he was proclaimed on the 6th of September. The rebels were defeated at Preston on the 13th of November, and their leaders made prisoners. In December, the Pretender himself arrived at Peterhead, assumed royal state, formed a council, and made a progress through the country, but the case was hopeless, and he was glad to escape to Gravelines. He soon after dismissed Lord Bolingbroke, who had been his secretary, and appointed the duke of Ormond to that post. Ordered to quit France, he went to Italy, and afterwards to Spain, where he was received as king of England, and an expedition was undertaken in his favor, which ended in failure. In 1719, the prince married Maria Clementina, daughter of the king of Poland, by whom he had two sons, Charles Edward, the Young Pretender, and Henry, Cardinal of York. Maria Clementina died in 1735. Disaffection and restlessness continued in Great Britain, and showed themselves from time to time in overt acts, and, in 1745, another Jacobite rebellion broke out in Scotland, Prince Charles Edward landing there, and getting his father proclaimed once more. This struggle ended with the defeat of the Jacobites at Culloden by the duke of Cumberland, 1746. The Pretender died at Rome, where he had lived for many years, in Dec., 1765.

James, in *Arkansas*, a township of Scott co.

James, in *California*, a village of Glenn co.

James, in *Iowa*, a flourishing township of Pottawattomie co.

James'burg, in *California*, a P. O. of Monterey co.

James'burg, in *Illinois*, a post-office of Vermilion co.

James'burg, in *New Jersey*, a post-village of Middlesex co., about 45 m. N.E. of Camden. *Pop.* (1895) 1,490.

James City, in *Virginia*, a S.E. co.; *area*, about 184 sq. m. *Rivers.* York, James, and Chickahominy. *Surface*, undulating; *soil*, fertile. It is one of the original eight shires into which the State was divided in 1634. *Cap.* Williamsburg. *Pop.* (1897) about 5,850.

James, Epistle of. (*Script.*) The name of one of the canonical books of the *New Testament*. The authorship of this book has been disputed. There are three persons of this name mentioned in Scripture: 1. James the Apostle, son of Zebedee, and brother of John; 2. James the Less, son of Alphæus and Mary, who was also an apostle; and, 3. James, the brother of our Lord. It is generally held by divines that it was James the son of Alphæus who wrote this book. This epistle is addressed "to the twelve tribes which are scattered abroad," evidently, from the context, meaning those that had embraced Christianity. The design of the apostle in writing this epistle was,—1. To prevent the Jewish Christians from falling into the vices which abounded among their countrymen, and to caution them against covetousness and sensuality, distrusting the divine goodness, &c.; 2. To set them right as to the doctrine of justification by faith; 3. To intimate to such as labored under bodily disorders, that if they were penitent, they might hope for a miraculous cure; and, 4. To prevent their being impatient under their present persecutions or dark prospects, and to support and comfort them by the assurance that the coming of the Lord was at hand. The language of this epistle surpasses all the other writings of the *New Testament* in the purity of its Greek, in liveliness, and in felicity of expression. No regular plan appears in it, and the ideas sometimes follow one another loosely, the writer passing from one subject to another without points of transition; but it contains an abundance of fine striking images, which, considered together, have no parallel in any other apostolic letter. The canonical authority of this epistle has been much disputed both in early and more recent times. It is classed by Eusebius among the *antilegomenai*, or writings whose authenticity was questioned, and it was rejected by Luther and some of the other reformers. The great argument in its favor is its being found in the Syriac version of the *New Testament* executed at the end of the 1st or early in the 2d century.

James'port, in *New York*, a post-village of Suffolk co., about 80 m. E of New York city. *Pop.* (1897) 484.

James River, in the *Dakotas*. See DAKOTA RIVER.

James River, in *Missouri*, enters the White River in Taney co.

James River, in *Virginia*, a considerable river formed by the union of the Jackson and Cowpasture rivers, on the W. border of Rock Bridge co., and flowing a general E. course enters the Chesapeake Bay between Norfolk and Elizabeth City cos. In its route of nearly 500 m. it intersects or washes the borders of some of the richest and most important localities of the State. It also affords communication between the sea and numerous cities, towns, and villages. Richmond, the capital of the State, is situated upon its banks at the head of tide-water, and about 150 m. above the sea. Its mouth expands into an æstuary several miles in width, and in some places affords good anchorage.

James, (St.,) (Order of.) See COMPOSTELLA, (ST. JAGO DE.)

James's Bay, (*jamz'ez.*) a large gulf, forming the most S. part of Hudson's Bay, between Lat. 51° and 55° N., and Lon. 79° and 82° W. It covers an area of about 42,000 sq. m., and contains numerous islands, among the largest of which are Argomsea and Charlton.

James'town, a small town on the west side of the Island of Barbadoes, W. Indies.

James'town, in *Alabama*, a P. O. of Cherokee co.

James'town, in *Arkansas*, a post-village of Independence co.

James'town, in *California*, a post-village of Tuolumne co., about 5 m. S.W. of Sonora. *Pop.* (1897) 450.

James'town, in *Colorado*, a post-village of Boulder co.

James'town, in *Georgia*, a post-village of Chattahoochee co.

James'town, in *Illinois*, a post-village of Clinton co., about 15 m. N.N.W. of Carlyle.

—A village of Hamilton co., about 5 m. from McLeansborough.

James'town, in *Kansas*, a post-village of Cloud co., on the Mo. Pacific R.R.

James'town, in *Indiana*, a post-town of Boone co., about 29 m. W.N.W. of Indianapolis. *Pop.* (1897) 650.

—A village of Elkhart co., about 12 m. W.N.W. of Goshen.

James'town, in *Iowa*, a township of Howard co. *Pop.* (1897) 670.

James'town, in *Kentucky*, a village of Campbell co., on the Ohio River, about 2 m. above Cincinnati, Ohio.

—A village of Monroe co.

—A post-village, cap. of Russell co., on the Cumberland River, about 80 m. S.S.W. of Lexington;

James'town, in *Michigan*, a post-township of Ottawa co.;

James'town, in *Minnesota*, a township of Blue Earth co. *Pop.* (1897) 1,020.

James'town, in *Missouri*, a village of Andrew co., about 180 m. N.W. of Jefferson City.

—A post-town of Mouiteau co.

James'town, in *North Carolina*, a post-village of Guilford co., on Deep river, about 95 m. W. by N. of Raleigh.

—A village of Rutherford co.

James'town, in *New York*, a handsome city on Chautauqua co., on the Erie and the J. & L. E. R.Rs., 69 m. S. by W. of Buffalo; has extensive manuf. Chautauqua Lake, near by, is a favorite resort. *Pop.* (1897) about 17,800.

James'town, in *Ohio*, a post-village of Greene co., about 64 m. W.S.W. of Columbus. *Pop.* (1890) 1,104.

James'town, in *Pennsylvania*, a post-borough of Mercer co., about 22 m. N.W. of Mercer. *Pop.* (1897) 1,050.

James'town, in *Rhode Island*, a post-town of Newport co., comprising the island of Canonicut in Narragansett Bay, opposite Newport. *Pop.* (1897) 950.

James'town, in *Tennessee*, a post-village, cap. of Fentress co., about 120 m. E. by N. of Nashville.

James'town, in *Virginia*, a former village of James City co., about 50 m. E.S.E. of Richmond. It was the first English settlement in the U. S., made in 1608, of which a few ruins now remain.

James'town, in *Wisconsin*, a post-village and township of Grant co., about 86 m. W.S.W. of Madison.

James'ville, in *New York*, a post-village of Onondaga co., about 7 m. S.S.E. of Syracuse.

Janeiro, Rio de, in Brazil. See RIO DE JANEIRO.

Jan'elew, in *West Virginia*, a post-village of Lewis co., on the M., V. & P. R.R.

James'ville, in *California*, a post-village of Lassen co.

—A village of Shasta co., about 20 m. S. by W. of Shasta.

James'ville, in *Illinois*, a post-village of Cumberland co., on the P., D. & E. R.R.

James'ville, or JAYNESVILLE, in *Iowa*, a post-village of Bremer co., on Cedar river, about 5 m. S. of Waverly.

James'ville, in *Minnesota*, a post-village and township of Waseca co., about 14 m. E. by S. of Mankato.

James'ville, in *Wisconsin*, a city, cap. of Rock co., on Rock river, about 45 m. S.E. of Madison. It is for the most part regularly built upon both sides of the river, and commands an active and increasing trade. The city contains many fine public and private edifices, and numerous manufactories. *Pop.* (1895) 12,971.

Jane-of-apes', *n.* A pert girl;—the counterpart of *jackanapes*, q. v.

Jan'gle, *v. n.* [Old Fr. *jangler*; probably allied to *gingle* or *jingle*, and *wrangle*.] To quarrel in words; to altercate; to bicker; to wraugle. Also, to gossip; to tattle. (Eng.)

—*v. a.* To cause to sound discordantly.

"Like sweet bells *jangled* out of tune and harsh." — *Shaks.*

—*n.* [Old Fr. *jongle*.] Discordant sound; contention; babble; prate; tattle; gossipry.

Jan'gler, *n.* A wrangling, noisy fellow.

Jan'gleress, *n.* A wrangling, noisy woman.

Jani'culum Mount. See IANICULUM.

Janin, JULES GABRIEL, (*zha'nd*,) an eminent French critic, B. at St. Etienne, 1804. Shortly after leaving college, he began to write squibs and political satires for the "Figaro," and continued to do so until that publication was suppressed by the government, in 1825. His vivacious and fearless pen was next employed in the columns of the "Messager des Chambres," and so trenchant were his attacks upon the despotic Polignac ministry of Charles X., that, in 1829, the journal to which he contributed was subjected to a heavy fine. In this year appeared his first novel, *The Dead Donkey and the Guillotined Woman*, which was nothing else than a satire upon the style of Victor Hugo, as head of the "Romantic" school. So highly did his own party already esteem him, that, although only 25 years of age, he was styled by them "the Prince of Critics." During the three or four following years he published two novels, —*The Confession*, and *Barnave*, as well as a couple of volumes of short tales. In 1833 he commenced what has since proved to be the greatest of all his literary undertakings,—the dramatic notices and literary reviews for the "Journal des Debats." Every Monday morning, for upwards of a quarter of a century, appeared a witty, sparkling, and pointed criticism on dramatic literature and the stage. These *feuilletons*, or foot-articles (they being always inserted at the bottom of the newspaper columns), soon made a European reputation for their author, who, throwing aside the dogmatic severity of his predecessors, quickly became a public favorite, by the grace, the polish, and the intuitive justice which characterized his articles. In 1870 he was elected member of the French Academy. D. 1874.

Janis'saries, JANIZARIES, *n. pl.* (*Hist.*) A celebrated body of infantry established by Amurath, or Murad I., about 1389, who, during the reign of his brother Soliman, had conquered the countries of Albania, Bosnia, Servia, and Bulgaria, and having claimed as his share a fifth of the captive Christians, selected the youngest and finest of these hardy people, and, having had them instructed in the Mohammedan precepts, he enrolled them into a body-guard for his person. Being highly drilled, and taught all the evolutions of war, they became, for many ages, the finest troops in the Ottoman service, and were regarded as the shield of the empire, and upholders of the dynasty and religion. For several centuries, the Janissaries were recruited exclusively from the trained and educated youths of Christian captives, and of these only the finest were selected; in later times, however, the Osmanlis were allowed to enroll in this distinguished and petted corps, who, knowing their power and influence, like the Prætorian Guard of the

Romans, soon turned on their masters, and by frequent mutinies and acts of insubordination, not only gave the state, and sovereign, frequent cause of disturbance, but compelled the deposition, both of obnoxious ministers and often the Sultan himself. The discipline and obedience taught in the Janissary schools was the most strict, austere, and perfect of any military education ever instituted, and had in it all the abstinence, privation, and total submission peculiar to the monkish orders of La Trappe and Ignatius Loyola. This splendid body of Infantry, which was never known to retreat from a field of battle, was composed of four squadrons, each squadron consisting of a certain number of Ortas, or troops, each Orta in the capital being composed of 100 men, in Natolia and elsewhere of 200, though, in time of war, the strength of each troop, Orta, or company, was raised to 500; the total strength of this imperial body-guard is supposed to have numbered 100,000. As the pay given by the state was small, the Janissaries were allowed, when not on duty, to work at their trades, the soldiers being divided into regiments, according to their occupation; thus, one regiment consisted entirely of bakers, another of shoemakers, and so on. An insurrection, which broke out among the Janissaries in 1825, lasted three days, and was so formidable that the Sultan Mahmoud, the father of the present monarch, resolved forever to abandon the institution, and having issued an order for their destruction, the troops of the line fell upon them, June, 1825, when above 25,000 men were slaughtered, their barracks fired, a curse pronounced on their name, and, by a proclamation, the Janissaries were suppressed throughout the Turkish empire.

Jan'itor, *n.* [Lat., from *janua*, a house-door, allied to *Janus*, who was believed to be the guardian of doors.] A doorkeeper; a porter.

Jan'itrix, *n.* A female doorkeeper.

(*Anat.*) The vein *Porta vena.*

Jan'izary, Jan'izar, *n.* One of the Janizaries, or Janissaries, *q. v.*

Jannes, and **Jambres,** (*Script.*) the name by which St. Paul calls the magicians who resisted Moses in Egypt, and supposed to be the same as *Jamn* and *Jotape* mentioned by Pliny, and as the *Johanni* and *Mamre* of the Talmud.

Jan'nina, or **Jani'na.** See Yanina.

Jan'nock, *n.* Probably a corruption of *bannock*, q. v. Oat-bread. (Prov. Eng.) Also a localism for honest; true; genuine.

Jan'sen, Jan'senius, the founder of the sect of Jansenists, *q. v.*

Jan'senism, *n.* (*Eccl. Hist.*) The doctrine of the Jansenists, *q. v.*

Jansenists, (*jăn'sen-ists,*) *n. pl.* (*Eccl. Hist.*) A party in the Roman Catholic Church, which arose about the middle of the 17th cent., and took its name from Cornelius Jansenius, bishop of Ypres, who died in 1638: He was a great advocate for the doctrine of Augustine, some of whose works he is said to have read thirty times, and left a work, which was published after his death, under the name of *Augustinus*, in which, supported by quotations from the works of Augustine, he set forth the doctrine of irresistible grace and absolute election and rejection. This doctrine was not new, for it had already several times agitated the Church. Michael Bains, professor at Louvain, had already asserted this doctrine, and 76 propositions, taken from his writings, were condemned by a Papal bull in 1567. Jansenius's work was fiercely attacked by the Jesuits as heretical, and as containing the five following propositions: — I. That there are certain commandments of God which good men are absolutely unable to obey, though they desire to do so, God not having given them a sufficient measure of grace; 2. That no person in the fallen state of nature can resist the influence of divine grace; 3. To render themselves meritorious in the sight of God, it is not requisite that men should be exempt from internal necessity, but only from outward constraint; 4. That the semi-Pelagians are heretical in maintaining that the human will is able to assist or obey the influence of divine grace; 5. That to say that Christ died for all men, is semi-Pelagianism. After much intriguing and delay the five propositions were condemned by Pope Innocent X. as heretical; but this by no means ended the dispute, for the Jansenists contended that they were condemned in a sense different from that which they were intended to bear by the author. An appeal was again made to the Pope, and in 1656 a new bull was issued by Alexander VII., declaring that Jansenius meant the propositions in the sense condemned by the previous bull. A formulary was now drawn up, conformably to the new bull, and all ecclesiastical persons were required to sign it, on pain of being suspended from their offices. Most of them refused, and a schism was thus occasioned in the French Church, which lasted for some time. The Port-Royalists (see Port Royal), Arnauld, Pascal, Nicole, Persault, were conspicuous for their defence of Jansenism, and, not content with acting on the defensive, carried the war into the enemy's country, attacking the errors and corruptions of the Romish Church, especially of the Jesuits; one of the ablest of their attacks being the *Provincial Letters* of Pascal. They also, as a means of dissipating error, encouraged the diffusion of education, and published a number of valuable educational works. At length, Clement IX., in order to bring about peace, attempted to compromise matters, by asking merely a rejection of the five propositions, without ascribing them to Jansenius. The liberal policy of Innocent XI. tended still more to restore peace. In 1698, however, the smouldering fire was again stirred up into a fierce flame by the appearance of Father Quesnel's *Moral Observations on the New Testament.* Quesnel was banished from the country; and in 1709, Louis XIV., at the instigation of his Jesuit confessor, suppressed and destroyed the monastery of the Port Royal, and the most revolting indignities were offered to the ashes of its illustrious dead. In 1713, Clement XI. issued his famous bull *Unigenitus*, condemning 101 propositions of Quesnel's work. The strife continued for some time after this, and many of the Jansenists emigrated to Holland. A number of the French clergy still hold the principles of Jansenius, and since 1854 they have had an organ in the religious press, — *L'Observateur Catholique.* While Jansenism remained in France a theological school, it became in the Netherlands an independent Church. In 1704, Codde, the vicar-apostolic of the archbishopric of Utrecht, was deposed by the Pope for holding Jansenistic views; but the chapter refused to acknowledge the validity of this deposition, and in 1723 they chose an archbishop of their own. Since that time they have had an archbishop at Utrecht, and bishops at Haarlem and Deventer. These Jansenists call themselves by preference the disciples of St. Augustine, whose doctrines they maintain, upholding moral strictness, and regarding the inward service of God as the greatest proof of piety. The Jansenistic principles also extended to Italy, especially to Tuscany, where Bishop Ricci and his party effected a temporary schism.

Jan'sen's Creek, in *New York*, enters the Hudson River between Columbia and Dutchess cos., about 4 m. below Catskill.

Jant, *v. n.* Same as Jaunt, *q. v.*

Jan'ter, *n.* A machine extensively used in Bengal and other parts of India, to raise water for the irrigation of land. It consists of a hollow trough of wood, about 15 feet long, 6 inches wide, and 10 inches deep, and is placed on a horizontal beam lying on bamboos fixed in the bank of a pond or river; one end of the trough rests upon the bank, where a gutter is prepared to carry off the water, and the other end is dipped in the water by a man standing on a stage, plunging it in with his foot.

Janthin'idæ, *n. pl.* [Gr. *ianthinos*, violet-colored.] (*Zoöl.*) The Purple Sea-snails, a family of gasteropodous molluscs. The few species known are marine, and are generally met with floating on the surface of the ocean in warm and tropical latitudes. The shell has some resemblance to our land-snails, but the aperture is angular at its lower part and at its outer side, where, however, the angle formed by the union of the upper and lower halves of the outer lip is much rounded in most of the species; the columella straight and elongated, the inner lip turned back over it. The animal has no operculum, but carries under its foot a vesicular organ, like a congeries of foam-bubbles, of solid consistence, that prevents creeping, but serves as a buoy to support it at the surface of the water. The head is a cylindrical proboscis; and is terminated with a mouth cleft vertically, and armed with little curved spines: on each side of it is a forked tentaculum. The shells are of a violet color; and when the animal is irritated it pours forth an excretion of deeper blue to tinge the sea around it.

Fig. 1434. — PURPLE SEA-SNAIL (*J. communis*).

Jant'ily, Jaunt'ily, *adv.* In a janty manner; briskly; airily; gayly.

Jant'iness, Jaunt'iness, *n.* Quality of being janty; airiness; flutter; briskness.

Jant'y, Jaunt'y, *a.* [Fr. *gentil;* Lat. *gentilis.* See Genteel.] Affectedly genteel; airy; showy; finical.

Jaunaria, (*zhu-noo-a're-a,*) a town of Brazil, about 150 m. N. of Minas Novas.

Jauna'rius, (St.,) a bishop of Benevento, was beheaded at Pozzuoli, in 291 or 305, the wild beasts to which he was at first exposed having refused, according to the chroniclers, to injure so holy a man. His relics were removed to Naples, where a small phial of his blood is said to liquefy spontaneously every anniversary of his festival, Sept. 19.

Jan'uary, *n.* (*Calendar.*) The first month of our year, so called from the god Janus, who is commonly represented with two faces, as it was considered both to look back upon the past year, and forward to that which was coming. It was likewise the first month in the Roman calendar, to which it was added, together with February, by Numa. It was not uniformly, however, the first month of the year among the Latin Christian nations until the 18th century; and even in some parts of this country the year commenced with the month of March till 1751, when an Act was passed adopting the Gregorian in place of the Julian style, and declaring that the legal year shall be uniformly deemed to begin on the 1st of January.

Ja'nus. (*Myth.*) A Latin deity, generally represented with two faces looking opposite ways. His temple, the doors of which were kept open in time of war, and closed in time of peace, is said to have been founded by Romulus. The gates were shut eight times; namely, in the reign of Numa, B. C. 714; soon after the first Punic war, B. C. 235; after the battle of Actium, B. C. 30; after the Cantabrian war, B. C. 25; at the general peace under Augustus, B. C. 5; under Nero in 58; under Vespasian in 71; and under Gordian in 241.

Ja'nus-faced, *a.* Practising duplicity.

Japan' (called Dai Nihon or Dai Nippon by the natives), an insular empire off the E. coast of continental Asia, opposite to Mantchooria, from which it is divided by the Sea of Japan and the Straits of Tartary and Corea. It comprises five large and a great number of small islands, lying between the 30th and 50th parallels of N. Lat., and between the 128th and 151st degrees of E. Lon.; bounded N. by the Sea of Okhotsk and the Pacific Ocean; S. by the Eastern Sea of the Chinese; and W. by the Sea of Japan, which communicates with the open ocean by the straits of La Perouse and Tsugaru, running between the different islands. The Japanese empire contains (including its dependencies) not less than 3,850 islands within its limits.—*Pol. Div.* The empire of Japan comprises Hondo (the main island, incorrectly called Niphon by foreigners), Kiushiu, Shikoku, Yezo, the numerous smaller islands, the Kurile group, of which the northern islands were acquired, in 1875, from Russia in exchange for Southern Saghalieu, and the dependencies of the Liu Kiu Islands (usually styled Loo Choo), and Formosa, and the Pescadores islands, recently acquired from China. The area of Japan proper is 146,640 square miles, being about equal to that of the State of California.—*Phys. Geog.* The principal islands of J. have a very uneven surface, few plains being of any great extent, and the hilly country extensive and of a rocky character. The main island contains several regular mountain chains, running N.N.E. Fujiyama, an isolated peak, 12,365 feet high, is the loftiest in the empire. Various other peaks exist, from 9,000 to over 10,000 feet high. There are a number of active volcanoes in Japan, of which Asamayama, Asoyama, and that on Oshima are best known. Earthquakes are frequent, one in 1705 having destroyed nearly half of

Fig. 1435.—A NOBLEMAN AND A BUDDHIST PRIEST.

Yedo, and killed more than 100,000 of its inhabitants; thermal and mineral springs also are of very frequent occurrence, so that, on the whole, the Japanese islands may be considered the seat of active volcanic movements, connected, most probably, with those of Kamchatka and the islands of Formosa and the Asiatic Archipelago, all of which belong to a chain of heights almost as distinctly marked as the volcanic chain of S. America. The metallic wealth of J. is considerable, comprising copper in sufficiently large quantities for an extensive exportation, a considerable quantity of antimony and sulphur, some lead, tin, and iron, and a little gold and silver; the mines being under exclusive government superintendence. The rivers of J., though numerous, are not long, on account of the peculiar narrowness of all the islands; few of them are navigable, and most of them might be characterized rather as torrents than rivers. The longest is the Tonegawa, which empties into the Pacific N.W. of Tokio. It is 172 miles long.—*Meteor.* The climate in a country extending over so many parallels of latitude must, of course, vary extremely. The Hokkaido (Yezo, the Kuriles, &c.), have a severely cold, while the S. parts of the empire have semi-tropical, climate. In Kiushiu, 80° is the average height of the thermometer in summer, and 35° during the severest months in winter. In Tokio and Yokohama the yearly average is about 58°. The winds, at all seasons, are very irregular. Clear and pleasant days are in excess of all others, but the average rainfall is above that of most countries. Two-thirds of the rain falls between April and October. The snowfall on the E.

coast is light, but on the W. is heavy. — *Agric. Prod. &c.* Tillage is followed in *J.*, not merely as a pursuit dictated by private interest, but also in obedience to a general and very peremptory law, which obliges all land-owners, under penalty of confiscation, to keep their property in good productive condition, and therefore able to pay a large land-tax to the government. The soil, though not naturally fertile, has been so much improved as to be rendered extremely productive. Few plants, except on the hills, are found in a natural state; and the face of the country, even in the mountain-slopes (which are formed into terraces as in some parts of Italy and Persia) is diligently cultivated. In Yezo and parts of the other islands, large tracts of land lie untilled, for lack of laborers or of scientific methods of farming. In the S. districts rice is raised in very large quantities, as it forms a principal article of food with the inhabitants; but wheat is little grown and held in light estimation; barley, also buckwheat, several varieties of beans, potatoes, melons, pumpkins, and cucumbers, are raised abundantly; and the fruits of the semi-tropical latitudes, the orange, lemon, grape, peach, and mulberry (the last of which is carefully reared for silkworms), are both plentiful and fine in quality. Ginger and pepper are the chief spice-plants. Cotton is grown in considerable quantities, and tobacco, introduced by the Portuguese Jesuits, is very generally raised in the S. islands. The grand object of cultivation, however, next to rice, is the tea-plant, brought hither from China in the 9th cent. There are few countries better supplied with useful and ornamental timber than is *J.* The ornamental plants are extremely beautiful, and the skill of the Japanese florists has excited the high commendation of European floriculturists. — *Zoöl.* Pasturage in a country inhabited by a people eating scarcely any animal food except fish, and so well supplied with cotton and silk that they feel no want of wool for the fabrication of cloth, must necessarily be quite unimportant. Buffaloes and oxen are not numerous, and are used only for draught labor, and there are but few sheep — the progeny of a breed introduced by the Dutch soon after their settlement in the country; the horses are of inferior size; there are neither mules nor asses; but hogs, once found only in the neighborhood of Nagasaki, are now more numerous throughout the country. Dogs are numerous, bearing a close resemblance to huge foxes. The *Chin*, or silken-haired, pug-nosed lap-dogs of *J.* are believed to be the progenitors of the King Charles Spaniel. Cats abound, and those in the S. and E. have no tails, or at least mere stumps. Among the wild animals may be enumerated bears, wild boars, and dogs, foxes, deer, monkeys, hares, and rats. Birds are numerous and of many varieties. Among reptiles, snakes are not infrequent, and one variety is of enormous size. Tortoises also, and lizards are of common occurrence, and the islands, particularly towards the S., are infested with noxious insects, as fleas, scorpions, and centipedes. The seas teem with immense quantities of fish, affording a staple article of food to the inhabitants, and giving employment to numerous fishermen. The salmon, herring, eel, perch, cuttle-fish, with many others, are caught in myriads. Oysters, also, of a peculiar and delicious kind, are extremely abundant, and are used almost exclusively as food by many of the poorer natives about Tokio, whore the fisheries lie. Whales and narwhals frequently visit the coast, and are caught by harpooning. The flesh is eaten.— *Manuf.* The manufacturing industry of the Japanese has very greatly widened of recent years. The artificers in copper, iron, and steel have a high reputation; and the sword-blades of *J.* rank second only to those made in Khorassan. Telescopes, thermometers, and a variety of scientific and philosophical instruments of good quality are now made by Japanese workmen, many of whom possess a high degree of mechanical ingenuity. Glass-making and blowing are becoming staple branches of art in *J.* Printing by means of wooden blocks was introduced in the 13th century, but the use of movable metal type is now becoming quite general. Engraving on wood has reached a high state of progress. Silk fabrics of good quality are manufactured to an extent sufficient to supply the home demand, and cotton manufactures, recently introduced, are in a flourishing state. The porcelain products of *J.* excel even those of China. The art of lacquering furniture with gold, silver, and various pigments, the secret of which was till lately almost exclusively confined to the Japanese, and hence called *japanning*, is practised with great success. Good paper is made from the maceration of the mulberry and other barks, the fibres of which are used in the manufacture of cordage. Japanese houses are built on one model, differing in size and costliness of material, while from the palace down there reigns a rigid simplicity in form and furniture. The frequency of earthquakes necessitates the use of the lightest materials, which are wood and paper; and with these the danger from fire is so great that costly ornamentation would be thrown away. Of shipbuilding and navigation the Japanese possess a slight knowledge, which was for centuries prevented from being increased by a law which compelled the people to build their ships in a particular manner, somewhat similar to that of the Chinese junks. That law is now repealed, and scores of first-class, modern sailing-ships and steamers are now owned or manned by the Japanese. — *Trade and Com.* The internal trade of *J.* is very extensive; and a variety of regulations are in force, the object of which is to protect and encourage home industry. Foreign commerce was, until within the last few years, vigorously opposed and rigorously excluded by the government, in consequence of the attempts formerly made by the Portuguese Jesuits to Christianize the people. An edict, published in 1637, made it a capital offence for the natives to trade into other countries; and their seamen even, when accidentally cast on foreign shores, were, on their return, subjected to severe examination, and sometimes tedious imprisonment, to purify them of the supposed pollution contracted abroad. In recent years, the combined efforts of the American and European governments have brought about a more liberal state of things. By treaties made with the U. States in March, 1854, with Great Britain in Oct., 1854, with Russia and the Netherlands in 1855, with France in 1859, with Portugal in 1860, with Prussia and the Zollverein in 1861, with Switzerland in 1864, with Italy in 1866, and with Denmark in 1867, the six Japanese

Fig. 1436. — PAIR OF VASES OF JAPANESE PORCELAIN.

(Presented by the Emperor of Japan to the publisher of this Encyclopedia as a mark of his Majesty's appreciation of the work.)

ports of Nagasaki, Kanagawa (Yokohama) Nügata, Osaka, Hiogo (Kobe), and Hakodato were thrown open to foreign commerce. Several other ports have recently been opened. Yokohama has until recently been the most flourishing port in the empire, but Hiogo, the outlet for the rich products of central Japan, is now a formidable rival, and surpasses Nagasaki, whose trade largely depends on the Takashima coal-mine. Until late years the balance of trade was much against *J.*, but at present the imports and exports approach a balance. The trade is largest with Great Britain and the United States, which latter country in 1903 imported $44,142,562 of Japanese goods, and sent $20,924,862 in return. The chief articles of import are sugar, cotton yarn, metals, kerosene, and shirtings; those of export are raw and manufactured silk, tea, rice, copper, lacquer work, pottery, bronzes, camphor, furs, seaweed, tobacco, &c. The trade of *J.* with foreign countries is steadily increasing, and several lines of steamers run to the Pacific ports of the U. S. and Canada. The former considerable importation of cotton and woollen goods has fallen off, and there has sprung up a considerable demand for raw cotton and cotton yarn, while cotton goods of Japanese manufacture have become articles of export. The tea trade of *J.* is mainly with the United States. The number of foreigners now resident in *J.* is considerable, in addition to the foreign military garrisons at Yokohama, and the sailors of the mercantile marine and of the various navies. The postal service is based on the American system. The English outnumber all the other foreigners, followed by the Americans, French, Germans and Dutch. Money accounts are kept in the *yen* and *sen*—1 *yen* = $1, 1 *sen* = 1 cent. The foreigners keep accounts in the Mexican or in the American trade-dollar. The Japanese coinage is on the decimal system, and are of gold, silver, and copper, corresponding to the American in value. The new mint at Osaka, furnished with the finest modern machinery, turns out the very best specimens of modern coinage, stamped and milled. There is also a national paper currency, engraved in a modern style that defies the counterfeiter. The denominations of the paper corresponds to the metallic currency. A system of national banks similar to the American has been introduced, and their issues of "greenbacks" resemble ours. The old issues of paper and the curious old coins, ingots, &c., have disappeared from view. In 1897 it was determined to adopt the gold standard, and steps were taken by the government to increase their holdings of that metal. The standard of weight is the *kin* = 1·325 Eng. lbs.; of the heavier weights, the *kwamme* = 100 *kin*. The measure of length is the *shaku* = 1 Eng. ft. The *tsubo* = 6 Eng. ft. sq. = 36 sq. ft., is the unit of superficial measure. For road distance, the *ri* = 2·44 Eng. m. is used.—*Govt., &c.* From the earliest ages until the year 1196, the govt. of *J.* was an absolute monarchy, the emperor, called the Mikado, residing at Kioto, and governing the various provinces by means of governors. In the year 1196, Yoritomo was appointed *Seii Tai shogun*, or "barbarian-chastising commander-in-chief." Yoritomo fixed his capital at Kamakura, about 20 m. from the present city of Tokio, and while nominally exercising military rule over the entire empire in the interest of the Mikado at Kioto, in reality used his position for his own aggrandizement. Thus was begun that dual system of government in *J.* which has been so little understood by foreigners, and which has given rise to a vast mass of inaccurate and often nonsensical writing about "spiritual" and "temporal" emperors in *J.* There never was but one real emperor in *J.*, and he was and is the Mikado. The Mikado, remaining in Kioto, surrounded by courtiers of the highest rank, and dwelling in a capital filled with priests, learned men, and nobles of high blood, but possessed of no land, was the fountain of honor, preferment, and appointment; and, though overawed by the military commander at Kamakurra, or Yedo, was in reality the only source of power. The Shogun was never anything else than a military commander who usurped the authority to make war, treaties, and laws. From the time of Yoritomo in 1196 until 1868, the power of the Shogun increased, and when, in 1854, Com. Perry appeared in the Bay of Yedo, and made a treaty, the remarkable spectacle of the envoy of a great nation making a treaty with an inferior and a subordinate was witnessed. Rarely in the history of diplomacy has such a strange mistake been committed. All the treaties made prior to 1868 were made with the Shogun without the Emperor's consent. In order to deceive the foreigners, and to make them believe that the Shogun (or military commander) had power to make treaties, the Shogun's government invented the title of *Taikun* (or "Tycoon," as commonly spelled, which means "Great Prince," or "Exalted Sovereign." This title was never before known or used in *J.*, and is a pure Chinese word. The signing of the treaties by the Shogun without the Mikado's consent, was the cause of his speedy downfall. Properly, the Shogun was one among many daimios in the empire who all owed allegiance to the Mikado. By superior wealth and resources, the Shogun had long surpassed the other daimios, but his arrogant assumption of power in dealing with foreigners roused the wrath of the powerful southern daimios against him. Gradually the power of the Shogun became weakened, while the tide of actual power set toward Kioto. In 1867, the daimios assembled at Kioto, by which time the Mikado had so far recovered his ancient power as to depose one Shogun and appoint another. In January, 1868, the three powerful clans of Satsuma, Choshiu, and Tosa, having obtained possession of the Mikado's palace, and having control of his person, by a bold *coup d'etat*, proclaimed that the Shogunate was ended, and the ancient form of government restored. The Shogun, having set out with a large army from Osaka to Kioto, to punish the bold reformers, was met at Fushimi, near Kioto, by a resolute force of the southern clansmen and fired on. This battle was the first of a war that lasted two years, between the adherents of the Mikado and those of the Shogun. In 1870, peace reigned throughout the empire, and in 1871 the feudal system was abolished, the daimios surrendering their incomes and the registers of their clans, and retiring to private life, receiving a pension ample for their needs, and permission to travel abroad. The government of

Fig. 1437. — JAPANESE WOMEN: MOTHER, DAUGHTER, AND SERVANT.

J. is now substantially as it was prior to the twelfth century, modified by the necessity of modern politics. The Emperor is assisted by a Prime Minister and two Junior High Ministers. Under these are seven *sangi*,

JAPAN, KOREA AND MANCHURIA

SCALE OF MILES

0 60 100 200 300

Capital of Country. ❋ Treaty Ports... Wiju ○

Railroads..... Proposed Railroads.....

Fortifications.. ✢ Navy Yards... Δ Submarine Cables.....

Principal Water Routes with Distances in Nautical Miles.....

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Longitude from Greenwich East

JAPAN, KOREA AND MANCHURIA.

Japan.....N 5
Area sq. m. 147,655
Pop....43,763,158

Korea.....G 5
Area sq.m.82,000
Pop....16,000,000

Manchuria....G 2
Area sq m. 363,610
Pop.....8,500,000

CITIES-TOWNS

Japan.

Pop. Thousands.

1,440 Tokyo....N 6
821 Osaka.....L 6
353 Kioto.....L 6
244 Nagoya...M 6
215 Kobe.....L 6
193 YokohamaN 6
122 HiroshimaK 6
107 Nagasaki .H 7
83 Kanazawa .M 5
83 Sendai .....O 4
78 Hakodate..O 3
66 Fukuoka ...J 7
63 Wakayama L 6
61 Tokushima .L 6
61 Kumamoto .J 7
59 Toyama ....K 6
58 Okayama. K 6
56 Otaru.....O 2
53 Kagosbima .J 2
53 Niigata.....N 5
50 Sakai..... .K 6
44 Fukui..... M 5
42 Akamagaseki J 9
42 Shizuoka...N 6
37 Kofu .....N 6
37 Sasebo .... H 7
37 Sapporo... O 2
36 MatsuyamaK 7
36 Kotchi.....K 7
35 Naba.....—
35 Yamagata .O 4
35 Himeaji....L 6
34 Hirosaki ...O 3
34 Matsuye ...K 6
34 Mayebashi .N 5
34 Takamatsu.L 6
34 Otsu .....P 2
33 Mito..... O 5
33 Tsu..... M 6
32 Morioka.. .O 4
32 Saga .....K 6
32 UtsunomiyaN 5
31 Gifu.. . . M 6
31 Takachi...M 5
31 Matsumoto M 5
31 Nagano.....N 5
30 Takasaki...M 5
30 Yonezawa..O 2
30 Nara.....L 6

or counsellors. These, with numerous under-counsellors, secretaries, etc., all constitute the *Dai jo kuan*, or Supreme Government Council. The administrative government is carried on by ten ministers, the heads of as many departments. In 1881 the Emperor conferred upon the Empire the forms of a constitutional government, and directed "that after 1890 *J.* shall be governed by a national assembly, the attributes of which we will settle hereafter." The result of the civil war of 1868 was the reduction of the usurping Shogun to the rank of an ordinary daimio, and a complete change in the policy of the empire. Whereas, formerly the country was divided into hundreds of petty principalities, with varying coinage, laws, customs, etc., and cursed with the spirit of sectionalism and clannishness, the empire is now ruled from one centre; and national systems of law, education, postage, coinage, and the details of administration are developing a higher type of national life. Among the reforms inaugurated and carried out by the Mikado's government are the abolition of the feudal system, a system of national posts and schools, the elevation of the Eta or parrah class to citizenship, the establishment of lighthouses, telegraphs, railways, dockyards, and most of the appliances of modern invention, the opening of permanent diplomatic relations with foreign nations, and a general advance along the path of modern progress. The laws of *J.*, once so vindictive and cruel, are now in course of revision, and a new code, far more merciful, discriminating, and in accordance with

Fig. 1438.—THE FIRST JAPANESE AMBASSADORS SENT TO THE UNITED STATES.

western jurisprudence, is in operation throughout the empire.—*Army and Navy.* The army, which is now wholly national, was modelled until recently on the French system, instructed by French officers and armed with Chassepot rifles, but since 1888 has closely followed the German method of drill and organization. At the beginning of 1897 it numbered on a war footing a total of about 300,000, but by 1904 the war footing army had increased to nearly 500,000. Much attention has been given of late years to the navy, dock yards have been constructed, and armored vessels of the best modern types purchased, whose efficiency was amply shown in the late war with China. In 1897 *J.* had over 50 war vessels. In 1904 it had over 180, including 12 battleships, 3 coast defense ships, 8 armored and 16 protected cruisers, 112 torpedo boats and destroyers, with minor cruisers, gunboats, etc. Railroad building has been actively pursued, there being now about 6000 miles of line, while the telegraph is in wide use.—*Education.* The school system has been much developed and the new methods in use in the U. S. have been introduced. There is an Imperial university at Tokio, with agricultural, commercial and technical colleges, &c. Large institutions of learning, in which foreign languages and science are taught, exist in other large cities, such as Osaka, Kioto, Nagoya, Niigata, Nagasaki, Hiroshima, &c.—*Religion.* Shinto, the indigenous cult, and Buddhism, modified and developed by the Japanese mind, are the prevailing religions. Buddhism is the most popular, but Christianity is spreading.—*Inhabitants.* *J.* is divided (since 1868) into three classes—noblemen, gentry and common people. The old caste system is practically abolished. The people of *J.* are evidently a mixed breed of Malay, Mongolian and Aino, or aboriginal, blood. They are in general well made, active and supple, having yellow or dark-red complexions, small, deep-set eyes, short, flattish noses, broad heads, and thick, black hair. The type of features varies greatly among the various classes, the oval face and prominent features being characteristic of the higher, and the round, flat face of the lower classes. The dress of the Japanese consist of several loose silken or cotton robes, worn over each other, the family arms being usually woven into the back and breast of the upper garment. To these is added, on state occasions, a robe of ceremony; and the aristocracy wear with it a sort of pantaloons called *hakama* (resembling a full-plaited petticoat drawn up between the legs), with one or more swords, according to the rank of the parties. The old ceremonial dress, the swords, and the shaven crown and top-knot, are either wholly in desuetude or are rapidly disappearing. The women are now abandoning the old customs of staining their teeth black, shaving off their eyebrows, painting their lips purple, etc. European dress has been largely adopted by officials and others of the male sex, but the women retain their ancient picturesque robes. Hats are in general only worn in rainy weather; but the fan is an indispensable appendage to all classes of the Japanese. Their gait is awkward, owing partly to their clumsy shoes; but that of the women is the worst, in consequence of their so tightly bandaging their hips as to turn their feet inwards. On the other hand, they do not deform themselves by confining their feet in tight shoes, like the Chinese. Polygamy is not practised even by the nobles, and far more freedom is permitted to the female sex than in China; many are well educated, and almost all play on musical instruments. Concubines are kept in numbers varying according to the means of the owner; but they hold a rank much inferior to that of wives. Prostitutes abound in the large cities, but they never ply their trade in public, being rigidly kept within a special quarter called the *Yoshiwara.* The great bulk of the people appear intelligent, and desirous of increasing their knowledge by inquiries; they study medicine and other sciences, and some recent students have made scientific observations of great value. The history of the country has been written with great care by some of the native writers; and their works on botany and zoölogy contain good descriptions and often very fine engravings of the plants and animals indigenous to their island. Poetry, also, is cultivated, and there is a prevalent taste for music. The Japanese language has no affinity to that of the Chinese, nor, indeed, to any known Asiatic language, except that of the Ainos, who inhabit Yezo and Karafto. It is a polysyllabic tongue, has an alphabet of 47 letters, and is written in four different styles of characters, one of which (the *katakana*) is used mainly by the males, while another (the *hiragana*) is appropriated to the females. The Chinese character also is in use among the learned.—*Cities, &c.* Besides the cities already mentioned, the other principal places are Kanazawa, Fukui, Sendai, Shidzuoka, Hirosaki, Yonezawa, Gifu, Hamamatsu, Takamatsu, &c.—*Pop.* The census of 1900 gives a total pop. of 44,260,604, the males exceeding the females by about 400,000.—*History.* Marco Polo was the first to make known to Europeans the existence of a country called by him *Zipangu*, but since proved to be identical with *J.* In 1542 Mendez Pinto, a Portuguese, was cast away on these shores, and a Portuguese settlement from Malacca was soon after made at Nagasaki, the commercial relations of which, with the inhabitants, were very considerable and highly lucrative to the settlers till the interference (as before stated) of Jesuit missionaries put an end to all traffic. The Dutch in 1600, obtained a footing in the way of trade, and the Russians made similar efforts. Finally, the efforts of Europe, with that of the U. S., obtained treaties, which opened *J.* to the world. Feb. 1889, a new Constitution was promulgated, establishing important reforms, such as, a parliament, the right of suffrage to all men of twenty-five and over, who pay a certain tax, liberty of speech, of religion, and the right to hold public meetings, nor can judges be removed, except by special legislation. See JAPANESE ART, JAPAN-CHINESE WAR, and JAPAN-RUSSIAN WAR in SECTION II., also *the Mikado's Empire.*

Japan', *n.* A work varnished and figured in the manner practised by the natives of Japan.

—*a.* Of or pertaining to japan work, or Japan; as, a *Japan* glass.

—*v. a.* To cover with a thick coat of hard, brilliant varnish, and embellished with figures; to make black and glossy; to varnish.

Japanese', *a.* (*Geog.*) Belonging to Japan.

Japanese', *n. sing.* and *pl.* A native, or the natives, of Japan.—The language of the natives of Japan.

Japanese Pepper, *n.* (*Bot.*) See XANTHOXYLLON.

Japanese Wax, *n.* (*Bot.*) See RHUS.

Japan'ner, *n.* One who varnishes after the manner of the Japanese.

Japan'ning, LACQUERING, *n.* (*Arts and Trades.*) The method of giving a hard and highly-polished surface to articles made of wood, metal, papor, or leather. It is applied to tea-trays and bread-baskets of iron or papier-mâché (see PAPIER-MÂCHÉ), boxes and tea-caddies made of wood, candlesticks, snuffers, and a great variety of articles of every-day use. *J.*, when applied to common tea-trays of sheet-iron, saucepans, grates, and other articles of hardware, merely consists in covering the surface of the metal with a hard and lustrous black varnish. In iron bedsteads of a common kind, the metal frame and laths are merely painted with a coloring-matter mixed with a clear transparent varnish. When applied to wooden bedsteads, wash-stands, chairs, &c., it consists in coating the same with coloring-matter which has been mixed with turpentine instead of oil. In the better kinds of japanned-work, there are four separate stages, —priming, putting on the ground, putting on the pattern in gold or colors, and finishing. The first stage consists in covering the article to be japanned, if it be made of wood, with a composition of size and whiting, to produce evenness and smoothness of surface; but this is said to be detrimental to the durability of the coats of varnish that are laid on it, from its brittle nature, so it is seldom applied unless the wood be soft and porous. For articles made of hard close-grained wood and metal, a simple coat of varnish is the only priming required. When this preliminary coat is quite dry, the ground is put on, which consists of various kinds of coloring-matter of an earthy nature, mixed with copal varnish, or varnish made of seed-lac or gumanimi. One or two coats of this mixture are applied, after which the work receives three or four coats of varnish, and is dried in a stove. If a ground of gold, silver, or bronze be desired, the work is coated with japanner's gold size, over which metallic dust is spread to produce the required appearance. When the ground is dry, the pattern is produced upon it by painting it in colors prepared in the same manner, or by gilding with gold size and gold dust, if the whole, or any part of the pattern, is to be produced in gold. Sometimes engravings that have been printed on paper prepared for the purpose, with a coating of gum or isinglass, are transferred to the surface of the work, the print being laid face downwards on the ground, and the paper removed by moistening the back with warm water, which dissolves the gelatinous matter on which the impression has been taken. The final stage is that of finishing, which consists in covering the whole work with several successive coats of varnish, each being allowed to become quite dry before the next is applied. When the last coat is thoroughly dry and hard, the surface is polished first with rotten-stone, and afterwards with a little oil. The art derives its name from the island of Japan, where a hard exterior and extremely brilliant polish is put on articles chiefly made of wood, by means of a natural varnish procured from a tree that is indigenous to the east of Asia. This art is sometimes termed *lacquering.*

Japan Sago, *n.* (*Bot.*) See CYCADACEÆ.

Ja'pan, (Sea of,) that part of the N. Pacific Ocean inclosed on the E. and S. by the Japan Islands, and W. by Corea and Mantchooria. It communicates with the Pacific on the E. by the strait of La Perouse, and S. by that of Corea. Breadth, at its widest part, about 540 m.

Ja'pheth. [Heb., enlargement.] (*Script.*) The eldest of Noah's three sons (*Gen.* ix. 27; x. 21), B. 100 years before the flood. He was perhaps the Iapetos, whom Greek legends represent as the progenitor of the Greek race. His seven sons (*Gen.* x. 2–5; 1 *Chr.* i. 5) occupied with their posterity the north of Asia and most of Europe.

Japhet'ic, *a.* Relating to Japheth.

Jap'u, *n.* (*Zoöl.*) A Brazilian species of woodpecker.

Japura, Yupura, or **Hyapura,** (*ha-poo'ra,*) a considerable river of S. America, takes its rise in the Republic of Colombia, on the east slope of the Andes, and flowing a general S. E. and E. course into Brazil, joins the Amazons River about Lat. 3° S., Lon. 65° W. Total length over 1,000 m. The upper part is sometimes called the CAQUETA.

Jar, *v. n.* [Sans. *jarad*, hard; Icel. *jara*, a contention, a battle.] To strike untunably or harshly; to sound discordantly; to contend or clash in words; to scold; to quarrel; to dispute; to clash; to interfere; to act in opposition; to be inconsistent.

—*v. a.* To shake; to cause to tremble; to cause a short tremulous motion in a thing.

—*n.* A rattling vibration of sound; harsh sound; a shake; as, "a trembling *jar.*" (*Holden.*)—Clash of interests or opinions; discord; quarrel.

"Till universal peace confound all civil *jar.*"—*Spenser.*

—The vibration of a pendulum.

—*n.* [Fr. *jarre;* Sp. *jarra;* It. *giarro;* Ar. *jarreh*, a vessel.] A vessel with a large belly and broad mouth, made of earth or glass.

—A certain measure.

Jar (*Electrical.*) See LEYDEN JAR.

Jaragua, (*zha-ra'gwa,*) a town of Brazil, province and comarca of Goyaz, on a small river of the same name; *pop.* 4,000.

—A fine sea-port of Brazil, prov. of Alagoas, near Maçaya.

Jar'ble, *v. a.* To bemire; to wet. [N. of Eng.]—(Also written *jarvel.*)

Jarda'ne. (*Myth.*) The slave of Omphale, who was loved by Hercules, and bore him a son named Alceus, who became king of Lydia, and whose descendants formed the Lydian dynasty of the Heraclidæ.

Jardes, (*järdz,*) *n.* (*Farriery.*) Hard callous tumors in horses, a little below the bending of the ham on the outside.

Jardines, (*har-dee'nes,*) "THE GARDENS," two small groups of islets and rocks off the N. and S. coasts of Cuba, W. Indies.

Jarensk, a town of Russia, cap. of a circle of the same name, 360 m. from Vologda. *Manuf.* Iron wares, and a trade in furs.

Jar'gon, *n.* [Fr. *jargon;* Sp. *xerga;* It. *gergone;* allied to Sax. *girran*, to chatter, to prate.] Confused, unintelligible talk or language; gabble; gibberish; cant.

Jar'gon, Jar'goon, *n.* (*Min.*) One of the varieties of *Zircon*, found in Ceylon.

Jargonelle', *n.* A variety of early pear.

Jargon'ic, *a.* Relating to, or resembling, the mineral called *Jargon.*

Jar'gonium, *n.* [Named from *Jargon*, q. v.] (*Chem.*) An element which was claimed to have been discovered in 1869 by Mr. Sorby, the inventor of the micro-spectro-

scope. The oxide of *J.* was found in combination with zirconia, and probably another oxide in the mineral hyacinth and zircon. The native silicate was colorless, or only slightly colored; but it gave a spectrum composed of more than twelve characteristic lines, which were much more distinct than those produced by didymium. It was afterward shown that Mr. Sorby was in error, and the word has, therefore, passed into disuse.

Jarnac, Guy de Chabot, Sire de, (*zhar'nak,*) a French gentleman of the chamber to Francis I. and Henry II., who fought a duel with a courtier named La Châtaigneraie, in 1547. His adversary defeated him; but, as he stood over him, Jarnac gave him a mortal thrust under the hough. The title *coup de Jarnac* has since been given to treacherous blows. B. about 1570.

Jar'nac, a small town of France, on the Charente, 16 m. from Angoulême. Here the Huguenots were defeated by Henry d'Anjou, afterwards Henry III., March 13, 1569. The Prince de Condé fell in this battle.

Jar'-nut, Pig-nut, Earth-nut, *n.* (*Bot.*) The tuberous root of the *Bussium flexuosum.*

Jaroslav, (*yar'os-lav,*) a government of Russia in Europe, inclosed by Vologda, Kostroma, Vladinir, Tver, and Novgorod; Lat. between 56° 45′ and 59° N., Lon. between 37° 35′ and 41° 30′ E.; *area,* about 14,000 sq. m. The soil is generally not fertile; it hardly supplies the wants of the inhabitants, and forces them to be industrious, so that the province furnishes nearly the whole of Russia with the best carpenters, masons, smiths, &c. The staple industry is dressing, spinning, and weaving flax, which occupies more than 25,000 hands, mostly near Jaroslav, Uglitch, and Vclikoe-Selo. In the northern districts of Mologa and Poshekhonje the whole population of many villages manufacture nails, springs, and other article of hardware. The Volga crosses the government from west to east, and gives a special impulse to its industry. The inhabitants are remarkably handsome, both as to form and feature. *Pop.* 969,642.

Jaroslav, the capital of the above government, on the Volga, 162 m. from Moscow. It consists almost entirely of wooden houses, but contains a large number of churches built of stone. It has a richly endowed seminary, is the see of an archbishop, and residence of a governor, and has several important courts and public offices. *Manuf.* Linen, silk, and Russian leather; also paper, soap, ropes, brass, white-lead, oil, and iron and copper wares. This place was founded in 1025, by Jaroslav, the son of Vladimir the Great. Its prosperity may be ascribed to the introduction of the linen-manufacture by Peter the Great. *Pop.* 37,375.

Jar'ringly, *adv.* In a jarring manner.

Jar'vel, *v. a.* See Jarble.

Jar'vis Channel, in *Washington,* an inlet of the Gulf of Georgia.

Ja'sey, *n.* [Probably corrupted from *Jersey.*] A worsted-wig; a bob-wig.

Jas'hawk, *n.* [Contr. of *eyas-hawk.*] A young hawk.

Jash'er, (Book of,) [Heb., book of the upright,] is the name of a book referred to in two passages of the Old Testament (*Josh.* x. 13; 2 *Sam.* i. 18), but now lost. Some have held that it was the book of Deuteronomy; others, Judges; others, the books of Samuel themselves. St. Jerome and some others were of opinion that it was the Book of Genesis. Bishop Louth, from the poetical nature of the citations from it, considered that it was a collection of national songs, in which opinion he was followed by Gesenius, who thought that it acquired its name, the "book of the upright," from being written in the praise of upright men. The general opinion is that the book of Jasher is one of those writings which perished during the captivity. Dr. W. J. Donaldson published in 1854 a book entitled "*Jasher; Fragmenta archetypa Carminum Hebraicorum in Masorethico Veteris Testamenti textu passim terrellata,*" in which he attempts to restore this ancient record in accordance with his own idea of its scope and contents. He asserts that it was written during the reign of Solomon, probably by Nathan the prophet, assisted perhaps by Gad the seer; and that its object was to show that at first man was upright, but, by following carnal wisdom, had fallen away, while the Israelites were chosen to preserve and transmit this law of uprightness. He believes that it comprised the marrow of what is contained in the sacred scriptures, which were not then written; and that it was subsequently worked up in a careless or arbitrary manner into the books as they now stand, at least as far as the book of Psalms. With this view, he proceeds to build up his imaginary book of Jasher. Whatever in the sacred books exhibits the nature of uprightness, celebrates the victories of the true Israelites, predicts their prosperity, or promises future blessedness, was taken from the book of Jasher. Among the strange results of his arrangement is, that Shem, Ham, and Japheth are the sons of Adam, not of Noah, who is Israel under a figure; Cain and Abel are sons of Shem, and Abraham is the son of Abel. There are also two rabbinical works that bear the title of the "*Book of Jasher,*" — one a moral treatise, written in the end of the 14th century by R. Shabbatai Carmuz Levita, a copy of which, in MS., is in the Vatican Library; the other, a treatise on Jewish laws, by R. Tham, written in the 13th century, and printed at Cracow in 1617. Another mediæval work, in Hebrew (printed at Venice and Prague in 1625), bears the same title, and is said to have been discovered at the destruction of Jerusalem by Titus, and to have been brought to Spain and preserved at Seville. It is probably the work of a Spanish Jew of the 13th century, containing the historical narratives of the Pentateuch, Joshua, and Judges, with many fabulous additions. A clumsy forgery was perpetrated in 1751, by one Jacob Hive, a type-founder in Bristol, who published a work entitled "The *Book of Jasher,* with Testimonies and Notes explanatory of the Text; to which is prefixed various readings; translated into English by Alcuin of Britain, who went a pilgrimage into the Holy Land." This clumsy fraud was revived at Bristol, 1827; at London, 1833, edited by C. R. Bond; and at New York, 1840, edited by M. M. Noah.

Jasmina'ceæ, *n. pl.* (*Bot.*) The Jasmine family, an order of plants, alliance *Echiales.* Diag. 2 distinct lobes to the fruit, 2 stamens, a naked stigma and regular unsymmetrical flowers. They are shrubs, often twining, with the following characters: — Calyx persistent, having 5–8 divisions; corolla regular, 5–8 partite, with imbricated æstivation; stamens 2, included; ovary 2-lobed, 2-celled, with 1–4 erect ovules in each cell; fruit a capsule or a berry; seeds with very little or no albumen; embryo erect. The *Jasminaceæ* are chiefly natives of the East Indies; but a few species are found in other warm regions of the globe. The flowers are generally fragrant. The *volatile oil of jasmine* used in perfumery is chiefly obtained by distillation from the flowers of *Jasminum officinale* (Fig. 1438), and *grandiflorum.* The leaves of some species are very bitter, and have been employed medicinally. The flowers of the species *Nyctanthes arbor-tristis* are used in India for dyeing yellow. The order includes 5 genera and 100 species.

Fig. 1438.
THE COMMON JASMINE.
(*Jasminum officinale.*)

Jas'mine, Jes'samine, *n.* [Fr. *jasmin;* Ar. *jasmen.*] (*Bot.*) The plant of the genus *Jasminum,* and Jasminaceæ, *q. v.*

Ja'son. (*Fabulous Hist.*) A famous hero, son of Æson, king of Iolchos, a city of Thessaly. Peleas having usurped the throne on the death of Æson, the youthful prince was driven from his kingdom. Subsequently, in obedience to the commands of the oracle, *J.* returned to the city of Iolchos and demanded the surrender of the throne to *him,* its rightful possessor; to this the usurper consented, if *J.* would first sail across the Euxine to the kingdom of Colchis, and there punish the perfidious king, Æetes, who had slain a mutual relative. With this *J.* complied, and taking a troop of the bravest Greeks he could get, set sail in the ship Argo, and soon after arrived at the king's court. Æetes readily promised to restore the Golden Fleece, which had been the cause of the kinsman's death, and afford him every satisfaction if he would *only* tame certain savage bulls with brazen hoofs and horns, who perpetually vomited forth flame and smoke, and make them plough a field sacred to the gods. At the same time he was to do some other trifling services, such as killing the dragon who guarded the Golden Fleece, and, finally, to finish all his tasks in one day. By the aid of Medea, the king's daughter, an enchantress, to whom he promised eternal love, *J.* was enabled to accomplish his several feats, and returned to Thessaly with the Golden Fleece and his wife Medea. Growing, however, weary of her exacting love, *J.* divorced Medea and married Glance, the king of Corinth's daughter. In revenge Medea destroyed her own children by Jason, and sent to Glauco a poisoned garment which burned her to death. *J.* was killed soon after, by a beam falling on him from the ship Argo, as he slept one day upon the shore by his beloved vessel.

Jas'per, *n.* [Fr. *jaspe;* Heb. *jaspeh;* Ar. *yashp;* Gr. and Lat. *inaspis.*] (*Min.*) A mineral of the quartz fam., which occurs in the form of rocky masses, often making up large portions of hills of considerable size. In hue, it is of various shades of red, yellow, brown, and green, and sometimes arranged in stripes, when it is called ribbon-jasper. Its varied colors are generally derived from iron in different degrees of oxidation. Jasper is much used for ornamental purposes, on account of its hardness and susceptibility of taking a high polish. Bloodstone, or heliotrope, is a deep-green variety of jasper, with blood-red spots. Touchstone is a velvet-black flinty variety, used for testing the purity of gold alloys. The alloy is rubbed on the stone, so as to leave a metallic streak, and the quality is estimated by the brightness of the color when nitric acid is washed over it. The principal deposit of jasper is the gorge of the Kargon, in Siberia. The labor of cutting out the blocks of jasper at this place is enormous. The workmen drill holes five inches apart, the whole length of the block, to the depth required; into these they drive dry birch-wood pegs, which are kept wet till they expand and break off the mass.

(*Hist.*) This gem, the twelfth in the breast-plate of the Jewish high-priest (*Exod.* xxviii. 20), B. C. 1491, was esteemed by the Greeks and Romans, and is mentioned by Onomacritus, B. C. 500, as the "grass-green jasper, which rejoices the eye of man, and is looked on with pleasure by the immortals." Galen (130–200) recommended the wearing of a jasper hung around the neck, to strengthen the stomach.

Jas'per, in *Alabama,* a post-village, cap. of Walker co., abt. 50 m. N.N.E. of Tuscaloosa.

Jas'per, in *Arkansas,* a post-village, cap. of Newton co., abt. 125 m. N.N.W. of Little Rock.

Jas'per, in *Georgia,* a central co.; *area,* about 365 sq. m. *Rivers.* Ocmulgee river, Cedar, Murder and Rocky creeks. *Surface,* hilly; *soil,* modcrately fertile. *Min.* Gold, iron, jasper, garnet, and granite. *Cap.* Monticello. *Pop.* (1897) 14,500.

—A post-town, cap. of Pickens co., about 55 m. N. of Atlanta, on the A., K. & N. R.R.

Jas'per, in *Florida,* a post-village, cap. of Hamilton co., about 100 m. E. of Tallahassee. *Pop.* about 1,250.

Jas'per, in *Illinois,* a S.E. co.; *area,* about 506 sq. m. *Rivers.* Embarras, and several smaller affluents of the Wabash. *Surface,* mostly level; *soil,* fertile. *Cap.* Newton. *Pop.* (1890) 18,188.

—A township of Wayne co.

Jas'per, in *Indiana,* a N.W. co.; *area,* about 570 sq. m. *Rivers.* Kankakee and Iroquois rivers. *Surface,* generally low, level prairies; *soil,* not very fertile. *Cap.* Rensselaer. *Pop.* (1897) about 12,100.

—A post-town, cap. of Dubois co., on Patoka creek, 120 m. S.S.W. of Indianapolis. *Pop.* (1897) about 1,750.

Jas'per, in *Iowa,* a central co.; *area,* about 720 sq. m. *Rivers.* Skunk river, besides numerous smaller streams. *Surface,* generally level; *soil,* fertile. *Min.* Coal in abundance. *Cap.* Newton. *Pop.* (1895) 25,891. — A township of Adams co.—A township of Carroll co.

Jas'per, in *Mississippi,* a S.E. central co.; *area,* 720 sq. m. *Rivers.* Tallahoma river, and several smaller streams. *Surface,* diversified; *soil,* fertile. *Cap.* Paulding. *Pop.* (1890) 14,785.

Jas'per, in *Missouri,* a S.W. co., adjoining Kansas; *area,* about 672 sq. m. *Rivers.* Spring river, Center, Drywood, Horse, and Muddy creeks. *Surface,* diversified; *soil,* fertile. There are extensive manuf. of pig-lead, zinc, spelter, &c. *Cap.* Carthage. *Pop.* (1897) about 53,500.

—A post-village and township of Jasper co., about 55 m. W. by S. of Springfield.

Jas'per, in *New York,* a post-township of Steuben co. *Pop.* (1890) 1,690.

Jas'per, in *Ohio,* a thriving township of Fayette co.

—A post-village of Pike co., about 65 m. S. of Columbus.

Jas'per, in *Tennessee,* a post-village, cap. of Marion co., on the Sequatchy river, about 114 m. S.E. of Nashville, on N., C. & St. L. R.R. Grain is largely raised and shipped. *Pop.* (1897) 980.

Jas'per, in *Texas,* an E. co.; *area,* about 840 sq. m. *Rivers.* Neches and Angelina rivers. *Surface,* even; *soil,* generally very fertile. *Cap.* Jasper. *Pop.* 5,592.

—A post-village, cap. of the above co., about 55 m. S. of San Augustine. *Pop.* (1897) 550.

Jas'perated, *a.* Mixed with jasper.

Jas'pery, Jaspi'dean, Jaspid'eous, *a.* Containing, resembling, or relating to, jasper.

Jas'ponix, *n.* (*Min.*) The purest horn-colored onyx; ribbon-jasper.

Jassy (*yas'sy*), formerly the cap. of Moldavia, and now the chief town of a district in Roumania, 200 m. N. of Bucharest. *Pop.* 90,000. *J.,* the ancient *Jassiorum Municipium,* founded by the Emperor Trajan about 105, was conquered by the Turks in 1538, stormed by the Tartars in 1659, and delivered by John Sobieski in 1686. The Russians took it in 1739 and in 1769, but on each occasion restored it to its native princes. A great fire in 1783 destroyed part of *J.* and the castle built by Trajan. The Austrians occupied it in 1788, and peace was concluded here between Russia and Turkey, Jan. 9, 1792. The Russians again occupied it from 1807 to 1812. It revolted in March, 1821, and was sacked by the Janissaries, Aug. 10, 1822. The Russians re-occupied it in 1828, and quitted it in 1834. It has few manufactures, but an important trade in grains and wine. In the vicinity are mineral springs and a water-cure establishment.

Jaszbereny, (*e'ass-be-re-ne,*) a town of Hungary, on the Zagya, 38 m. from Pesth. Attila, king of the Huns, is said to have been buried in an old fortress of this place. *Pop.* 20,250.

Jateorhi'za, *n.* (*Bot.*) A genus of plants, ord. *Menispermaceæ.* The root of the species *J. palmata,* sometimes named *Coccalus palmatus,* forms the Calumba of the Materia Medica. Calumba is extensively used as a tonic; its properties are evidently due to a crystalline alkaloid, called Calumbine. The plant is indigenous in the forests of Mozambique, whence the roots are imported.

Jat'iva, in Spain. See Xativa.

Jat'ropha, *n.* [Gr. *iatros,* physician, and *trophe,* food, in allusion to the medicinal properties of the plants.] (*Bot.*) A genus of plants, order *Euphorbiaceæ.* The seeds of *J. purgans* and those of *J. multifida* are called physic-nuts. They yield, by pressure, fixed oils, and both the oils and seeds are drastic cathartics. The oil of *J. purgans* is commonly known as *oil of wild castor-seeds,* or *J. oil,* and is well adapted for burning. It is sometimes employed to adulterate East Indian croton-oil. The seeds of *J. gassypifolia,* called bastard French physic-nuts, also possess purgative properties. The Cassava, formerly included in this genus, is now placed in the genus *Manihot,* q. v.

Jauer, (*yow'er,*) a town of Prussia, in Lower Silesia, on a river of same name, 10 miles from Liegnitz. *Manuf.* Woollen and cotton goods, &c. *Pop.* 8,636.

Janja, (*how'ha,*) or Atanjanja, a river of Peru, joins the Apurimac about 145 m. N.E. of Huancavelica. Its lower part is called Mantaro.

—A town of Peru, cap. of a prov. of its own name, about 125 m. E. of Lima.

Jaun, *n.* The same as Jamb, *q. v.*

Jaun'dice, (*jan'dis,*) *n.* [Fr. *jaunisse,* from *jaune,* yellow; It. *giallo.*] (*Med.*) A disease characterized by yellowness of the skin and eyes, the urine being saffron-colored. It is usually preceded by symptoms of a disordered state of the liver and digestive organs, and loss of appetite, irregular bowels or constipation, colic, pains, nausea, headache, languor, &c. Sooner or later, the

yellow color begins to appear, usually first in the eye, then the face, and then the whole body. Sometimes the yellowness is the first symptom. From the time of the appearance of the yellow hue, many of the preliminary symptoms may diminish. The shades of yellowness are various, from a light yellow to a deep orange hue, and in some cases greenish, or even almost black, — when it is known as green or black jaundice. Jaundice arises from the excretion of bile being prevented and retained in the blood, or re-absorbed and diffused throughout the system. It depends upon various and different internal causes. Any kind of pressure upon the excretory ducts will occasion it, as by tumors, &c.; by the ducts being filled up by mucus, inspissated bile, or biliary calculus. Fits of anger, fear, alarm, &c., have sometimes been directly followed by jaundice. It may also occur as a symptom of acute or chronic inflammation of the liver. A high atmospheric temperature long continued has also a decided influence in producing certain forms of this disease. In general, we may expect a favorable termination of this disease, except when it depends upon structural disease of the liver, or supervenes suddenly upon some great mental or bodily shock. The greenish or darkish varieties are the most dangerous. The course and duration of this disease is various, in some cases disappearing or proving fatal as early as the fourth day; in others continuing for months or years. Some kinds of *J.* are absolutely irremediable, others will pass away without any treatment. In general, the obvious treatment is to promote the secretion of the bile and to favor its removal. In general, mercury forms an essential part in its treatment, together with active purgatives. If there be any spasmodic pain in the right side, opium and the warm bath should be used; a mild diet, and the avoidance of all stimulants to be strictly enjoined.

Jaun'diced, *a.* Affected with the jaundice. — Prejudiced: seeing with distempered vision.

Jaunt, *v. n.* [Old Eng. *jaunce*, from old Fr. *jancer*, to stir, as a horse in the stable till he sweats.] To ramble here and there; to make an excursion.

—*n.* A short journey; a trip; a tour; an excursion; a ramble.

Jaunt'ily, *adv.* See JANTILY.

Jaunt'iness, *n.* The quality of being jaunty.

Jaunt'ing-car, *n.* A light, low-backed, Irish car.

Jaunt'y, *a.* See JANTY.

Jauru, (*zhow-roo'*,) a river of Brazil, joins the Paraguay River about Lat. 15° S., after a general S.E. course of about 220 m.

Ja'va, a large and fertile island of the Eastern Archipelago, belonging to the Dutch, and the centre, as well as the most valuable of their Indian possessions. It lies between 6° and 7° S. Lat., and 105° and 115° E. Lon.; separated from Sumatra on the W. by the straits of Sunda; E. by those of Bali from the island of that name; having N. the Sea of Java between it and Borneo, and S. the Indian Ocean. Its general configuration is not unlike that of Cuba, except that it is not curved, and it also resembles Cuba in its extent, fertility, products, and commercial value, while it supports eight times her amount of population. Its length W. to E. is about 660 m.; breadth varying from 40 to 130 m. *Area*, inclusive of the adjacent island of Madura, 51,336 sq. m. *Phys. Geog.* Most part of the surface is mountainous. A mountain-chain, obviously of volcanic origin, runs W. and E. entirely through the centre of the island; its peaks varying in elevation from 5,000 to probably 12,000 feet. The S. coast is usually bold and rocky, and is generally unsafe for shipping; the N. shore is, on the contrary, low and marshy, and has many tolerable harbors and roadsteads. Rivers numerous, but very few of any size. The largest is the Solo, running through nearly the centre of the island, and disemboguing on the N. coast, opposite Madura. Its length may be estimated at 400 m., ⅛ths of which are navigable for vessels of 200 tons. There are many extensive swamps, and in the mountains numerous small lakes occupy the craters of extinct volcanoes. —*Geol., &c.* Basalt, hornblende, and other volcanic formations are abundantly intermixed among the primary rocks of the mountain-region. On either side of the central mountain-chain coarse limestone and argillaceous iron-stone are very prevalent strata, and are covered, especially in the lower lands, with a volcanic mould of great richness, in some places 12 feet in depth. The N. coast rests entirely upon coral. Metals are few. Mineral springs of various kinds are met with, besides naphtha and petroleum wells. *Clim.* The seasons are divided into the *wet* and *dry*. The former accompanies the monsoon from October to March or April; the latter, the E. monsoon, which lasts during the rest of the year. On the N. coast, where the thermometer sometimes rises to 90° Fahr., the climate is very unfavorable to Europeans; but in the interior, at an elevation of 4,000 feet, where the temperature ranges between 50° and 60°, no deleterious influence is to be apprehended from atmospheric conditions. Earthquakes are frequent, but thunderstorms are unknown. *Veg. J.* has a most luxuriant vegetation. It is distinguished by the variety and superior excellence of its fruits and other vegetable products, which comprise many of the most valuable common to tropical latitudes. Dense forests of teak and other heavy timber, useful for shipbuilding, cover a great part of the interior, especially toward the E. end of the island. The Javanese teak is inferior in hardness and solidity to that of Malabar, while superior in those respects to that of Burmah, and is said to excel every other variety in durability. The sago and many other palms, the very curious pitcher-plant (*Nepenthes distillatoria*), and two virulently poisonous plants, the *auchar*, and the *chetik*, are indigenous. The latter, which is peculiar to this island, is a large creeping shrub, and is identical with the celebrated *upas*, (q. v.) — *Zoöl.* The aggregate number of mammalia has been estimated at 50, including the royal and black tigers, rhinoceros, several kinds of deer, wild hog, wild Java ox, and the buffalo. Crocodiles and other large reptiles infest the mouths of the rivers and marshes; and upwards of twenty venomous serpents are enumerated, including some of enormous size. Birds are in immense variety; the bird of Paradise visits *J.*, and the edible nests of the sea-swallow (*hirundo esculenta*) form an important and valuable article of trade for the Chinese market. This singular product is obtained in the greatest perfection from deep, damp, but inaccessible caves along the rugged parts of the coasts. These are government property, and, when they can be suitably guarded, produce a considerable revenue. The nests are taken twice a year, and assorted in three qualities, the best being the whitest, or those taken away before they have been soiled by the food or *faces* of the young birds. The supply of nests being limited and unsusceptible of increase, and being, at the same time, highly prized by the rich and luxurious Chinese, on account of their real or supposed invigorating powers, they bring very high prices; the choicest sorts selling for from $25 to $30 per lb., and the inferior for about $6. *Agric. Prod.* The vast majority of the Javanese are a people of husbandmen. The wealth of a province or village is measured by the extent and fertility of its land, its facilities for rice irrigation, and the number of its buffaloes. Four-fifths of the entire population are engaged in agriculture, and it is probable that if the whole island were under cultivation, no area of land of the same extent in any other quarter of the globe could surpass it, either in the quantity, quality, or value of its vegetable productions. At present, only about one-third part of the surface is under culture; and yet, *J.* not only produces enough of corn for its own consumption, but is the granary of the E. Archipelago, and even of Singapore. Within the last 20 years, the cultivation of all its great staples has wonderfully increased; and the progress of the island has been more remarkable than that of either Brazil or Cuba. The husbandry of the Javanese may be said to exhibit, upon the whole, neatness and order. It is true, the implements of agriculture are few and simple; but, as well as the processes of husbandry, they are more perfect, and imply a greater degree of intelligence than those of any Asiatic people, the Chinese excepted. Rice is a principal article of cultivation, and is the leading food of all classes; it is grown everywhere where water is to be had. Coffee, however, is the great commercial staple of the island, and is immediately followed by sugar, the growth of which has nearly kept pace during late years with the coffee-crop. Since 1839, the govt. spice monopoly has been done away with, and the cultivation of spices permitted without restriction. Indigo succeeds well, and bids fair to rival that of India. Tobacco, cotton, pepper, the cereals, a great variety of pulses and vegetable oils, the sweet potato, cocoa, betel, &c., are all extensively produced. The greater part of the soil of *J.* is claimed as govt. property, and it is only in the residencies in the N.W. part of the island that there are private estates, chiefly owned by Hollanders. The bulk of the natives are held in strict subjection as agricultural laborers. The landlords, whether govt. tenants or private landowners, enforce one day's gratuitous work out of seven from all the laborers on their estates, and they are besides entitled to as much work as they choose to claim, on the sole condition of paying each man the wages ruling in the district. Great power is vested in the Resident, and his European and native officials, to enforce a strict adherence to all the laws regulating labor. The whole of the exports from *J.* to the Netherlands are carried by, and the property of, the *Nederlandsche Handel Maatschappij*. This trading corporation was established at Amsterdam in 1824, with a capital of 37,000,000 fl. ($15,540,000), but which was subsequently reduced to 24,000,000 fl. ($10,000,000). Manuf. are few, and principally domestic, comprising coarse cotton fabrics, leather and saddlery, matting, bamboo-work, match-locks, copper-wares, &c. The coins in circulation are similar to those current in Holland, but Chinese weights are invariably used in all commercial transactions. — *Govt. &c.* Since 1832, this island has been governed in an absolute manner, under a colonial policy introduced by General Van den Bosch, in that year, and known as the "culture system." It is based in principle on the forced labor of the natives, which is directed to produce not only a sufficiency of food for themselves, but the largest possible quantity of colonial produce best suited for the European market. To carry out the "culture system," there exists a complicated bureaucratic administration, the functions of which descend into the minutiæ of public and private life. The whole of *J.*, including the neighboring island of Madura, is divided into 24 provs., or *residencies*, each governed by a Resident, who has under him an Assistant-Resident, and a number of inspectors, called *Contrôleurs*. All these functionaries must be citizens of the Netherlands, and the higher class must have gone through an examination at the college of Delft, near Rotterdam. The Resident and his assistants exercise absolute control over the provs. in their charge; not, however, directly, but by means of a vast hierarchy of native officials, who receive either salaries or percentages on the amount of produce cultivated by the natives. The latter are controlled by these means in all their actions, and incited to labor; and the better to insure such control, a register is kept by the Resident of the number of people in each village, with the name and condition of each, and the minutest particulars affecting their character and occupation. No person is allowed to move from one place to another without a passport, and no occupation of any kind can be engaged in without the permission of the authorities. There is a regular and unceasing personal intercourse between the native chiefs and the contrôleurs, who act as the immediate agents of the Resident. The superior administration of *J.* and executive is in the hands of a Governor-General, appointed by the Dutch govt., who is at the same time viceroy of all the Netherlands Indies. He is assisted by a council of 5 members, who, however, have no share in the executive, and can act only as a Court of Advice. The Governor-General represents the legislative as well as executive authority. He has the right of passing laws and regulations for the administration of the colony, which remain in force until sanctioned or disallowed by the States-General of the mother-country. He is also commander-in-chief of the naval and military forces stationed in the East Indian seas.—*Army, &c.* The regular army numbers averages about 30,000 men, chiefly European infantry. The navy comprises several gun-boats, frigates, and corvettes, and 25 smaller craft, sloops-of-war, &c.—*Religion, &c.* It is impossible to say precisely when Hindoo civilization and religion were introduced into *J.*, though it must have been very early in the Christian æra. Buddhism was superadded about the 10th cent., and there are many old Buddhist temples scattered throughout the island, memorials of the former prevalence of that religion. The most famous is that called *Boro Buddor*, the most elaborate monument of the Buddhist style of architecture anywhere existing. It is a 9-storied pyramid of a square form, measuring about 400 feet across. The five lower stories consist of narrow terraces running round the building, rising on an average about 8 feet one above the other. On their outer edge is a range of buildings of the most various and fantastic outline, covered with small spires and cupolas of various shapes and forms, the principal ones covering 436 niches, occupied by as many statues of Buddha as large as life, seated in the usual attitude with his legs crossed. Above are three circular terraces, the outer ornamented with 32, the next with 24, and the upper with 16 small domes, each containing a seated statue of Buddha, which can be seen through the open work of their roofs. The whole is surmounted by the pagoda. Towards the close of the 14th century, Mohammedanism found a footing in the eastern provinces, and soon became the faith of the country. Actually, however, the widest toleration prevails, in matters of religion, and ministers of all Christian sects are equally remunerated by the govt. Education is equally advanced. — *Inhab.* The Javanese, as a people, are the most progressive of any in the Occidental Archipelago. They only, of those inhabiting that zone, have a native calendar, and have made any progress towards civilization. The germs of art and science they appear to have received from the Hindoos. Slavery, so called, was abolished in *J.* by a law which came into operation on Jan. 1, 1860. — *Hist.* The history of this island cannot, with any degree of confidence, be traced further than the latter portion of the 12th cent. From that time down to the establishment of Islamism, at the close of the 15th cent., the religion of the people was a modified Hindooism, and a number of independent states existed in the island. The Hindoo kingdom of Mojopahit was overthrown by the Arabs in 1478. The Portuguese reached *J.* in 1511, and the Dutch in 1595. The latter founded Batavia in 1619, and gradually consolidated their power on the island, though for a long period engaged in internecine conflicts with the native princes. In 1811, the island was taken by the English, who held it till 1816, when, in pursuance of the treaty of Paris, it was restored to the Hollanders. *Chief Towns.* Batavia (the cap.), Surabaya, and Surukarta. In 1883, *J.* was visited by earthquakes and volcanic eruptions, causing the death of about 75,000 people. *Pop.* (1890) 23,862,820.

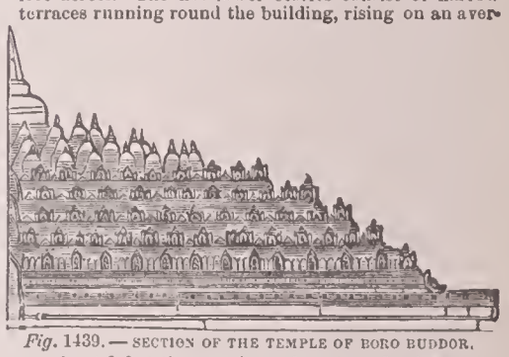


Fig. 1439. — SECTION OF THE TEMPLE OF BORO BUDDOR.

Ja'va, in *New York*, a post-township of Wyoming co., about 18 m. W.S.W. of Warsaw. The village is called JAVA CENTER. *Pop.* (1890) 1,824.

Ja'van. (*Script.*) The fourth son of Japheth, (*Gen.* x. 2, 4.) This name is the same as the Greek *Iōn*, whence comes Ionia.

Javanese', *a.* (*Geog.*) Relating to Java.

—*n. sing.* and *pl.* A native, or the natives, of Java.

(*Geog.*) Belonging, or having reference to Java.

Java Sea, that portion of the Eastern Sea which lies between the island of Java to the south, Sumatra to the west, the islands of Banca, Billiton, and Borneo to the north, and the island of Celebes to the east. The width of the sea between Java and Borneo is 250 miles, and it is crossed by two approved routes to China, the one by the Straits of Macassar, and the other by Pitt's Passage. Lon. between 107° and 115° E.

Java Village, in *New York*, a post-village of Wyoming co., about 58 m. S.W. of Rochester.

Jav'elin, *n.* [Fr. *javeline;* Sp. *jabalina*, from *jabali*, a wild boar; Port. *javali;* Ar. *khinzar ghabali*, a mountain or wild boar.] A sort of spear about five and a half feet long, the shaft of which is made of steel-pointed wood.

Jaw, *n.* [Fr. *joue;* Ir. *giall*, probably allied to Lat. *gena;* Gr. *genus;* Sans. *hanu*, the jawbone, the jaw.] The bones of the mouth in which the teeth are fixed; the maxillary-bone. See MAXILLA.

(*Naut.*) One of the two sides forming the semi-circular opening at the thick end of a gaff or boom. The object is to half encircle the mast, so that, the other half circle being completed with rope, the spar may at once be prevented from leaving the mast, and permitted to run up and down when necessary.

(*Railroads.*) That part of the framing of a railroad-car or truck by which an axle-box is held laterally, and in which it may move vertically; an axle-guard. (U. S.)

—Wordy abuse; insolent language; as, give me none of your *jaw*. (Vulgar.)

Jaw, *v. a.* and *n.* To abuse grossly; to scold. (Vulgar.)

Jaw'ana, DJAWANA, JOANA, a town in the island of Java, 30 m. from Jepara. It is the residence of a governor, and has a fort. Its trade is considerable. *Pop.* 12,800. —The river Jawana is one of the largest on the N. coast of Java, taking its rise in an inland lake, and falling into the Java Sea. It is navigable by praam to its source.

Jaw'bone, *n.* The maxillary-bone; the jaw.

Jawed', *a.* Having jaws; denoting the appearance of the jaws.

Jaw'-tooth, *n.* One of the grinders.

Jaworow, (*ya-vor'o,*) a town of Austria, in Gallcia, 25 m. from Lemberg, where Catharine, empress of Russia, was first seen by Peter the Great; *pop.* 4,200.

Jaw'y, *a.* Relating to the jaws.

Jaxt, (*yakst,*) a river of Germany, rising near Ellwangen, and, after a course of 100 m. joining the Neckar 7 miles from Heilbronn.

Jay, *n.* (*Ornith.*) [Fr. *geai;* Sp. *gayo*, jackdaw; allied to Fr. *gai;* Sp. *gaytero*, showy, and *gayar*, to variegate, from the brilliancy of its plumage. See GAY.] (*Zoöl.*) A genus of Insessores birds (*Garrulus*, Cuvier), differing from the genus *Corvus* by having weaker mandibles, terminating in a sudden and nearly equal curve. The tail is cuneiform, not long; and the slender feathers of the forehead can be erected like a crest. The European jay (*Corvus glandarius*, Linn.) nidificates in woods, and builds a simple nest of sticks and slender twigs; the female lays five or six eggs, of a grayish ash color, mixed with green, and faintly spotted with brown. The young associate with the parents till the following spring, when they separate to form new pairs. The Blue jay, *Garrulus cristatus*, is a N. American species, E. of the Missouri, is smaller than the European, but more elegant, with a tail much longer in proportion; the head is handsomely crested, with loose silky plumes; bill black; legs brown; the whole bird is of a fine blue color on the upper parts, with the wings and tail marked by numerous black bars; neck encircled with a black collar; under parts blossom-color, with a slight cast of blue; tail tipped with white; legs, feet, and thighs of a dusky brown. Its note is less discordant than the European jay, but its manners are very similar. It is a great destroyer of Indian corn, often assembling in large flocks to devour it.

Fig. 1440. — BLUE JAY. (*Garrulus cristatus.*)

Jay, JOHN, an eminent American jurist and statesman, and first chief-justice of the U. States, b. at New York, 1745. After studying at Columbia (then King's) College, he was admitted to the bar, and in 1774 was chosen a delegate to the first American Congress, at Philadelphia. In 1776 he was chosen president of the congress; in 1777 he was a member of the convention which framed the constitution of New York; and in the following year he was appointed chief-justice of that State. He was next sent as minister plenipotentiary to Spain; and, in 1782, was appointed one of the commissioners to negotiate a peace with Great Britain. The definitive treaty having been signed in September, 1783, he returned to the U. States; and in 1794 was sent as envoy-extraordinary to Great Britain, where he concluded the boundary treaty which has been called after his name. In 1795 he was elected governor of his native State; this post he continued to occupy till 1801, when he declined a re-election, as well as a re-appointment to the office of chief-justice of the U. States, and passed the remainder of his days in retirement. D. 1829.

Jay, WILLIAM, son of the preceding, b. 1779, was one of the most active advocates of the abolition of slavery, and the author of several works in aid of the same cause. These were collected and published at Boston, with the title *Miscellaneous Writings on Slavery*, 1854. He was one of the founders of the American Biblical Society, and served as President of the Peace Society. In 1832, he edited his father's correspondence, and wrote a biography of him, publishing the work under the title of *The Life and Correspondence of John Jay.* Died 1850.

Jay, in *Indiana*, an E. co., adjoining Ohio; *area*, about 396 sq. m. *Rivers.* Salamonie and Wabash rivers. *Surface*, undulating; *soil*, generally fertile. *Cap.* Portland. *Pop.* (1890) 23,478.

Jay, in *Maine*, a post-town and township of Franklin co. *Pop.* (1897) about 1,580.

Jay, in *Michigan*, a former post-office of Saginaw co.

Jay, in *Minnesota*, a township of Martin co.

Jay, in *New York*, a post-town and township of Essex co., about 145 m. N. of Albany. *Pop.* (1897) 2,010.

Jay, in *Pennsylvania*, a flourishing township of Elk co.

Jay, in *Vermont*, a post-town and township of Orleans co. *Pop.* (1897) 692.

Jay, in *Indiana*, a village of Jay co., on the Grand Rapids & Indiana R.R.

Jay Hawk, in *California*, a village of El Dorado co., about 12 m. W. of Placerville.

Jaynes'ville, in *Mississippi*, a post-village of Simpson co.

Jay'sou, in *Kentucky*, a post-office of Todd co.

Jays'ville, in *Ohio*, a post-village of Darke co.

Jay'ville, in *New York*, a P. O. of St. Lawrence co.

Jaz'erant, *n.* (*Mil.*) A frock of mail without sleeves, lighter than the hauberk.

Jealous, (*jĕl'us,*) *a.* [Fr. *jaloux;* Lat. *zelus*, zeal, jealously; Gr. *zelos*, eager rivalry.] Suspicious; apprehensive of rivalship; uneasy, through fear that another has withdrawn, or may withdraw from one the affections of a person he loves, or enjoy some good which he desires to obtain; suspicious that we may not enjoy the affection or respect of others, solicitous to defend the honor of; concerned for the character of; suspiciously vigilant or fearful; anxiously careful and concerned for.

Jeal'ously, *adv.* With jealousy or suspicion; emulously; with suspicious fear or vigilance.

Jeal'ousness, *n.* The state of being jealous; suspicion.

Jeal'ousy, *n.* [Fr. *jalousie.*] The quality of being jealous; a painful suspicion of rivalry; that passion or peculiar uneasiness which arises from the fear that a rival may rob us of the affections of one whom we love, or the suspicion that he has already done it; suspicious fear or apprehension; caution or vigilance; solicitude for the welfare or honor of others.

Jean, (*zhahn.*) The French name for JOHN, *q. v.*

Jean, or JEAN BABEL, a seaport-town near the N.W. extremity of the island of Hayti, W. Indies.

Jean d'Angely, (St.,) (*-danzh'le,*) a town of France, dep. Charente Inferieure, on the Boutonn, 35 m. from La Rochelle. *Manuf.* Wine and brandy. *Pop.* 6,243.

Jean de Luz, (St.,) (*-de(r)'loos,*) a town of France, dep. Basses Pyrénées, 11 m. from Bayonne. It is defended by two forts. *Pop.* 2,500.

Jean Pied de Port, (St.,) (*-pe'ai de(r) por,*) a town of France, dept. Basses Pyrénées, on the Nive, on the Spanish frontier, 23 m. from Bayonne. It has a citadel, commanding three passes which lead from France into Spain. *Pop.* 1,800. Near this place is the pass of Roncesvalles, where, in 778, the army of Charlemagne was defeated, and Roland mortally wounded.

Jeanne d'Arc, See JOAN OF ARC.

Jeannette Island, a small rocky island in the Arctic Circle, lat. 76° 47′ N., long. 158° 56′ E., discovered by de Long (U. S. N.) in 1880, and named after his ship.

Jears, *n. pl.* (*Naut.*) See JEERS.

Je'ba, GEBA, a river of Guinea, W. Africa. At its mouth; Lat. 11° 41′ N., Lon. 15° 14′ W., it is 15 m. across.

Jeb'usites, one of the chief tribes of the land of Canaan; they dwelt in the mountains to the west of the Dead Sea, and to the N. of the Hittites. Their capital was Jebus, afterwards called Salem; and, according to some, was the site, at a later period, of the city of Jerusalem.

Jeconi'ah, king of Judah, began his reign at the age of 18, about 599 B. C. He sat on the throne, however, only a short time, being carried prisoner to Babylon by Nebuchadnezzar, when the latter took Jerusalem. He remained in captivity till the year 560 B. C., and was then placed by Evil-Merodach among the princes of his court. Zedekiah, his brother, succeeded him.

Jed, a river of Scotland, co. of Roxburgh, rises on the English Border, and flows N. to join the Teviot below Jedburgh.

Jed'do, the cap. of Japan. See YEDO.

Jed'do, in *Michigan*, a post-office of St. Clair co.

Jed'do, in *New York*, a post-village of Orleans co.

Jed'do, in *Ohio*, a post-office of Jefferson co.

Jed'do, in *Pennsylvania*, a post-borough of Luzerne co., about 22 m. S. of Wilkesbarre.

Jed'do, in *Wisconsin*, a post-office of Marquette co.

Jee, *v.a.* and *n.* See GEE.

Jeel, *n.* A shallow lake or morass. (India.)

Jeer, *v. n.* [G. *scheren*, O. G. *scerran*, to shear, cut, lop, shave; G. *scherz*, jest, joke, *scherzen*, to quiz, to jeer.] To scoff; to deride; to flout; to gibe; to mock; to utter severe, sarcastic reflections.

—*v. a.* To make a mock of; to treat with scoffs or derision.

—*n.* Railing language; scoff; taunt; biting jest; flout; gibe; mockery; derision; scornful ridicule.

Jeer'er, *n.* A scoffer; a railer; a scorner; a mocker.

Jeer'ingly, *adv.* With raillery; scornfully; contemptuously; in mockery.

Jeers, *n. pl.* See JEARS.

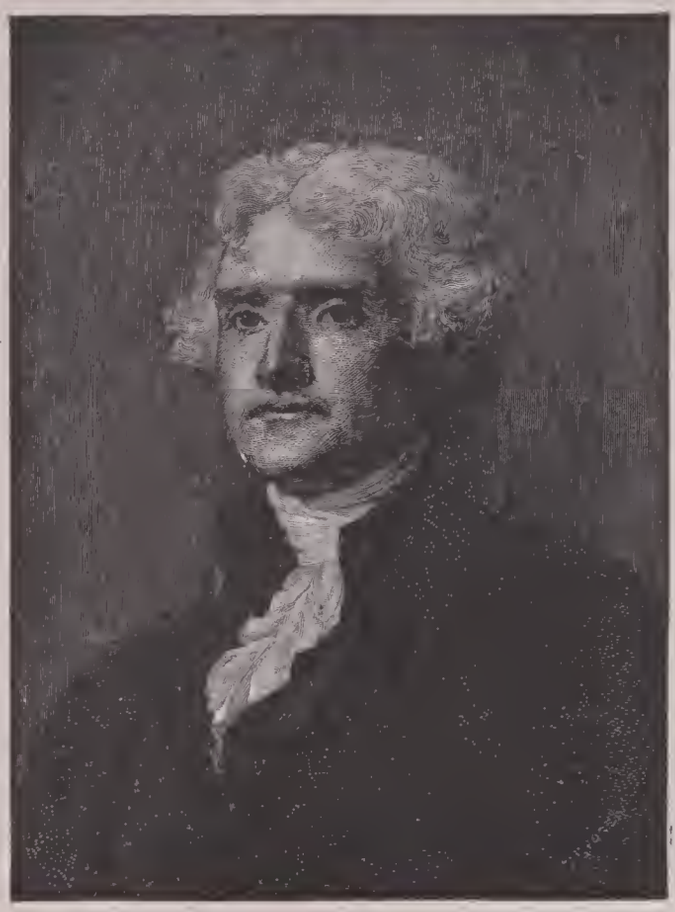
Jef'ferson, THOMAS, third President of the U. States, b. 1743, at Shadwell, Albemarle county, Virginia. His father had been employed in various boundary surveys, and aided in constructing the first map of Virginia ever made. He died in 1757, bequeathing to his son the lands on which the future president had been born and for many years lived. After receiving a tolerable preliminary education, Jefferson studied at the college of William and Mary at Williamsburg, and learned a great deal from its professor of mathematics, a Scotchman, Dr. Small, whose varied services to his early culture are gratefully acknowledged in his autobiography. He was a student of law, when at the door of the lobby of the House of Burgesses of Virginia he heard with sympathy and admiration Patrick Henry declaim against the Stamp-Act. Two years later he went to the bar, and was rising to eminence in his profession, when he diverged permanently into politics. In 1769 he had been elected a member of the House of Burgesses for his native county, and made an unsuccessful effort for the emancipation of the negroes. He soon became one of the leaders of those younger members of the house who were for bold measures, and who disliked the timidity of their senior fellow-representatives. On the dissolution of the Virginia Assembly by the Governor, after its assertion of the right of self-taxation, Jefferson joined Washington, Patrick Henry, and others, in protesting. In 1773 he aided in organizing the standing committee of correspondence, which proved an important agency in the American revolution, maintaining as it did a constant communication between the disaffected provinces. He was a member of the first Virginia convention which met independently of the British authorities. To the General Congress Jefferson was sent as one of the delegates of Virginia, and the original draught of the Declaration of Independence was his handiwork. He retired from Congress to labor in the Legislature of his native State, where he procured the abolition of entails, and after a long struggle, that of the Anglican Church establishment. He advocated a general scheme of State education, and, with even less success, a plan for the gradual emancipation of the slaves. He does not seem to have had any military ambition or skill, and contented himself during the war of independence with discharging the civil duties of the governorship of Virginia, to which he was elected in 1779. He had twice previously declined, for domestic reasons, a mission to Europe; which he accepted, however, at the peace, when he was sent to Paris ostensibly to regulate, in the company of Franklin and Adams, treaties of commerce with the nations of Europe. In these negotiations his principal success was with Frederick the Great, then on the verge of the grave. He succeeded Franklin as minister at Paris, and witnessed with sympathy the early scenes of the French revolution. On his way home, towards the close of 1789, he was met by the offer of the Secretaryship of State, which he accepted rather reluctantly, as he would have preferred to return to Paris. He entered on his duties in March of 1790, and was the leader of the Democratic section of the Cabinet in opposition to the Federal one led by Alexander Hamilton; and the President, Washington, had no small difficulty in making his divided ministry work. At the close of 1793, Jefferson resigned, and returned to his plantation to occupy himself with study and agriculture; but he could not forget politics, and in his retirement he directed in some measure the councils and operations of the Democratic Anti-Federalists, the party opposed to Washington. In 1796 he was put forward as a candidate for the Presidency, but was defeated by the Federalist Adams, becoming, however, Vice-President. At the Presidential election of 1801, he and Aaron Burr received an equal number of votes, and the House of Representatives, with whom the decision then lay, elected Jefferson. The great event of his first Presidency was his negotiation of the purchase of Louisiana, which had been ceded to France by Spain. At the expiry of his term of office he was reëlected by a large majority. His second Presidency was distinguished by the promptitude and stringency with which he laid, and for a year maintained, an embargo on all outward-bound American vessels, when the commerce of the States was threatened with obstruction by Napoleon and the policy of the Berlin and Milan decrees on the one hand, and the right-of-search claims on the other. At the close of his second Presidency, *J.* withdrew definitively into private life, still taking a keen interest,

Fig. 1441. — THOMAS JEFFERSON.

however, both in public and local affairs. Through his exertions the University of Virginia was founded in his native State. His later years were a little clouded by pecuniary difficulties, the result of obligations incurred

John Jay

1745–1829



Thomas Jefferson

1743–1826

in behalf of a friend. He applied to the Legislature of Virginia to allow him to dispose of his property by lottery, to raise a fund in his necessity. The application was preceded by the composition of a paper entitled *Thoughts on Lotteries*, and which contains a brief retrospect of the services which he had rendered to his country, prominent among them being the changes he had effected in the Legislature of his native State. An autobiography which he had commenced, and which is printed in his works, stops unfortunately at the close of his residence in Paris. His *Notes on Virginia*, drawn up on the eve of his mission to Europe at the request of a member of the French legation in Philadelphia, have been often printed. He died on the 4th of July, 1826, the very day on which, 50 years before, the declaration of independence had been signed, and on the same day died, also, John Adams. It was with *J.*'s election to the Presidency that began, as M. Guizot has observed, the long rule of the Democratic party in the U. S., and to *J.*'s leadership that triumph is mainly due. His *Memoirs, Correspondence, and Papers* were edited by his grandson, T. J. Randolph, in 1829; but that collection has been superseded by the publication, in 1853, of his *Writings, Official and Private*, augmented from MSS. left by Randolph, purchased by Congress, published by its order, and edited by H. A. Washington. A life of *J.*, by Professor Tucker, was published in 1837; and another, with contributions from family papers, by Henry S. Randall, in 1858.

Jef'ferson, in *Alabama*, a N. central co.; *area*, about 1,092 sq. m. *Rivers.* Locust Fork of Black Warrior river, and some less important streams. *Surface*, diversified; *soil*, fertile. *Min.* Coal and iron. There are very important manufactures of iron at Birmingham and elsewhere in the co. *Cap.* Birmingham. *Pop.* (1897) about 101,000.

—A post-village of Marengo co.

Jefferson, in *Arkansas*, a S.E. central co.; *area*, about 840 sq. m. *Rivers.* Arkansas, and Bayou Bartholomew. *Surface*, nearly level; *soil*, fertile. *Cap.* Pine Bluff. *Pop.* (1890) 40,881.

—A township of Sevier co.

Jefferson, in *California*, a village of Nevada co., on the South Yuba river, about 24 m. E.N.E. of Nevada.

Jefferson, in *Colorado*, a Northern Central co.; *area*, about 860 sq. m. *Rivers.* South Fork of Platte river, Bear and Clear creeks. *Surface*, hilly; *soil*, fertile. *Min.* Gold. *Cap.* Golden. *Pop.* (1890) 8,450.

—A post-village of Park co., about 70 m. S.W. of Denver.

Jefferson, in *Georgia*, an E. co.; *area*, about 640 sq. m. *Rivers.* Ogeechee river, and Big, Brier, and Rocky Comfort Creeks. *Surface*, level; *soil*, fertile. *Min.* Agate, carnelian, chalcedony, and burrstone. *Cap.* Louisville. *Pop.* (1890) 17,213.

—A village of Camden co.; also called JEFFERSONTON.

—A post-village, cap. of Jackson co., 18 m. N.W. of Athens, on the Ga. R. R. *Pop.* (1897) 564.

Jefferson, in *Florida*, a N. co., adjoining Georgia on the N., and washed by Appalachee Bay on the S.; *area*, about 600 sq. m. *Rivers.* Ocilla river, and some smaller streams. Micosukee lake is in the N.W. part. *Surface*, rolling; *soil*, fertile, *Cap.* Monticello. *Pop.* (1897) 15,750.

Jefferson, in *Illinois*, a S. co.; *area*, about 580 sq. m. *Rivers.* Big Muddy river, and some smaller streams. *Surface*, mostly level; *soil*, moderately fertile. *Cap.* Mount Vernon. *Pop.* (1890) 22,590.

—A former post-village and township of Cook co.; was annexed to Chicago in 1880.

Jefferson, in *Indiana*, a S.E. co., adjoining Kentucky; *area*, about 370 sq. m. *Rivers.* Obio river, and several less important streams. *Surface*, diversified; *soil*, exceedingly fertile. *Cap.* Madison. *Pop.* (1890) 24,507.

—A post-town of Clinton co., about 20 m. E.S.E. of Lafayette. *Pop.* (1897) about 1,100.

—A township of Adams co.

—A township of Allen co.

—A township of Boone co.

—A township of Carroll co.

—A township of Cass co.

—A township of Elkhart co.

—A township of Grant co.

—A township of Greene co.

—A township of Henry co.

—A township of Huntington co.

—A township of Jay co.

—A township of Kosciusko co.

—A township of Miami co.

—A township of Morgan co.

—A township of Newton co.

—A township of Noble co.

—A township of Owen co.

—A township of Pike co.

—A township of Pulaski co.

—A township of Putnam co.

—A township of Sullivan co.

—A township of Switzerland co.

—A township of Tipton co.

—A township of Washington co.

—A township of Wayne co.

—A township of Wells co.

—A township of Whitley co.

Jefferson, in *Iowa*, a S.E. co.; *area*, about 452 sq. m. *Rivers.* Des Moines and Skunk rivers, and Big Cedar and Warrior creeks. *Surface*, generally undulating; *soil*, fertile. *Products.* Corn, large; wheat, oats, butter, wool, live stock. *Min.* Stone-coal in abundance. *Cap.* Fairfield. *Pop.* (1895) 16,405.

—A township of Adair co.

—A township of Allamakee co.

—A township of Bremer co.

Jef'ferson, in *Iowa*, a township of Buchanan co.

—A township of Butler co.

—A township of Clayton co.

—A township of Dubuque co.

—A township of Fayette co.

—A post-town and township, cap. of Greene co., 55 m. N.W. of Des Moines, on the C. and N.W. and the Des M. N. & West. R.Rs. Is in the natural-gas belt, and has some local industries. *Pop.* (1895) 2,260. The town is sometimes called NEW JEFFERSON.

—A township of Harrison co.

—A township of Henry co., about 40 m. S. by W. of Iowa City.

—A township of Johnson co.

—A township of Lee co.

—A township of Louisa co.

—A township of Madison co.

—A township of Mahaska co.

—A township of Marshall co.

—A township of Polk co.

—A township of Poweshiek co.

—A township of Ringgold co.

—A township of Taylor co.

—A township of Warren co.

—A township of Wayne co.

Jefferson, in *Kansas*, a N.E. co.; *area*, about 568 sq. m. *Rivers.* Kansas river, Grassbopper creek, and several smaller streams. *Surface*, undulating; *soil*, fertile. *Min.* Coal and limestone. *Cap.* Oskaloosa. *Pop.* (1895) 17,173.

—A township of Jackson co.

—A township of Jefferson co.

Jefferson, in *Kentucky*, a N.W. co., adjoining Indiana; *area*, about 375 sq. m. *Rivers.* Ohio river, and Floyd's Fork of Salt river. *Surface*, diversified; *soil*, very fertile. It was one of the original cos. of Kentucky, and is now the most populous. *Cap.* Louisville. *Pop.* (1897) about 201,500.

Jefferson, in *Louisiana*, a S.E. parish, forming a part of the delta of the Mississippi; *area*, about 390 sq. m. *Rivers.* Mississippi river, and numerous small streams, and Barataria bay and an arm of the Gulf of Mexico wash its S.W. borders. *Surface*, low, and along the borders occupied by extensive marshes; *soil*, exceedingly fertile. *Cap.* Gretna. *Pop.* (1890) 8,450.

—A former post-village of the above parish, on the Mississippi river; now annexed to New Orleans.

Jefferson, in *Maine*, a post-town of Lincoln co., about 20 m. S.E. of Augusta. *Pop.* (1897) 1,422.

Jefferson, in *Maryland*, a post-village of Frederick co., about 83 m. W.N.W. of Annapolis.

Jefferson, in *Michigan*, a township of Cass co.

—A post-township of Hillsdale co.

—A village of Jackson co., on Raisin river and Clark's lake, about 12 m. S.S.E. of Jackson.

Jefferson, in *Minnesota*, a township of Houston co.

Jefferson, in *Mississippi*, a S.W. co. adjoining Louisiana; *area*, about 490 sq. m. *Rivers.* Mississippi river and some smaller streams. *Surface*, generally level; *soil*, fertile. *Cap.* Fayette. *Pop.* (1890) 18,947.

Jefferson, in *Missouri*, an E. co., adjoining Illinois; *area*, about 640 sq. m. *Rivers.* Mississippi, Big, and Maramec rivers, and Joachim, Plattin, and Sandy creeks. *Surface*, diversified; *soil*, fertile. *Min.* Lead in abundance, and also copper and cobalt. *Cap.* Hillsborough. *Pop.* (1890) 22,484.

—A village of the above co., about 18 m. S. of St. Louis.

—A township of Scotland co.

Jefferson, in *Montana*, a S.W. central co.; *area*, about 1,850 sq. m. *Rivers.* Jefferson, Madison, Missouri, and Wisdom rivers. *Surface*, much diversified; *soil*, in general, fertile. *Cap.* Boulder (or Boulder Valley). *Pop.* (1890) 6,026.

Jefferson, in *North Carolina*, a post-village, cap. of Ashe co., about 200 m. W.N.W. of Raleigh.

Jefferson, in *New Hampshire*, a post-town of Coos co., *Pop.* (1897) 1,085.

Jefferson, in *New Jersey*, a township of Morris co.

Jefferson, in *New York*, a N. co., bordering on Lake Ontario and Upper Canada; *area*, about 1,147 sq. m. *Rivers.* St. Lawrence, Black, and Indian rivers, besides numerous smaller streams. *Surface*, uneven; *soil*, very fertile. *Min.* Iron, lead, and copper. *Cap.* Watertown. *Pop.* (1890) 68,806.

—A post-town of Schoharie co. *Pop.* 1,469.

—A post-village of Schuyler co., on Seneca lake, about 21 miles N. of Elmira. The name of the post-office is WATKINS, and sometimes the village itself receives that name.

Jefferson, in *Ohio*, an E. co., adjoining West Virginia; *area*, about 435 sq. m. *Rivers.* Ohio river, Yellow and Cross creeks. *Surface*, diversified; *soil*, very fertile. *Min.* Stone-coal. *Cap.* Steubenville. *Pop.* (1897) about 41,000.

—A township of Adams co.

—A post-village and township, cap. of Ashtabula co., about 56 miles E. of Cleveland.

—A township of Brown co.

—A township of Clinton co.

—A township of Coshocton co.

—A township of Fayette co.

—A township of Franklin co.

—A township of Greene co.

—A township of Guernsey co.

—A village of Harrison co., about 20 miles W. by N. of Steubenville.

—A township of Jackson co.

—A township of Knox co.

—A village of Wayne co.

—A township of Logan co.

Jefferson, in *Ohio*, a township of Madison co., about 14 m. W. of Columbus.

Jefferson, in *Ohio*, a township of Ross co.

—A township of Scioto co.

—A township of Tuscarawas co.

—A township of Williams co.

Jefferson, in *Oregon*, a thriving post-village of Marion co., on the Santiam river, about 16 m. S. of Salem.

Jefferson, in *Pennsylvania*, a W. central co.; *area*, about 640 sq. m. *Rivers.* Mahoning and Redbank creeks. *Surface*, hilly; *soil*, is generally very fertile. *Min.* Iron and coal. *Cap.* Brockville. *Pop.* (1897) about 46,200.

—A township of Allegheny co.

—A township of Berks co.

—A township of Butler co.

—A township of Dauphin co.

—A township of Fayette co.

—A village of Forest co.

—A post-borough and township of Greene co., about 37 m. S.W. of Pittsburg.

—A township of Lackawanna co.

—A township of Somerset co.

—A township of Washington co.

—A borough of York co., about 12 m. S.W. of York.

Jefferson, in *South Carolina*, a post-township of Chesterfield co.

Jefferson, in *Tennessee*, an E. co.; *area*, about 310 sq. m. *Rivers.* Holston and French Broad rivers. *Surface*, much diversified, the co. being traversed by high ridges of the Allegheny mountains; *soil*, in the valleys fertile. *Min.* Iron-ore. *Cap.* Dandridge. *Pop.* (1890) 16,478.

—A post-village of Rutherford co., about 20 m. S.E. of Nashville.

Jefferson, in *Texas*, an E.S.E. co., bordering on Louisiana and the Gulf of Mexico; *area*, about 960 sq. m. *Rivers.* Neches river, and some smaller streams. Sabine lake occupies its E. border. *Surface*, level; *soil*, fertile. *Cap.* Beaumont. *Pop.* (1890) 5,857.

—A city, cap. of Marion co., on Big Cypress bayon, 162 m. E. of Dallas, on Tex. & Pac., and S., S. & S. R.Rs. Has steamboat connection with New Orleans, via the Red river, and ships cattle and cotton largely; has some manufacturing. Oak and pine timber are abundant, and there is some iron ore in the vicinity. *Pop.* (1897) about 3,500.

Jefferson, in *Virginia*, a village of Powhatan co., on the James river, about 35 m. above Richmond.

Jefferson, in *Washington*, a W. co., bordering on the Pacific Ocean; *area*, about 1,688 sq. m. *Rivers.* Small and unimportant; Admiralty Inlet bounding it on the E. *Surface*, mountainous; *soil*, in some parts fertile. *Cap.* Port Townsend.

Jefferson, in *Wisconsin*, a S.E. co.; *area*, about 570 sq. m. *Rivers.* Crawfish, Bark, and Rock rivers. *Surface*, undulating; *soil*, fertile. *Cap.* Jefferson. *Pop.* (1895) 36,317.

—A township of Greene co.

—A city, the cap. of Jefferson co., 45 m. W. of Milwaukee, on the Chicago and Northwestern R.R. Here are important manufacturing industries, including tanneries, furniture and implement works, flour, saw and woollen mills, boot and shoe factory, pork-packing house, &c. *Pop.* (1897) about 2,850.

—A township of Monroe co.

—A township of Vernon co.

Jefferson, in *West Virginia*, an extreme N.E. co., adjoining Maryland and Virginia; *area*, about 280 sq. m. *Rivers.* Shenandoah and Potomac rivers, and Opequan creek. *Surface*, diversified, the Blue Ridge forming the S.E. border; *soil*, in the valleys very fertile. It is at the N.E. corner of this co. that the Potomac pierces the Blue Ridge. (See HARPER'S FERAY). *County-town*, Charlestown. *Pop.* (1890) 15,553.

Jef'ferson Bar'racks, in *Missouri*, a post-village and U.S. military station of St. Louis co., on the Mississippi river, about 12 m. S. by W. of St. Louis.

Jef'ferson Bridge, in *Montana*, a small village of Madison co.

Jef'ferson City, in *Missouri*, a city, cap. of the State and seat of justice of Cole co., on the Missouri river, about 128 m. W. of St. Louis; Lat. 38° 36′ N., Lon. 92° 8′ W. The city is finely located on an elevated tract, and contains some handsome and substantial edifices. *Pop.* (1897) about 7,000.

Jefferson City, in *Montana*, a post-village, the former cap. of Jeffersou co., on the Missouri river, about 25 m. E. of Helena.

Jefferso'nia, *n.* [Named in honor of President *Jefferson.*] (*Bot.*) A genus of plants, order *Berberidaceæ.* The species *J. diphylla*, the Twin-leaf, or Rheumatism-root, is found in woods from W. New York to Wisconsin and southward. The leaves, which are only two and bipartite, rise immediately from a horizontal root-stock borne upon long petals, and enfolding a handsome white flower, not unlike that of the blood-root, and appearing in April and May. This plant has in the West the reputation of being a stimulant, diaphoretic, and antispasmodic.

Jeffersonite, *n.* (*Min.*) A dark-green foliated variety of pyroxene.

Jef'ferson High'land, in *New Hampshire*, a post-village of Coos co.

Jef'ferson Line, in *Pennsylvania*, a post-office of Clearfield co.

Jef'ferson's River, in *Montana*, the most western of the three branches which unite in Gallatin co. to form the Missouri river.

Jef'ferson Junction, in *Wisconsin*, a post-office of Jefferson co.

Jef'fersonton, in *Georgia*, a village, the former cap. of Camden co., on the Santilla river, about 185 m. S.S.E. of Milledgeville.

Jef'fersonton, in *Virginia*, a post-village of Culpepper co., about 109 m. N.N.W. of Richmond.

Jef'fersontown, in *Kentucky*, a post-village of Jefferson co., about 45 m. W. of Frankfort.

Jef'ferson Valley, in *New York*, a post-village of Westchester co. *Pop.* (1897) about 160.

Jef'fersonville, in *California*, a village of Tuolumne co., about 3 m. W. of Sonora.

Jef'fersonville, in *Georgia*, a post-village, cap. of Twiggs co., abt. 22 m. S.E. of Macon, on M., D. & S. R.R.

Jef'fersonville, in *Illinois*, a post-vill. of Wayne co.

Jef'fersonville, in *Indiana*, an important manufacturing city of Clarke co., on the Ohio river, nearly opposite Louisville, Ky., and about 40 m. below Madison. The town is well built, and among other fine structures coutains the State prison of Indiana and three U. S. hospitals. *Manuf.* Locomotives and other machinery, cars, &c. *Pop.* (1897) about 11,250.

Jef'fersonville, in *Iowa*, a village of Lee co.

Jef'fersonville, in *Kentucky*, a post-village of Montgomery co., about 8 m. E. of Mount Sterling.

Jef'fersonville, in *Michigan*, a village of Cass co.

Jef'fersonville, in *New York*, a post-village of Sullivan co., about 95 m. S.S.W. of Albany. *Pop.* (1897) 720.

Jef'fersonville, in *Ohio*, a post-village of Fayette co., about 4 m. S.W. of Columbus. *Pop.* (1897) 1,320.

Jef'fersonville, in *Pennsylvania*, a post-village of Montgomery co., about 3 m. N.W. of Norristown.

Jef'fersonville, in *Vermont*, a post-vil. of Lamoille co.

Jef'fersonville, in *Virginia*, a village of Tazewell co., about 300 m. W. by S. of Richmond.

Jeffrey, FRANCIS, a distinguished British critic and essayist, b. at Edinburgh, 1773. After graduating at the universities of Glasgow and Oxford, *J.*, in 1794, was admitted to the Scottish bar. In 1802, he became editor of the *Edinburgh Review*. The celebrity which this review at once attained was owing more, in an incalculable degree to him, than to any other of the contributors. In 1813 he married a grand-niece of the famous John Wilkes (*q. v.*), crossing to the United States to bring her home. In 1815, he became the occupant of the beautiful castle of Craigcrook, near Edinburgh (see Fig. 1442 which, improved by his fine taste, became a rendezvous

Fig. 1442. — CRAIGCROOK CASTLE.

for many of the chief *literati* of Europe. From 1816 till he ceased to practise, *J.* was the acknowledged leader of the Scottish bar. In 1820, and again in 1821, he was elected Lord Rector of the University of Glasgow; in 1829, Dean of the Faculty of Advocates, and, in Dec., 1820, Lord Advocate of Scotland, or, in other words, Secretary of State for that division of Great Britain. In this capacity he entered the British House of Commons. In May, 1834, he took his seat on the bench as one of the judges in the High Court of Session, assuming, according to the Scottish fashion, the honorary title of *Lord Jeffrey*. In 1843, Lord *J.* published, though with reluctance, 3 vols., containing selections from his *Contributions to the Edinburgh Review*. D. 1850.

Jeffreys, or **Jefferies,** GEORGE, LORD, an English judge, notorious for his cruelty and injustice, born at Acton, Denbighshire, England, about 1640. He was educated at Westminster school, after which he removed to the Inner Temple, where he studied the law with great application. By attaching himself to the Duke of York, he obtained the appointment of Welsh judge, the honor of knighthood, and the chief-justiceship of Chester. In 1683 he was appointed Chief-Justice of the King's Bench, and, in 1685, Lord-Chancellor. His cruelties on the western circuit towards the deluded followers of the duke of Monmouth were excessive; yet they gave great satisfaction to James II., who, with a grim pleasantry, called this "Jeffreys' Campaign." He supported all the arbitrary acts of the court, and rendered himself so obnoxious to the people, that, when James abdicated the throne, *J.* attempted to leave the kingdom in the disguise of a sailor, but was recognized while drinking in a cellar in Wapping. Perceiving himself discovered, he feigned a cough, and turned to the wall with his pot of beer in his hand; but information of his presence being communicated to the mob, they rushed in, and carried him before the Lord-Mayor, who sent him before the Privy Council, by whom he was committed to the Tower, where he remained for the rest of his life. D. in the Tower of London, 1689.

Jeffrey's Creek, in *S. Carolina*, enters the Pedee River from Marion district.

Jeffries, JOHN PARSONS, an American author, b. in Tell township, Huntingdon co., Tenn., 1815. In 1836 he settled in Wooster, Ohio, where he commenced the practice of law in 1840, and, by his integrity of character and forensic ability, soon attained the first rank of the legal profession. As a writer he was best known by his *Natural History of the Human Races*, published in 1867, a book of great research, much reading and careful analysis, which is regarded as a standard work on ethnology.

Jeffries, in *Pennsylvania*, a post-office of Clearfield co.

Jeffris, in *Wisconsin*, a post-office of Lincoln co.

Jehanghir, A-BUL MUZAFFER NOUREDDIN MOHAMMED, Mogul emperor of Hindostan, and son of the famous Akbar, whom he succeeded on the throne of Delhi in 1605. Unlike most Eastern despots, he was generous, affable, and easy of access to his subjects, and a patron of literature and arts. He wrote memoirs of the first 17 years of his reign, and added to the historical commentaries of Sultan Baber. Nourjehan, his wife, celebrated equally for her beauty and wit, had great influence on the conduct of state affairs, and has been the fertile theme of Oriental poems and romances. An interesting account of the court of *J.* and of the state of India during his reign, was written by T. Roe, who was sent ambassador from James I. to the court of the Mogul in 1615. *J.* D. 1627.

Jeho'ahaz, one of the idolatrous kings of Israel, and succeeded his father, Jehu, in the sovereignty, 876 B. C. His iniquitous courses led to his defeat and humiliation; his country being invaded by the armies of Syria, and suffering such defeats and misfortune, that he could barely muster 10,000 infantry, fifty horse, and only a few chariots to oppose the myriads of the encroaching foe. After a wicked and stormy reign of 17 years, he died, B. C. 850. — Also the name of a king of Judah, commonly called the younger, a son of Josiah, who, obtaining a party, usurped the throne, to the exclusion of his elder brother; his short reign of a few months, however, was brought to a close by his captivity, and committal as a close prisoner to Egypt.

Jehoi'akim, a king of Judah, and a brother of the last-named, was advanced to the throne of Judah B. C. 608 as a tributary of Pharoah Necho, king of Egypt, to whom, as the price of his elevation, he gave 500 talents of silver and one talent of gold. Though strongly admonished by the prophet Jeremiah to walk in the paths of virtue and piety by a strict observance of the law, like too many of his predecessors in Judah and Israel, Jehoiakim relapsed into idolatry and wickedness. His pride, or his obstinacy, brought down upon himself and unfortunate country the vengeance of the Babylonian king, Nebuchadnezzar, who with a vast army crossed the frontiers of Judea, and besieged Jerusalem, rifled the temple of all its sacred and precious vessels, and leaving the humiliated king as his tributary on the throne, returned to Babylon loaded with spoil, and carrying with him some of the principal inhabitants of Jerusalem as hostages of Jehoiakim's good faith, the youthful Daniel being among the captives. The death of this king appears to have been attended with some mystery and suspicion; and his funeral, as had been predicted by Jeremiah, unmourned and dishonored, his body being drawn through the city and cast into a hole without the walls. D. 597 B. C.

Jehor'am. See JORAM.

Jehosh'aphat, king of Judah, ascended the throne at the age of 35, in succession to his father Asa, 914 B. C. During the early part of his reign his people prospered, for he was a pious prince; but having entered into an alliance with Ahab, he suffered many disasters, which were at length averted by prayer and fasting; and henceforth his reign was peaceful and happy. After a reign of 25 years he died, 889 B. C. leaving his crown to his son Jehoram.

Jehosh'aphat, (Valley of.) (*Script.*) The valley of *the judgment of God*, a metaphorical name of some place where God would judge the foes of his people, (*Joel* iii. 2, 12.) There is no ground for applying it to any known locality, or for connecting it, unless for mere illustration, with the great battle of Jehoshaphat described in 2 *Chr.* xx. Since the third century, however, the name has been appropriated to the deep and narrow glen east of Jerusalem, running north and south between the city and the mount of Olives, called in the Bible the brook Kidron. — See JERUSALEM.

Jeho'vah, *n.* [Heb. *yehovah*, from *havah*, or *haiah*, to be.] The Eternal, the Immutable Being; the Scripture name of the Supreme Being. The word itself, which appears to be of Phœnician origin, was held in peculiar veneration by the Jews, who never allowed themselves to pronounce it in the reading of their sacred books, but substituted for it wherever it occurred, the term Adonai, or *Lord*. This practice is maintained even to this day; nor will they *write* the word in perfect Hebrew letters. Hence they have left the word Jehovah imperfectly written over the altar-piece in the synagogue in St. Helen's Place, London; making it to resemble that word, but in reality to signify *the Beloved*.

Jeho'vist, *n.* (*Eccl. Hist.*) One who maintains that the vowel points annexed to the word Jehovah, in Hebrew, are the proper vowels belonging to the word, and express the true pronunciation; — opposed to the *Adonists*.

Jehovis'tic, *a.* Relating to Jehovah; — applied to those parts in the Old Testament, where the Supreme Being is more especially named Jehovah — in contradistinction to those in which he is named *Elohim*.

Je'hu, tenth king of Israel, had been commander in the army of Jehoram, his king, whom he shot with an arrow, and put to death seventy of Ahab's children, and the priests of Baal in the temple of their idol. Afterwards relapsing into idolatry, he was punished by the delivery of his kingdom to Hazael, king of Syria. D. 857 B. C.

Jejune', *a.* [Lat. *jejunus*.] Void; vacant; wanting; hungry.

— Dry; barren; wanting interesting matter.

Jejune'ly, *adv.* In a jejune, empty, barren manner.

Jejune'ness, *n.* State or quality of being jejune; emptiness; poverty; barreuness; particularly, want of interesting matter.

Jejunum, *n.* [Lat. *jejunus*, empty.] (*Anat.*) The second division of the small intestines; — so called because after death it is, almost invariably, found empty.

Jejuy, (*ha-hwee'*,) or XEXUY, a river of Paraguay, enters the Paraguay River about 90 m. above Asunciou.

Jekil-irmak, YESHIL-IRMAK, (*yesh-il ir'mak*,) a river of Asiatic Turkey, rising in Lat. 39° 50′ N., Lon. 37° 40′ E., and after a course of 200 m., falling into the Black Sea on the E. side of the Bay of Samsoun.

Jelalabad', a town of Afghanistan, stands near the Cabul River, in a fertile plain, which is separated from Peshawur by the famous Khyber Pass. *J.* thus occupies a commanding position on the grand route between India and Central Asia.

Jelat'an, JELATMA, JELATONE, a town of Russia, govt. of Tambov, 158 m. N. of Tambov City, on the Oka; *pop.* 7,500.

Jelitz', Jeletz', a town of Russia, govt. of Orel, 110 m. E.S.E. of Orel city, on the Sosna. In the vicinity are extensive iron-mines. *Pop.* 25,000.

Jellachich, DE BUZIM, JOSEPH, BARON VON, Ban of Croatia, general in the Austrian service, born 1801; died 1859. Educated at the military college of Vienna, at eighteen he was made lieutenant in the dragoon regiment of his uncle the vice-ban of Croatia. He spent several years in Italy, and was also employed on the military frontier. In 1842 he rose to the rank of colonel, and obtained the reputation of being a good officer. In 1848, when the Magyars sought to render themselves independent, Jellachich persuaded the Croats that the preservation of the Austrian empire was necessary to their interests. The Croats sent a deputation to Vienna with offers of service, and demanded that Jellachich should be made Ban. The court was only too glad to concur, adding the title of privy councillor and commandant of the Banat. In September, 1848, he encountered the Hungarians and was repulsed, but afterwards marched with eighteen thousand men to the aid of Prince Windischgrätz, who was besieging the insurgent capital. In November he met the Hungarians at Swechat, and gained a victory which decided the fate of the capital. At the conclusion of the Hungarian struggle he received high testimonies of esteem from the imperial court. In 1853, when the Austrians were nearly embroiled with the Turks, he commanded a corps on the lower Danube. The Ban in his youth was a cultivator of the Muses, and his poems were republished in 1851.

Jellied, *a.* [See JELLY.] Brought to the consistence of jelly.

Jelly, *n.* [Fr. *gelée*; Sp. *jalea*, from Lat. *gelo*, to freeze, to congeal; allied to Ar. *jalid*, ice.] The term applied to every transiucent juice which, when cold, thickens, so as to coagulate into a trembling mass; thus the juices of acid or mucilaginous fruits, currants, &c., are called jellies when, by the addition of one part of sugar to two parts of juice, and by boiling, they have obtained a proper consistence. The term is also applied to a concentrated decoction of Iceland moss, rendered agreeable to the taste by the addition of sugar, &c. When the horns, bones, or extremities of animals are boiled to such a degree as to be stiff and firm when cold, without the addition of any sugar, they are also called jellies. Fruit jellies, when diluted with water, are good as medicines in all disorders of the *primæ viæ* arising from alkalescent juices: in their nature they are cooling, saponaceous, and ascescent. Jellies made from animal substances, on the contrary, are alkalescent, and are therefore good in all cases in which acidity of the humors prevails. Animal jelly is soluble in water, glutinous, becomes fluid by heat, coagulates in the cold, and combines with oils and resins.

Jelly-fish, *n.* (*Zoöl.*) A term applied to the animals of the class *Acalephæ* generally, but more especially to the MEDUSÆ, *q. v.*

Jemidar, *n.* A native officer in the East-Indian army, who holds a rank somewhat similar to that of a lieutenant in the regular service.

Jemmapes, (*zhem-map'*,) a small town in Belgium, in the province of Hainault, and renowned for the victory gained here on the 6th of November, 1792, over the Austrians by the French under General Dumouriez and the Duc de Chartres — afterwards Duke of Orleans and Louis Philippe — and which led to the subsequent conquest of Belgium by the French.

Jena (*yā'na*), a town of Germany, in the grand-duchy of Saxe-Weimar, on the Saale, 12 m. from Weimar. In the vicinity is the old castle of Kirchberg, now in ruins. It is principally noted for its university, which was opened in 1558, and which, toward the beginning of the present century, had for its teachers Humboldt, Fichte, Griesbach, Schiller and Schelling. The neighborhood of this town was the scene of the great battle of the 14th October, 1806, in which, at one blow, Bonaparte overthrew the Prussians. *Pop.* 6,123.

Jenkins, in *Alabama*, a post-office of Calhoun co.

Jenkins, in *Iowa*, a township of Mitchell co.

Jenkins, in *Missouri*, a post-office of Barry co.

Jenkins, in *Pennsylvania*, a township of Luzerne co.

Jenkin's Bridge, in *Virginia*, a post-village of Accomac co.

Jenkintown, in *Pennsylvania*, a post-borough of Montgomery co., about 4 m. N. of the city limits of Philadelphia; a favorite suburban resort. *Pop.* (1897) about 2,500.

Lord Jeffreys

1640-1689

Jenks, in *West Virginia*, a post-office of Lincoln co.
Jenks, in *Pennsylvania*, a township of Forest co.
Jenks'ville, in *New York*, a post-village of Tioga co. *Pop.* (1897) about 130.
Jenne, Jinne, (*jen,*) a town of central Africa, situate on the Niger, and on the road from Sego to Timbuctoo, from which it is distant about 280 m. It is a place of considerable commercial importance, and in the shops may be seen printed muslins, scarlet cloth, hardware goods, and other articles of British manufacture. *Pop.* 9,000, all Mohammedans, who allow no "infidels" to enter the town.
Jen'ner, EDWARD, an English physician, the discoverer and propagator of vaccination, B. at Berkeley, Gloucestershire, in 1749. Having studied medicine in London under the first teachers of the day, he took up his residence in his native county, devoting himself to the onerous duties of a general practitioner. Some years later, feeling the fatigue of such ceaseless toil to be too severe for his strength, he obtained a Scotch degree, and limited his practice to physic only. In 1796, after many years devoted to the consideration of, and experiments made with, vaccine lymph (or fluid taken from a pustule on the teat of a cow, and to the efficacy of which he had very early in life been directed) as a specific for small-pox, Dr. Jenner was for the first time enabled to satisfy many medical men of the valid properties of this new agent, and show by a demonstration that the lymph or fluid humor taken from a cow, when inserted under the skin of a patient of any age, acted as a *prophylactic*, or preventive of the disease known as small-pox; such lymph, after a period of 7 to 9 days, producing on the human subject a disease precisely similar to that in the cow from whence it was taken, and that the lymph taken from the pustule on the patient possessed the *same integrity* and preventive qualities, for the use of others, with that obtained from the *pock* on the cow's teat. Though men of enlightened views at once supported *J.* in his theory, and hailed the discovery as the greatest boon conferred on man for ages, his practice was violently opposed by the ignorant and prejudiced: and it was not until a new generation of practitioners had sprung up, that *Vaccination*, as the new doctrine was called (from the Latin word *vacca*, a cow), was universally advocated by medical men. The English government, however, gave this benefactor of humanity a grant of $150,000. D. 1823. — See VACCINATION.
Jen'ner, in *Pennsylvania*, a township of Somerset co.
Jen'nerstown, in *Pennsylvania*, a post-borough of Somerset co.
Jen'nerville, in *Pennsylvania*, a post-village of Chester co., about 70 m. E. by S. of Harrisburg.
—A village of Somerset co., about 62 m. E. by S. of Pittsburg.
Jen'net, *n.* A Spanish horse; a genet.
Jen'neting, *n.* [Corrupted from *junetting*, an apple ripe in June.] A species of apple ripening early.
Jen'nings, in *Indiana*, a S.E. co.; *area*, about 350 sq. m. *Rivers.* Vernon's Fork and Graham's Fork of Muscatatuck river, and Sand creek. *Surface*, diversified; *soil*, fertile. *Cap.* Vernon. *Pop.* (1890) 14,608.
—A township of Crawford co.
—A township of Fayette co.
Jen'nings, in *Louisiana*, a thriving post-town of Calcasieu parish, on the Southern Pacific R.R., 40 m. W. of Lafayette; largely settled by people from the North and West, and is becoming a trade center of some importance. *Pop.* (1897) about 1,000.
Jen'nings, in *Michigan*, a post-village of Missaukee co.
Jen'nings Gap, in *Virginia*, a post-village of Augusta co., about 133 m. W.N.W. of Richmond.
Jen'nings' Ordinary, in *Virginia*, a post-village of Nottoway co., about 50 m. W. of Richmond.
Jen'ny, *n.* A machine for spinning. See SPINNING.
Jen'ny, in *Wisconsin*, a post-village and township of Lincoln co., about 18 m. N. of Wausau. Now MERRILL.
Jen'ny-ass, *n.* The female ass:—opposed to *jackass*.
Jen'ny Lind. See LIND, JENNY.
Jen'ny Lind, in *Arkansas*, a post-village of Sebastian co.
Jen'ny Lind, in *California*, a post-township of Calaveras co., 25 m. S.W. of Mokelumne Hill.
Jennyop'olis, in *Oregon*, a thriving village of Benton co., about 11 m. S. of Corvallis.
Jeof'ail, *n.* [Fr. *j'ai failli*, I have failed.] (*Law.*) Certain statutes are called statutes of amendments and jeofails, because, where a pleader perceives any slip in the form of his proceedings, and acknowledges the error (jeofail), he is at liberty to amend it.
Jeopard (*jep'ard*), *v. a.* [Ger. *gefährden*, to expose to danger, from *gefahr.*] To put in danger of loss or injury; to hazard; to risk; to peril; to endanger.
Jeop'arder, *n.* One who puts to hazard.
Jeop'ardize, *v. a.* To put in danger or jeopardy; to endanger; to hazard; to jeopard.
Jeop'ardous, *a.* Exposed to danger; perilous; hazardous.
Jeop'ardously, *adv.* Hazardously; in danger.
Jeop'ardy, *n.* Hazard; risk; peril; danger; exposure to death, loss, or injury.
Jephthah (*jef'tha*), one of the judges of Israel, who made a remarkable vow before he marched against the Ammonites, that if he proved victorious, he would offer to the Lord the first living thing which should come to meet him on his return. This happened to be his only daughter, whom he is said to have sacrificed to fulfil his rash vow. But many learned writers contend that the text does not warrant the assertion, and that the daughter of *J.*, instead of being sacrificed, was devoted to perpetual virginity. And this seems most probable, since human sacrifices were held in abomination by the Israelites. The history of *J.* is contained in the Book of Judges.
Jequitinhonha, (*zha-kee-teen-you'ya.*) or RIO-GRANDE-DO-BELMONTE, a river of Brazil, rises in the Serra Pedra Redonda, and after a general N. and N.E. course, enters the Atlantic Ocean below Belmonte. It was formerly much celebrated for the diamonds found in its bed.
Jerboa, *n.* (*Zoöl.*) A singular genus of rodent quadrupeds of the *Muridæ* or Rat family. One species is a native of Egypt, Syria, &c.; and was known to the ancients under the name of *Dipus* (two-footed), which is still its scientific appellation. The most common species is the *Dipus sagitta*. It is of a pale-yellowish fawn color on the upper parts, and white beneath; the length of the body is about 8 inches, and of the tail 10, being terminated by a tuft of black hair, the tip of which is white, but the rest short and rough. The head is short; the ears thin, broad, upright, and rounded; the eyes large, round, and dark-colored; the hind legs are extremely long, thin, sparingly covered with short hair, and very much resemble those of a bird; the hind feet have three toes on each, the middle of which is somewhat larger than the rest, and all are furnished with sharp and strong claws; there is also a very small spur

Fig. 1443. — COMMON JERBOA, (*Dipus Ægyptius.*)

or back toe, with its corresponding claw. On each side the nose are several long hairs or whiskers; and the cutting teeth are sharp and strong, resembling those of a rat. In its attitudes and manner of progression this animal much resembles a bird; generally standing, like the kangaroo, on its hind feet, and leaping with much celerity, and to a great distance. It principally uses the fore-legs in feeding, putting to its mouth the ears of corn, and various other vegetable substances on which it feeds. They are burrowing animals, nocturnal, very destructive to grain, laying up hoards for their winter use. — The *Jumping-mouse*, or American *J.*, of Labrador and southward and westward to the Pacific, is about 3 inches long to the tail, which is 4 to 6 inches; the color above light yellowish-brown, lined finely with black, beneath white, and the sides yellowish-rusty, sharply defined against the colors of the back and belly. When startled it progresses by very long and rapid leaps, and there is probably no other mammal of its size that can make its way over the ground with so great rapidity, or so quickly escape from its pursuers.
Jeremi'ah, the second of the four great prophets, was the son of Hilkiah, a priest. Having predicted the miseries which should befall his country for the sins of the rulers, priests, and false prophets, he was thrown into prison. When Nebuchadnezzar took Jerusalem, *J.* was permitted to remain in Judea; but Johanan, and other fugitive Jews, determining to go into Egypt, contrary to the prophet's advice, compelled him to accompany them. Some say he was slain there by his countrymen; but others assert that he died at Babylon, about 586 B.C.

(*Script.*) One of the prophetic books of the Old Testament is so called after its author, the prophet Jeremiah. It embraces a period of upwards of 40 years, between 628 and 586 B.C. The various prophecies of this book are arranged without any regard to the order of time in which they were delivered. The following arrangement will serve to make the book more intelligible to the reader: — 1. The prophecies delivered in the reign of Josiah (i.–xii.); 2. In the reign of Jehoiakim (xiii.–xx., xxii., xxiii., xxxv., xxxvi., xlv.–xlviii., and xlix. 1–33); 3. In the reign of Zedekiah (xxi., xxiv., xxvii.–xxxiv., xxxvii.–xxxix., xlix. 34–39, l., li.); 4. Under the government of Gedaliah, from the taking of Jerusalem to the retreat of the people into Egypt, and the prophecies of Jeremiah delivered to the Jews in that country (xl.–xliv.). The last chapter (lii.) was added by some other hand, probably Ezra, subsequently to the return from the captivity, of which it gives a short account, and forms a proper argument or introduction to the Book of Lamentations by the same author, which immediately follows. Some have professed to see in the style of Jeremiah marks of rusticity; but though wanting the dignity and splendor of Isaiah, it is by no means destitute of elegance or sublimity. His prevailing tone is that of melancholy: and his mind is so deeply and sorrowfully impressed with certain scenes and events, that he dwells upon them with all the tenacity of overwhelming anguish. "Though his sentiments are not always the most elevated, nor his periods uniformly neat and compact, yet his style is in a high degree beautiful and tender, especially when he has occasion to excite the softer passions of grief and pity, which is frequently the case in the earlier parts of his prophecies. These are chiefly poetical. The middle of his book is almost entirely historical, and is written in a plain, prosaic style, suitable to historical narrative. On many occasions he is very elegant and sublime, especially in xlvi. to li. 1–39, which are wholly poetical, and in which the prophet approaches very near the sublimity of Isaiah."
Jeremi'ad, *n.* [From *Jeremiah.*] A lamentation; a tale of sorrow, or complaint; a lament; also, a curtain-lecture.
Jer'falcon, *n.* See GERFALCON.
Jericho, (*jer'i-ko.*) (*Anc. Geog.*) A city of the Canaanites, in a plain on the W. side of the Jordan, near its mouth. It was destroyed by Joshua, rebuilt in the time of the judges, and formed an independent frontier fortress of Judæa. It was again destroyed by Vespasian, rebuilt under Hadrian, and finally destroyed during the crusades. The site of *J.* has usually been fixed at Rihah, a mean and foul Arab hamlet of some 200 inhabitants. Recent travellers, however, show that

Fig. 1444. — JERICHO.

the probable location of *J.* was 2 m. W. of Rihah, at the mouth of Wady Kelt, and where the road from Jerusalem debouches into the plain. The city destroyed by Joshua may have been nearer to the fountain of Elisha, supposed to be the present Ain es-Sultan, 2 m. N.W. of Rihah. On the W. and N. of *J.* rise high limestone hills, one of which, the dreary Quarantana (Fig. 1444), 1,200 or 1,500 feet high, derives its name from the modern tradition that it was the scene of our Lord's forty days' fast and temptation. *J.* was anciently well watered and amazingly fruitful. It might easily be made so again, but now lies neglected; and the palm-trees, balsams, and honey, for which it was once famous, have disappeared. The road from *J.* to Jerusalem ascends through narrow and rocky passes and ravines and precipices. It is an exceedingly difficult and dangerous route, and is still infested with robbers, as in the time of the good Samaritan. (*Luke* x. 30–34.)
Jericho (*jer'e-ko*), in *Alabama*, a post-office of Perry co., on the Cahawba river, about 13 m. N. of Marion.
Jer'icho, in *Arkansas*, a post-office of Crittenden co.
Jer'icho, in *Kentucky*, a post-village of Henry co., on L. & N. R.R.
Jer'icho, in *New Jersey*, a village of Salem co.
Jer'icho, in *New York*, a post-village of Queen's co., about 30 m. E. of New York city.
Jer'icho, in *Ohio*, a post-office of Gallia co.
Jer'icho, in *Vermont*, a post-township of Chittenden co., about 30 m. N.W. of Montpelier. *Pop.* (1897) 1,490.
Jer'icho, in *Wisconsin*, a post-office of Calumet co.
Jer'icho Cen'ter, in *Vermont*, a post-village of Chittenden co., about 32 m. N.W. of Montpelier.
Jer'ico, in *Missouri*, a post-village of Cedar co.
Jerid', Jereed', *n.* A Turkish javelin.
Jerk, *v. a.* [Icel. *hrekia;* Scot. *yerk.*] To thrust ontto thrust with a sudden effort; to give a sudden pull, twitch, thrust, or push: to throw with a quick, smart motion. — To cut into long, thin pieces, and dry, as beef —*n.* A short, sudden thrust, push, or twist; a striking against something with a short, quick motion. — A sudden spring.
Jerk'er, *n.* One who jerks; a whipper.
Jer'kin, *n.* [Du. *jurk*, a frock.] A jacket; a short body-coat; a close waistcoat.
Jer'kinhead, *n.* (*Arch.*) A roof, the end of which is fashioned into a shape intermediate between a gable and a hip.
Jeroboam, the first king of Israel, an officer in the service of Solomon, who had created him governor of the states of Ephraim and Manasseh. While fulfilling these offices, it was predicted that he should yet rule over *ten* instead of two of the tribes. Solomon, alarmed at the effect of such a report, sent out his officers to secure Jeroboam; but he, receiving timely warning, left his post and fled into Egypt, where, for the rest of Solomon's reign, he remained in retirement. Upon the death of that monarch, 990 B.C., and the revolt of the ten tribes from the house of Judah, Jeroboam returned to his native land; and the revolted tribes having formed themselves into a separate kingdom, under the name of

Israel, elected Jeroboam as their first king, and who, after an unholy and idolatrous reign of 22 years, died 958 B. C.

Jerobo'am II., king of Israel, and the son of Joash, succeeded that king in 834 B. C. After some signal victories over the Assyrians, he fell into the practice of idolatry, and had his kingdom overrun by the Assyrians. The prophets Hosea and Amos predicted the downfall of his house.

Jerome', or **Hieron'ymus**, (St.,) one of the fathers of the Church, was b. in 331, at Stridon, on the frontiers of Dacia, and studied at Rome, under Donatus the Grammarian. He was ordained a presbyter at Antioch, in 378, and soon after went to Constantinople, where he lived with Gregory Nazianzen. In 382, he visited Rome, and was made secretary to Pope Damasus; but three years afterwards he returned into the East, accompanied by several female devotees, who wished to lead an ascetic life in the Holy Land, and died in 420, superintendent of a monastery at Bethlehem. *J.* was one of the most learned of the fathers, and took a leading part in the religious controversies of his age, combating especially Vigilantius, Jovinian, Rufinus, and Pelagius; but as a theological disputant he was violent and acrimonious in a high degree. His writings are very numerous, the most important being his Commentaries on various parts of the Bible. The Church owes to him the Latin translation of the Bible, well known under the name of the Vulgate. His style is singularly pure and classical.

Jerome', in *Indiana*, a post-village of Howard co., on the Wildcat River, abt. 55 m. N. by E. of Indianapolis.

Jerome', in *Iowa*, a post-village of Appanoose co., abt. 43 m. S.W. of Ottumwa.

Jerome', in *Michigan*, a township of Midland county.

Jerome', in *Ohio*, a post-township of Union county.

Jerome of Prague, b. 1378, so called from the place of his birth, was the disciple of John Huss (*q. v.*), and a man of considerable learning. The council of Constance cited him to appear before it with his master; but finding that Huss was thrown into prison, he retired to Uberlingen, where he applied for a safe-conduct, which was refused. On the journey to his own country, he was arrested and sent to Constance in chains. After being cruelly tortured, he was consigned to the flames, which he endured with great fortitude, in 1416.

Jeromesville, (*je-romz'vil,*) in *Ohio*, a post-village of Ashland co., about 85 m. N.N.E. of Columbus.

Jeron'ymites, *n. pl.* (*Eccl. Hist.*) See Hieronymites.

Jer'rold, Douglas, an English humorist, novelist, and dramatic writer, b. in London, 1803. His best productions are, *The Prisoner of War*, *Bubbles of a Day*, *Time Works Wonders*, *The Catspaw*, *St. Cupid*, *The Heart of Gold*, *Mrs. Caudle's Lectures*, &c. D. 1859.

Jer'sey, the largest and most important of the Channel Islands, lying in the English Channel, and belonging to Great Britain. It is about 12 m. long and 7 m. wide. The coast is indented with numerous excellent harbors, and, save towards the S., is generally bold and precipitous. The surface is an alternation of wooded hills and fertile valleys. The island contains neither limestone, chalk, marl, nor gravel. The climate is mild and healthy. An excellent breed of cows, small sturdy horses, sheep, and a few varieties of feathered game are the most important animal productions. Much attention is devoted to apple-orchards, for which the soil and climate are particularly favorable. The most important manufactures are shoes and hosiery; ships also are built. *Cap.* St. Helier's.

Jer'sey, in *Illinois*, a S.W. co., adjoining Missouri; *area*, about 360 sq. m. *Rivers.* Mississippi and Illinois rivers. *Surface*, generally level; *soil*, fertile. *Cap.* Jerseyville. *Pop.* (1890) 14,810.

Jer'sey, in *Ohio*, a post-village and twp. of Licking co.

Jer'sey, *n.* Combed wool, and yarn made of combed wool;—so called from the island of Jersey.—Also a short, close-fitting jacket made of such or similar material, worn by sailors, and of late years popular with ladies.

Jer'sey City, in *New Jersey*, a city, the cap. of Hudson co., on the Hudson river, opposite New York city, with which it is connected by several steam ferries. It is the terminus of the Central R. R. of New Jersey, the Erie, the Del., Lacka., & Western, the Pennsylvania, the Lehigh Valley, the West Shore, and other railroad lines; the docks of several transatlantic steamship companies are located here, including some, as the American, Red Star, Hamburg, &c., whose principal passenger wharves are in New York. Its manufacturing industries include some of the largest sugar refineries and tobacco works in the world, and there are several immense grain elevators, stock-yards, &c., besides a great variety of other industrial enterprises. The place was originally known as Paulus Hook, which was laid out in 1804, incorporated as a village in 1820, and chartered as a city, under its present name, in 1838. *Pop.* (1895) 182,713; (1897) about 193,400; (1900) 206,433.

Jer'sey Mills, in *Pennsylvania*, a village of Lycoming co.

Jer'sey Shore, in *Pennsylvania*, a post-borough of Lycoming co., on Susquehanna river and 3 railroad lines, 12 m. W. of Williamsport. *Pop.* (1897) 2,070.

Jer'sey-tea, *n.* (*Bot.*) See Ceanothus.

Jer'seytown, in *Pennsylvania*, a post-village of Columbia co., about 12 m. N. of Danville.

Jer'seyville, in *Illinois*, a city, cap. of Jersey co., on the Chicago & Alton, and St. L., Chic. & St. Paul R. Rs., 20 m. N.N.W. of Alton, in an agricultural region, raising fine live-stock. *Pop.* (1897) about 3,650.

Jerumenha, (*zha-roo-men'ya,*) a town of Brazil, prov. of Piauhy, on the right bank of the Gurgnea, a tributary of the Parnahiba, about 95 miles W. of Oeiras; *pop.* 3,000.

Jeru'salem. [Heb. *Kadushah;* Gr. *Hierosoluma;* Lat. *Hierosolima;* called also, in Arabic, *Elkhuds* or *Elkoddes*, the "Holy."] A celebrated city of Asia, and to the Christian the most renowned in the world. *J.*, the ancient capital of the ancient Judæa and the modern Palestine, is situate in Asiatic Turkey, 126 m. from Damascus, about 37 m. from the Mediterranean, and about 24 from the Jordan, at an elevation of 2,500 feet above the level of the sea; Lat. 31° 46′ 43″ N., Lon. 35° 13′ E. It stands on an elevated plateau, consisting of a series of ridges of limestone, intersected by narrow and precipitous ravines. Its most splendid edifice is the mosque, erected in the 7th cent. by the caliph Omar, and bearing his name. It is also called Kubbet-es-Sukhrah, "Dome of the Rocks," and is superior to any other example of modern architecture in the Turkish empire, not excepting the celebrated mosque of St. Sophia. It occupies the site, and is supposed to contain some remains of the Jewish Temple. The church of the Holy Sepulchre was built by the empress Helena, the mother of Constantine the Great, and professes, without probability, to comprehend within its limits the scene of all the great events of the crucifixion, entombment, and resurrection of the Messiah. Close by the entrance to the lower chamber are the tombs of Godfrey of Bouillon and of Baldwin, two modern kings of Jerusalem, with Latin inscriptions in Gothic characters. The other buildings and inclosures are numerous, and occupy by far the larger part of the space within the walls of the city. The largest of the inclosures is called by the Mahometans El-Haram Es-Sherif, "the Noble Sanctuary," and is deemed so sacred that none but the Faithful are permitted to enter it. The other buildings of greatest note within the city are the convents. The houses are lofty, and as no windows appear on any of the lower stories, while those above are latticed, the passage appears to be between blank walls. The bazaars or shops are in a most unwholesome situation, being covered over, and, to all appearance, a nursery for every species of contagion. Hardly anything is exposed for sale; the various articles being secreted, through fear of Turkish rapacity. Dr. Clarke, when at *J.*, riding out of the city by what is called Zion gate, came to a deep dingle or trench, at the bottom of which he discovered a series of subterraneous chambers, each containing one or many repositories for the dead. Some of these tombs, from their magnificence, and the labor necessary to form the numerous repositories contained in them, suggested an almost regal destination. As the place of crucifixion seems to have been a public cemetery, and as it was without the city, the present spot appears to agree with it better than any other yet assigned. For the same reason, this seems the most probable spot for the entombment of the Messiah. Farther to the E., and in the place called Aceldama, were found some other sepulchres. At the foot of the Mount of Olives, and on the E. side of the brook Kidron, or Cedron, are the sepulchre of the Virgin, and those of the patriarchs. They form part of a vast cemetery, which extends along the foot of all the hills which surround *J.* to the S. and E. On the N.W. side, by the gate of Damascus, are seen the sepulchres of the kings. This place of sepulture has occasioned considerable difficulty to antiquaries; but it is supposed to have been the tomb of Helena, queen of Adiabene. To the E., beyond the brook Kidron, rises the Mount of Olives, which, by the abundance of that plant, still vindicates this ancient appellation. In the district in which *J.* is situate, many of the events recorded in the Scriptures took place, and many of the places therein named are recalled by local associations. *J.*, though in possession of the Moslems, has long been the abode of numerous

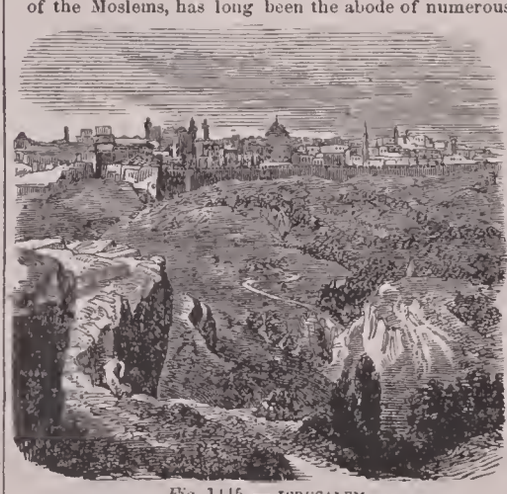


Fig. 1445.—Jerusalem.

(From the road to Bethany, on the S. side of Mount Olivet.)

monks. These consisted, originally, of various nations and professions, each of which had a quarter assigned to it; but the number has been greatly reduced. *J.* belonged to the Jebusites, who, after its conquest by the Israelites, still retained a castle or fortified eminence, from which they were not expelled till the reign of David. That monarch made it the capital of his kingdom. Solomon, on succeeding to the throne, not only protected, but enlarged it, surrounded it with stronger walls, and adorned the interior with that Temple the splendor of which was so much admired in the ancient world. It was taken in 599 B. C., by Nebuchadnezzar who put an end to the kingdom, carried king Jehoiakim captive to Babylon, and established Zedekiah as his viceroy. That prince, however, making an attempt to re-establish the independence of his country, *J.* was again taken, and was then razed to the ground, the temple demolished, and all the inhabitants carried into captivity. After the conquest of Babylon by Cyrus, the Jews were permitted to return to their country, and to rebuild their Temple, and *J.* soon resumed its former splendor. After the conquest of Persia by Alexander, and after his empire had fallen to pieces, it was surprised and plundered by Ptolemy, king of Egypt. Subsequently, it was exposed to a long series of attacks from the kings of Syria, who were, however, after many obstinate conflicts, bravely repelled by the Maccabees. Afterwards, the Romans conquered Judæa, but did not interfere with the religious rites, or even the municipal government of the Jews, when Jesus Christ appeared and suffered at *J.* During the reign of Nero, the Jews rebelled against the tyranny of the pro-consuls, and the city was finally reduced, after a long siege, by Titus. It was burnt, and the inhabitants sold into slavery. In the reign of Adrian, it was razed to the ground, and on its ruins a Roman town was erected, called Ælia Capitolina. This name remained till, by the conversion of Constantine, Christianity became the ruling religion of the Roman empire. *J.* then resumed its original name, and was held as an object of pious veneration. As the empire became more generally Christian, *J.* continued to increase in veneration. In 1076 it fell into the hands of the Saracens and Turks, who committed such outrages on the Christian pilgrims visiting the city, that the country was invaded by the Crusaders, and *J.* taken in 1099, by the army under Godfrey of Bouillon, who, in reward for his valor, was created king of *J.* The city, with the surrounding territory, was then ruled, during upwards of 60 years, by five Latin kings, when it yielded to the arms of Saladin. After changing successively its Moslem masters, it was annexed, in 1517, to the Turkish empire, of which it has ever since formed a part.—*Explorations.* Within the latter part of the 19th century efforts to discover the ancient sites and the remains of the ancient architecture have been actively prosecuted, with interesting and important results. It might seem highly improbable that, after the many sieges and conflagrations to which *J.* has been subjected, much should remain of the city of Herod, and that any traces should be left of the city of Solomon. Yet more has been discovered in proportion than of the city of Rome of Herod's date, and far more than of Tyre, Carthage, or Corinth. In 1865 so careful an ordnance survey was made by Sir Charles Wilson as to make it appear probable that nothing was left above ground undiscovered. Yet an inscribed stone of the temple has since been found, and other important relics may exist built up in modern walls. The underground remains have been sought in a series of explorations on an extensive scale, conducted by Sir Charles Warren, in 1867–70, Major Conder, in 1871–76, Clermont Ganneau, in 1874–75, and by other explorers, Russian, French, German, &c.; with such results that since 1870 the whole previous literature upon the topography of *J.* has become antiquated. Of the monuments of which remains have been discovered the following may be mentioned: the rock scarps on the south of Zion, which in all probability belonged to the wall of the time of David; the Pool of Bethesda, recovered in 1888; the tomb known as that of Nicodemus, and belonging to the oldest class of Jewish tombs; the great rock-cut passage from the Virgin's Fount to the Pool of Siloam, which is probably as old as the 8th century B. C.; the Haram area, including the site of the Temple, with its stupendous walls, its ancient gates, its vast vaults, &c. These are but a few of the many discoveries, largely of remains of a later period than the above, while the explorations are still diligently continued. *Pop.* (1897) about 28,000, of whom about one-half are Jews, a quarter Moslems, and the remainder Christians.

Jeru'salem, in *Georgia*, a post-office of Pickens co.

Jeru'salem, in *New York*, a post-village of Queens co.—A village and township of Yates co., about 20 m. S.S.W. of Geneva.

Jeru'salem, in *North Carolina*, a post-township of Davie co.

Jeru'salem, in *Ohio*, a post-village of Monroe co.

Jeru'salem Artichoke, *n.* (*Bot.*) See Helianthus.

Jer'vin, *n.* [From Sp. *Jerra*, the name of a poison obtained from white hellebore]. (*Chem.*) A white crystalline fusible base, found, along with veratrine, in the *Veratrum album*, or white hellebore.

Jesi (*e-as'i*), a town of Italy, on the Esino, 16 m. from Ancona, *Manf.* Woolen and silk fabrics. *Pop.* 18,912.

Jess, *n.* [Old Fr. *gect;* Fr. *jet*, a throw, a cast, from *jacto*, to throw, to cast.] (*Falconry.*) A short strap of leather tied round the legs of a hawk by which it is held on the fist and tossed off into flight.—A ribbon hanging from a garland.

Jes'samine, *n.* (*Bot.*) See Jasmine.

Jes'sant, *n.* [Fr. *gisant.*] (*Her.*) Applied to a lion or other beast, rising or issuing from the middle of a jess.

Jes'samine, in *Kentucky*, an E. central co.; *area*, about 162 sq. m. *Rivers.* Kentucky river, Hickman and Jessamine creeks. *Surface*, undulating; *soil*, exceedingly fertile. *Cap.* Nicholasville. *Pop.* (1890) 11,248.

Jes'samine Creek, in *Kentucky*, enters the Kentucky river from Jessamine co.

Jes'se. (*Script.*) Son of Obed and father of David. He was a grandson of Ruth, the Moabitess, and in her ge-

tive land he found an asylum while David was in most danger from the jealous pursuit of Saul.

Jes'se, *n.* A large branched caudlestiek suspended in the middle of a church or choir; — so called from its resembling the branches of the *Arbor Jessæ*, the genealogical tree of Jesse, a picture of which was formerly hung up in churches.

Jessed', *a.* (*Her.*) Having jesses on, as a falcon.

Jes'sen Land, in *Minnesota*, a township of Sibley co.

Jes'so, in Japan. See YESSO.

Jes'sup, in *Iowa*, a post-village of Buchanan co., abt. 22 m. E.S.E. of Cedar Falls.

Jes'sup, in *Pennsylvania*, a township of Susquehanna co.

Jes'sup's Landing, in *New York*, a village of Saratoga co., on the Hudson River, abt. 42 m. N. of Albany.

Jes'sup's River, in *New York*, rises in the N.E. part of Hamilton co., and enters the Hudson River in Essex county.

Jest, *n.* [Sp. *chiste*, a fine witty saying; probably from Lat. *gestio*, to use passionate gesture, to be joyful; or from *gesticulor*, to make mimic or pantomimic gestures, to gesticulate.] Something ludicrous uttered, and meant only to excite laughter; joke; fun; raillery; a witticism. — The object of laughter, sport, or banter; a laughing-stock.

—*v. n.* To divert or make merry by words or actions; to joke; to utter in sport; to say what is not true, merely for diversion's sake.

Jest'er, *n.* A person given to jesting, sportive talk, and merry pranks; one prone to sarcasm.—A professed buffoon; a merry-andrew; a court-fool.

Jest'ful, *a.* Given to jesting; full of jokes.

Jest'ingly, *adv.* In a jocose manner; not in earnest.

Jes'uit, *n.* (*Eccl. Hist.*) A member of the Society of Jesus. (See JESUITS, in SECTION II.) The terms below which owe their derivation to the word *Jesuit*, are severally defined in all the senses applicable to them — even including those expressed by the opponents of the order in countries of Europe where, in former times, the Society of Jesus had rendered themselves obnoxious by their interference with political matters. It will be obvious that no Dictionary of the English language — irrespective of private opinions — might exclude such definitions, however invidious.

Jes'uitess, *n.* One of an order of nuns who followed the rules of the Jesuits. The order was suppressed in 1630 by Pope Urban VIII.

Jesuit'ic, Jesuit'ical, *a.* Pertaining to the Jesuits, or to their principles and acts.

—Designing; cunning; deceitful; prevaricating.

Jesuit'ically, *adv.* Crafty; in a jesuitical manner.

Jes'uitism, *n.* The arts, principles, and practices of the Jesuits.

—Hypocrisy; deceptive practices to effect a purpose.

Jesuitoc'racy, *n.* Government by Jesuits.

Jesuit's-bark, *n.* See CINCHONA.

Jesuit's-nut, *n.* See TRAPA.

Je'sus. [In Hebrew, *Jehosuah*, "Saviour."] This name has been borne by nine different persons mentioned in the Holy Scriptures, where they are distinguished from each other by the name of their father being affixed. The most frequently mentioned are—Jesus, son of Josedech, who was the first high-priest of the Jews after their return from captivity in Babylon, and who, with Zorobabel, rebuilt the temple between 535 and 516 B. C. Jesus, son of Sirach, a man celebrated for wisdom, who flourished under the pontificate of Simon I., between 303 and 284 B. C. He was the author of the book entitled "Ecclesiasticus." His grandson Jesus translated this book into Greek, which is the version now extant in the Apocrypha.

Jesus Christ, the founder of the Christian religion, the Saviour of the world, and Son of God, miraculously conceived by the Holy Ghost, and born of the Virgin Mary, in a stable at Bethlehem, four years earlier than the æra from which the common system of chronology dates the years A. D. His birth was announced to shepherds by angels; and a star appeared in the east, which guided the magi to Jerusalem, who inquired of Herod where the Messiah was born, as they were come to worship him. This threw the king and his court into consternation. The magi, following the direction of the star, went to Bethlehem, where they found the child, to whom they made their offerings; and being divinely warned, did not go back to Herod, but returned home by a contrary way. Herod, full of wrath, determined on the death of the infant; but Joseph, the husband of Mary, being divinely warned in a dream, fled with the child and his mother into Egypt. While they were on their journey, Herod committed a horrid slaughter of all the children in Bethlehem. On the death of the tyrant, Joseph returned towards home; but finding that Archelaus reigned instead of his father, he went to Nazareth, by which that prophecy was fulfilled which called Jesus a Nazarene.. Here J. dwelt with his parents, working probably at his father's trade, which was that of a carpenter, till he came to the age of 30, when he commenced his public labors; and having been baptized by John the Baptist, he called a few poor, unlearned disciples, and then went about declaring the purposes of his mission, and confirming his authority by numerous miracles. The Jews were filled with astonishment at his doctrine and works; but their hearts were hardened, and instead of receiving him as the promised Messiah, they persecuted him with the utmost malignity, and attributed his miracles to diabolical agency. The Sanhedrim, or council of priests, often consulted to destroy him, and at last he was betrayed into their hands, in the Garden of Gethsemane, by his disciple Judas Iscariot, for thirty pieces of silver. After an examination before Caiaphas, the high-priest, he was remitted to Pontius Pilate, the Roman governor, who made several attempts to save him from the fury of the priests and people; but being charged as an enemy of Cæsar if he let Jesus go, he caused him to be first scourged, and then put to death. He was crucified between two malefactors on Mount Calvary, Friday, April 3, A. D. 36. His body was entombed by Joseph of Arimathea in a new sepulchre; and as Jesus had declared that he would rise again the third day, the Jews obtained a guard from Pilate to watch the tomb. But on the third day he arose, and the soldiers went and gave information to their employers, who bribed them to say that the body had been stolen by his disciples. In confutation of this calumny, Jesus remained six weeks among his followers, and then conducting them to Mount Olivet, ascended into heaven.—An explanation may be necessary for the brevity of this article Approaching the subject in all reverence, and wishing to avoid the slightest reference to controversy, either of fact or opinion, we have thought it preferable to give only a plain narrative derived from the New Testament.

Je'sus Island, an island of Lower Canada, surrounded by the St. John and Prairie rivers, the two branches of the Ottawa River before it joins the St. Lawrence River. *Area*, about 1,200 sq. m.

Jesus Maria, (*hay'soos ma-ree'a,*) in *California*, a mining-village of Calaveras co., about 6 miles S.S.E. of Mokelumne Hill.

Jesus Maria, (Cape,) a headland of Uruguay, extending into the Atlantic Ocean N. of the æstuary of the Plate, and about 40 m. N.W. of Montevideo.

Jet, *n.* [D. *git;* Fr. *jais;* Gr. *gagates*, from *Gagas*, a town and river of Lycia.] (*Min.*) A solid, dry, inflammable fossil substance, susceptible of a good polish, and glossy in its fracture, which is conchoidal or undulated. It has a resinous lustre, and a spec. grav. from 1·25 to 1·30. The color of jet is a pure and deep black, with sometimes a tinge of brown. It occurs in opaque compact masses, so solid and hard that they can readily be turned in a lathe. By friction it acquires a weak electricity, even when it is not insulated. Sometimes it presents the form of branches of trees, and exhibits traces of a ligneous texture. When burning, it has a flame often greenish in color; but it does not melt like solid bitumen. It exhales during combustion a strong and sometimes aromatic odor, sensibly different from that of coal or bitumen. It is most frequently found in detached masses, of a moderate size, in beds of sandstone, marl, limestone, and secondary trap, and is connected with coal formations, especially those that are associated with secondary trap-rocks. In Galicia and other parts of Spain, and in Wittenberg in Saxony, good specimens of jet are obtained; also in the dept. of Ande, in France, where it sometimes contains amber. In England, it is found near Whitby. It occurs in trap-rocks in the Faroe Islands, and in the Isle of Skye, and in the coal formation in Massachusetts, in America. Although used for fuel in some parts, jet is more frequently cut and polished for ornamental purposes, necklaces, braelets, buttons, &c. By some mineralogists jet is considered as being intermediate between bituminous wood and coal.

—A mineral of a compact texture and velvet-black color, used for ornaments.

—[Fr. *jet;* It. *getto*, from Lat. *jactus*, from *jacio*, to throw or cast. See EJECT.] A spout; spouting, or shooting of water or other fluids.—A gas branch with one aperture. —A channel or tube for introducing metal into a mould.

—*v. n.* [Fr. *jeter*, from Lat. *jacio*, or its frequent. *jacto.*] To throw or cast; to shoot forward; to shoot out; to project; to jut; to protrude.

Jet'-black, *a.* Of the deepest black; of the color of jet.

Jet d'eau, (*zhā-dō',*) *n.* [Fr.] A fountain that throws up water to some height in the air; also, a waterspout.

Jet'ersville, in *Virginia*, a post-village of Amelia co., about 40 m. S.W. of Richmond.

Jet'erus, *n.* (*Bot.*) The vegetable jaundice, a disease in plants, when the system becomes affected with a general yellowness.

Jeth'ro. (*Script.*) A king and priest of the Midianites, surnamed Raguel, who received Moses into his family when he fled from Egypt, and gave him his daughter Zipporah in marriage. When Moses had delivered the Israelites from their bondage, Jethro met him, and delivered him his wife and children.

Jet'sam, Jet'tison, *n.* [From Fr. *jeter*, to cast away.] (*Mar. Law.*) Anything thrown overboard from a ship when in danger of foundering or being cast ashore. See WRECK.

Jet'teau, *n.* A jet d'eau.

Jet'tee, Jut'ty, *n.* (*Arch.*) A part of a building that projects beyond the rest, and overhangs the wall below, as the upper stories of timber-houses, bay-windows, pent-houses, small turrets at the corners, &c.—Also used as a pier projecting out into the water.—See JETTY.

Jet'tison, *n.* (*Mar. Law.*) See JETSAM.

Jet'ty, *n.* [Fr. *jetée*, to cast, from *jeter*, to cast, to throw, to shoot, from *jacio*, *jactus*, to cast, to throw.] (*Engineering.*) A landing-place carried out from the bank of a river, or from the sea-shore, so that vessels may be enabled to discharge their passengers or cargo at all times of the tides. They may be either solid, so as to act as a species of breakwater, as is the case in the harbors upon the sea-coast; or they may be made so as to allow the tide-wave to flow uninterruptedly past them; a pier; a mole.

—*a.* Made of jet; black as jet.

Jet'ty-head, *n.* (*Naut.*) The projecting part of a wharf; the front of a wharf whose side forms one of the cheeks of a dock.

Jeu-de-mot, (*zhe(r)-de-mō'.*) A play upon words.

Jeu d'esprit, (*zhe(r) des'pree.*) [Fr., a stroke of wit.] A witticism formed from some unexpected association of ideas; as charades, enigmas, acrostics, &c.

Jeunesse Dorée, (*zhō-nēss-do'rā.*) [Fr., gilded youth.] (*French Hist.*) This party, chiefly composed of the middle and richer classes, and distinguished by a peculiar dress called the "costume à la victime" (Fig. 830), was formed in France in 1794, and was protected by Fréron. The members opposed the Jacobins, whom they expelled from their place of meeting, Nov. 8.

Jeux Floraux, (*zhe(r) flor-o'.*) [Fr., floral games.] The name given to a poetical contest which takes place annually at Toulouse, in France, under the presidency of the *Académie des Jeux Floraux*. It originated in the early part of the 14th cent., in an attempt by the citizens of Toulouse to revive the poetry of the Troubadours. Seven persons were united into a society under the name of the *Sept Trobadors de Tolosa*, and, in 1323, they sent a letter, in verse, to all the poets of Provence, inviting them, on the 3d of May, 1324, to a poetical contest, when the composer of the best poem was to receive a violet of fine gold. The celebrated troubadour Arnaud Vidal gained the prize. Two other prizes were soon after added, to increase the splendor of the festival, — a wild rose and a pansy, both of silver. Similar institutions were afterwards established at Barcelona and Tortosa, and the original institution began to decline, and at the end of the century was nearly extinct, when it was revived by Clemence Isaure, who left, by will, a considerable sum for the continuance of this festival. More costly flowers now rewarded the talent of the competitors. It afterwards took the name of *Académie des Jeux Floraux*, and was made to include a *modérateur*, twenty-five *maintaineurs* or judges, and twenty masters. After an interruption of fifteen years, from 1790 to 1806, the academy again assembled for the awarding of prizes, and since that time the festival has been annually celebrated.

Jew, (*ju,*) *n.* [A contraction of *Judah.*] A Hebrew or Israelite.—See JEWS.

—*v. a.* To drive a hard bargain. (Colloq.)

Jew, (THE WANDERING.) (*Lit.*) A mythical personage who forms the subject of many popular traditions. According to one account, he was a carpenter; and as our Saviour passed his workshop on his way to execution, the soldiers begged that he might be allowed to enter for a few moments and rest; but he not only refused, but insulted him. By another account he was a shoemaker, sitting at his bench as our Saviour passed to Calvary, and not only refused to allow him to rest for a few moments, but drove him away with curses. Jesus calmly replied, "Thou shalt wander on the earth till I return." Driven by fear and remorse, he has since wandered, according to the command of our Lord, from place to place, and has in vain sought death amid all the greatest dangers and calamities to which human life is subject. The legend first appears in the Chronicle of Matthew Paris, in the 13th cent., where the Wandering Jew is called Cartaphilus, and is said to have been a servant of Pilate. His name in the later legends is *Ahasuerus*. In the 16th and 17th centuries there appeared several impostors claiming to be the Wandering Jew. This legend has formed the subject of long poems by Schubart and Mosen; of a tragedy by Klingmann; of a mystico-philosophical drama by Edgard Quinet; of prose romances by George Croly (*Salathiel*), Alexandre Dumas, the elder (*Isaac Lakadam*), M. Œlckers, and David Hoffman (*Chronicles selected from the Originals of Cartaphilus; The Wandering Jew*, by Eugene Sue, (London, 1854); of the poem of the *Undying One*, by Mrs. Norton; and of numerous small lyrical pieces.

Jew'el, *n.* [It. *giojello;* Fr. *joyau;* Ger. *juwel;* It. *gioja*, a precious stone, joy, from Lat. *gaudium*, gladness, joy, *q. v.*] An ornament of dress, usually consisting of a single precious stone, or set with one or more; a precious stone; a gem; a brilliant. — A name expressive of fondness.

—*v. a.* To dress or adorn with jewels; to set, as diamonds or other hard stones, in a watch for the pivots to turn in.

Jew'el-block, *n.* (*Naut.*) One of the two small blocks which are suspended at the extremity of the main and fore-topsail yards.

Jew'eller, or **Jew'eler,** *n.* One who makes or deals in jewels and other ornaments.

Jew'ellery, *n.* See JEWELRY.

Jew'elling, *n.* (*Arts and Trades.*) A term particularly applied to the art of setting precious stones of a hard nature in different parts of a watch, so that the spindles or pivots of the wheels may work in them. After the watchmaker has bored holes in the various pieces of the watch in the exact spots where the jewels are to be inserted, the parts are sent to the jeweller, who enlarges the holes on one side of the plate in such a manner that the small ring of brass in which the stone has been set may sink into it. He must, however, always take care that the centre of the hole made by the watchmaker may coincide with the centre of the cavity that he himself has hollowed out to receive the jewel and its setting. After the jewel has been fitted into the cavity, it is secured in its place by two screws with broad heads, which project over the setting and prevent it from slipping out. The jewel and its setting is always let into the plate deep enough to allow the latter to be flush with it. When a jewel is required with a hole right through it, one stone is sufficient, which is drilled and let into the plate in the manner described above; but when a cavity is required in the stone instead of a complete perforation, so that the end of the pivot may have something to work against, two stones are used, fixed in separate settings, — one of

which is bored right through, while the other is not pierced at all, but serves to close the hole made in the first stone on one side of it, by fitting over it. In this case the jeweller cuts away the metal of the plate about the hole that is to be jewelled, deep enough to receive the two settings, which he places in the cavity one above another, taking care that the surface of the last may be flush with the plate, after which he secures them by screws as before. The stones are fixed in the setting by turning a hollow in the ring to receive the jewel, and pressing a thin brass rim, which is left for the purpose, closely about the stone with a burnisher. Diamonds for end-pieces, however, are generally brazed into settings of steel. The jeweller cuts the jewels to the required shape, and polishes them in a small lathe on a little disc of copper, which is charged with diamond-powder, known in the trade as "bart." The holes in the stones are drilled by means of small drills of steel, diamond-powder and oil being introduced into the cavity while the process of drilling is going on. The stones are finally polished by rubbing them on a piece of plate-glass on which a little diamond-powder and oil has been placed.

Jewelry, Jewellery, (*jū'el-re,*) (*jū'el-e-re,*) *n.* In the primary acceptation of the word, the term jewelry is applied to any ornaments made of precious stones set in gold or silver for the adornment of the person. In an extended sense, it includes any small article made of gold or silver, even though no precious stones or jewels be used in its manufacture. The principal of the precious stones or gems are described under their respective headings. (See AMETHYST, DIAMOND, EMERALD, GEMS, RUBY, SAPPHIRE, &c.) The work of preparing the stones, by cutting them into a suitable form and polishing them, belongs to the lapidary. (See LAPIDARY-WORK.) It is the peculiar province of the jeweller to make settings of metals for the stones, and secure them therein, and to manufacture trinkets of any kind in gold or silver, whether in combination with jewels or not. The settings of ornaments are made by casting the metal in small moulds or stamping it with dies, after which a finish is given by chasing, burnishing, and lacquering. Gems are fixed in their setting by cement and the aid of the blow-pipe, a small hammer, and some very fine files. The value of gold is estimated by the ratio that exists between the gold and the alloy, the whole mass being considered to be divided into 24 equal parts. Thus, pure gold is spoken of as being "24 carats fine;" old standard or sterling gold, as being 22 carats, and new standard gold 18 carats; which means that sterling gold contains 22 parts of gold to 2 of alloy, and new standard gold 18 parts of gold to 6 of alloy. Pure gold, or gold of 22 carats, is too soft for the purposes of the jeweller: and as articles of jewelry bear no mark to determine the quality of the gold, purchasers who have no means of testing it may often be led by specious announcements to give a high price for a chain or ornament of no intrinsic value. Gold used in jewelry may be mixed with such a large proportion of alloy as to be comparatively worthless, while it presents a fair appearance to the sight. The tint of the metal or composition may be made paler or deeper, according to the preponderance of silver or copper in the alloy; and the introduction of zinc has the effect of improving the appearance of the metal, and rendering its similitude to pure gold still greater; while the intrinsic value of the composition thus produced is very small. American-made *J.* equals that of any other nation, and it has become a most important industry, in which over $22,000,000 of capital was invested in 1890.

Jew'el-weed, *n.* (*Bot.*) See BALSAMINA.

Jew'ess, *n.* A Hebrew woman.

Jew'ett, in *New York,* a post-town of Greene co., about 40 m. S.W. of Albany.

Jew'ett, in *Ohio,* a post-village of Harrison co.

Jew'ett City, in *Connecticut,* a post-village of New London co., about 9 m. N.E. by N. of Norwich. *Pop.* (1897) 2,060.

Jew'ett Center, in *New York,* a post-village of Greene county.

Jew'ish, *a.* Pertaining to the Jews or Hebrews.

Jew'ishly, *adv.* In the manner of the Jews.

Jew'ishness, *n.* The quality or character of Jews.

Jew'ry, *n.* Judea.—Also a district, quarter or street where Jews formerly resided; as, the Old *Jewry,* London.

Jews, HEBREWS, or ISRAELITES. [Heb. *Jehudim, Ibrim, Bene Israel.*] (*Hist.*) A celebrated people, whose ancestors appear very early in the written history of mankind on the banks of the Euphrates, Jordan, and Nile, and whose fragments are now to be seen, in large or small numbers, in almost all the cities of the world; regarding themselves as a nation in the midst of other nations; and though thinly scattered both among the rudest and most civilized nations, preserving through thousands of ages common features, habits, religion, literature, and the same language — a phenomenon unparalleled in history. Descended from Abraham, the Jews were at first called Hebrews, from the alleged ancestor of that patriarch, Heber. After the time of Jacob, their first appellation was replaced by the word *Israelites,* from Israel, a surname of Jacob. The term *Jew,* derived from *Judæus,* dates from the captivity in Babylon. The Jewish people assign their origin to Abraham, whom they designate the father of their race. After Abraham, Isaac, his son, became their chief; then Jacob, or Israel, the son of Isaac. Jacob had 12 sons, among them Judah, the ancestor of David and of Jesus Christ. The descendants of Jacob multiplying very rapidly, they were eventually divided into 12 tribes, each of which was regarded as having been founded by one of the children of Jacob. In the closing years of his life Jacob settled in Egypt, in the land of Goshen. His posterity, powerful at first, were afterwards enslaved and persecuted by the Pharaohs. Moses delivered them from their bondage in Egypt, and put himself at their head to conduct them into the land of Canaan. Under his leadership, the Jews miraculously passed the Red Sea, when Pharaoh and all his host were drowned. After wandering for 40 years in the desert, where Moses died, they reached the Land of Promise, their leader being Joshua, who had succeeded Moses. Joshua established the Jews in the Land of Promise, and, dividing the country into twelve parts, gave a portion to each of the twelve tribes. After Joshua, the govt. was confided to a council of elders, then to judges; subsequently it became monarchical. Saul was the first king of the Jews; David succeeded him, and was followed by Solomon. These three kings established the dominion of the Jews throughout the ancient land of Canaan, and, for a short period, the kingdom extended to the Euphrates and the Red Sea, upon which Solomon possessed the port of Elath. But on the death of this last king, the twelve tribes were divided, and from that schism sprang two kingdoms. (See ISRAEL and JUDAH.) The kingdom of Judah remained faithful to the lineal descendants of David, and offered allegiance to Rehoboam, son of Solomon; the kingdom

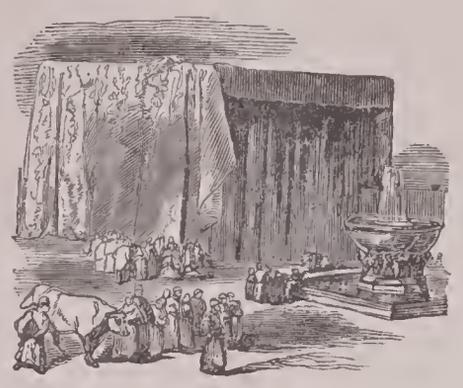


Fig. 1446. — THE COURT OF THE TABERNACLE.

of Israel elected for its sovereign Jeroboam. These two kingdoms, weakened by perpetual warfare and discord, were in the end enslaved. The kingdom of Israel was destroyed by Shalmaneser, king of Assyria, and the kingdom of Judah by Nebuchadnezzar, who first carried captive to Babylon a great part of the inhabitants, and afterwards took Jerusalem by assault, destroyed the temple, and reduced to slavery the whole of the people. After a captivity of 70 years, the Jews obtained from Cyrus permission to re-establish themselves in Jerusalem, where they were governed by high-priests. After the fall of the Persian empire, the Jews passed successively under the dominion of Alexander; of Ptolemy, king of Egypt; of Seleucus Nicator, king of Syria; and after once more falling under the sway of the kings of Egypt, were subsequently enslaved by the Syrians. Against these the Jews rose, under the leadership of Maccabæus, and threw off their yoke. The Maccabees became the hereditary sovereigns. Subsequently, the Romans interfered in the internal affairs of the Jewish kingdom, and placed Herod I. on the throne of the Maccabees, B. C. 37. It was under the reign of Herod that our Saviour was born. After the death of king Herod, Palestine was distributed among his sons, and divided into four portions, called tetrarchies (Judæa, Galilee, Abilene, Ituræa); but in a few years the Romans sent into the country a proconsul, who governed in their name, and shortly afterwards Rome was sole master of the whole kingdom. The Jews, impatiently supporting the Roman sway, revolted many times. The emperor Titus took Jerusalem in the year 70, after a fearful siege of five months, as was prophesied. The city was again taken, under Adrian, in the year 135: the Jews were in great part exterminated; those who survived being driven forever from Jerusalem. From this period the Jews, ceasing to form an independent nation, have been scattered over the earth. When Christianity became the religion of the Romans, their condition became very miserable. In 418, military service was interdicted them; in 610 the emperor Heraclius persecuted them with many cruel enactments. Islamism treated them less rigorously. Under the reign of the caliphs, the Jews of Asia, of Africa, and of Spain, were permitted to live in peace, and to cultivate commerce, letters, and the sciences. In Christian Europe, especially during the period of the Crusades, the Jews had to undergo every form of persecution, frequently being compelled to purchase life at the price of their hoarded gold; they were made to wear distinctive marks on their clothing, and afterwards to dwell in separate quarters of every city. They were driven from England in 1290, from central France in 1395, and from Spain and Sicily in 1492. In Germany, they belonged, like serfs, to the emperors and the nobles, who bought and sold them at their pleasure. The Inquisition was a particularly bitter foe to the Jews, especially in the Spanish dominions. In the 16th century, their condition became much improved. In France, they were allowed to settle at Bayonne and Bordeaux, in 1550; in 1784 they were relieved from the poll-tax which had hitherto been imposed upon them. Shortly afterwards, the other European states, following the example of France, treated them in a more liberal spirit. The Jews are spread over every quarter of the globe, being exceedingly numerous in Germany, Poland, and the N. of Africa, — in Algiers in particular. Although intermixed for eighteen hundred years with so many diverse nations, the Jews have not only preserved their religion, as already said, but a certain national type of feature, of which the most salient points are a dark skin, thick lips, and an aquiline nose. The Jews belong to the Semitic race, as is proved by their language, which is allied with the Arabic, the Syriac, and the Chaldean. Their primitive life was patriarchal, pastoral, nomadic perhaps,—certainly so in the desert, between their departure from Egypt and entrance into the Land of Promise. According to the Holy Scriptures, they had many vices, joined to which were superstition, a readiness to fall into idolatry, a spirit of discord and of revolt. In addition to the Old Testament, they possess a literature which chiefly consists of legends, songs, proverbs, and genealogies. (See HEBREWS, LANGUAGE AND LITERATURE.) After their return from captivity in Babylon, philosophy and theology began to take their rise among the Jews, and a number of sects sprang up, such as the Pharisees, Sadducees, and Essenes. During the Middle Ages, the Jews were instrumental, like the Arabs, in handing down the learning of antiquity. In our own day, and in almost every country, they have illustrious representatives in all departments of science and the fine arts, being perhaps more decidedly proficient in music. Their religion is founded entirely on the Old Testament; it denies the divinity of Jesus Christ; but nevertheless teaches its followers to believe in the coming of the Messiah, who will collect the scattered Jewish people, and found a great empire. The Jews admit no other revelation than that of Moses and the prophets; they observe at the present time the same ceremonies which the ancient Hebrews practised, — the celebration of the Sabbath, the Passover, the abstinence from certain viands which are termed unclean. With the ancient Jews, all the priests were of the tribe of Levi; they thus bore the name of Levites, which, at the present time, is changed to *Rabbins.* After the dispersion of the Jews, during the reign of Adrian, the principal doctors of religion assembled at Tiberias, where they formed a Grand Council, or *Sanhedrim,* and founded a school, which became the nursery of their rabbins. These last composed, under the title of the *Talmud,* a work designed to contain the oral law and traditions of the Jews. This work was completed in the year 500 of the Christian æra; and, with the greatest portion of the Jews, it became the basis of their faith; some, however, refused to accept it. Hence arose the division of the Jews into two rival sects, — the *Talmudists,* or *Rabbinists,* who follow the Talmud; and the *Caraites,* who follow the strict letter of the Old Testament.

Jews'-ear, *n.* (*Bot.*) See EXIDIA.

Jews'-frankincense, *n.* See STYRAX.

Jews'-harp, *n.* (*Mus.*) An insignificant instrument, the form of which is too well known to need description. It is a mere plaything, and is totally incapable of being played in conjunction with either the voice or other instruments; its sounds are produced by holding it between the teeth and striking the projecting end of an iron spring with the finger. It is sometimes called the Jews'-trump, and is vulgarly believed to derive its name from the Jews, and to be employed in their music. This is, however, entirely wrong, as they do not possess any instrument of the kind, and its present name is most probably a corruption of the French *jeu-trompe,* a trumpet to play with; or it may come from what seems to be its proper name, and what it is often called, *jaw's-harp,* from its being played between the teeth.

Jews'-mallow, *n.* (*Bot.*) See CORCHORUS.

Jews'-pitch, *n.* Asphaltum.

Jews'-stone, Jew-stone, *n.* The fossil spine of a large egg-shaped echinus.

Jews'-trump, *n.* A Jews'-harp (*q. v.*).

Jeypoor (*ji-poor'*), JEYPORE a state of Hindostan, in Rajpootana; *area,* 15,251 sq. m. *Pop.* 2,832,276. This state is under the protection of the British.—Its capital, Jeypoor, stands in Lat. 26° 56′ N., Lon. 75° 55′ E., 850 m. N.W. of Calcutta; it is one of the handsomest of the native towns of India. *Pop.* (1897) 162,500.

Jez'ebel, a Jewish queen celebrated for her impious life. She was daughter of Ethbaal, king of Sidon, and wife of Ahab, king of Israel. She turned her husband from the worship of the true God, established temples to the idol Baal, and caused a large number of prophets and holy persons to be put to death. Jehu, on gaining the throne, flung her from the windows of her own palace, which killed her, the dogs devouring her, as had been foretold. — Her name, given by St. John, probably as a descriptive epithet, to a certain female of Thyatira, in his day holding a like bad pre-eminence in profligacy of life, has become a proverb, and is commonly applied to a forward, rapacious, or vile woman.

Jez'reel, (*Script.*) a city of Issachar (*Josh.* xix. 18), lying W. of Bethshean. *J.* was called Esdraela in the time of the Maccabees, and is now replaced by a small and ruinous Arab village called Zerin, at the N.W. point of Mount Gilboa. — Also the name of the great plain lying between *J.* and Acre.

Jhan'si, a state of India, in Bundelcund; *area,* 2,500 sq. m.; *pop.* 200,000. *J.* is under the protection of the British. Its cap., Jhansi, stands in Lat. 25° 28′ N., Lon. 78° 38′ E., on the main route between the Deccan and the Doab.

Jhe'lum, (anc. *Hydaspes,*) a river of the Punjab. It rises in Cashmere, which forms its upper basin, and is navigable within that country for about 70 m. On emerging from the Himalaya through the Baramula

Pass, it again becomes practicable for small craft. After a course of 490 m., it joins the Cheuab, in Lat. 31° 10′ N., Lon. 72° 9′ E., and forms with it what is sometimes called the Trimah or Trimab. The banks of this river were the scene of the battle between Alexander the Great and Porus.

Jib, *n.* [Lat. *gibba*, a hump-like swelling, a protuberance.] (*Naut.*) A name given to the foremost sail of a ship. It is in fact a large staysail extended from the outer end of the bowsprit, and prolonged by the jib-boom to the fore-topmast-head (Fig. 1447).—To *clear away the jib* is an order to loose it preparatory to its being set. The *jib-boom* is a spar which runs out from the extremity of the *bowsprit* in a similar manner to a topmast on any of the masts of a ship, and serves as a

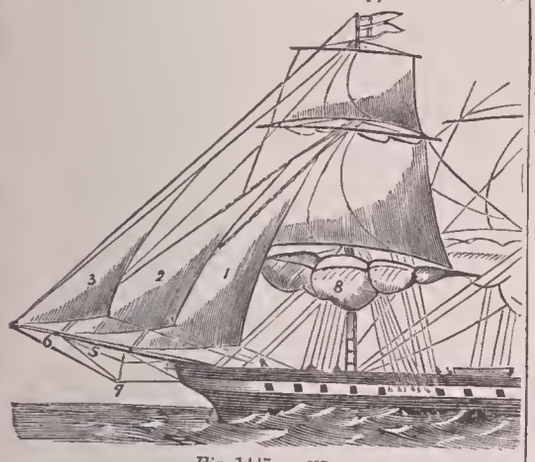


Fig. 1447.—JIB.

1, Fore-topmast staysail, set on fore-topmast-stay; 2, jib; 3, flying-jib; 4, bowsprit; 5, jib-boom; 6, flying jib-boom; 7, martingale, or dolphin-striker; 8, fore-course.

continuation of it, so that the height of the mast can be varied from jury-masts to top-gallant masts; the bowsprit can be elongated by means of the jib-boom to suit the increased or diminished altitude of the masts.—*Middle jib* is a sail sometimes extended from the end of the jib-boom.—A *flying-jib* is a sail rigged on a boom running out from the end, or beyond the jib-boom, as sometimes seen in the engravings of ships two centuries ago.

(*Mach.*) The overhanging part of a crane, or a triangular frame with a pulley at the end, for the chain to pass over which leads from the crane.

—*v. a.* To shift from one side of the mast to the other, as a boom-sail.

Jib′-boom, *n.* (*Naut.*) See JIB.

Jib′-door, *n.* (*Arch.*) A door so constructed that it stands flush with the adjoining face of the wall on both sides, and without dressings or architraves. Thus it appears to form part of the wall, the intention of a jib-door being simply to disguise the aperture.

Jib′ing, *n.* (*Naut.*) See GIBING.

Jid′dah, Jeddah, a port and haven on the W. coast of Arabia, on the Red Sea, about 60 m. W. of Mecca, of which city it is the port. It is the emporium for nearly all the Arabian merchandise, from whence it is shipped either for Europe or to meet the caravans for Nubia, Abyssinia, and Egypt. *Pop.* 22,000.

Jig, *n.* [It. *giga*, a hurdy-gurdy; Fr. *gigue*; Ger. *geige*, a violin or fiddle.] A light quick tune in 6-8 time.—A kind of light lively dance suited to the tune, which was very popular at the end of the last century.—A trick; a sport.

—*v. n.* To dance a jig.—To dance carelessly.

—*v. a.* To trick or cheat.

(*Mining.*) To separate by shaking, as ore.

Jiggamaree′, *n.* A trick; a manœuvre. (*Colloq. and low.*)

Jig′ger, *n.* One who jigs.

(*Naut.*) A machine consisting of a piece of rope about 5 feet long, with a block at one end and a sheaf at the other, used to hold on the cable when it is heaved into the ship by the revolution of the windlass.

—A potter's wheel by which he shapes his earthen vessels.

Jig′gish, *a.* Suitable to a jig.

Jig′gle, *v. n.* To wriggle. (R.)

Jig′gog, *n.* A jolting motion; a jog.

Jig′pin, *n.* (*Mining.*) A pin frequently used by miners to hold the turn-beams and prevent them from turning around.

Jill, *n.* A term of contempt for a woman; a wanton; a gill. (Vulgar.)

Jill′-flirt, *n.* A giddy, light, or wanton girl or woman.

Jilt, *n.* [Icel. *gilja*, to allure or entice a woman.] A woman who gives her lover hopes, and capriciously disappoints him; a woman who trifles with her lover; a coquette.—A name of contempt for a woman.

—*v. a.* To encourage as a lover, and then frustrate his hopes; to trick in love.

—*v. n.* To play the jilt; to practise deception in love, and discard lovers: to coquet.

Jim′crack, *n.* See GIMCRACK.

Jim′my, *n.* A tool used by burglars to break open doors.

Jim′son, *n.* (*Bot.*) The Thornapple.—See DATURA.

Jin′gle, *v. n.* [See GINGLE.] To clink; to sound with a kind of sharp rattle.

—*v. a.* To shake so as to make a rapid, merry, tinkling sound.

"The bells she *jingled*, and the whistle blew."—*Pope.*

—*n.* Any clink, or sharp rattle; anything sounding; a bell; a rattle.—Correspondence of sound in rhyme.

Jip′po, *n.* [O. Fr. *juppe*.] A kind of stays worn by ladies; also called *jump*.—See JUPPON.

Jo′ab, (*Script.*,) son of Zeruiah, David's sister, and brother of Abishai and Asahel, was the commander of David's army during almost the whole of his reign (2 *Sam.* v. 6–10). Valiant but unscrupulous, he committed many crimes, and was at length put to death by order of Solomon, (1 *Kings* ii.)

Joachim, St., (Order of.) This equestrian order of Franconia was founded in 1755, by an association of younger members of the German aristocracy. It was originally named the "Order of Defenders of the Honor of Divine Providence," and received its present title in 1785.

Joachim Creek, (*jo′a-kim,*) in *Missouri*, enters the Mississippi River at Herculaneum.

Joan, (POPE.) The story of this famous mythical personage may be thus briefly stated. When Pope Leo IV. died in 855, the clergy and people of Rome having met to elect his successor, chose a young priest, a stranger in Rome, who had acquired an immense reputation for learning and virtue, and styled him John VIII. The supposed priest was in reality a young Englishwoman, daughter of an English missionary, who had been established at Fulda. Beautiful and talented, she had fascinated a monk of the convent at Fulda, who succeeded in inducing her to assume male attire and enter the convent as a brother. The guilty intercourse carried on by means of this disguise, became at length so dangerous as to force the lovers to fly. They wandered through Europe, both learning and teaching, until at Athens, where they were studying Greek, the monk died. Joan made her way in time to Rome, and opened a school which soon became the resort of all lovers of learning. After her election, the administration of Rome and the Church was conducted with great ability, and the praise of John VIII. was universal. In the hour of her elevation, however, Joan fell again into the sin which had first tempted her; and heedless of the consequences, she was acting her part in a solemn religious procession on one of the rogation days, when she was seized with the pains of labor at a spot lying between the church of St. Clement and the Coliseum, and to the horror of all present gave birth to a child in the open street. Both parent and child died. A statue was erected to preserve the infamy of the fact, and it was determined that the pontiff in procession should never again pass by the desecrated spot. This strange tale, which the opponents to the Catholic cause vehemently maintained, was at length overthrown by a French Protestant minister, named Blondel, who in the interest of truth published in 1647 an "Eclaircissement de la Question." His view of the falsity of the story, supported by Bayle, Leibnitz, Eckhardt, and others, has prevailed, and the mythical nature of the female pope is now generally admitted. A critical examination of the documents relative to the fable of Pope Joan, by A. Bianchi-Giovini, appeared in Italian in 1845.

Joan of Arc, (in French, JEANNE D'ARC,) the heroic Maid of Orleans, was the daughter of Jacques d'Arc or Darc, and of Isabeau Romée, his wife, villagers of Domrémy, on the borders of Lorraine, and was B. in 1410 or 1411. She received the usual education of a peasant-girl at that period, and was taught to spin and sew, and repeat her Paternoster and Ave Maria, but not to read or to write. From her early years she was employed in tending the flocks of the villagers, and was distinguished only by her simplicity and kindness of heart, and her ardent qualities. At that period the English had conquered the greater part of her native country. Even the remote village of Domrémy did not wholly escape the danger and privations of these evil times; and on one occasion Joan and her parents were compelled to seek shelter at a hostelry in Neufchâteau. The perilous condition of her native land produced a deep impression on the ardent and enthusiastic mind of Joan; and she

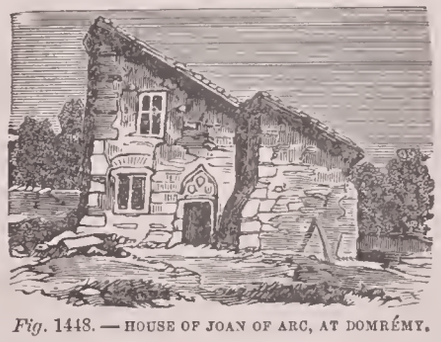


Fig. 1448.—HOUSE OF JOAN OF ARC, AT DOMRÉMY.

now began to fancy that she saw visions of saints, and heard mysterious voices, declaring that the foreign invaders were to be expelled, and the independence of France established by her aid. The crisis which took place in the affairs of the country, when Orleans was invested by the Earl of Salisbury, seems to have given a definitive shape to these phantoms of Joan's brain. Joan announced that she was commissioned from heaven to relieve the city and to crown the daughter of Rheims. With considerable difficulty, assisted by her uncle, whom she had convinced of the truth of her mission, she prevailed upon Robert de Baudricourt, governor of the neighboring town of Vaucouleurs, to send her, in Feb., 1429, to the French court, which was then held at Chinon, in the valley of the Loire, between Tours and Saumur, one hundred and fifty leagues distant. Escorted by the Sires de Metz and de Poulengy, she reached the vicinity of Chinon, and with some difficulty obtained admission to the presence of Charles. After some conversation with the king and his courtiers, and a long examination before the university and parliament at Poitiers, the popular opinion was so strongly expressed in favor of the Maid, that the royal counsellors were constrained, with considerable misgivings, to recommend that her services should be accepted. Her presence among the troops at Blois, and the fame of her supernatural powers, had an extraordinary effect in raising the drooping spirits of the soldiers, and it was resolved immediately to make an attempt, under her direction, to throw two convoys of provisions into Orleans, which was now reduced to the utmost need. This difficult enterprise was performed with complete success, and Joan herself entered the beleaguered city on the 29th of April. Anxious to raise the siege, if possible, without bloodshed, she sent repeated warnings to the besiegers to depart, under pain of vengeance from heaven; but, as might have been expected, they answered only with scoffs and ribaldry. On the 4th of May a part of the garrison made a sally against the English bastile of St. Loup, but were driven back. Joan heard the noise of the fray, and galloping to the spot, plunged headlong into the thickest of the fight, and leading the troops on to a second onset, succeeded in storming the bastile. The remaining bastiles on the southern bank of the Loire were carried by assault on the 6th and 7th of May, and the garrisons put to the sword; and on the 8th, the English generals, dispirited by these defeats, and finding that their troops were panic-stricken at the approach of the "sorceress," as they termed her, raised the siege and retreated to Melun-sur-Loire. The anniversary of this deliverance is still held sacred at Orleans. Having thus achieved the first part of her promise, the relief of Orleans, Joan hastened to Tours, where Charles was now residing, and urged him to undertake at once the expedition to Rheims. It was deemed necessary, however in the first instance, to reduce the other posts which the English still held on the Loire. Jargeau was stormed, Joan as usual leading the assault with indomitable courage; and Beaugency and Melun were surrendered without resistance. The remainder of the English army under Talbot retreated towards the Seine, but was overtaken near the village of Patay, 18th June, and so terror-struck were the troops at the idea of the Maid's supernatural power, that they fled almost without striking a blow. The brave Talbot himself was taken prisoner, and upwards of two thousand men were killed in the pursuit. Joan now renewed her entreaty that the king should set forth to be crowned at Rheims, though that city and every other stronghold on the way was still in the hands of the enemy; and Charles, indisposed as he was to personal exertion, was compelled to yield to the solicitations of his benefactress, supported as they were by the popular voice and the wishes of his troops. Difficulties and perils seemed to vanish at the approach of the Maid. Troyes, Chalons, and Rheims in succession opened their gates as if in concert to welcome their king. On the 16th of July Charles made a triumphal entry into the city of Rheims, and on the following day was solemnly crowned in its cathedral, his deliverer standing by his side before the high altar during the ceremony, with her banner unfurled in her hand. J. now regarded her mission as

Fig. 1449.—JOAN OF ARC.
(Copied from her statue in Orleans.)

accomplished, and asked the king to "allow her to return to her father and mother, to keep her flocks and herds as before, and do all things as she was wont to do." But Charles and his captains, though they did not themselves credit her divine commission, were well aware of her influence over the soldiers and the people, and by their urgent entreaties induced her to remain. Laon and other strong towns opened their gates to the king.

but the army was repulsed in an attack upon Paris, and the maid was severely wounded. She once more determined to retire from the contest, but was again induced by renewed entreaties to lay aside her resolution. Charles, in the midst of his successes, led back his troops into winter-quarters, and by his supineness lost a most favorable opportunity of completing his triumph. *J.* spent the winter at the court in Bourges or its neighborhood, and in December received from the king letters-patent of nobility to herself and her family. Her birthplace was at her request also declared to be exempted in future from any kind of impost, a privilege which it retained for more than three centuries. At the return of spring, 1430, the French army again took the field. *J.* displayed her accustomed bravery in several skirmishes, and on the 21st of May threw herself into the fortress of Compiègne, which was besieged by the Duke of Burgundy. In a sally which was made on the evening of her arrival she was taken prisoner — there is reason to believe through the treachery of the governor, Guillaume de Flavy, a brave but harsh and savage officer, who envied her renown. After having been transferred in succession to several prisons, *J.* was sold by John of Luxembourg for 10,000 livres to the English, by whom she was treated with great cruelty, and ultimately brought to a trial on a charge of witchcraft, before an ecclesiastical tribunal presided over by Pierre Cauchon, bishop of Beauvais, a base and cruel priest, and by Jean Lemaitre, vicar-general of the inquisition. The whole proceedings were of the most infamous character, and the condemnation of the unfortunate girl was determined beforehand. She displayed in her defence not only a courageous spirit, but remarkable discretion and good sense. She was of course found guilty of sorcery and heresy, in May, 1431, and having under the terror of death signed a formula of abjuration, she was condemned to perpetual imprisonment, "with the bread of grief and the water of anguish for her food." The object of these proceedings was to degrade her in public opinion, and then to find a pretext for putting her to death. By some means or other, by fraud or violence, she was induced to clothe herself in a suit of men's apparel, and was in consequence pronounced a heretic relapsed, and condemned to death. On the 30th of May she was burned alive in the market-place of Rouen, protesting to the last that her voices were unfeigned, and that in obeying them she had obeyed the will of God. The infamous treatment of this noble-minded, generous, courageous, patriotic, and devoted woman, reflects deep disgrace on all parties connected with it — the English authorities, the renegade Frenchmen, her judges and accusers, and on the king of France, who, immersed in his voluptuous pleasures, made no effort to save the subject to whom he was so much indebted. Her father died of grief at the tidings of her cruel fate; her mother survived for many years, and was supported by a pension from the city of Orleans. The memory of the maid of Orleans and her noble deeds was long cherished by the French, and her story has been the theme of many a poet in Germany and England as well as in France.

Joan OF NAPLES. This accomplished and ill-fated princess, b. 1327, was the daughter of Charles, duke of Calabria, and grand-daughter of Robert, king of Naples, to whose authority she succeeded in right of her deceased father, 1343. In order to unite the claims of the two branches of the house of Anjou, and secure the tranquillity of her reign, King Robert had married her to Andrew, youngest son of Carobert, king of Hungary, when they were both children. The match was not a happy one, either for the princess or her subjects, by whom Andrew, a man of unamiable and gross disposition, was about equally beloved, and a conspiracy being formed against him, he was murdered in 1345. In 1347 the queen married her kinsman Louis of Tarentum, who had been her lover, and was the principal instigator of the conspiracy; and the circumstances led to a war in which Charles III., duke of Durazzo, became a principal actor, and Avignon with its territory was ceded to the Pope by Queen *J.* Louis survived these events till 1362, when *J.* was married again to James of Arragon, and for a fourth time, in 1376, to Otho of Brunswick. Eventually, Charles of Durazzo usurped the throne of Naples, and caused the queen to be suffocated in 1381.

JOAN II., daughter of Charles of Durazzo, succeeded to his ill-gotten power in 1414, and was married successively to William, the son of Leopold of Austria (1404–6), and to James, count of La Marche (1415). She was a woman of profligate character, and no redeeming virtues are recorded of her. D. 1435.

Joan'na. (*Script.*) One of the faithful women who ministered to Christ while living, and brought spices to his tomb. Her husband Chuza was a steward to Herod Antipas, (*Luke* viii. 3; xxiv. 1–10.)

Joan'na, JOHANNA, or ANJOUAN, the largest of the Comorro group of islands, off the E. coast of Africa; it is 24 m. long, and 18 broad; Lat. 12° 50′ S., Lon. 44° 29′ 30″ E. *Pop.* 20,000.

Jo'ash, or JEHO'ASH, the 8th king of Judah, b. c. 878–838. He was the only son of Ahaziah who was not slain by the usurping Athaliah, his grandmother. Being rescued by Jehoshebah his aunt, and secluded six years in the temple, he was raised to the throne, when seven years of age, through the faithful care of Jehoiada; and while this venerable man survived, *J.* served God and prospered. Idols were banished, and the temple was repaired. But afterwards he followed less wholesome counsels; idolatry revived; and when Zechariah the high-priest rebuked the guilty people, the ungrateful king caused this servant of God, the son of his benefactor, to be stoned to death. Misfortunes soon multiplied on his head; he was repeatedly humbled by the Syrians, and gave them the temple treasures as a ransom; a loathsome disease imbittered his life, which was soon cut short by a conspiracy of his servants, and he was not buried in the sepulchre of the kings, (2 *Kin.* xi. 12; 2 *Chr.* xxiii. 24.) The prophet Joel was contemporary with him.

JOASH II. The son and successor of Jehoahaz, king of Israel, b. c. 840–825. There was much in his conduct to commend. He had a great regard for the prophet Elisha, and visited him on his death-bed, where by a divine oracle he was assured of three victories over the Syrians. He was also victorious when forced to give battle to Amaziah king of Judah, and was one of the best kings of Israel. (2 *Kin.* xiii. 9–25; xiv. 1–8; 2 *Chr.* xxv.)

Joazeiras, (*zho-a-za'ras,*) a town of Brazil, province of Bahia, abt. 65 m. N.N.W. of Jacobina.

Job, (Book of.) (*Script.*) The name of one of the books of the Old Testament, so called from the patriarch whose history and whose patience under adversity and suffering it depicts. Many questions have been agitated with respect to this book, particularly regarding the reality or fiction of the history, the period in which the author lived, and the piety and ethics which the book is intended to teach. Many eminent critics have endeavored to prove that the whole poem is a mere fictitious narration, intended to instruct through the medium of a parable; while the actual truth of the narrative has been maintained by men equally distinguished, and has, besides, been the uniform belief of both the Jewish and the Christian Church. Besides, Job is spoken of in several other passages of Scripture as being a real personage. "Ye have heard of the patience of Job," says the apostle James. As to the age in which he lived, there is great diversity of opinion. Some regard him as living in the time of the patriarchs; others, in the time of Moses; others, during the Judges; others, in the reign of Solomon; others, in the time of the captivity, &c. The book itself bears undoubted marks of antiquity. The Uzerian, or Bible chronology, dates the trial of Job about the year 1520 B. C., or 29 years before the departure of the Israelites from Egypt. In support of its high antiquity have been adduced, besides the general air of antiquity which pervades the manners recorded in the poem, the longevity of Job, which was characteristic of early or patriarchal times; his holding the office of priest in his own family; his allusion to that species of idolatry alone which is generally admitted to have been the most ancient — that of the heavenly bodies; and the silence of the book respecting the history of the Israelites and the Mosaic laws. Dr. Hale has, by means of astronomical calculations based upon the position of the stars referred to by Job, attempted to fix the date of his trial, and makes it to have been 184 years before the birth of Abraham. The scene of the poem is stated to be the land of Uz, which most probably is Idumæa. The different parts of the book are so closely connected together, that it must all have been the work of one author; and many conjectures have been made as to who that author was. Elihu, Job, Moses, Solomon, Isaiah, Ezekiel, and Ezra, have all been brought forward as having written it. There is no reason, however, to doubt, indeed it is highly probable, that Job was the writer of his own story, of whose inspiration we have the clearest evidence, when he says, "I have heard of thee by the hearing of the ear; but now mine eye seeth thee." (xlii. 5.) In this book we have an account of a man of distinguished wealth, as well as of eminent piety, suddenly precipitated from the very summit of prosperity into the lowest depths of misery and ruin — first bereaved of his wealth and children, and afterwards afflicted with a loathsome and excruciating bodily disease. Yet, under these heavy afflictions, we are told that he sinned not, nor charged God foolishly. He is visited by three of his friends, Eliphaz, Bildad, and Zophar, on the pretence of affording him consolation. After a long silence, Job's grief breaks forth into passionate exclamations, and a vehement execration of the day of his birth. The minds of his friends are suddenly exasperated; and their consolation, if any was intended, is changed into contumely and reproaches. Eliphaz reproves his impatience, questions his integrity, by insinuating that God does not so punish the righteous, and finally admonishes him not to despise the chastisement of God. (iv., v.) Job replies, apologizing for the intemperance of his grief by the magnitude of his calamities, prays for speedy death, accuses his friends of cruelty, and supplicates the mercy of God. (vi., vii.) The argument of Eliphaz is resumed by Bildad, who reproves Job with still greater acrimony, telling him that the death of his children had been owing to their transgressions, and that he should reform, not murmur. (viii.) In reply, Job acknowledges the justice and sovereignty of God, argues that his afflictions are no proof of his wickedness, and in despair again wishes for death. (ix., x.) Zophar prosecutes the argument with still greater severity, and exhorts him to repentance as the only means by which to recover his former prosperity. (xi.) Job replies, censuring their pretensions to superior wisdom, charging them with hypocrisy and uncharitableness, and appealing to God, professing his hope in a future resurrection. (xii.–xiv.) The second series of controversy begins with another speech from Eliphaz, who accuses Job of impiety in justifying himself. (xv.) Job replies, complaining of the increasing unkindness of his friends, protests his innocency, and looks to death as his last resource. (xvi., xvii.) Bildad continues his former line of argument with increased asperity, inculcating the general idea that Job's sufferings are the tokens of God's displeasure at his wickedness. (xviii.) In reply, the sufferer complains bitterly of the cruelty of his friends, and the hard treatment of God; also, he craves pity, and professes his belief that God would yet appear to vindicate his cause against his accusers. (xix.) The second speech of Zophar enlarges upon the sure downfall and portion of the wicked. (xx.) Job, on the contrary, dwells upon the fact that the wicked are often prosperous in this world, and end their days in peace. (xxi.) The third series of controversy is opened by Eliphaz asserting more directly than before that Job's misfortunes were the result of his crimes, and concludes with renewed exhortation to repentance and prayer. (xxii.) In reply, Job ardently desires to plead his cause before God, and maintains that the wicked frequently escape punishment in this life. (xxiii., xxiv.) The reply of Bildad, who expresses the holiness of God, before whom no man can be pure. (xxv.) Job, in reply, re-vindicates his own conduct with great warmth, takes a retrospect of his former life as a husband, a master, a magistrate, and concludes with an ardent wish for an immediate trial before God's tribunal. (xxvi.–xxxi.) Another speaker is now introduced, Elihu by name, who sums up the whole argument. After condemning the conduct of all the disputants, whose reasonings were not calculated to produce conviction (xxxii.), he proceeds to contest several of Job's positions, and to show that God frequently afflicts the children of men for the best of purposes, and that, in every instance, it is our duty to submit. He concludes with a fine description of the various attributes of God. (xxxiii.–xxxvii.) Jehovah himself now interposes, and addresses Job out of a whirlwind, in a speech of the sublimest kind. He shows Job the folly of questioning the justice or wisdom of the Divine government, when he is unable to control, or as much as comprehend, the commonest phenomena of nature. (xxxviii.–xli.) Then follows Job's submission, and his restoration to prosperity, his possessions being doubled. (xlii.) Some commentators have regarded this book as a regular epic, possessing unity of action, delineation of character, plot, and catastrophe, — not exactly in the Grecian, but in the Oriental style; others regard it as a regular drama, divided into acts and scenes; while others call its form lyrical. But whatever class of poetry we regard it as belonging to, it stands in the first rank of Hebrew poesy. It is not only equal to that of any other of the sacred writings, but is superior to them all, except those of Isaiah alone. As Isaiah is the most sublime, David the most pleasing and tender, so Job is the most descriptive of all the inspired poets. A peculiar glow of fancy and strength of description characterize the author. No writer whatever abounds so much in metaphors. He may be said not to describe, but to render visible, whatever he treats of.

Job, *n.* [Ger. *hieb,* a cut, a stroke, from Old G. *hauwan,* to cut, to kill; Sansk. *jab,* to strike, to kill.] A sudden stab with a pointed instrument.

—A piece of work; anything to be done; a lucrative business; an undertaking with a view to profit. — Any public business, work, or office, undertaken or carried on for the purpose of some private, unfair, or unreasonable emolument or benefit.

(*Printing.*) The name applied to cards, shop-bills, reward-bills, play-bills, posting-bills, auctioneers' catalogues, price-lists, and other small things of a similar kind. Job-houses seldom execute book-printing to any great extent, as their materials are not calculated for it.

—*v. a.* To strike or stab with a sharp instrument. — To drive a sharp-pointed instrument into.

(*Com.*) To deal in the public stocks; to buy and sell as a broker.

—*v. n.* To work at chance-work; to hire or let horses, &c.

Jobation, *n.* A tiresome reprimand. (Low.)

Job'ber, *n.* A dealer in the public stocks or funds; a stock-jobber. — One who does chance works or jobs. — A merchant who purchases goods from importers, and sells to retailers.

Job'bernowl, *n.* A blockhead.

Job'bery, *n.* Act or practice of jobbing; dishonest management; mean craft.

Job'bing-house, *n.* The establishment or business of a trader who purchases goods from importers and sells to retailers. (U. S.)

Jobie, (*jo-be',*) an island of the Indian Archipelago, situate at the entrance of the Great Bay, on the N. side of the N. island of Papua. It is 90 m. long, with a breadth varying between 12 and 28. There is not a single cove or creek sufficiently large to receive a ship.

Job's-tears, *n.* (*Bot.*) See COIX.

Jobs'town, in *New Jersey,* a post-village of Burlington co., about 6 m. E.N.E. of Mount Holly.

Jobs'ville, in *New Jersey,* a village of Gloucester co., on the Delaware river, about 4 m. above Woodbury.

Jocas'ta, wife of Laius, king of Thebes, and mother of Œdipus, whom she afterwards married, not knowing that he was her son. On discovering the fact, she, in horror of the crime, hanged herself.

Joch'ebed. (*Script.*) The wife of Amram, and mother of Moses, Aaron, and Miriam. She was a daughter of Levi, and her husband's aunt, though such marriages were afterwards prohibited. (*Lev.* xviii. 12.)

Jock'ey, *n.*; *pl.* JOCKEYS. [Said to be from *Jockey,* a diminutive of *Jack,* John; primarily, a boy who looks after horses.] A man who rides a horse in a race, (see HORSE-RACING.)—A dealer in horses.—One who deceives, or takes undue advantage in trade.

Jockey, *v. n.* To play the jockey to; to cheat; to trick, to deceive in trade. — To jostle by riding against one.

—*v. a.* To act the jockey.

Jock'ey Club, *n.* A celebrated English corporate racing body, instituted at Newmarket during the reign of George II. (1727–1760), was first officially noticed in "Heber's Racing Calendar" for 1758. Its decisions in

disputed cases, first published in 1808, have been continued in the "Racing Calendar" ever since. New rules were enacted in 1828 and 1858.

Jock'eyism, *n.* The character and practice of a jockey.

Jock'eyship, *n.* The character or quality of a jockey.

Jocose', *a.* [Lat. *jocosus*, from *jocus*, a jest or joke, *q. v.*] Given to jokes and jesting, as a person; merry; waggish; sportive. — Containing a joke, as a remark; jocular; facetious.

Jocose'ly, *adv.* In jest; for sport or game; waggishly.

Jocose'ness, *n.* The quality of being jocose; merriment; waggery.

Jo'co-se'rious, *a.* That is at the same time mirthful and serious.

Jocos'ity, *n.* Waggery; merriment.

Joc'ular, *a.* [Lat. *jocularis*, from *joculus*, a little jest or joke, dimin. of *jocus*.] Given to jokes, jesting, or pleasantry, as a person; facetious; jocose; humorous. — Containing a joke; not serious, as conversation; merry; waggish; sportive.

Jocular'ity, *n.* Quality of being jocular; merriment; jesting.

Joc'ularly, *adv.* In jest; for sport or mirth.

Joc'und, *a.* [Lat. *jocundus*, or *jucundus*, from *jocus*, a jest or joke.] Pleasant; pleasing; agreeable; delightful; characterized by life or sportive enjoyment; merry; lively; cheerful; mirthful; airy; sprightly.

Jocun'dity, *n.* [Lat. *jucunditas*.] The state or quality of being jocund; mirth; gayety; sportive enjoyment.

Joc'undly, *adv.* Merrily; gayly.

Joc'undness, *n.* The state of being jocund; jocundity.

Jodar, (*ho'dar,*) a town of Spain, in Andalusia, 24 m. from Jaen. *Pop.* (1897) about 5,550.

Jo Daviess, in *Illinois*, an extreme N. W. co.; *area*, about 663 sq. m. *Rivers.* Mississippi, Apple, Fevre, and Plum rivers, and Rush creek. *Surface*, uneven; *soil*, fertile. *Min.* Copper and lead in abundance. *Cap.* Galena. *Pop.* (1890) 25,101.

Jo Daviss, in *Minnesota*, a township of Faribault county.

Joe. See JOHANNES.

Jo'el, (Book of.) (*Script.*) The name of one of the books of the Old Testament, called after its author, who is one of what are termed the minor prophets. He lived in Judah, but under what reign is doubtful, some placing him under Uzziah, others under Joash, &c. The book consists of two parts: the first (i. 2—ii. 18) giving a description of a famine caused by the ravages of locusts, and exhorting the people to repentance, in which he becomes very urgent towards the close, denouncing still greater judgments against them if they continue impenitent; and the second part (ii. 19—iii. 21), containing the divine promise respecting the removal of this judgment upon the people, the destruction of all nations hostile to the theocracy, and the glorification of that theocracy by the richest blessings of nature and the outpouring of the spirit upon all flesh. The canonicity of this book has never been doubted. The style is pure, elegant, and copious, and the ideas are noble and vigorous.

Jog, *v. a.* [D. *schokken;* Sax. *scucan;* W. *gogi*, to shake, *q. v.*] To push or shake with the elbow or hand: to give notice to, or excite the attention of, by a slight push. —*v. n.* To move by jogs or small shocks; to walk or travel idly, heavily, or slowly.

—*n.* A push; a slight shake; a shake or push intended to give notice or awaken attention; a hint given by a push.

Jog'ger, *n.* One who walks or moves heavily and slowly; one who gives a sudden push.

Jog'ging, *n.* A slight push or shake.

Jog'gle, *v. a.* To shake slightly; to give a sudden but slight push to.

(*Arch.*) To indent the joints of stones or other materials in such a way that the adjacent stones fitting into the indentations are prevented from being pushed away from each other by any forces perpendicular to the pressures by which they are thus held together.

—*v. n.* To shake or totter.

Jog'gle, Jog'gle-joint, Jog'gle-piece, *n.* (*Arch.*) A term used in various senses relating to the fitting of stones together; almost every sort of jointing, in which one piece of stone is let or fitted into another, is called a joggle; what a carpenter would call a *rebate* is also a joggle in stone.

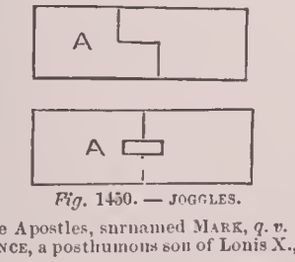


Fig. 1450. — JOGGLES.

Johan'nes, *n.* [Lat., John] (*Numis.*) A Portuguese gold coin; often contracted into *Joe*; value abt. $8.

John, a disciple of the Apostles, surnamed MARK, *q. v.*

John I., KING OF FRANCE, a posthumous son of Louis X., B. and D. 1316.

JOHN II., surnamed THE GOOD, B. 1319, succeeded his father Philip of Valois, 1350. Taken prisoner by the Black Prince, at the battle of Poitiers, 1356, he D. in prison, 1364.

Johan'nisberg, a village famous for its vineyards, with a castle, in Prussian Nassau, near the E. bank of the Rhine, on the N. confines of the Rheingau, 16 m. W. by N. of Mentz. The prodnee of the vineyards, known as *Schloss-Johannisberger*, is admitted to be the very finest of the Rhenish wines, being distinguished by its high flavor and bonquet, by an almost total want of acidity, and by its being improved the longer it is kept. The finest growth in the best years sometimes realizes as much as $25 the bottle. The castle and vineyards are the property of Prince Metternich.

Fig. 1451. — JOHANNISBERG.

John, KING OF ENGLAND, B. at Oxford, 1166, was the yonngest son of Henry II. by Eleanor of Guienne. Ireland being intended for him, he was sent over, in 1185, to complete its conquest, but snch was his imprndence that it was found necessary to recall him; and on the death of his father he was left without any provision, which procnred for him the name of *Sans Terre*, or Lackland. His brother Richard, on coming to the throne, conferred on him the earldom of Mortaigne, in Normandy, and various large possessions in England, and married him to the rich heiress of the duke of Gloucester. Notwithstanding this kindness, he had the ingratitude to form intrigues against Richard, in conjnnction with the king of France, during his absence in Palestine; but Richard magnanimously pardoned him, and at his death left him his kingdom, in preference to Arthur of Brittany, the son of his elder brother, Geoffry. Some of the French provinces, however, revolted in favor of Arthur; but John ultimately recovered them, and his nephew was captured, and confined in the castle of Falaise, whence he was subsequently removed to Rouen, and never heard of more. Being suspected of the murder of Arthur, the states of Brittany summoned John to answer the charge before his liege lord, King Philip; and upon his refusal to appear, the latter assumed the execution of the sentence of forfeiture against him; and thus, after its alienation from the French crown for three centuries, the whole of Normandy was recovered. A quarrel with the Pope Innocent III., who had nominated Stephen Langton to the see of Canterbury, added to the perplexity of the king, whom the Pope excommunicated, and whose subjects he formally absolved from their allegiance. At length John was induced not only to receive Langton as archbishop of Canterbury, but to resign his kingdom to the holy see, in order to receive it again as its vassal. John had by this time rendered himself the object of such universal contempt and hatred, that his nobles determined, if possible, to limit his power, and establish their privileges; and though the Pope declared his disapprobation of their conduct, the barons assembled in arms at Oxford, where the court then was, and immediately proceeded to warlike operations. They were received without opposition in London, which so intimidated the king, that he consented to whatever terms they chose to dictate. Thus was obtained that basis of English constitutional freedom known as *Magna Charta*, which not only protected the nobles against the crown, but secured important privileges to every class of freemen. But while the monarch appeared to be all-complying and passive, he was secretly purposing to disannul the charter. The Pope pronounced a sentence of excommunication on all who should attempt to enforce it; and John, having collected an army of mercenaries, carried war and devastation throughout the kingdom. The barons, taken by surprise, now sent a deputation to Philip of France, offering the crown of England to the dauphin Louis; who speedily, with 600 vessels, landed at Sandwich, and proceeded to London, where he was received as lawful sovereign. John was immediately deserted by all his foreign troops, and most of his English adherents; but the report of a scheme of Louis for the extermination of the English nobility arrested his progress, and induced many to return to their allegiance. While the king's affairs were beginning to assume a better aspect, he was taken ill, and died at Newark, 1216.

Fig. 1452. — COSTUMES, (reign of John.)

John. This name belongs to 23 Popes who reigned in the following order:

John I.,.....523–526	John XIII.,..... ...965–972
John II.,.....533–535	John XIV.,.....983–985
John III.,.....560–573	John XV.,..... 985
John IV.,.....640–642	John XVI.,..... .. 985–996
John V.,.....685–686	John XVI., (anti-pope,)997
John VI.,.....701–705	John XVII.,..... 1003
John VII.,.....705–707	John XVIII.,.....1003–1009
John VIII.,..... 872–882	John XIX.,..... 1024–1033
John IX.,..... 898–900	John XX.,..... 1045–1046
John X.,.....914–928	John XXI.,.....1276–1277
John XI.,..... 931–936	John XXII.,.....1316–1334
John XII.,.....956–964	John XXIII.,.... 1410–1415

We notice only those who have an historical importance.

JOHN I. was a native of Tuscany, and ascended the papal chair on the death of Hormisdas, in 523. Theoderic, king of the Goths, a violent Arian, threw him into prison at Ravenna, where he died in 526. The Catholic Church honors him as a martyr.

JOHN VIII., a Roman, was elected to the pontificate on the death of Adrian II., in 872. He crowned the emperor Charles the Bald in 875, and three years after, went to France, where he held a council at Troyes. In his time Italy was ravaged by the Saracens, who obliged the Pope to pay tribute. He corresponded with Photius, patriarch of Constantinople, who had driven Ignatius from his seat and usurped the dignity. John, imposed upon by the pretences of the intruder, acknowledged him patriarch; but, on discovering his error, he excommunicated him. D. 882.

JOHN XI. was made pope at the age of 25, in 931, through the influence of his mother Marozia, wife of Guy, duke of Tuscany; but his brother Alberico afterwards threw both him and her into the castle of St. Angelo, where John died in 936.

JOHN XII., the son of Alberico, and originally called Octavian, B. 938. He was elected pope in 956, and was the first who changed his name on that occasion. At that time Berenger tyrannized over Italy, and the pope implored the assistance of the emperor Otho I., who delivered the country. John crowned Otho at Rome, and promised him fidelity, which, however, was of short duration, for he united with the son of Berenger against his deliverer. Otho returned to Rome in 963, and called a council, in which the pope was accused of sacrilege and other crimes, which being proved, he was deposed. On the departure of the emperor, John entered Rome, and exercised dreadful cruelties on his enemies. He died in 964, under very suspicious circumstances.

JOHN XXII., (*James d'Euse,*) a native of Cahors, who by the patronage of Charles II. of Naples, to whose son he was preceptor, rose to high ecclesiastical dignities, and in 1316 was elected pope. He was an active pontiff, and founded several abbeys, and established some bishoprics in central towns. His pontificate, however, was disturbed by various quarrels, especially with the Cordeliers, whose order he intended to suppress. He died 1334, respected for his frugality, prudence, and sanctity. He was well skilled in medicine, and wrote the *Thesaurus Pauperum* — treatise on the Disorders of the Eyes — on the Gout — on the Formation of the Fœtus — Advice for Preserving Health, printed at Lyons.

JOHN XXIII., (*Balthasar Cossa,*) a Neapolitan who was legate at Bologna, and chamberlain to Boniface IX., and succeeded Alexander V., 1410. His elevation was not without opposition; but to pacify faction, he promised to resign the tiara, if Gregory XII. and Peter de Luna, or Benedict XIII., would also abandon their pretensions. Though these conditions were accepted and ratified with due formality in the council of Constance, he had the art to withdraw himself, and to re-assume the office and insignia of sovereign pontiff; but he was soon after deposed and imprisoned. Three years after, 1418, he was restored to liberty, and compelled to acknowledge the election of Martin V., by whom he was treated with great kindness. He died soon after, 1419.

John I., emperor of Constantinople, surnamed *Zimisces*, was of an illustrious family. He succeeded the emperor Nicephorus Phocas in 969, and obtained many victories over the Russians, Bulgarians, and Saracens. He was poisoned by Basil the Eunuch, in 976.

JOHN II., *Comnenus*, succeeded Alexis Comnenus, his father, in 1118. He gained several battles over the Turks and Servians, and governed with great prudence and liberality. He died in 1143, of a wound which he received from a poisoned arrow.

JOHN III., *Ducas*, was crowned at Nicea in 1222, at the time when the Latins were in possession of Constantinople. He was a prince of great virtue, gained many battles, defeated the Scythians, Tartars, and Bulgarians, and extended his empire on all sides. D. 1255.

JOHN IV., *Lascaris*, son of Theodore the Young, whom he succeeded in 1259, at the age of six years; but, in the same year, the despot Michael Palæologus deprived him of his crown and his eyes, and imprisoned him for life. D. 1284.

JOHN V., *Palæologus*, succeeded his father, Andronicus the Younger, in 1341, but his throne was for a long period usurped by John Cantacuzenus, whose daughter he married after recovering his throne. His son Andronicus revolted against him, and the Genoese made themselves masters of the isle of Lesbos, and Amurath I. took the city of Adrianople. D. 1391.

JOHN VI., *Cantacuzenus*, was the minister and favorite of Andronicus Palæologus, who made him guardian of his children John and Emanuel, with whose mother, Jane of Savoy, he governed for some time with great wisdom

and moderation. But, in 1345, he assumed the imperial title in Thrace, and, in 1347, took Constantinople, compelling John Palæologus, who had been crowned in 1341, and who had married his daughter, to retire to Salonica. The exiled monarch, however, with the help of the Genoese, defeated the fleet of the usurper, and obliged him to quit his throne and capital. He then retired to the monastery of Mount Athos, where he devoted himself to literary studies, and wrote a valuable history of the empire, and a defence of Christianity against the Mohammedans.

JOHN VII., *Paleologus*, succeeded his father Emanuel in 1425. His reign was very unfortunate, and the Turks made such progress in his dominions as to reduce him to the necessity of imploring the succor of the Latins. He consented to a union of the two churches, which was performed at the council of Ferrara, in 1439, at which John assisted in person. D. 1448.

John I., KING OF PORTUGAL, was the natural son of Peter, and, in 1383, ascended the throne, to the prejudice of Beatrice, daughter of Ferdinand I., his brother. John I., king of Castile, the husband of that princess, disputed the crown, but was defeated at the battle of Aljubarota, in 1385. He then turned his arms against the Moors of Africa, and took Ceuta and other places. D. 1432.

JOHN II., surnamed the Great, and B. 1455, succeeded his father, Alphonsus V., 1481. He was successful in his suppression of some insurrections, and afterwards he carried his arms into Africa, and was at the taking of Arzile and Tangiers. He afterwards defeated the Castilians at the battle of Toro, 1476, and with wise policy encouraged the maritime excursions of his subjects, and favored their settlements on the coasts of Africa and in the Indies. D. 1495.

JOHN III. succeeded his father, Emanuel, 1521. The beginning of his reign was marked by dreadful earthquakes; but John, with benevolence and wisdom, relieved the miseries of his subjects, and encouraged commerce and navigation. His fleets penetrated far into the East, and discovered Japan; and to insure the tranquillity of his Indian settlements he sent among them the celebrated Francis Xavier. D. 1557, deservedly respected as a humane and enlightened monarch.

JOHN IV., surnamed the *Fortunate*, B. 1604, was son of Theodore, duke of Braganza. He employed all the powers of his mind, and of his situation, to the emancipation of his country, which the Spaniards, after the death of Sebastian, had conquered, and since held as a tributary province, and by the assistance of his brave countrymen, he shook off the odious yoke, and was proclaimed king, 1630. D. 1636, aged 32.

JOHN V. succeeded Peter II., 1707. He espoused the cause of the allies in the wars of the Spanish succession, and when the peace of Utrecht, in 1713, restored tranquillity to Europe, he devoted himself to the encouragement of commerce, of literature, and of industry among his subjects. D. 1750, aged 61, universally regretted,

JOHN VI., second son of Peter III., was appointed regent when his mother, Maria I., lost her reason, in 1799. In 1817 he was driven by the French from Portugal, whereupon he took up his residence in Brazil, with the title of emperor. On the death of his mother, in 1816, he was proclaimed king, but did not return to Portugal till 1821. In 1823, French intervention again destroyed the hopes of the constitutional party in Portugal. The independence of Brazil was recognized in 1825, and the king died in 1826. Of his family, by the Infanta Carlotta Joaquina, daughter of Charles IV., the most notable are: Pedro IV., who succeeded him; Don Miguel, banished during his father's lifetime, and afterwards a pretender to the crown; Maria Francesca d'Assis, wife of Don Carlos; and Maria Isabella, wife of Ferdinand VII.

John I., KING OF CASTILE AND LEON, succeeded his father, Henry II., in 1379, at the age of 21 years. He made war on Portugal, for the purpose of placing his son on the throne of that country, but was unsuccessful. He was surnamed "Father of his Country," for his generous and just rule of his kingdom. D. 1390.

JOHN II., B. 1405, was son of Henry III., and was proclaimed king when less than two years of age, his uncle Ferdinand being appointed regent. He made war successfully against the kingdoms of Aragon and Navarre, and the Moors of Grenada. He greatly assisted in the restoration of Spanish literature, and was father of the celebrated Isabella and Henrique IV. D. 1454.

John I., KING OF ARAGON, succeeded his father, Peter IV., in 1387. Throughout his reign he was continually at hostilities with his subjects, whom he governed with great injustice and severity.

JOHN II., son of Ferdinand the Just, ascended the throne of Navarre on marrying Blanche, daughter of Charles the Noble, in 1425, and that of Aragon in 1458, after the death of Alphonsus, his brother. He was for a long time at war with his son Don Carlos, to whom Blanche, his mother, had left the crown of Navarre at her death, in 1441. He died in 1479, leaving the kingdom to his son Ferdinand the Catholic.

John, KING OF BOHEMIA, the son of the emperor Henry VII., was elected to the throne in 1310, at the age of 15. He was a warlike prince, and, after defeating the Lithuanians, assumed the title of king of Poland. He lost an eye in that expedition, and a Jewish doctor, who pretended to restore him to sight, deprived him of the other. His military spirit, however, continued unabated, and he accompanied Philip of France, in 1346, to the battle of Cressy, where he was guided between two brave knights, each holding his bridle. He fell in that action, and was buried at Luxembourg.

John I., KING OF POLAND, B. 1459, was the second son of Casimir IV., whom he succeeded in 1492. He was the friend of letters and of peace, and during his reign there were few military events of importance. He was succeeded by his son Alexander, grand-duke of Lithuania. D. 1501.

JOHN II., or JOHN CASIMIR. See CASIMIR V.

JOHN III., (John Sobieski), king of Poland, was youngest son of James Sobieski, governor of Cracow, and educated at Paris. In 1665 he was made grand-marshal and general of the Polish armies, after which he was appointed master of the Royal House, and prelate of Cracovia. He retook several cities from the rebellious Cossacks of the Ukraine, and distinguished himself in many gallant actions. In 1673 he gained the memorable battle of Choczim, near the Dniester, in which the Turks lost 28,000 men. On the death of Michael, in the following year, he was elected king of Poland, and shortly afterward compelled the Turks to sue for peace. In 1683 he forced them to raise the siege of Vienna, which otherwise would inevitably have been taken. D. at Warsaw, 1696.

John I., KING OF SWEDEN, called JOHN SVERKERSON, reigned 1216–1222. — JOHN II., same as John, king of Denmark. — JOHN III., born 1537, succeeded 1568, abdicated 1592.

John, KING OF DENMARK, B. 1455, succeeded his father, Christian I., 1481, king of Norway 1483, king of Sweden 1497, dethroned by the Swedes 1512, died 1513.

John, DUKE OF BRITTANY. Though six princes of this name have worn the ducal coronet of Brittany, only two require a passing notice in the two centuries and a half that the name extended, between 1237 and 1419; and these are: John IV. — commonly known as John de Montfort, — whose cause was espoused by the English, and who, when made prisoner by the French, had his rights vigorously maintained by his heroic wife, who bravely held out her castle against the large force that encompassed it, till the arrival of the English fleet with troops to her aid compelling the enemy to raise a fruitless siege; and John VI., who, for the aid he afforded the English in their expedition under Henry V., was attacked by the duke of Penthièvre, who drew him into an ambuscade, and making him a prisoner, kept him in confinement for five years. His government, after he regained his liberty, was marked by weakness and indecision. D. 1442.

John "THE FEARLESS." [Fr. *Jean Sans Peur.*] Duke of Burgundy and count of Nevers, succeeded his father in 1404, at the age of 33. The houses of Burgundy and Orleans at that period disputed the government of France, during the insanity of Charles VI. In 1407 he caused the assassination of the duke of Orleans, and, by that act, became absolute master in Paris; but it was also the commencement of the fearful internal struggle between the *Burgundiens* and the Armagnacs. Being reconciled with the dauphin, afterwards Charles, he was assassinated in his presence by one of his courtiers, 1419.

John of Austria, or **Don John.** This renowned general was the natural son of the Emperor Charles V., and was brought up in such ignorance of his birth, that, till summoned by Philip II., his brother, to Spain, — to whom Charles had revealed the fact on his death-bed, — and there acknowledged as the emperor's son, he had been in total darkness as to who his parents were. His first most illustrious triumph was a victory over the Turkish galleys in the Gulf of Lepanto, in which the Ottomans lost 30,000 men; he next invaded Tunis, and in 1576 was sent by Philip as governor of the Low Countries, then in open revolt, under command of the Prince of Orange and the Archduke Matthias; here, in a succession of splendid victories, he so reduced his antagonists, that the country must soon have submitted and returned to its allegiance, had he not been, unfortunately for the duration of the Spanish rule, suddenly carried off by poison, in the 32d year of his age, 1578.

John'-apple, *n.* A kind of apple which retains its freshness far into the spring, when other fruits are all consumed.

John Bull, a collective name, used in a sportive manner in order to designate the English people. It was first employed by Dean Swift. Among the English themselves, the term is used in order to convey the idea of an honest, blunt, but, on the whole, good-natured character. Among foreigners, the term *John Bull* is employed in order to express the insular peculiarities and prejudices of the English nation, and especially their inability to accommodate themselves to the circumstances of foreign countries.

John of Bruges. See VAN EYCK.

John, Chrysostom, (St.) See CHRYSOSTOM.

John Dory. (*Zoöl.*) See DORY.

John Day City, in *Oregon*, a post- and mining-village of Grant co., in John Day precinct, on John Day River, near Cañon City.

John Day River, in *Oregon*, enters the Columbia River abt. 50 m. above the Dalles.

John, (Epistles of.) (*Script.*) The name of three of the books of the New Testament, which, though bearing no name, are unquestionably the work of the apostle John. The author of the first epistle describes himself at its commencement as an eye-witness of the life of our Lord; and the style and language manifestly harmonize with those of the author of the gospel of John. For the authenticity of the first epistle very ancient testimony can be adduced. The design of this epistle is to refute, and to guard the Christians, to whom he wrote, against erroneous and licentious tenets, principles, and practices: to stir up all who profess to know God, to have communion with him, and to believe in him, that they walk in the light and not in darkness, that is, in holiness and not in sin, and to help forward and provoke real Christians to have communion with God and Christ Jesus, to constancy in the faith, and purity and holiness of life. The style is simple, clear, and flowing, and the epistle breathes a spirit of love and devotion, with zeal for moral strictness. The second epistle is addressed to Kuria, "the elect lady," and is an epitome of the first, touching in few words on the same points. Kuria is commended for the religious upbringing of her children, and is exhorted to abide in the doctrine of Christ, to persevere in the truth, and carefully to avoid the delusion of false teachers. Chiefly, however, he beseeches her to practise the great and indispensable commandment of Christian love and charity. The third epistle is addressed to a converted Gentile, named Gaius, but of whom nothing is known with certainty. Its scope is to commend his steadfastness in the faith and his general hospitality, especially to the ministers of Christ; to caution him against the ambitious and turbulent practices of Diotrephes, and to recommend Demetrius to his friendship, referring what he may further have to say to a personal interview.

John, (Gospel of.) (*Script.*) One of the books of the New Testament, written by John the Evangelist and apostle, the son of Zebedee, and the younger brother of James the elder. The precise date of this gospel is not known, some placing it as early as 68 or 69, others as late as 97. There has been much speculation in modern times as to the object the apostle had in view in writing this gospel. According to some, his design was to supplement the deficiencies of the three other gospels; according to others, to confute the errors of the Nicholaitans and Cerinthus; while others are of opinion that it was to state the true doctrine of the divinity of Christ. Probably all of these and other motives may have been in the mind of the apostle; but, judging from what he himself has said, the last of these seems to have been the main motive. "Many other signs truly did Jesus in the presence of his disciples, which are not written in this book. But these are written, that ye might believe that Jesus is the Christ, the Son of God, and that, believing, ye might have life through his name," (xx. 31). The four following doctrines are more particularly insisted upon in this book: — 1. The mystical relation of the Son to the Father; 2. that of the Redeemer to believers; 3. the announcement of the Holy Ghost as the comforter; 4. the peculiar importance ascribed to love. It is usual to divide this book into three parts:—1. The introduction or prologue, (i. 1–18;) 2. the history, narrating the various events in connection with our Lord's ministry, and giving an account of his death, (i. 19–xx. 29;) 3. the conclusion, giving an account of the person of the writer of this gospel, and of his design in writing it, (xx. 30–xxi.) No doubt has ever been entertained at any time in the church, either as to the canonical authority of this book, or to its being written by John. The circumstantiality of its details proves it to have been written by a hearer and an eye-witness; besides which there is the uninterrupted testimony of the ancient fathers in its favor.

John Hircanus, son of Simon Maccabæus, whom he succeeded as high-priest and prince of the Jews, B. C. 135; D., after a reign of 29 years, distinguished by his victories and reforms, B. C. 106.

John of Jerusalem, (Order of St.) See HOSPITALLERS.

John of Leyden. See LEYDEN, (JOHN OF.)

John'ite, *n.* (*Min.*) A variety of turquoise.

John'ny-cake, *n.* A cake made of Indian meal.

John Quincy Adams, in *Indiana*, a township of Warren co.

John River, in *New Hampshire*, enters the Connecticut River from Coos co.

John, (St.,) THE BAPTIST, the famous forerunner of Christ, was son of the priest Zacharias and Elizabeth, the cousin of Mary, the mother of our Lord. John and Christ were therefore second cousins. The wonderful circumstances attending the conception and birth of the former are recorded in the 1st chapter of St. Luke's gospel. After a life devoted to preparing his countrymen for the coming of the Messiah, he was thrown into prison, and afterwards executed by Herod Antipas. J.'s followers existed as a separate body till long after the spread of Christianity, and a sect still exists in the East professing to be his disciples.

John, (St.,) THE EVANGELIST AND APOSTLE, the son of Zebedee and Salome, and the brother of James the Greater. John, like his relative, was a fisherman, and left his occupation on the waters of Galilee to follow his Master. John is distinguished throughout the Scriptures as the *beloved*. After the separation of the disciples, he fixed his residence at Ephesus. John suffered under the persecution of Domitian, and having come through the ordeal of boiling oil unhurt, was banished to the island of Patmos, ultimately returning to Ephesus, where he died at an extreme old age.

John, (St.,) a city and river of New Brunswick. See ST. JOHN.

John's, or JOHNS'TOWN, in *Iowa*, a township of Appanoose co.

John's Bread, (St.,) *n.* (*Bot.*) See ALGAROBA.

John's, (St.,) cap. of Newfoundland. See ST. JOHN'S.

Johns'burg, in *Illinois*, a post-village of McHenry co.

Johns'burg, in *New York*, a post-town of Warren co., on the Hudson river, about 85 m. N. of Albany. *Pop.* (1897) 3,040.

John'son, ANDREW, President of the United States, born in Raleigh, N. C., 1808, lost his father when only four years of age, and at ten was apprenticed to a tailor in his native place, with whom he served seven years. While learning his trade, he resolved to make an effort to educate himself, and having gained a knowledge of

Samuel Johnson

1709–1784

the letters, he borrowed a book which he had often heard read aloud. By perseverance he learned to read, and on completing his apprenticeship, in 1824, went to Laurens Court-House, where he was employed as a journeyman for nearly two years. After working again for a short time at Raleigh, in 1826, he set out to seek his fortune in the West, taking with him his mother, who was dependent upon him for support. He obtained work at Greenville, Tennessee; remained there about 12 months, married, afterwards went further westward, eventually settling at Greenville, where he commenced business. Up to this time he had merely acquired a knowledge of reading, but under the instructions of his wife he learned writing and ciphering, &c., after the labors of the day were over. The first office which he held was that of Alderman of the village, to which he was elected in 1828; re-elected in 1829; and in 1830 was chosen Mayor, which position he held for three

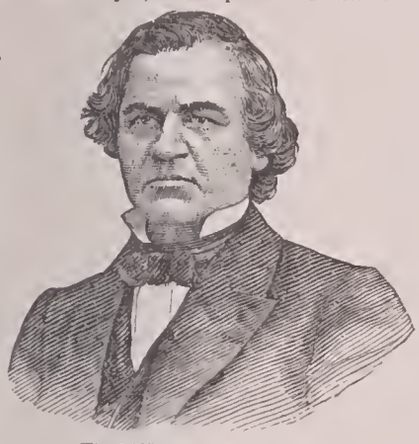


Fig. 1453. — ANDREW JOHNSON.

years. In 1835 he was elected to the Legislature, when he took decided ground against a scheme of internal improvements, which he contended would not only fail, but entail upon the State a burdensome debt; and on account of the course he adopted was defeated at the next election, in 1837. He again became a candidate in 1839, when many of the evils he had predicted having been fully demonstrated, he was elected by a large majority. In 1840 he served as Presidential elector for the State at large on the Democratic ticket, canvassing a large portion of the State, and confronting upon the stump several of the leading Whig orators; in 1841, he was elected to the State Senate, and in 1843 to Congress, in which, by successive elections, he served until 1853. During this period he was conspicuous and active in advocating the annexation of Texas, the tariff of 1846, and the war measures of Mr. Polk's administration. In 1853 he was elected governor of Tennessee, and re-elected in 1855, after a severe contest. At the expiration of his second tenure of office as governor, in 1857, he was elected U. States Senator for a full term, ending March 3, 1863. On the re-election of Mr. Lincoln as President, in the autumn of 1864, Mr. *J.* was elected Vice-President, and after the assassination of Mr. Lincoln, April 14, was sworn in as President, April 15. The policy of Mr. *J.*, marked by a decided tendency to treat the Southern States with clemency, involved him in a struggle with Congress, which caused his impeachment in 1868. (See IMPEACHMENT.) After his acquittal, Mr. *J.*, whose power had been successively limited by the Senate, persisted in vetoing the measures adopted by the Republican majority of Congress for the reconstruction of the Southern States, till the end of his term, March 4, 1869. After passing the interim years in private life, Mr. *J.* was elected Senator to the U. S Congress, from Tenn., in 1875. D. July 31st, 1875.

John'son, REVERDY, an American lawyer and statesman, B. at Annapolis, Md., May 21, 1796. After completing his education at St. John's College, in his native city, and undergoing a preparatory study of the law, *J.* was admitted to the bar in 1815, and two years afterwards, commenced a lucrative practice in Baltimore, where he has since resided. In 1821 he was elected State senator, and reëlected in 1825. In 1845 he was chosen U. States senator, and, in 1845, was appointed by President Taylor, attorney-general of the republic. In 1868, Mr. *J.* was named U. S. minister to the Court of St. James, and during his stay there effected a treaty with the British govt. for the adjustment of the Alabama claims, which, however, failed to receive ratification by Congress. He returned home in 1869, being succeeded by Mr. Motley. D. 1876.

John'son, SIR WILLIAM, BART, a British officer, some time superintendent-general of Indian Affairs in North America, and colonel of the Six Nations, was B. in Ireland, in 1715. In 1738 *J* established himself as the manager of the estates of his uncle (Admiral Sir Peter Warren), on the S. side of the Mohawk River, about 27 m. from Schenectady, N. Y. Here he speedily gained the confidence of the surrounding Indians, learned their language, and was adopted as a sachem by the Mohawks. In 1743 he was appointed by the British govt. chief superintendent of the Indians, and, in 1750, a member of the provincial council. At the close of the war with the French, in 1753, *J.* threw up his commission, and retired to his fortified residence, called Fort Johnson. In 1755 he was again commissioned Indian superintendent, created a major-general, and made commander-in-chief of the provincial forces operating against Crown Point. In September of the same year, he met and destroyed the French army under Baron Dieskau, at Fort George. This victory paralyzed the enemy for the time being, and *J.* received the thanks of parliament, was voted $25,000, and created a baronet of Great Britain. In 1758, Sir William was present with Abercrombie at the repulse of Ticonderoga, and succeeded to the chief command before Fort Niagara, which place he captured, after cutting to pieces a French force sent to its relief. Next year he led his Indian braves into Canada, and was present at the surrender of that country to the British in 1760. In recognition of his services, *J.* was presented by that govt. with a grant of 100,000 acres of land in the valley of the Mohawk, where he built the village of Johnstown, which became in 1772 the cap. of Tryon co. Sir William lived in baronial magnificence, exercised unlimited hospitality, and ruled his Indian friends much after the style of a monarch. D. at Fort Johnson, in 1774, leaving a numerous issue, both white and half-breed.

John'son, SAMUEL, LL.D., a celebrated English lexicographer, and one of the most distinguished writers of the 18th century, was B. in 1709, at Lichfield, where his father was a bookseller. He completed his education at Pembroke College, Oxford; and in 1732 he became under-master of a free-school at Market Bosworth, in Leicestershire, which situation he was soon induced to quit, on account of the haughty treatment he received from the principal. He next resided with a printer at Birmingham, where he translated Lobo's account of Abyssinia. In 1735 he married Mrs. Porter, a widow lady of that town, who was possessed of the sum of £800; and with this capital he the same year opened a school at Edial, near Lichfield; but he obtained only three scholars, one of whom was David Garrick. About this time he began his tragedy of *Irene*. In 1737 he set out for the metropolis, accompanied by Garrick. On fixing his residence in London, he formed a connection with Cave, the publisher of the "Gentleman's Magazine," for which work he wrote during several years, his principal employment being the reports of the parliamentary debates. At this period he contracted an intimacy with Richard Savage, whose name he has immortalized by one of the finest pieces of biography ever written. In 1749 appeared his *Vanity of Human Wishes*, an imitation of Juvenal's tenth Satire. Two years previously, he had printed proposals for an edition of Shakspeare, and the plan of his English Dictionary, addressed to Lord Chesterfield. The price agreed upon between himself and the booksellers for the last work was $7,875. In 1749 Garrick produced his friend's tragedy upon the stage of Drury Lane Theatre, but it was unsuccessful. In 1750 he commenced his *Rambler*, a periodical paper, which was continued till 1752. In this work only five papers were the production of other writers. About the period of his relinquishing the *Rambler*, he lost his wife, a circumstance which greatly affected him, as appears from his *Meditations*, and the sermon which he wrote on her death. In 1754 he visited Oxford. The next year appeared his Dictionary, which, instead of three, had occupied eight years. Lord Chesterfield endeavored to assist it by writing two papers in its favor in the "World:" but, as he had hitherto neglected the author, Johnson treated him with contempt. The publication of his great work did not relieve him from his embarrassments, for the price of his labor had been consumed in the progress of its compilation, and the year following we find him under an arrest for five guineas, from which he was released by Richardson, the printer. In 1758 he began the *Idler*, which was published in a weekly newspaper. On the death of his mother, in 1759, he wrote the romance of *Rasselas*, to defray the expenses of her funeral, and to pay her debts. In 1762 George III. granted him a pension of $1,500 per annum. In 1763, Boswell, his future biographer, was introduced to him, a circumstance to which we owe the most minute account of a man's life and character that has ever been written. Boswell, though a very ordinary mortal, has immortalized himself by this performance. In his book everything about *J.* is supplied to us; in Lord Macaulay's words, we have "his coat, his wig, his figure, his face, his scrofula, his St. Vitus' dance, his rolling walk, his blinking eye, the outward signs which too clearly indicated the approbation of his dinner; his insatiable appetite for fish-sauce, and veal-pie with plums; his inextinguishable thirst for tea; his trick of touching the posts as he walked; his mysterious practice of treasuring up scraps of orange-peel; his morning slumbers; his midnight disputations; his contortions; his mutterings; his gruntings; his puffings; his vigorous, acute, and ready eloquence; his sarcastic wit; his vehemence; his insolence; his fits of tempestuous rage; his queer inmates, — old Mr. Lovett and blind Mrs. Williams, the cat Hodge, and the negro Frank, — all are as familiar to us as the objects by which we have been surrounded from childhood." *J.* had the honor of a conversation with the king, in the royal library, in 1765, when his Majesty asked if he intended to publish any more works. To this he answered that he thought he had written enough; on which the king said, "So should I too, if you had not written so well." About this time he instituted the Literary Club, consisting of some of the most celebrated men of the age. In 1773 he went on a tour with Mr. Boswell to the western islands of Scotland, of which journey he shortly afterwards published an account, which occasioned a difference between him and Macpherson, relative to the poems of Ossian. In 1775 the university of Oxford sent him the degree of LL.D., which diploma, ten years before, had been conferred on him by the university of Dublin. In 1779 he began his *Lives of the British Poets*, which was the last of his literary labors. After a long illness, during part of which he had fearful apprehensions of death, his mind became calm, composed, and resigned, and he died in London, 1784, full of that faith which he had so vigorously defended and inculcated by his writings. His remains were interred in Westminster Abbey, and a statue, with an appropriate inscription, has been erected to his memory in St. Paul's Cathedral. A complete list of his works is prefixed to Boswell's "Life." As a writer, few have done such essential services to their country, by fixing its language and regulating its morality. In his person he was large, robust, and unwieldy; in his dress he was singular and slovenly; in conversation positive, and impatient of contradiction. But with all his singularities he had an excellent heart, full of tenderness and compassion, and his actions were the result of principle. He was a stout advocate of truth, and a zealous champion for the Christian religion as professed by the Church of England. In politics he was a Tory, and at one period of his life a friend to the house of Stuart. He had a noble independence of mind, and would never stoop to any man, however exalted, or disguise his sentiments to flatter another.

Fig. 1454.
Full-length portrait of Dr. Johnson, in the dress worn by him in his journey to the Hebrides.

John'son, in *Arkansas*, a N.W. central co.; *area*, about 612 sq. m. *Rivers.* Arkansas river, and several smaller streams. *Surface*, undulating; *soil*, fertile. *Cap.* Clarksville. *Pop.* (1890) 16,758.

Johnson, in *Georgia*, an E. central co.; *area*, about 266 sq. m. *Rivers.* Oconee and Great Ohoopee rivers. *Surface*, undulating; *soil*, generally fertile. *Cap.* Wrightsville. *Pop.* (1890) 6,129.

—A village of Sumter co.

—A post-office of Decatur co.

Johnson, in *Illinois*, a S. co.; *area*, about 340 sq. m. *Rivers.* Cache river and Big Bay creek. *Surface*, level; *soil*, fertile. *Cap.* Vienna. *Pop.* (1890) 15,013.

—A township of Christian co.

—A township of Clarke co.

Johnson, in *Indiana*, a S. central co.; *area*, about 320 sq. m. *Rivers.* White river and Sugar creek. *Surface*, mostly level or undulating; *soil*, very fertile. *Cap.* Franklin. *Pop.* (1890) 19,561.

—A township of Brown co.

—A township of Clinton co.

—A township of Gibson co.

—A township of Knox co.

—A township of La Grange co.

—A township of La Porte co.

—A township of Ripley co.

Johnson, in *Iowa*, an E.S.E. co.; *area*, about 575 sq. m. *Rivers.* Iowa and Cedar rivers. *Surface*, diversified; *soil*, extremely fertile. *Cap.* Iowa City. *Pop.* (1895) 23,563.

—A township of Plymouth co.

—A township of Webster co.

Johnson, in *Kansas*, an E. co., adjoining Missouri; *area*, about 480 sq. m. *Rivers.* Kansas and Blue rivers, and Cedar creek. *Surface*, diversified; *soil*, extremely fertile. *Cap.* Olathe. *Pop.* (1895) 16,794.

—Or JOHNSON CITY, a post-village, cap. of Stanton co., 20 miles S. of Syracuse.

Johnson, in *Kentucky*, an E. co.; *area*, about 300 sq. m. *Rivers.* West Fork of the Big Sandy river, and Paint creek. *Surface*, diversified; *soil*, fertile. *Min.* Stone-coal. *Cap.* Paintsville. *Pop.* (1890) 11,027.

Johnson, in *Missouri*, a W. co.; *area*, about 800 sq. m. *Rivers.* Postook Fork and Clear Fork of the Blackwater river, an affluent of the Lamine. *Surface*, generally level; *soil*, fertile. *Min.* Stone-coal. *Cap.* Warrensburg. *Pop.* (1890) 28,132.

—A township of Washington co.

Johnson (generally spelled JOHNSTON), in *North Carolina*, an E. central co.; *area*, about 670 sq. m. *Rivers.* Neuse and Little rivers. *Surface*, uneven; *soil*, fertile. *Min.* Iron ore and granite. *Cap.* Smithfield. *Pop.* (1890) 27,239.

Johnson, in *Nebraska*, a S.E. co.; *area*, about 396 sq. m. *Rivers.* Big Nemaha and S. Fork of the Little Nemaha rivers. *Surface*, mostly level; *soil*, fertile. *Min.* Coal and limestone. *Cap.* Tecumseh. *Pop.* (1890) 10,333.

Johnson, in *Ohio*, a township of Champaign co.

Johnson, in *Tennessee*, an extreme N.E. co.; *area*, about 340 sq. m. *Rivers.* Some small and unimportant affluents of the Watauga river. *Surface*, diversified, the Stone Mountains, a ridge of the Alleghenies, forming the S.E. boundary; *soil*, in some parts fertile. *Min.* Iron ore in abundance. *Cap.* Mountain City. *Pop.* (1890) 8,858.

Johnson, in *Texas*, a N.E. central co.; *area*, about 850

sq. m. *Rivers.* Brazos river and Noland's creek. *Surface,* diversified; *soil,* fertile. *Cap.* Cleburne. *Pop.* (1890) 22,313.

John'son, in *Vermont,* a post-town of Lamoille co., on the Lamoille river, about 32 m. N. by W. of Montpelier *Pop.* (1897) 1,486.

John'sonburg, in *New Jersey,* a post-village of Warren co., about 65 m. N. of Trenton.

John'sonburg, or JOHN'SONSBURG, in *New York,* a post-village of Wyoming co., about 260 m. W. of Albany.

John'son Creek, in *Wisconsin,* a post-village of Jefferson co. *Pop.* (1897) about 200.

John'son's, in *Kentucky,* a post-office of Christian co.

John'son's Bayou, in *Louisiana,* a post-office of Cameron parish.

John'son's Corners, in *Ohio,* a village of Summit co.; its post-office is JOHNSON.

John'son's Creek, in *Illinois,* a village of Carroll co.

John'son's Creek, in *New York,* enters Lake Ontario from Orleans co.

—A post-village of Niagara co., about 35 m. N.N.E. of Buffalo.

John'son's Crossing, in *Indiana,* a post-office of Madison co.

John'son's Cross Roads, in *West Virginia,* a post-village of Monroe co.

John'son's Grove, in *Tennessee,* a post-village of Crockett co.

John'son's Mills, in *North Carolina,* a post-village of Pitt co. *Pop.* (1897) about 105.

John'son's Mine, in *Illinois,* a village of St. Clair co.

—A village of Placer co., about 8 m. S.E. of Marysville.

John'son's Pass, in *California,* a pass through the Sierra Nevada, in El Dorado co.

John'son's Springs, in *Virginia,* a post-village of Goochland co., about 28 m. W. of Richmond.

John'son's Station, in *Texas,* a post-village of Tarrant co.

John'sonville, in *Illinois,* a post-village of Wayne co.

John'sonville, in *Minnesota,* a township of Redwood co.

John'sonville, in *New York,* a post-village of Rensselaer co. *Pop.* (1897) 660.

John'sonville, in *Ohio,* a post-village of Trumbull co.

John'sonville, in *Pennsylvania,* a post-village of Northampton co.

John'sonville, in *South Carolina,* a post-village of Williamsburg co. *Pop.* (1897) 120.

John'sonville, in *Tennessee,* a post-village of Humphreys co., about 78 m. W. of Nashville.

John'sonville, in *Wisconsin,* a post-office of Sheboygan co.

John's River, in *North Carolina,* enters the Catawba river in Burke co.

John'ston, ALBERT SYDNEY, an American Confederate general, B. in Mason co., Kentucky, in 1803. After graduating at West Point, he, in 1826, was appointed lieutenant in the 6th infantry, and served in the Black Hawk war. In 1836 he entered the Texan army as a private soldier, and was eventually promoted to the chief command. In 1838, *J.* was appointed secretary of war, and, in 1839, carried on a successful expedition against the Cherokees. In 1846, at the solicitation of Gen. Taylor, he took command of a regiment of Texan volunteers, and served during the Mexican war. At the siege of Monterey, *J.* highly distinguished himself and was made inspector-general. In 1860 *J.* had the command of the Pacific dept., and, on the outbreak of the civil war, was appointed commander-in-chief of the Confederate army of the West. Killed in the first day's sanguinary battle at Shiloh, April 6, 1862.

John'ston, ALEXANDER KEITH, F.R.S., LL.D., an English geographer, B. 1804, and educated at Edinburgh. He early devoted himself to geographical studies, and is best known for having made on a large scale the application of physical science to geography. Founding his researches on the writings of Humboldt and Ritter, and aided by the advice of the former, *J.* produced *The Physical Atlas of Natural Phenomena* in 1848, and a new and enlarged edition of the same in 1856. He also wrote *The Dictionary of Geography* (1850); an *Atlas of the Historical Geography of Europe,* and *Atlas of Astronomy* (1855); *Atlas of the United States of America,* &c. &c.; was a member of the principal geographical societies of Europe and America. Died 1871.

John'ston, JOSEPH EGGLESTON, a celebrated Confederate general, B. in Va., 1809. He graduated at West Point in 1829, entered the U. S. army, and resigned his commission in 1837. He rejoined the service in 1838 as first lieut. of topographical engineers, and was brevetted captain "for frequent acts of gallantry against the Florida Indians." When the Mexican war broke out, *J.* was promoted to be captain of engineers, and while conducting a successful reconnoissance at Cerro Gordo, April 12, 1847, was twice severely wounded, and was brevetted major for his gallantry. As lieut.-colonel of regulars he participated in the attack on the city of Mexico, in September of the same year, and in June, 1860, was appointed quartermaster-general with the rank of brigadier. From this post he retired, on the breaking out of the civil war in 1861, when he was appointed a general in the Confederate service, and commanded the force which occupied Harper's Ferry, in May, 1861. He joined Gen. Beauregard's corps shortly before the close of the battle of Bull Run, in July of the same year, and was severely wounded while commanding the Confederate forces at the battle of Seven Pines, July 21, 1861. After his recovery he was assigned to the command of the S.W. dept., and unsuccessfully attempted to reinforce Vicksburg in 1863. His army was defeated at Jackson, Miss., July 13, 1863 after which it was attached to General Bragg's forces in N.W. Georgia. In 1864, Gen. "Joe" *J.* was placed in command of the corps intended to check Gen. Sherman's advance into Ga. His cautious strategy caused him to be superseded by Gen. Hood, whose more dashing operations did not, however, prevent the fall of Atlanta. Soon after the fall of Richmond, Gen. *J.* surrendered to the National forces. He published a *Narrative of Military Operations* (1874); was a member of the 46th Congress, and appointed a U. S. R.R. Commissioner in April, 1885. Died Mar. 21, 1891.

John'stone, a manufacturing town of Scotland, co. Renfrew, 18 m. W. by S. of Glasgow. *Manuf.* Cotton, iron, and brass wares, machinery, &c. *Pop.* 7,044.

John'ston Strait, a strait of British N. America, in the N. Pacific Ocean, separating Vancouver's Island from the mainland.

Johns'town, a village of Leinster, co. of Kilkenny, Ireland, about 2 m. N.E. of Urlingford.

Johns'town, in *California,* a village of El Dorado co., about 10 m. N. of Placerville.

Johns'town, in *Illinois,* a post-township of Cumberland co.

Johns'town, in *Michigan,* a township of Barry co.

Johns'town, in *Missouri,* a post-village of Bates co.

Johns'town, in *New York,* cap. of Fulton co., 48 m. W. N. W. of Albany, on the F. T. & G. R. R. Has extensive glove and knit goods mills.

Johns'town, in *Penn.,* principal city of Cambria co., at the confluence of Stony creek and the Conemaugh river, 39 m. W. S. W. of Altoona, on the Penna. and B. & O. R.Rs. A large portion of the central part of the city was utterly destroyed by the famous flood of May 31, 1889, which was caused by the heavy rains and the breaking of the dam near South Fork, and which resulted in the loss of nearly 3,000 lives and the destruction of millions of property; but it has since been rebuilt, and is now more populous and flourishing than ever. Here are very important manufactures of iron and steel rails, steel car works, bolts, nuts, journals, structural steel, plow points, harrow teeth and hardware, besides fire-brick, stove, radiator and enameling works, and other minor industries. Here are located the immense works of the Cambria Steel Co., which employs 14,000 hands and has an annual output of many millions, the Lorain Steel Company, employing 2,000 men, a shovel plant, and a shirt factory employing 1,200 people. There are several smaller villages and boroughs immediately surrounding, all of which are tributary to the trade of *J.* The city possesses several imposing churches and public edifices, including a very attractive public library; there are 2 daily newspapers and 3 weeklies. *Pop.* (1900) 35,936; estimated population, 1903, exceeds 58,000.

Johns'ville, in *Md.,* a post-village of Frederick co.

Johns'ville, in *Ohio,* a post-village of Montgomery co.

Join, *v. a.* [Fr. *joindre;* Lat. *jungo, junctus;* allied to Gr. *zeugnumi,* to join; Lith. *jungui,* to impose a yoke; Sansk. *yuj,* to join.] To bring into close union or connection; to unite in league or marriage; to associate; to unite in concord or in any act. — To add; to connect; to combine; to annex; to link; to couple.

—*v. n.* To unite with; to grow to; to adhere; to be contiguous, close, or in contact; to unite with in marriage, league, confederacy, partnership, or society.

Join'der, *n.* Act of joining; conjunction.

(*Law.*) The union of two or more causes of action in the same declaration.

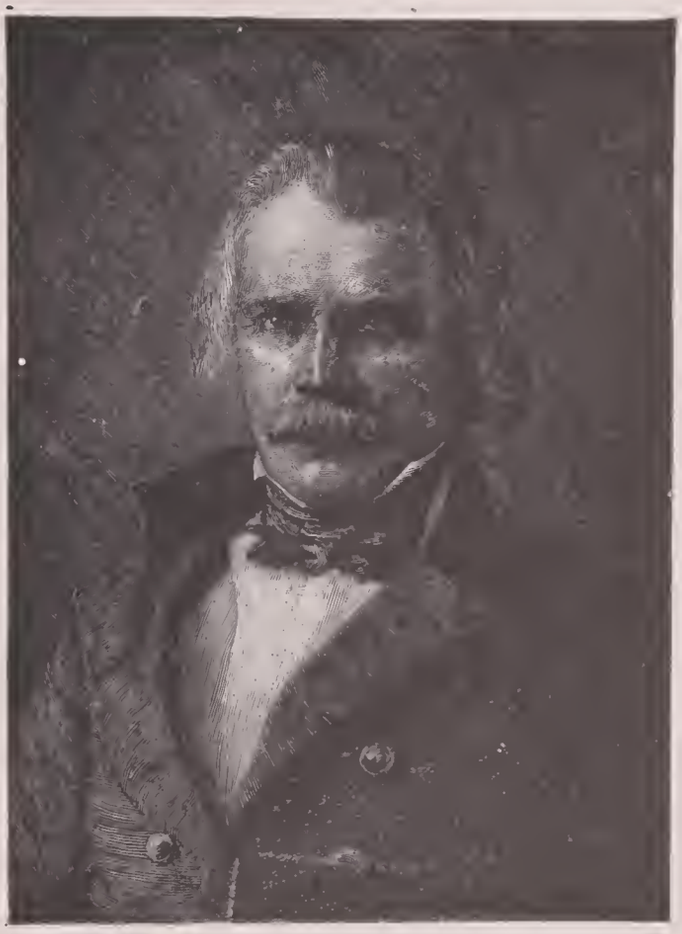
Join'er, *n.* One who joins; one who constructs things by joining pieces of wood; usually a mechanic who does the woodwork in the covering and finishing of buildings.

Join'ery, *n.* (*Arch.*) The art of connecting and fitting separate pieces of timber together, whether large or small, but which is more properly confined to the operations of the carpenter, who makes the doors, staircases, window-frames, and other internal fittings of a house, and who is, in consequence, called a joiner. One of the most important joints in carpentry is the *scarf,* by which two thick pieces of timber are scarfed or fastened together, that they may present the appearance of being one continuous piece of the same width and thickness throughout. It is principally used in preparing the keels of vessels and beams, in which great length is required. Masts are also sometimes joined together in this way. The form of the scarf is various. The most common method is that which is used in fastening small pieces of timber, or the joints of a fishing-rod, together, in which a plain bevelled joint of some length runs diagonally through the piece, and is formed by bringing together the extremities, which have been cut in such a manner that the bevelled surfaces of the ends of each piece form a very small angle with the external surface of the side that meets it at the sharpened end; but this would not be sufficiently strong for joining together pieces of timber of considerable size; so the ends are generally cut and fitted together in the form of steps, from which this kind of scarf has obtained the name of the *step-scarf.* The French have a method of cutting the ends of each piece into a sloping zigzag or notched form, which is perhaps better adapted to resist longitudinal tension; but all timbers joined by scarfing should be secured with bolts, having nuts and screws at either end; and it is better to put substantial plates of iron across the ends of the joints that appear in the upper and under surface of the beam through which the bolts are passed, so that each end of the scarf is bound and tied together by a frame-work of iron. Sometimes pieces of iron of some breadth are fitted to the sides of the beam, and fastened together by bolts passing above and below the beam: this plan is adopted when the timbers have to resist any transverse strain. If no bolts are used to strengthen the scarf, it must be much longer, in proportion to the depth of the beam. With bolts, the length of the scarf should be at least twice the depth of the beam in elm, oak, beech, ash, and all kinds of timber of a similar nature to these materials; but in deal, it must be four times the depth. Without bolts, the length of the scarf, for all kinds of wood, must be three times as long as it would be if bolts were used, to add to the security of the joint. When joints are made in timber in which the grain in each piece runs in the same direction, and parallel to the sides of the wood, they are called *longitudinal joints;* but when the grain of one crosses that of the other at right angles, it is called an "abutting joint." A simple method of joining small pieces of timber at right angles to each other is by notching or cutting away half the thickness of the end as far into the length of the timber as may be required. This is done to each of the pieces that have to be fastened together. When two pieces cross each other at right angles, or indeed at any angle, a joint is made in this way, by cutting a piece out of each piece of wood to the extent of half its thickness, and corresponding in width or shape to that of the piece which is to fit into it. When broad pieces of timber or planks are joined at the ends, they are dovetailed into each other, or notched and dovetailed. The dovetail joint is sometimes used in joining square pieces of wood end to end, but it is not so strong as the scarfed joint for this purpose. Notched joints of any kind, such as those already described, and the notches made to allow the ends of rafters to fit into girders and wall-plates, or to fit against the inner edge of the latter, are always secured by nails or wooden pegs. The joint most commonly used for putting pieces of wood together to form strong rough frames, and for putting together partitions and large structures of timber, is the *mortise-and-tenon joint.* A square hole is sunk in one piece of timber by means of the mortise-chisel and mallet, and the end of the piece of timber that is to fit into it at right angles is cut to the shape of the hole by the tenon saw. When the pieces have been fitted together, the joints are nailed or pegged, or the tenon is locked closely into the mortise by splitting its extremity and inserting one or more thin wedges. The above are the different descriptions of joints used in carpentry. Those adopted in joinery are similar in principle; thus the component parts of the framing of a door or shutter are put together by mortise-and-tenon joints; but the mortises and tenons are long and very narrow, instead of being square, or twice as long as they are broad, as in carpentry, when heavy timbers are fitted together. The dovetailed joint is used for joining the ends of planks that form the sides of drawers and boxes, while different varieties of the mitre joint are used for fitting and joining the corners of picture-frames and ornamental beading placed round a panel. In making staircases, a broad grove is generally cut in the under side of the horizontal board called the head, at a short distance from the edge, or *nosing,* in front, into which the top of the vertical board, or riser, below it is fitted. This method of joining boards is called *notching.* In joining the edges of boards to form a plane surface, a rebate is formed in the edge of each plank by cutting it away on one side in the form of a step, and the boards are then fitted over each other; or a grove is cut in the centre of the edge of one board, which receives a corresponding projection formed on the edge of that which comes next to it. Sometimes a groove is cut in the edges of both boards, into which a narrow slip of wood is inserted.

Join'-hand, Join'ing-hand, *n.* A mode of writing with the letters joined.

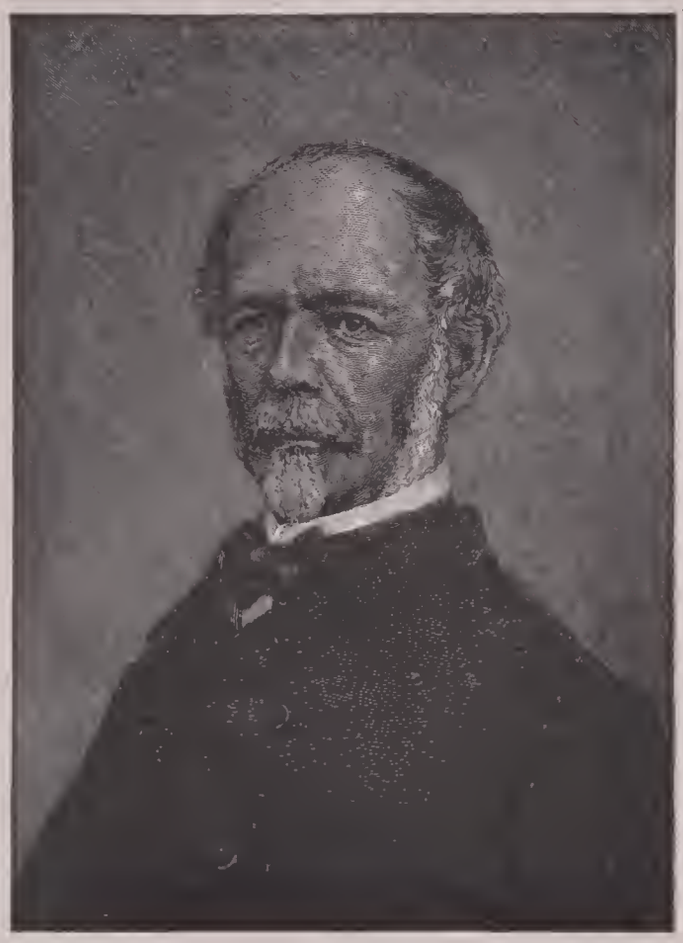
Joint, *n.* [O. Fr. *joinct;* Fr. *joint;* Lat. *junctura,* from *jungo,* to join.] The joining of two or more things; a seam; a fissure.—The joining of two or more bones; an articulation.—A knot; the union of two parts of a plant, or the space between two joints. — A hinge; a juncture of parts which admits of motion. — A limb or part of a limb of an animal cut off by a butcher.

(*Arch.*) Applied to the various means that are adopted to connect or fasten any two or more pieces of material together. Joints are of two kinds, —*fixed* and *movable.* A rigid or fixed joint is that which serves to unite pieces of wood, stone, or metal together, in such a manner that they may answer the same purpose as a single piece of the same material would, if it could be procured of the requisite shape on the one hand, or of sufficient size on the other, and such as could be readily placed in position. A movable joint is such as enables pieces of woodwork to be attached to each other in such a manner that one may work or turn about the other, as a door moves about the jamb to which it is suspended. The various kinds of joints by which this is effected are described elsewhere (see HINGE), and the different methods of connecting pieces of timber are noticed in the preceding article (see JOINERY). It will therefore only be necessary, in the present article, to mention the joints that are used in connecting masonry and metal-work. The term *joint* in masonry is applied for the most part to the vertical junctures of the ends of pieces of stones and bricks, and to the slanting junctures of the vonssoirs of an arch. When large blocks of stone are joined together, they are sometimes dovetailed and secured at the top by iron clamps set in melted lead, or they are fitted together by what is termed a *joggle,* in which a projection, left on the side of one stone, is fitted into a groove that is cut for its reception in the side of another that is adjacent to it. In joining thick bars and pieces of metal, joints similar in form to those used in carpentry are employed, the pieces being also further and more intimately connected by welding, brazing, or soldering, or by the insertion of iron rivets into holes bored through both of the pieces that are to be fastened together. Welded joints are made by heating the ends



Albert Sydney Johnston

1803–1862



Joseph E. Johnston

1809–1891

of the pieces to a red or white heat, and then hammering them together. Brazed joints consist of the union of the edges of pieces of metal by the aid of an alloy that is mostly made of brass and zinc. Soldered joints consist of the union of a small and narrow part of the surfaces of contiguous pieces of metal lying along the edge of either — the pieces being made to overlap each other about the eighth of an inch, or more if necessary — by an alloy or solder that fuses readily at a low heat. Different alloys are used for joining two pieces of metal of the same kind, and two pieces of different kinds.

Joint, *a.* Joined; united; combined; shared by two or more; united in the same profession; having an interest in the same thing; acting in concert.

—*v. a.* To form with joints or articulations.

"The fingers are *jointed* together for motion."
Ray on the Creation.

—To form, as many parts into one.

"Pierc'd through the yielding planks of *jointed* wood."—*Dryden.*

—To cut or divide into joints or quarters.

—*v. n.* To coalesce as joints, or as parts mutually fitted to each other.

Joint'edly, *adv.* By joints.

Joint'er, *n.* A sort of plane, somewhat longer than the fore-plane, and used for smoothing the surface of boards, or straightening the edges of those to be joined.

(*Masonry.*) An iron instrument, with two curves, used by bricklayers.

Joint'ing, *n.* The forming of joints.

Joint'ing-plane, *n.* See JOINTER.

Joint'ing-rule, *n.* (*Masonry.*) An instrument used by bricklayers.

Joint'ly, *adv.* Together; unitedly; in concert; with coöperation; with union of interest.

Joint'ress, *n.* (*Law.*) A woman who has a jointure.

Joint'-stock, *n.* Stock held jointly, or in company.

Joint-stock Company. (*Law.*) A kind of partnership entered into by a number of individuals for the purpose of carrying on some trade or business with a view to individual profit; invested by statutes, in Europe and many of the States, with some of the privileges of a corporation. In ordinary partnerships, the members (except in the case of what are termed "sleeping partners") contribute more or less of their own personal labor or management to the affairs of the company. In joint-stock partnerships, on the other hand, the members only contribute to the funds or "stock" of the company, without having any direct share in the management; and hence their name. The capital of the company is generally divided into equal parts, called "shares," a certain number of which are held by each member of the company; and in proportion to the number of these he is entitled to participate in the profits of the undertaking. These shares are freely transferable without the consent of the company. The immediate superintendence of the affairs of the company is usually delegated to a portion of the members, called directors, subject, nevertheless, to the general control of the body assembled at stated intervals, or on particular occasions, when they may be convened; except on such occasions, however, the general body of the shareholders have no power to interfere in its concerns or to bind the company. The increased facilities which the wealth and influence of a number of individuals, concentrated in the hands of a few, give for carrying out commercial projects, were seen and taken advantage of early in the history of commerce. The most noted among the earlier associations of this kind was that of the Hanse Towns, which continued to flourish for several centuries.

Joint'-stool, *n.* A stool consisting of parts inserted into each other.

Joint-ten'ancy, *n.* (*Eng. Law.*) The joint ownership of two or more persons in land or other property. The creation of an estate in joint-tenancy depends on the wording of the deed or device by which the tenants claim title for this estate can only arise by purchase or grant, — that is, by act of the parties, and never by mere act of law.

Joint-ten'ant, *n.* (*Eng. Law.*) One who holds a thing in joint-tenancy.

Joint'ure, *n.* [Old Fr. *jointcture;* Fr., from Lat. *junctura*, from *jungo, junctus*, to join.] (*Law.*) That portion of lands and tenements conveyed to a wife, in the event of her surviving her husband. By the Statute of Uses (27 Hen. viii. c. 10), jointure must be made before marriage; for if the jointure be made to her after marriage, she has her election after her husband's death, either to accept it, or to refuse it and betake herself to her dower at common law, for she was not capable of consenting to it during coverture. The jointure must be limited to take effect immediately on the death of the husband; it must be for her own life, or during widowhood at least, and not *pur auter vie*, or for any term of years; it must be made to herself, and to no other in trust for her, although a trust estate is a good equitable jointure; and it must be made in satisfaction of her whole dower, and not of any particular part of it.

—*v. a.* To settle a jointure upon.

Joint'uress, *n.* (*Law.*) A woman who has a jointure.

Joinville, JEAN, (*zhwaṅ'veel,*) SIRE DE, an eminent French statesman and historian of the 13th century. He accompanied Louis IX. in his first crusade or expedition to Egypt, in 1249, sharing his master's captivity, and rendering him many important services. In the king's second crusade, however, he declined taking a part, and subsequently employed himself in writing the *History of St. Louis*, one of the most interesting documents existing relative to the history of the Middle Ages. He D. in 1318, aged 90.

Join'ville, FRANÇOIS-FERDINAND-PHILIPPE-LOUIS-MARIE D'ORLEANS, PRINCE DE, third son of the late king of the French, Louis Philippe. When he had completed his education, he was appointed to the French navy, and made several voyages on the coasts of France and Italy, after which he underwent a public examination at the naval school of Brest. In 1836 he became lieutenant, and in 1837 joined his brother, the duke de Nemours, at Constantine, soon after the taking of that city. During the war with Mexico, in 1838, he courageously engaged the batteries of St. Jean d'Ulloa, with his corvette the *Créole;* and, shortly afterwards, at the head of his sailors, stormed the gate of Vera Cruz, and took prisoner General Arista; for which he received the cross of the Legion of Honor, and was appointed post-captain. In 1840 he brought to France from St. Helena the remains of Napoleon I. In 1843 he married, at Rio Janeiro, the Princess Francesca of Braganza, sister of Don Pedro II., and was the same year promoted to rear-admiral. In 1845 he commanded the fleet that bombarded Tangiers and captured Mogador, upon which he became vice-admiral. During the events of 1848, he was at sea before Algiers. Surrendering his command to the republicans, he joined his exiled family at Claremont. Driven suddenly from a brilliant position into the narrow limits of private life, he accepted his new situation with simplicity and dignity, and remaining at heart a French sailor, endeavored to render himself useful to the navy of his country by his pen, if not by his sword. He had already, in 1844, begun publishing in the *Revue des Deux Mondes* his studies on the French navy, which he has since continued in his exile. His last article, published in 1865, was a comparative review of the fleets of the United States and of France, and excited much attention at the time. Happening to be in this country about a twelvemonth after the breaking out of the civil war, he accompanied his nephews, the Comte de Paris and the Duc de Chartres, to the camp of Gen. McClellan, with whose staff he witnessed the principal actions of the Virginian campaign of 1862, and published on them an impartial article in the *Revue des Deux Mondes* of 1863. In 1873 he was elected to the French Assembly.

Joist, *n.* [Old Fr. *giste*, a couch, a bed, from *gesir*, Lat. *jacere*, to lie, to lie low, flat, level. See ADJACENT.] A piece of timber, such as is framed into the girders and summers of a building to support a floor.

—*v. a.* To fit in joists; to lay joists.

Joke, *n.* [Sax. *ioic;* Lat. *jocus.*] A jest; something said for the sake of exciting a laugh; something witty or sportive; raillery.

—An allusion; something not real, or to no purpose.

—*v. n.* [Lat. *jocor.*] To jest; to sport; to be merry in words or actions.

—*v. a.* To cast jokes at; to rally; to make merry with.

Jok'er, *n.* A jester; a merry fellow.

Jok'ingly, *adv.* In a joking way.

Jole, *n.* [Sax. *ceole;* allied to Old Fr. *gueule;* Sp. *gola;* Lat. *gula*, the throat, the gullet.] The cheek; used in the phrase cheek-by-jole, that is, with the cheeks together, close, tête-à-tête.

Joliet (*jōl-ly-ĕt'*), in *Illinois*, an important city and R.R. center, cap. of Will co., on the Des Plaines river, about 37 m. S. W. of Chicago; has immense manuf. of iron and steel, flour, hardware, tinplate, &c.; mines the celebrated "Joliet limestone." The town is well built and has some fine public and private edifices. The State penitentiary is located here. *Pop.* (1897) about 32,500.

Joliette, a S.W.co. of Quebec; *area*, 1,350 sq. m.; *p.* 22,898.

Jollifica'tion, *n.* A scene of merriment, mirth, or festivity. (Colloquial.)

Jol'lily, *adv.* With noisy mirth; with a disposition to noisy mirth.

Jol'liness, Jol'lity, *n.* Noisy mirth; merriment; gayety; festivity; hilarity; joviality; mirth.

Jol'ly, *a.* [Fr. *joli*; It. *giullivo.*] Merry; gay; lively; full of life and mirth; jovial; expressing mirth or inspiring it; exciting mirth and gayety.— Plump; like one in high health; pretty.

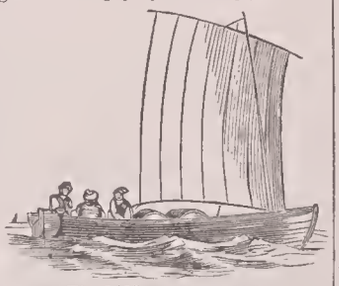


Fig. 1455.—JOLLY-BOAT.

Jol'ly-boat, *n.* [Du. *jol*, a yawl.] (*Naut.*) A broad safe-boat on board ships, used for going on shore, &c.

Jolly Town, in *Pennsylvania*, a post-office of Greene co.

Jol'lyville, in *Iowa*, a village of Lee co.

Jols'va, ARNOVIA, or ELTSCH, a town of Hungary, in the valley of the Eltsch, 14 m. from Rosenau. *Pop.* 4,500.

Jolt, *v. n.* To shake with short uprisings and fallings.

—*v. a.* To shake with sudden jerks, as in a carriage on rough ground, or on a high trotting-horse.

—*n.* A shock or shake by a sudden jerk.

Jolt'er, *n.* He who, or that which, shakes or jolts.

Jolt'er-head, Jolt'head, *n.* A great head; a dolt; a blockhead.

Jolt'ingly, *adv.* So as to jolt or shake.

Jomel'li, NICCOLO, a musical composer, born in Naples, 1714. He is the author of 36 operas, which were generally very popular in his time, but now are seldom heard. His celebrated *Requiem* and *Miserere* are often played in Roman Catholic churches. D. 1774.

Jomini, BARON HENRI, general and historian, B. at Payerne (canton de Vaud), 1779, served in a Swiss regiment in the French pay until 1792, when all foreign troops were disbanded. After engaging in commerce, he repaired to Switzerland, and although very young, received the rank of Lieut.-Colonel in the militia. Re-entering France, in 1804, he obtained the grade of *Chef de Bataillon*, and was made Colonel in 1805. Meanwhile he had not been unmindful of theoretical military studies, and produced his "Traité des Grandes Opérations Militaires" in 1803; and his "Mémoire sur les Probabilités de la Guerre de Prusse" in 1806. Napoleon was so well pleased with his services, that about this time he gave him the title of Baron. In 1808 he accompanied Marshal Ney into Spain, where, in consequence of a misunderstanding between the two, he remained inactive. In 1811 he was nominated General of Brigade, while in his favor was re-established the office of Historiographer of France, unoccupied since the time of Marmontel, and in 1812 he was made Governor of Wilna. Ney proposed J. to the emperor for the rank of General of Division, which the latter refused to confer upon him, and sent him back to France, in order to punish him for some negligence. Taking advantage of an armistice, he entered the service of Russia, and for this desertion was sentenced to death by a French council of war. The emperor Alexander I., however, nominated the condemned soldier Lieut.-General, and attached him to his person as aide-de-camp. Baron J. would not accept any command in the Russian army, and preserved as a profound secret, as Napoleon himself knew, the French plan of operations, of which he had a perfect knowledge. In 1815 he accompanied the Czar to Paris, where he remained some time to recast the work on which his fame as a military historian chiefly rests; "Histoire Critique et Militaire des Guerres de la Révolution, de 1792 à 1801," published in 1806, and of which a third edition appeared in 1819–24. Baron J. returned to Russia, where he was charged by Alexander I. to complete the military education of his brother, the late emperor Nicholas I., and then he occupied himself with the composition of military works, which have since become great text-books of the science of war, the principal of which are, *History of the Wars of Frederick II., Principles of Strategy, Political and Military Life of Napoleon, Treatise on the Art of War*, and *The Military Atlas*. D. 1870.

Jon'adab, the son of Rechab; was the founder of a sect to which he gave the name of Rechabites. It practised the greatest austerity, refused the use of wine, the accumulation of wealth being likewise forbidden. J. lived in the reign of Jehu, abt. 880 B. C.

Jonah, (Book of.) (*jō'nȧ.*) (*Script.*) The name of one of the sacred books of the Old Testament, the fifth in order among those of the minor prophets. Its author, J., was the son of Amithai, a native of Gath-hepher, in the tribe of Zebulun, and is generally believed to have flourished during the reign of Jeroboam II., though some place him 40 years earlier, toward the close of Jehu's reign. With the exception of the sublime ode in the second chapter, the book of Jonah is a simple narrative. It gives an account of the prophet's commission to denounce Nineveh, and of his refusal to undertake the task; his attempt to flee to Tarshish, and its frustration, together with his delivery from the stomach of the great fish, which had swallowed him, (i.–ii.) He is again sent on his mission, and, in consequence of his preaching, the Ninevites repent in dust and ashes, (iii.) J. was exceedingly angry at God's merciful forbearance toward the Ninevites, probably dreading lest his veracity as a prophet might be called in question, and retired from the city to a spot from whence he might witness its destruction. God caused a gourd to spring up to shelter him; and from its speedy death he took occasion to reprove Jonah for repining at the divine forbearance. The scope of the book is to show the value of the real repentance; and from the conduct of the Ninevites, our Lord takes occasion to reprove the perfidiousness of the Jews. Many have attempted to deny the literal interpretation of this book, some regarding it as an allegory, others as a mere fiction, designed to serve a moral purpose. There are also some who, while not questioning the truth of the narrative, yet have recourse to the most absurd and ridiculous hypotheses in order to explain away the account given of Jonah's being swallowed by a great fish. The word translated whale, in the New Testament, means any large fish; and the general opinion now is, that the animal was a species of shark, within some of which whole human bodies have been found. From the manner in which the sacred historians and Jesus Christ speak of the incidents of this book, it is evident that it is a true narrative of a real personage, and that Jonah was a prophet of considerable eminence.

Jon'athan, a son of Saul, and the constant and unshaken friend of David, proving the sincerity of his regard by repeatedly saving his friend's life when threatened by the fury of his father. Jonathan fell in battle in the war with the Philistines.

JONATHAN, son of Mattathias, and brother of Judas Maccabæus, a famous Jewish general. He compelled Bacchides, the Syrian commander, to sue for peace; defeated Demetrius Soter and his general Apollonius. At length he fell by treachery into the hands of Tryphon, who, after receiving a large sum as a ransom for him, put him to death, B. C. 144.

Jon'athan, *n.* A sportive name applied collectively to the people of the U. States.

Jonathan's Creek, in *Ohio*, enters the Muskingum a few miles below Zanesville.

Jones, ANSON, the last president of the Texan Republic, was B. in Berkshire co., Mass., in 1798. He was brought up to the medical profession, and, in 1833, established himself in Brazoria, Texas, in a lucrative practice. He was one of the earliest advocates of Texan

independence, and served both as a private soldier and in his professional capacity, in the war which ensued with Mexico. In 1837–8 he represented Brazoria in the Texan Congress, and in the latter year was sent as envoy to Washington, where he unsuccessfully endeavored to bring about the annexation of Texas to the U. States. In 1841 he was appointed Secretary of State by Pres. Houston (*q. v.*), which office he held for 3 years, ably administering its duties. In 1844, *J.* was elected President of the republic of Texas, and so remained till its annexation to the U. States. In the later years of his presidency, however, he fell into unpopularity in consequence of his change of views with regard to annexation, and n. by his own hand, in 1858.

Jones, John Paul, an American naval officer, b. in Scotland, 1747, of humble parentage. He went at an early age to sea, and while in Virginia, at the commencement of the revolutionary struggle, made an offer of his services to the American colonists, which was accepted, and he was commissioned as a lieutenant in the navy, in Dec., 1775. After commanding several vessels in succession, seeing considerable service, and taking several prizes, *J.* was commissioned to the *Ranger*, 18 guns, with which vessel he sailed to European waters, and cruising along the W. coast of his native country, greatly harassed its trading-vessels. During their course, the *Ranger* fought and captured the *Drake*, a sloop-of-war about her equal in strength. In 1779, *J.* was appointed to the *Bon Homme Richard*, mounting 42 guns, having under his command 4 other vessels. With this squadron *J.* commenced operations against the enemy, and in a few months captured or destroyed 26 vessels. On Sept. 23, *J.* was off Flamborough Head on the N.E coast of England, with three vessels, his own (the *Bon Homme Richard*), the *Alliance*, Capt. Landais, and the *Pallas* (32 guns), Capt. Cottineau. About mid-day, a fleet of Baltic merchantmen hove in sight, under convoy of the *Serapis*, 44 guns, and the *Countess of Scarborough*, 20. At about 7.30 in the evening, the *Richard* came up with the *Serapis*, and exchanged broadsides. An artillery duel ensued for about an hour, when the two ships fouled each other. A furious engagement followed, fought hand-to-hand, when, in the midst of it, the *Serapis* suddenly came upon the larboard quarter of the *Richard*, and opened a heavy fire upon her. Nevertheless, *J.* refused to surrender, and though, by this time, his ship was riddled through with shot, and fast sinking, he kept up his fire until 10 o'clock, when the *Serapis*, with masts shot away, surrendered. Shortly afterward, the *Bon Homme Richard* sunk. No authentic report of the loss on either side has been given, but the action was, undoubtedly, one of the most sanguinary and hotly contested that ever was fought between two ships. *J.* took his prizes into the Texel, and on his arrival in France was received with marked honors. In 1781, he sailed for the U. States, where he also met with a flattering reception. Congress voted him a gold medal, and Gen. Washington addressed to him a complimentary letter. *J.* ultimately entered the Russian service, but, quarrelling with his superior officer, he fell into disgrace, and finally took up his residence in Paris, where he died in poverty and neglect, in 1792.

Jones, Sir William, an eminent Oriental scholar and linguist, b. in London, 1746, and educated at Harrow and Oxford. Devoting himself to the study of languages, he became the most celebrated English linguist of his time, being familiar with both the dialects and literature of 27 languages. He was called to the bar in 1774, and, in 1783, was appointed judge of the Supreme Court of Bengal In India he further distinguished himself by his researches into Asiatic literature and archæology, and became the first president of the Asiatic Society. His translations from the Hindoo, Persic, and other Oriental tongues are many and various. A complete edition of his works was printed in London, in 13 vols., 1813. D. at Calcutta, 1794.

Jones, in *Arkansas*, a township of Greene co.

Jones, in *Georgia*, a central co.; *area*, about 386 sq. m. *Rivers.* Ocmulgee river, and Cedar, Falling, Walnut and Commissioner's creeks. *Surface*, mostly hilly; *soil*, fertile. *Min.* Iron, granite, and quartz. *Cap.* Clinton. *Pop.* (1890) 12,709.

Jones, in *Iowa*, an E. co.; *area*, about 576 sq. m. *Rivers.* Makoqueta, Wapsipinicon, and Fall rivers, and Bear creek. *Surface*, generally level; *soil*, very fertile. *Cap.* Anamosa. *Pop.* (1895) 20,088.

Jones, in *Michigan*, a post-village of Cass co., on the Michigan Central R.R.

Jones, in *Mississippi*, a S.E. co.; *area*, about 680 sq. m. *Rivers.* Leaf and Tallahoma rivers. *Surface*, generally level; *soil*, sandy, and not very fertile. *Cap.* Ellisville. *Pop.* (1890) 8,333.

Jones, in *North Carolina*, a S.E. co., drained by Trent and Neuse rivers; *area*, 430 sq. m. It has a level and marshy surface, with pine and cypress forests, and a sandy soil. Its chief productions are corn, wheat, oats, and cotton. *Cap.* Trenton. *Pop.* (1890) 7,405.

Jones'borough, in *Alabama*, a post-village of Jefferson co., about 79 m. N.W. of Macon.

Jones'borough, in *Arkansas*, a post-town, cap. of Craighead co., on the Kansas City, Ft. Scott & Memphis, and St. L. Southwestern R.Rs., 60 m. N.N.W. of Memphis. Tenn. *Pop.* (1897) about 2,350.

Jones'borough, in *Georgia*, a post-village, cap. of Clayton co., about 80 m. N.W. of Milledgeville. Here, Aug. 31, 1864, Gen. Howard defeated the Confederates under Gen. Hardee, who lost about 1,400 men.

Jones'borough, in *Illinois*, a post-village, cap. of Union co., about 150 m. S. of Springfield. *Pop.* (1897) 1,240.

Jones'borough, in *Indiana*, a post-town of Grant co., about 6 m. S.S.E. of Marion. *Pop.* (1897) 1,750.

—A village of Greene co., abt. 85 m. S.W. of Indianapolis.

Jones'borough, in *Maine*, a post-town of Washington co. *Pop.* (1897) 654.

Jones'borough, in *Mississippi*, a P. O. of Tippah co.

Jones'borough, in *Missouri*, a village of Saline co., about 80 m. N.W. of Jefferson City.

Jones'borough, in *North Carolina*, a post-village of Moore co.

Jones'borough, in *Tennessee*, a post-town, cap. of Washington co., about 80 m. E. of Nashville, on the Southern R.R. *Pop.* (1897) 1,050.

Jones'borough, in *Virginia*, a post-village of Brunswick co., about 90 m. S. by W. of Richmond.

Jones'burg, in *Kansas*, a post-vill. of Chautauqua co.

Jones'burg, in *Missouri*, a post-village of Montgomery co., on Wabash R.R. *Pop.* 437.

Jones' Creek, in *Alabama*, enters the Sipsey river in Walker co.

Jones' Creek, in *Delaware*, enters Delaware bay from Kent co.

Jones' Creek, in *North Carolina*, enters the Yadkin river in Anson co.

Jones' Creek, in *Tennessee*, enters the Harpeth river in Dickson co.

Jones' Mill, in *Tennessee*, a post-office of DeKalb co.

Jones' Mills, in *Georgia*, a post-vill. of Meriwether co.

Jones' Mills, in *Pennsylvania*, a post-village of Westmoreland co.

Jones'port, in *Maine*, a post-township of Washington co., on the Atlantic coast. *Pop.* (1897) 1,985.

Jones' Springs, in *West Virginia*, a post-village of Berkeley co.

Jones' Station, in *Penna.*, a P. O. of Allegheny co.

Jones' Switch, in *Alabama*, a post-vill. of Autauga co.

Jones'town, in *Mississippi*, a post-town of Coahoma co.

Jones'town, in *Pennsylvania*, a post-borough of Lebanon co., about 29 m. N.E. of Harrisburg.

Jones'town, in *Tennessee*, a post-office of Cocke co.

Jones'ville, in *Indiana*, a post-village of Bartholomew co., about 10 m. S. of Columbus, on P., C. C. & St. L. R.R.

Jones'ville, in *La.*, a post-vill. of Catahoula parish.

Jones'ville, in *Michigan*, a post-village of Hillsdale co., on St. Joseph's river, about 47 m. W. of Monroe.

Jones'ville, in *Mississippi*, a post-office of Hinds co.

Jones'ville, in *North Carolina*, a post-office of Yadkin co., about 145 m. W.N.W. of Raleigh.

Jones'ville, in *New York*, a post-village of Saratoga co., about 21 m. N. of Albany.

Jones'ville, in *Ohio*, a village of Monroe co., about 40 m. N.E. of Marietta.

Jones'ville, in *South Carolina*, a post-village of Union co., about 80 m. N.W. of Columbia.

Jones'ville, in *Tennessee*, a post-office of Roane co.

Jones'ville, in *Texas*, a post-village of Harrison co.

Jones'ville, in *Vermont*, a post-village of Chittenden co.

Jones'ville, in *Virginia*, a post-village, cap. of Lee co., on Powell's river, about 390 m. W.S.W. of Richmond.

Jong'ler, *n.* [Fr. *jongleur.*] A mountebank; a prestidigitator; a conjurer; a juggler.

Jon'quil, Jon'quille, *n.* [Fr. *jonquille.*] (*Bot.*) See Narcissus.

Jon'son, Benjamin, (commonly known as *Ben Jonson,*) a celebrated English dramatist, the contemporary and friend of Shakspeare, was the posthumous son of a clergyman. He was b. at Westminster, in 1574, studied at Westminster School, under Camden, at an early age: till his mother marrying a bricklayer, young Ben, as he was familiarly called, was taken home by his father-in-law, and employed in his trade. The spirit of the future

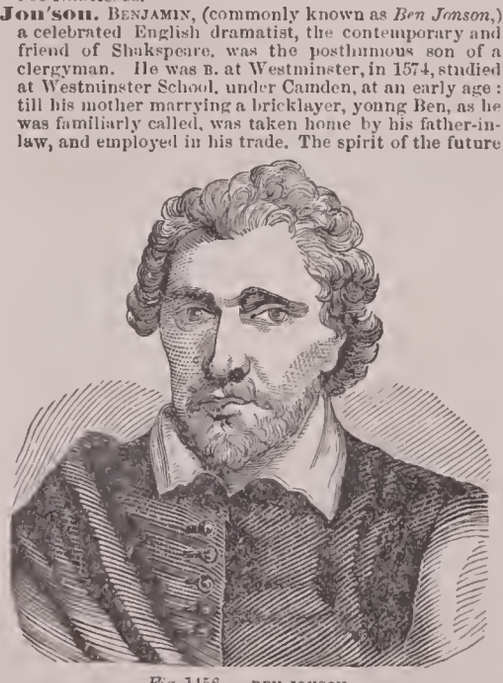


Fig. 1456.—Ben Jonson.

poet revolted against his condition; he fled from home and entered the army, serving first in Flanders. On his return he went to Cambridge, but poverty obliged him to leave the university and take to the stage. At first he was not very successful, either as an actor or an author, and having killed another actor in a duel, he was imprisoned and narrowly escaped with life. On being released from confinement he married, and recommenced writing for the stage, to which he was encouraged by Shakspeare, who performed in one of his pieces. In 1598 he produced his comedy of *Every Man in his Humour*, which was followed by a new play every year, till the reign of James the First, when he was employed in the masques and entertainments at court. But, regardless of prudence, Ben joined Chapman and Marston in writing the comedy of *Eastward Hoe*, which so grossly libelled the Scotch nation, that the authors were committed to prison; and had they not made a timely and humble submission for the offence, they would have lost their noses and ears in the pillory, according to their sentence. By his address, however, he soon regained the favor of the king, and for the remainder of that reign he continued in high favor as a kind of superintendent of the court revels. In 1619 he was appointed poet-laureate, with a salary of $500, and a butt of canary wine yearly from the king's cellars. Want of economy, however, kept him constantly poor, although in addition to the royal bounty he had a pension from the city. The principal plays of *B. J.* are *Sejanus*, *Volpone*, *Epicœne*, and *The Alchemist.* He died August 16, 1637, and was buried in Westminster Abbey, where a tablet has been erected to his memory in Poet's Corner, inscribed, *O rare Ben Jonson.* Dryden, speaking of the great rival dramatist, says: "Shakspeare was the Homer, or father, of our dramatic poets; *J.* was the Virgil, the pattern of elaborate writing. I admire him, but I love Shakspeare."

Jood'poor, Joud'pore, in Hindostan. See Marwar.

Jop'pa. See Jaffa.

Jop'pa, or Joppa Village, in *Massachusetts*, a post-village of Plymouth co., abt. 25 m. S. by E. of Boston.

Jo'ram, or Jeho'ram, son of Ahab, king of Israel, succeeded his older brother Ahaziah, b. c. 896, and reigned 12 years. During his reign, the Moabites revolted. Joram secured the aid of Jehoshaphat, king of Judah, and after receiving for his ally's sake a miraculous deliverance from drought, defeated the Moabites with great slaughter. Not long after he was involved in war with Ben-hadad, king of Syria, and Hazael his successor; and at this time occurred the miraculous deliverance of Samaria from siege and famine, and also various miracles of Elisha, including the healing of Naaman. Joram was wounded in a battle with Hazael, and met his death, in the suburbs of Ramoth-gilead, by the hand of Jehu his general. His body was thrown into the field of Naboth, at Jezreel, and with him perished the race of Ahab.

Jo'ram, or Jeho'ram, the son and successor of Jehoshaphat, king of Judah. He reigned with his father, from b. c. 889, four years, and four years alone. Unhappily he was married to Athaliah, daughter of Ahab and Jezebel, whose evil influence did much to render his reign a curse to the land. He slew his own brothers, five in number, and seized their possessions. He also introduced Phœnician idols and their worship into Judah. A successful revolt of the Edomites, and repeated invasions of the Philistines and Arabians, made of his reign a calamity. His country, the city, and his own household were ravaged, his body was afflicted with a frightful dysenteric illness, and after death, a burial in the royal sepulchres was denied him.

Jordaens, Jacob, an eminent Dutch painter, b. at Antwerp, 1594, was the son-in-law of Van Oort, under whom he studied; d. 1678. His works are exceedingly numerous, and are to be found in most European collections. They are marked by great truthfulness and vigor of portraiture, and are richly but rather glaringly colored. Their chief defects are a want of taste and elegance in design. Among his best-known works are, the *Merry-making*; the *Satyr and Man blowing Cold and Hot*; *Pan and Syrinx*; and *Saturn devouring his Children.*

Jor'dan, the principal river of Palestine, the bed of which forms a great valley, stretching from north to south in the eastern part of the country. The *J.* deriving its head-waters partly from the eastern branches of the Lebanon Mountains, and partly from Mount Hermon, (Fig. 1281,) flows south, and after a course of 150 m. having passed through the small lake of El Huleh (The Waters of Merom) and the Lake of Tiberias, or Sea of Galilee (Fig. 1101), falls into the northern extremity of the Dead Sea. The bed of the river varies much in breadth, and its banks are in some places flat; in others, steep. Where it enters the Dead Sea, it is 180 yds. broad, and 3 feet deep; but a little way further up it is only 80 yards broad, and 7 feet deep. From the lake of Tiberias to the Dead Sea, the *J.* is crossed by no bridge, although in two or three places there are ruins of bridges. Above the Lake of Tiberias is a bridge called Jacob's bridge, over which the road from Damascus to the sea-coast passes. In a number of places, the *J.* is fordable; in some even when the river is in flood. The course of the *J.* was explored by Lieutenant Lynch, with an expedition sent out by the United States government in April, 1848. A Canal connecting the Mediterranean with the Red Sea, *via* the Valley of the Jordan, has been proposed as a rival to the Suez Canal, at an est. cost of $70,000,000.

Jor'dan, a village of Lincoln co., prov. of Ontario.

Jor'dan, in *Indiana*, a township of Jasper co.

—A township of Warren co.

—A post-office of Jay co.

Jor'dan, in *Minnesota*, a village and township of Fillmore co., about 21 m. S.S.E. of Rochester.

Jor'dan, in *New York*, a post-village of Onondaga co., 17 m. W. of Syracuse, on the West Shore and New York Central R. Rs. *Pop.* (1897) 1,320.

Jor'dan, in *Pennsylvania*, a township of Clearfield co.

—A township of Lycoming co.

John Paul Jones

1747–1792

Ben. Jonson

1574–1637

Jor'dan, in *Pennsylvania*, a township of Northumberland co.

Jor'dan, in *Wisconsin*, a post-township of Green co. —A village of Portage co., about 9 m N. N. E of Stanton.

Jor'dan Creek, in *Idaho*, enters the Owyhee river from Owyhee co.

Jor'dan Creek, in *Pennsylvania*, enters the Lehigh river near Allentown.

Jor'dans, Luca, a famous Italian painter, born at Naples, 1632. He studied the manner of Pietro da Cortona, but chiefly wrought in the style of Paul Veronese. Died 1705.

Jor'dan's Saline (now Grand Saline), in *Texas*, a post-village of Van Zandt co., on the Sabine river, about 200 m. N. E. of Austin.

Jor'dan Village, in *Indiana*, a post-office of Owen county.

Jor'danville, in *New York*, a post-village of Herkimer co.

Jor'den, *n.* A vessel formerly used by alchemists and and physicians.—A vessel for chamber uses.

Jo'rum, Jo'ram, *n.* A bowl or drinking-vessel.

Jornandes, (*jor-nān'dees,*) a Goth, who embraced Christianity, and became bishop of Ravenna abt. 552. He wrote the "History of the Goths."

Jorullo, (*ho-rool'yo,*) or Xurullo, or Xorullo, or Jurullo, a volcano of Mexico, about 75 m. S.S.W. of Valladolid, and 80 m. from the Pacific Ocean; Lat. 19° 10′ N., Lon. 101° 1′ 45″ W. The site of this remarkable mountain was formerly a fertile plain, about 2,890 feet above sea-level, but a violent eruption, on September 28 and 29, 1759, raised it to an elevation of 4,265 feet, and sent forth immense quantities of lava, with stones of great size. The craters or coues were six in number,

Fig. 1457. — VOLCANO OF JORULLO, MEXICO.

most of which are now extinct, and surrounded by precipitous walls of basalt and ancient volcanic rocks. The elevation is about 4 sq. m. in area, and is covered with thousands of small mounds or *hornitos* (little ovens) from 6 to 9 feet high, from which, until recently, issued steam and sulphurous vapors. The San Pedro and Cuitimba, two rivers which formerly watered this tract, sink into the earth on the E. side, and appear again as hot springs on the W. side of the elevation.

Jo'seph, the son of Jacob and Rachel, b. in Mesopotamia (*Gen.* xxx. 22–24), B.C. 1747. His history is one of the most pleasing and instructive in the Bible; and is related in language inimitably natural, simple, and touching. It is too beautiful for abridgment, and too familiar to need rehearsal. Joseph D., aged 110, B. C. 1637; and when the Israelites, a century and a half later, went up from Egypt, they took his bones, and at length buried them in Shechem, (*Ex.* xiii. 19; *Josh.* xxiv. 32.) A Mohammedan wely or tomb covers the spot regarded generally, and it may be correctly, as the place of his burial. It is a low, stone enclosure, and stands in quiet seclusion among high trees, at the western entrance of the valley of Shechem, at the right of the traveller's path, and nearer Mount Ebal than Mount Gerizim.

Joseph, the husband of Mary, Christ's mother. His genealogy is traced in *Matt.* i. 1–15, to David, Judah, and Abraham. His residence was at Nazareth in Galilee, where he followed the occupation of a carpenter, to which Christ was also trained, (*Mark* vi. 3.) When he became the husband of Mary, he was somewhat advanced in age, and is generally supposed to have died before Christ began his public ministry.

Joseph I., emperor of Germany, was the son of Leopold I., and succeeded that prince in 1705. He was engaged nearly the whole of his reign in hostilities; and with England and Holland continued the war against France, to seat the Archduke Charles on the throne of Spain. The splendid victories gained by the allies under Marlborough in the Low Countries, and Prince Eugene on the Rhine, made the reign of *J.* remarkably brilliant. His arms were equally triumphant in Italy and Hungary: in the latter kingdom he drove the revolted Bagotzki from the country, and forced him to seek safety in Turkey; while in the Italian peninsula, his conquest was most complete; all the great cities from Mantua to Genoa were laid under heavy contributions. An attack of virulent small-pox suddenly carried him off in the midst of his triumphs in 1711.

Joseph II., emperor of the West, and king of Germany, was the son of the Emperor Francis I. (of Lorraine) and Maria Theresa. He was crowned king of the Romans in 1764; the year following he succeeded his father; and in 1780, by the death of the empress-queen, he succeeded to the crown of Hungary and Bohemia. In 1788, a declaration of war was published against the Turks, and the same year the emperor, in person, reduced Schabatz; but this was followed by a defeat of Prince Lichtenstein, who fell in the action. Soon after this a bloody battle was fought between the Imperialists and Turks, on the heights of Rohadin, in which neither could claim the victory. *J.* next made an attempt to possess himself of Belgrade, but without success. But Marshal Laudohn taking upon himself the command of the army, took Dubicza and Novi, and, in 1789, reduced Belgrade, soon after which a peace was concluded, chiefly in consequence of the agitation caused in Europe by the French revolution. In February following, the emperor died of a lingering illness, and was succeeded by his brother, Peter Leopold, grandduke of Tuscany. Joseph II. was of a lively disposition, fickle, and fond of action; his favorite object was to be sovereign in the fullest sense, and to manage the great machine of the State entirely himself. He introduced many reforms in the government, established toleration for all religious sects, and did much to promote the progress of arts, manufactures, and commerce in Austria. Frederick the Great, in a letter to Voltaire, thus spoke of him: "Joseph is an emperor such as Germany has not had for a long time. Educated in splendor, his habits are simple; grown up amidst flattery, he is still modest; inflamed with a love of glory, he yet sacrifices his ambition to his duty."

Jo'seph-Emmanuel, king of Portugal, B. 1715, was son and successor of Charles V., and ascended the throne in 1750. The great earthquake at Lisbon, in 1755, and the expulsion of the Jesuits from the kingdom in 1759, were the principal events of this reign, during which *J.* was assisted by his clever minister, the marquis de Pombal. Learning was encouraged, commerce and industry received a fresh impulse, and the power of the Inquisition was diminished. D. 1777.

Joseph of Arimathea, a rich inhabitant of Jerusalem, who went to Pilate and begged the body of Jesus, which he laid in his own sepulchre. He afterwards joined the disciples, and D. at Jerusalem.

Jo'seph of Paris, a famous Capuchin, commonly called Father Joseph, who was employed by Cardinal Richelieu in most of his political intrigues. Louis XIII. procured him a cardinal's hat, but he D. of an apoplexy before he received it, in 1638.

Josephine', empress of the French, and queen of Italy, was B. at Martinique in 1763, and bore the name from her parents, of Rose Tascher de la Pagerie. While very young, she was taken by her father to France, to be the bride of the Viscount de Beauharnois—a marriage having been arranged by the two families when the Marquis Beauharnois was governor-general of the Antilles. They were accordingly married; and, in the enjoyment of each other's society, they lived beloved and respected, while *J.* became the mother of two children, Eugène and Hortense. Prompted by filial attachment, she went, in 1787, to Martinique, to attend upon her mother in sickness; and having taken her daughter with her, she remained in the island three years. The sudden rising of the colony, however, obliged her to quit it for France, with such haste, as not to allow of her taking leave of her parent. After effecting her escape, and surmounting numerous obstacles, Madame Beauharnois began to experience the horrors of the French revolution; and soon saw her husband, who had used every exertion at the head of the French army on the Rhine, dragged to a prison, and thence to a scaffold. She was also included in the proscription; but the death of her husband reduced her to such a state that she could not be removed, and to this circumstance she owed her deliverance. Robespierre at length perished, and the viscountess was delivered from prison by Tallien; who was never forgotten by her, nor by Eugène, from whom he received a considerable pension till his death. *J.* was indebted to Barras for the restoration of a part of the property of her husband; and at his house, after the 13th Vendemiaire, she met General Bonaparte, who was desirous of seeing her in consequence of her son Eugène, then 15 years old, presenting himself before the general to solicit that the sword which had belonged to his father might be given to him. Bonaparte from the first was favorably impressed towards the widow, and his attachment strengthening at every succeeding interview, he married her, in 1796. From that day it was her part to encourage him through dangers, and moderate his feelings in the hour of victory. When her husband was raised to the consulate, her beneficent disposition displayed itself in a thousand ways; to her many emigrants owed their restoration; she encouraged the arts, and rewarded industry; her life, in short, was one continued act of benevolence; so that Bonaparte frequently observed to her, "I can win battles, but you win hearts." Her great mind looked to the glory of France, and the fame of her husband, as the two most desirable objects. After Napoleon became emperor, his friends advised him to divorce her, but he at first declined. *J.* had been crowned empress at Paris, and queen of Italy at Milan. When Napoleon became desirous of marrying a princess, and *J.* was made acquainted with the wishes of the nation regarding a successor, she nobly resolved to sacrifice her private feelings; and giving the archduchess, Maria Louisa, credit for all the estimable qualities which she knew were requisite to the happiness of Napoleon, she consented to the marriage. She, however, would not follow the wishes of her children, who were anxious that she should quit France; but retired to her beautiful seat of Malmaison, with the title of empress-queen-dowager.

Fig. 1458. — JOSEPHINE, EMPRESS OF THE FRENCH.

After visiting her daughter-in-law, the vice-queen of Italy, she returned to the former seat of her happiness, and pursued her taste for botany. But she was doomed to see the destruction of that throne on which she had once sat; Napoleon's exile drew from her expressions of the most poignant regret; and it was evident to every one that her health was rapidly declining. The allied sovereigns treated her with the most respectful distinction. The Emperor Alexander sent his physician, and visited her often in person; but a sudden inflammation of the throat terminated her life on the 29th of May, 1814.

Jo'sephine, in *Alabama*, a P. O. of Baldwin co.

Jo'sephine, in *Kentucky*, a P. O. of Scott co.

Jo'sephine, in *Oregon*, a S. W. co., bounded N. by Rogue river mountains; *area*, 1,605 sq. m. *Rivers.* Illinois and Rogue rivers. *Surface*, generally mountainous; *soil*, in the valleys fertile. *Min.* Gold, copper, and iron are abundant. *Cap.* Grant's Pass. *Pop.* (1897) about 5,500.

Jose'phus, Flavius, the Jewish historian, B. at Jerusalem A. D. 37. On his mother's side he was descended from the Asmonæan princes, while from his father, Matthias, he inherited the priestly office. He enjoyed an excellent education; and at the age of 26 he went to Rome to plead the cause of some Jewish priests whom Felix, the procurator of Judæa, had sent thither as prisoners. After a narrow escape from death by shipwreck, he safely landed at Puteoli; and being introduced to Poppæa, he not only effected the release of his friends, but received great presents from the empress. On his return to Jerusalem he found his countrymen eagerly bent on a revolt from Rome, from which he used his best endeavors to dissuade them; but failing in this, he professed to enter into the popular designs. He was chosen one of the generals of the Jews, and was sent to manage affairs in Galilee. When Vespasian and his army entered Galilee, *J.* threw himself into Iotapata, which he defended for 47 days. When the place was taken, the life of *J.* was spared by Vespasian through the intercession of Titus. *J.* thereupon assumed the character of a prophet, and predicted to Vespasian that the empire should one day be his and his son's. Vespasian treated him with respect, but did not release him from captivity till he was proclaimed emperor nearly three years afterward (A. D. 70). *J.* was present with Titus at the siege of Jerusalem, and afterward accompanied him to Rome. He received the freedom of the city from Vespasian, who assigned him, as a residence, a house formerly occupied by himself, and treated him honorably to the end of his reign. The same favor was extended to him by Titus and Domitian as well. He assumed the name of Flavius, as a dependant of the Flavian family. His time at Rome appears to have been employed mainly in the composition of his works. He D. about 100. The works of *J.* are written in Greek. They are: 1. *The History of the Jewish War*, in 7 books, published about A. D. 75. *J.* first wrote it in Hebrew, and then translated it into Greek. It commences with the capture of Jerusalem by Antiochus Epiphanes in B.C. 170, runs rapidly over the events before *J.*'s own time, and gives a detailed account of the fatal war with Rome. 2. *The Jewish Antiquities*, in 20 books, completed about A. D. 93. It gives an account of Jewish

history from the creation of the world to A. D. 66, the twelfth year of Nero, in which the Jews were goaded to rebellion by Gessius Florus. In this work *J.* seeks to accommodate the Jewish religion to heathen tastes and prejudices. Thus he speaks of Moses and his law in a tone which might be adopted by any disbeliever in his divine legation. He says that Abraham went into Egypt (*Gen.* xii.), intending to adopt the Egyptian views of religion, should he find them better than his own. He speaks doubtfully of the preservation of Jonah by the whale. He intimates a doubt of there having been any miracle in the passage of the Red Sea, and compares it with the passage of Alexander the Great along the shore of the sea of Pamphylia. He interprets *Exod.* xxii. 28, as if it conveyed a command to respect the idols of the heathen. Many similar instances might be quoted from his work. 3. *His own Life*, in one book. It was not written earlier than A. D. 97, since Agrippa II. is mentioned in it as no longer living. 4. *A Treatise on the Antiquity of the Jews*, or *Against Apion*, in two books. It is in answer to such as impugned the antiquity of the Jewish nation on the ground of the silence of Greek writers respecting it. The treatise exhibits extensive acquaintance with Greek literature and philosophy. One of the best editions of *J.* is that by W. Dindorf in Didot's *Bibliotheca Græca.*

Joses, See BARNABAS.

Josh'ua, a great general of the Israelites, who succeeded Moses in command of the people, and under whose authority the tribes were led into Canaan, and, after exercising his power to the advancement of the Jews, and the establishment of their sway in the new land, died at the age of 110. He was the son of Nun, and belonged to the tribe of Benjamin. The Book of Joshua, and a part also of Deuteronomy, are attributed to the pen of this successful leader.

J., BOOK OF. (*Script.*) The sixth in order of the books of the Old Testament, and is a history of the Israelites under the government of Joshua, the successor of Moses, embracing the period between 1451 and 1425 B. C. The general opinion is that the book was written by Joshua himself (except the last five verses), though some regard it as the work of a later hand The book may be conveniently divided into three parts: I. The history of the occupation of the land of Canaan by the Israelites (i.–xi.), and a recapitulation of the conquests, both of Moses and Joshua (xii.); 2. A description of the land of Canaan (xiii.), and a particular apportionment of it among the different tribes (xiv.–xxii.); 3. The dying address, death, and burial of Joshua (xxiii., xxiv.). The scope and design of the book is to demonstrate the truth and faithfulness of God, in the perfect fulfilment of all his promises to the patriarchs, regarding the possession of the land of Canaan by their posterity. A further design of the book is to show the portion which was allotted to each tribe. The canonical authority of this book has never been called in question, and in all the copies of the Old Testament its place is immediately after the Pentateuch. The style is clear, simple, and unpretending. There is some accidental derangement in the order of the chapters of this book. Chronologically, they should read thus: "First chapter to ninth verse; then the second chapter; then from the tenth verse to the end of the first chapter: after which should follow the third and consecutive chapters to the eleventh; then the twenty-second chapter, and the twelfth to the twenty-first chapter inclusive; and, lastly, the twenty-third and twenty-fourth chapters." (*Horne.*) The Samaritans have two books extant, bearing the name of Joshua, the one being a chronicle of events from Adam to the year of the Hegira 898 (A. D. 1492), and the other a similar chronicle, from the death of Moses to the death of Alexander Severus. Of the latter of these an edition was published in Arabic and Latin, by Juynboll, Leyden, 1848.

Josh'ua, in *Illinois*, a township of Fulton county.

Josi'ah, king of Judah, succeeded his father, Amon, 641 B.C., at the age of 8 years. He destroyed the idols, and restored the worship of the true God, established virtuous magistrates for the administration of justice, and repaired the temple. He also caused the law of Moses to be sought for and preserved. He was wounded in a battle fought at Megiddo, against Necho, king of Egypt, and D. 610 B. C.

Josika, MIKLOS, (*e-o-se'ka.*) baron, a distinguished Hungarian novelist, B. at Torda, Transylvania, 1796. After serving in the Austrian army, and taking part in the campaign of 1814–15, he retired, in 1818, to his estate in Transylvania, where he henceforth occupied himself with literature. He has written *Abafi*, a national and historical tale; *The Last Batori*; *The Bohemians in Hungary*; *Zriny the Poet*, and *Stephen Josika.* Since the revolution in Hungary, he resided at Brussels. D. 1865.

Josse-zeu-noode, (*zhoss.*) a town and parish of Belgium, about 1 m. from Brussels, of which it is a suburb. *Pop.* 9,000.

Jos'tle, *v. a.* [O. Fr. *jouster*, to tilt. See JOUST. Written also *justle.*] To run against; to push.

Jot, *n.* [Gr. *iota*, the smallest letter in the Greek alphabet.] An iota; a point; a tittle; the least quantity assignable.

—*v. n.* To mark briefly; to set down; to make a memorandum of.

Jo'tham, king of Judah, B. C. 758, son and successor of Uzziah, or Azariah. He appears to have been for some years regent before the death of Uzziah, his leprous father, but ascended the throne at the age of 25 years, and reigned 16 years.

Joubert, BARTHELEMY CATHERINE, (*zhoo'bair,*) a general of the French republic, born 1769; killed at the battle of Novi, when fighting against the Russians under Suwarrow, 1799.

Joudpore', in Hindostan. See MARWAR.

Jouffroy', THEODORE SIMON, a French philosopher of the electic school, born in a village of the Jura. His principal work is *Leçons sur le Droit Naturel.* D. 1852.

Joule (*jowl*), JAMES PRESCOTT, physicist, was born at Salford, England, Dec. 24, 1818; was the son of a brewer, and himself engaged in that business until 1854. He was self-educated in science, being fond of personal research, and at the age of 19 had constructed an electro-magnetic engine, which, while not practically valuable, established certain principles which have since been elaborated and made useful. His investigations were largely made in connection with Prof. Thompson (now Lord Kelvin), Jacobi, Scoresby and Dr. Lyon Playfair, and covered the sciences of electricity and chemistry along the lines developed by Meyer, Helmholtz, Seguin, Faraday and Grove. *J.* was the originator of the Joule Law (*q. v.*), and received countless honors for his valuable contributions to science. Died Oct. 11, 1889.

Jounce, *n.* A shake; a jolt.

—*v. a.* To shake; to jolt.

Jourdan, JEAN BAPTISTE, (*zhoor'da,*) a marshal of France, B. at Limoges, 1762. He served in the war of American independence at the age of 16 years, under Count d'Estaing, and in 1791 was appointed to the command of a battalion of volunteers. He fought under Dumouriez in Belgium, and became a general of division in 1793. He greatly distinguished himself at the battle of Houdschoote, and two days afterwards was named general-in-chief, but was deprived of his command by the Committee of Public Safety. Subsequently, he was placed at the head of the army of the Moselle. He took Durant and Charleroi, and gained the celebrated battle of Fleurus, in 1794. Opposed by the Archduke Charles, he crossed the Rhine a second time; but, being defeated, was superseded in 1799. Named a member of the Council of Five Hundred, he proposed the law of conscription. A sincere republican, he opposed the usurpation of Bonaparte, and, after the 18th Brumaire, was excluded from the Legislative Corps. He was, however, nominated by Napoleon marshal of France, in 1804; but he was never again employed in any important capacity. He accompanied Joseph Bonaparte to Spain, in command of the 7th military corps. D. in Paris, 1833.

Jour'nal, *n.* [Fr. *journal;* Lat. *diurnum*, from *dies*, a day. See DIURNAL.] A diary; an account of daily transactions and events, or the book containing such account. —A merchant's book, in which every particular article or charge is fairly entered from the waste-book or blotter. — A daily register of a ship's course and distance, the winds, weather, &c.

—A paper published daily, or other newspaper; also the title of a book or pamphlet published at stated times; a narrative of the transactions of a society, &c.

(*Mach.*) A bearing of a shaft when it is between the points where the pressure and resistance are applied; a bearing subject to torsion.

Jour'nal-book, *n.* A book for making daily records.

Jour'nal-box, *n.* (*Mach.*) The part of a machine in which the journals of a shaft, axle, or pin bears and moves; strictly, a box in two or more parts, so that it can be opened and adjusted.

Jour'nalism, *n.* The keeping of a journal. — The management of public journals.

Jour'nalist, *n.* The writer of a journal or diary. — The conductor of a public journal.

Journalis'tic, *a.* Relating to journalism; of the nature of a journal.

Jour'nalize, *v. a.* To record; to register.

—*v. n.* To write for a journal.

Jour'ney, *n.* [Fr. *journée*, from *jour*, a day, from Lat. *diurnus*, pertaining to a day, from *dies*, a day.] Travel by land to any distance and for any time, indefinitely; a tour; passage from one place to another.

—*v. n.* To travel from place to place; to pass from home to a distance.

Jour'neyer, *n.* One who journeys.

Jour'neyman, *n.*; *pl.* JOURNEYMEN. [O. Fr. *jorne*, day-service.] One who works by the day; a mechanic who is hired to work for another in his employment; a hired workman.

Jour'ney-weight, *n.* A species of weight used at the mint in weighing parcels of coin.

Jour'ney-work, *n.* Work performed for hire; work done by the day.

Joust, *n.* [O. Fr. *jouste;* It. *giostra*; Sp. *justa;* Fr. *joute*; L. Lat. *just*, a tilt.] A fight on horseback, man to man, with lances, whether in earnest or for diversion. See TOURNAMENT.

—*v. n.* To engage in fight, as man to man, on horseback. (Written also JUST.)

Joux, (*zhoo,*) a lake of Switzerland, cant. of Vaud, near the Jura and the French frontier, and 18 m. S.E. of Lausanne. Length, 7 m.; breadth, 1 m. It is overlooked by Mont Tendre, which, on the S.E., attains an elevation of 5,730 ft. above the level of the sea.

Joux, (Chateau de,) (*sha-tō'deh-zhoo,*) a fortress in the Jura mountains, France, dep. of Doubs, commanding the route to Neufchâtel, 16 m. N. of the lake. It was successively the prison of Fouquet, Mirabeau, Toussaint l'Overture, and Gen. Dupont.

Jove, *n.* Another name for JUPITER, *q. v.*

Jo'vial, *a.* Under the influence of Jupiter the planet. —Happy; merry; joyous; gay; airy; full of mirth and gladness; fond of good cheer; expressive of mirth and hilarity; festive; gleeful.

Jo'vialist, *n.* One who lives jovially.

Jovial'ity, *n.* Merriment; festivity; conviviality.

Jo'vialness, *n.* State of being jovial; noisy mirth; gaiety.

Jo'vialty, *n.* Joviality; mirth.

Jo'vian, or **Jo'vianus,** FLAVIUS CLAUDIUS, a Roman emperor, was elected by the soldiers, A. D. 363, after the death of Julian, whom he had accompanied in his campaign against the Persians. In order to effect his retreat in safety, *J.* surrendered to the Persians the Roman conquests beyond the Tigris. He died suddenly, 364, after a reign of little more than seven months. *J.* was a Christian, but he protected the heathens.

Jo'vicentric, *a.* Relating to, or seen from, the centre of Jupiter.

Jowl, *n.* See JOLE.

Jowl'er, *n.* A hunting-dog or beagle.

Joy, *n.* [Fr. *joie*; It. *gioja;* Sp. *joya*, from Lat. *gaudium*, joy, from *gaudeo*, to be glad.] Felicity; happiness; exultation; ecstasy; rapture; transport; gayety; merriment; festivity; hilarity; the passion or emotion excited by the acquisition or expectation of good; exhilaration of spirits; the expression of high gratification or exhilaration; a glorious and triumphant state; the cause of joy or happiness.

—*v. n.* To rejoice; to be glad; to exult.

—*v. a.* To congratulate; to entertain kindly.

"To *joy* the friend, or grapple with the foe." — *Prior.*

—To gladden; to exhilarate.

"My soul was *joy'd* in vain;
For angry Neptune rous'd the raging main." — *Pope.*

Joy'ance, *n.* [O. Fr. *joiant.*] Gayety; festivity; joyfulness. (R.)

Joyeuse, ANNE, DUKE DE, admiral of France and favorite of Henri III., who distinguished himself by many gallant exploits. B abt. 1561. He was killed at the battle of Coutras, 1587.

Joy'ful, *a.* Full of joy; very glad; merry; blithe; gleeful; gay; festive; joyous; happy; blissful; exulting.

Joy'fully, *adv.* With joy; gladly.

Joy'fulness, *n.* State or quality of being joyful; great gladness; joy.

Joy'less, *a.* Destitute of joy; wanting joy; giving no joy or pleasure.

Joy'lessly, *adv.* Without joy.

Joy'lessness, *n.* State of being joyless.

Joyner's Depot, in *N. Carolina*, a post-village of Edgecomb co., abt. 32 m. N. of Goldsborough.

Joy'ous, *a.* [Fr. *joyeux*, from L. Lat. *gaudiosus.*] Full of joy or gladness; merry; blithe; gleeful; glad; gay; mirthful; giving joy; festive; joytul; happy; blissful; charming; delightful.

Joy'ously, *adv.* With joy or gladness.

Joy'ousness, *n.* State or quality of being joyous.

Ju'ab, in *Utah*, an E. central county; *area*, about 3,828 sq. m. *Rivers.* Sevier river and some smaller streams. *Surface*, mountainous; Mount Nebo, in the northeastern part of the county, rising to the height of 12,00 feet; *soil*, not fertile. *Cap.* Nephi. *Pop.* (1895) 6,466.

Juan. The Spanish name for John.

Juan, DON. See DON JUAN.

Juan of Austria. See JOHN OF AUSTRIA.

Juan II., DON, a natural son of Philip IV. of Spain, and of Maria Calderona, an actress, was B. in 1629; made grand prior of Castile; commanded the Spanish army in Italy in 1647, and took the city of Naples; subjugated Barcelona in 1652, but being afterwards unsuccessful, was exiled. Under Charles II. he was re-called to Madrid, made prime minister, and D. in 1679.

Juan Fernandez, ISLANDS OF, the name given to several islands of Chili, in the Pacific Ocean, abt. 400 m. W. of Valparaiso. Lat. 33° 37′ S.; Lon. 78° 53′ W. Mas-a-Tierra, the larger one, was the lonely residence of Alexander Selkirk, for 4 years, and is the scene of De Foe's well-known story of *Robinson Crusoe.* It has an area of abt. 108 sq. m., and in the S. part rises to an elevation of 3,000 ft. above sea-level, with a dangerous rocky coast. In the N. part, however, there are fertile valleys producing many tropical fruits, sandal-wood, cork, &c. Cumberland Bay on the N. coast, is said to be an excellent harbor. The island is now occupied chiefly by settlers from the United States and Tahiti, who lease it from the Chilian govt. Of the other islands MAS-A-FUERA is the largest, lying a few m. to the W. of Mas-a-Tierra; it is also rocky and precipitous.

Juanpore', a district of British India, prov. Allahabad, chiefly between 25° and 26° N. Lat. and 83° E. Lon.; having N. Oude and Azimghur; E. Bennares; S. the Ganges, dividing it from Mirzapore; and W. Allahabad. *Area*, 1,552 sq. m. *Surface*, undulating; *soil*, tolerably fertile, and well irrigated and cultivated. *Prod.* Sugar, in large quantities. *Cap.* Juanpore.

JUANPORE, a city and cap. of above dist., on the Goomtee, 38 m. N.W. of Bennares. Previous to the middle of the 15th century this was a place of importance, and the cap. of an independent sovereignty. *Pop.* about 30,000.

Ju'ba, *n.* [Lat., a *mane.*] (*Zöol.*) The long and thickest hairs which adorn the neck, chest, or spine of certain quadrupeds.

Juba, the name of two kings of Mauritania and Numidia, important kingdoms of Northern Africa, prior to and after the fall of Carthage. — JUBA I. flourished about half a century B. C., and, having declared for Pompey in the struggle for mastery among the first triumvirate, upon the murder of Pompey, Cæsar invaded the kingdom of Mauritania, and Juba being defeated and compelled to fly, in despair fell on his sword B. C. 42. — JUBA II., the son of the former, was carried prisoner to Rome while yet a youth, when Cæsar drove his father from the throne. Upon the fall of the second triumvirate, Augustus Cæsar, who had taken a strong regard for Juba, married him to one of Antony's daughters, Cleopatra, and restored him to his father's throne. Juba

possessed great judgment and considerable learning, and left behind him "A History of Arabia," "Antiquities of Syria," and "A History of Rome," written in Greek. Died A. D. 17.

Juarez, (*hwär'eth,*) Benito, President of the Mexican republic, is a descendant of the Indian raes of the Taputecos, and was b. in 1806, at Ixtlan, near Oaxaca. After graduating at the college of the latter city, he, in 1830, was elected member of the Institute of Arts and Sciences of Mexico, and, in 1833, a member of the state legislature. In the year following, he was admitted as a counsellor and elected to the chair of Canonical Law in the Institute of Oaxaca. After filling various legal and political offices, *J.* became, from 1848 till 1852, governor of his native State, in which he effected many substantial reforms. In 1853, when Santa-Anna (*q. v.*) was a second time raised to the dictatorship, *J.*, with other liberals, was banished, and resided in Havana and New Orleans until May, 1855, when he joined the successful insurrection of Alvarez against the dictator. Alvarez having been named Provincial President, *J.* received the portfolio of Minister of Justice. Under Comonfort, the next President, *J.* was Secretary of State and President of the High Court of Justice, and on the overthrow of Comonfort, in 1859, became himself president of the republic. He endeavored to summon a congress, but having been defeated in the field, was obliged to betake himself to Vera Cruz. There were thus, at this time, two governments in Mexico: the Church party, headed by Zuloaga, and afterwards by Miramon, having its seat in the city of Mexico; and the Liberal party, with *J.* as its chief, supported mainly by the import-duties of the port of Vera Cruz. The government of Miramon was recognized by the European powers, and with some difficulty *J.* obtained a recognition of his authority by the U. States. Miramon, however, was defeated at the battle of Siloa, Aug. 14, 1860, and having sustained a series of reverses in December, he escaped to the coast and fled the country. *J.* re-entered the city of Mexico, Jan. 12, 1861, summoned a congress, which elected him president, and was formally installed, June 1st. His first act was to decree the dissolution of the religious orders and the secularization of the Church property. A more dangerous measure, however, was the decree of June 17, by which all payments to the creditors of the State (including foreigners) were suspended for two years. This caused the British and French ambassadors to suspend their functions, and England, France, and Spain entered into an alliance for intervention in Mexico, Dec. 31, to enforce the claims of their respective subjects. The Spanish Contingent landed Dec. 17. *J.* then issued a proclamation, in which he attempted to justify his impolitic and obnoxious decree on the ground of urgent necessity, Dec. 18. General Doblado, the president's plenipotentiary, met the representatives of the Allied Powers at Soledad, Jan. 19, 1862, the result of the negotiations being the withdrawal of the English and Spanish forces. The French, however, though abandoned by their allies, declared war against *J.*, believing it unworthy to withdraw without obtaining any satisfaction. A provincial government was, meanwhile, established, of which Gen. Almonte was the nominal head, and *J.* offered a vigorous resistance to the invaders. Shortly before the capture of the city of Mexico (May 31, 1863), he removed the seat of government to San Luis de Potosi. The Assembly of Notables meeting in convention, then summoned the Archduke Maximilian to accept the crown, which, after some hesitation on his part, he consented to do, and entered the capital, June 12, 1864. In the meantime *J.*, had been driven from place to place, but being morally sustained by the U. States, he was enabled, on the withdrawal of the foreign troops from Mexico, to make head against the imperial forces. He had issued a proclamation calling upon the people to resist foreign invasion, Jan. 1, 1865, and after a desultory warfare, his generals succeeded in defeating the imperial troops early in 1867. The Emperor Maximilian, who had refused to abandon the cause he had espoused, was betrayed into the hands of the Juarists at Queretaro, and was shot by the express order of *J.*, June 19, 1867. The greatest efforts were made by the ambassadors of foreign powers, and other representatives of the civilized world, to induce *J.* to forego this useless act of barbarity, but in vain. On July 15, the president re-entered the capital, after an absence of 4 years. The country, however, still remained in a disaffected condition, and a formidable insurrection broke out in Yucatan in the latter part of the year, which was ultimately suppressed. Another, which occurred at Tampico, was extinguished in Feb., 1868. Other insurrectionary movements, even more formidable still, agitated the country in the years 1866–70, directed mainly by the partisans of Marquez and Santa Anna respectively, which will be further treated of in the article Mexico, *q. v.* D. 1872.

Ju'bal. (*Script.*) Son of Lamech and Adah, and a descendant of Cain. He invented the lyre and the shepherd's pipe, (*Gen.* iv. 21.)

Ju'bate, *a.* (*Zoöl.*) Having long pendent hairs in a continued series, as in some insects.

Jubé, *n.* (*Arch.*) The *Rood-loft*, or gallery, over the entrance into the choir, is called in France and sometimes in England the Jube, from the words *Jube, Domine, benedicere*, which were pronounced from it immediately before certain lessons in the Roman Catholic service, which were sometimes chanted from this gallery, when the dean, abbot, or other superior of the choir, gave his benediction; — a custom still continued in some of the foreign churches, as at Bayeux Cathedral. This name was also applied to the *Ambo* for this same reason.

Ju'bilant, *a.* [Lat. *jubilans*, from *jubilo, jubilatus*, from *jubilum*, a wild cry, shout. See Jubilee.] Uttering songs of triumph: rejoicing; shouting with joy.

Jubila'te, *n.* [Lat., rejoice.] (*Eccl.*) A name given to the third Sunday after Easter; because on that day divine service was commenced with Psalm lxvi., "*Jubilate Deo, omnes terræ*" (Sing to the Lord, all ye lands).

Jubila'tion, *n.* [Lat. *jubilatio*.] The act of declaring triumph.

Ju'bilee, *n.* [Fr. *jubilé;* Lat. *jubilum;* Heb. *yobel*, or *jobel.*] (*Eccl. Hist.*) One of the Jewish festivals, which was celebrated every fiftieth year. This festival was proclaimed by sound of trumpet throughout the land, on the evening of the day of Atonement. All slaves and captives were to be free, all the estates which had been sold reverted to their original proprietors or their descendants, and every man returned unto his family. The ground was not to be sown, nor was that to be reaped which grew of itself during that year. The political object of this institution was to preserve the distinction of tribes and families, and to prevent too great a social inequality among the people, by restoring to each his previous possessions. Some have been of opinion that this jubilee was celebrated every forty-ninth, and not every fiftieth year. According to the Hebrew ritual, not only was every seventh day observed as a period of rest, but likewise every seventh year, when they were to cease from labor, and the land was to remain uncultivated. Hence, it is objected to the fiftieth year, that in that ease the land would remain for two consecutive years uncultivated. This language of Scripture, however, is so decided as to the fiftieth year, as to have no room for entertaining the other opinion. The jubilee did not continue to be observed after the Babylonish captivity. In modern times the term has been applied to the year in which all who visited the church of St. Peter at Rome, for a certain number of days, with pious offerings, received plenary indulgence. A jubilee was first declared by Pope Boniface VIII., in 1300, and was to recur every hundred years. The period was shortened by Clement VI. to fifty years; by Urban VI. to thirty-three years; and by Paul II. to twenty-five, at which last it still remains. The condition of visiting Rome is no longer in force, certain acts of devotion or charity being substituted for it. The last jubilee of the Church was celebrated in 1850.

Juchitan, (*hoo-che-tan',*) or Xuchitan, a town of Mexico, on a river of the same name, about 20 m. N.E. of Tehuantepec; *pop.* 4,500.

Ju'da, in *Wisconsin*, a post-office of Green co.

Judæ'a. See Palestine.

Juda-Hakadosh, (*ju'da hăk-ka'dosh,*) or the Saint, a famous rabbi in the time of the emperor Antoninus, to whom he was preceptor. He is said to have been the original compiler of the Mischua, or the Talmudical text.

Ju'dah, the fourth son of Jacob and Leah, and the head of the tribe of that name. It was to Judah that Jacob declared that the sceptre should not depart from it till the coming of the Messiah; a prediction fulfilled in the advent of Christ.

Judah, (Kingdom of.) (*Hist.*) This state — which was formed in reality on the death of Solomon and the secession of the Ten Tribes forming the kingdom of Israel — was composed of the two remaining tribes of Benjamin and Judah. Infinitely smaller than its rival in territorial possessions, consisting of little more than a fifth of the whole country of Palestine, and not, indeed, the whole of the province of Judea, yet, in point of population, it was nearly on a par in numbers with the ten united tribes. The kingdom of Judah endured for 133 years after the destruction of its rival, and was brought to a close by Nebuchadnezzar, 588 B. C., who carried the vanquished inhabitants to Babylonia, and distributed them beyond the Euphrates. After their return from captivity, this tribe in some sort united in itself the whole Hebrew nation, who from that time were known only as Judæi, Jews, descendants of Judah. Judah — when named in contradistinction to Israel, Ephraim, the kingdom of the Ten Tribes, or Samaria — denotes the kingdom of Judah, and of David's descendants. One of the principal distinctions of this tribe is, that it preserved the true religion, and the public exercise of the priesthood, with the legal ceremonies in the temple at Jerusalem; while the Ten Tribes gave themselves up to idolatry.

Juda'ic, or **Juda'ical,** *a.* Pertaining to the Jews.

Juda'ically, *adv.* After the Jewish manner.

Ju'daism, *n.* [Fr. *judaïsme.*] The religious doctrines and rites of the Jews, as enjoined in the laws of Moses. —Conformity to the Jewish rites and ceremonies.

Ju'daist, *n.* An adherent to *Judaism.*

Judais'tic, *a.* Belonging to Judaism.

Judaiza'tion, *n.* Conformity to the Jewish religion or ritual.

Ju'daize, *v. n.* [Fr. *judaïser.*] To conform to the religious doctrines and rites of the Jews.

Ju'daizer, *n.* One who conforms to the religion of the Jews; — a name applied, among other sects, to the Ebionites, *q. v.*

Ju'das-colored, *a.* Red-haired. — *Dryden.*

Judas Iscariot. (*Script.*) One of the twelve apostles, and betrayer of his master, seems to have possessed the full confidence of his fellow-apostles, and was entrusted by them with all the presents which were made them, and all their means of subsistence; and when the twelve were sent out to preach and to work miracles, *J.* appears to have been among them, and to have received the same powers. For the paltry sum of about $15, he engaged with the Jewish Sanhedrim to guide them to a place where they could seize his Lord by night, without danger of a tumult. But when he learned the result, a terrible remorse took possession of him; not succeeding in undoing his fatal work with the priests, he cast down before them the price of blood, crossed the gloomy valley of Hinnom, and hung himself (*Matt.* xxvii. 3–10); or fell headlong and burst asunder (*Luke* xxii.; in *Acts* i. 18). Many interpreters suppose that the motive of his betrayal was to oblige Jesus, in self-defence, to announce himself as the expected Messiah, to surmount the emergency by his miraculous powers, and to open to himself, the apostles, and the Jewish kingdom, the anticipated career of aggrandizement.

Judas Maccabæus. See Maccabæus.

Judas-tree, *n.* (*Bot.*) See Cercis.

Jude, (St.,) or Judas, an apostle of Jesus Christ, brother of St. James the Less, and, according to many of the fathers, son of Joseph, husband of the Virgin Mary. He took the East as the theatre of his mission, and preached the new doctrine to the heathen of Idumea, Arabia, Mesopotamia, with Syria, and Libya; and is supposed to have been martyred at Berytus about the year 80.

J. (*Epistle of.*) (*Script.*) The name of one of the books of the New Testament, whose canonical authority has been much disputed in ancient and more recent times. It is placed by Eusebius among the controverted books, as having been rejected by many of the ancients; and Luther, Grotius, Dahl, Michaelis, also call it in question. The doubts thrown upon its genuineness, however, arise solely from the writers being supposed to quote two apocryphal books. As regards the prophecy of Enoch, the language of the author does not imply that he is quoting from any book: the fact may have been handed down by tradition among the Jews, and the words may have afterwards been copied by the author of the apocryphal book of Enoch, in order to give color to his forgery. The same remarks apply to the notice of the dispute between the archangel Michael and the devil, respecting the body of Moses, which some consider to have been taken from a book entitled the *Assumption or Ascension of Moses.* The author of this book simply calls himself Jude, the brother of James, and servant of Jesus Christ; and hence it has been doubted whether he was Jude the apostle, or Jude the Lord's brother, if, indeed, these were two distinct persons, which is by no means clear. Some suppose the book to have been written about 64 or 66, others not till about 90. The design of this epistle is to guard believers against the false teachers who had begun to insinuate themselves in the Church, and were disseminating dangerous tenets of insubordination and licentiousness. The epistle concludes with admonitions and counsels to believers to persevere in faith and godliness, and to rescue others from the snares of false teachers. The language of the epistle is animated, the expressions are remarkably strong, and the figures and comparisons bold, apt, and striking.

Jude'an, *n.* A native of Judea; a Jew.

Judex, Judicium, (*ju'deks, ju-dith'e-um.*) (*Roman Law.*) It appears that there was no class among the ancient Romans corresponding to our judges. The judices were not necessarily lawyers, and it would seem that any Roman citizen might act as a judex in civil causes. The judices were allowed to have their assessors, learned in the law, to devise with. A judex judged both of facts and law, but only in such cases as were of smaller importance. An *arbiter* determined what seemed equitable in a matter not sufficiently defined by law. The *recuperatores* were another class of judges, and were so called because by them every one recovered his own. The *centumviri* were judges chosen from the thirty-five tribes, three from each; being in all 105, but named by a round number, 100. They formed a court in which weighty matters of the law were decided. The *judicia* were of two kinds, *privata* (privats) and *publica* (public), the former being civil trials, having relation to differences between privats individuals, the latter criminal trials. The *Album Judicum* was the body out of which judices were to be chosen.

Judge, (*jŭj.*) *n.* [Fr. *juge;* Lat. *judex.*] (*Law.*) One invested with authority to try any cause in question in a court of judicature, and to pronounce sentence or judgment thereon. Judges are not liable to prosecution for anything done by them as judges, at least within their own jurisdiction; nor are they in any way punishable for a mere error of judgment or for wrongful imprisonment. Judges are, however, punishable for wilful offences against the duties of their stations. Bribery is punishable by loss of office, fine, and imprisonment. A judge ought to judge by law, and not by examples, (*Judex est lex loquens.*) — Judges are appointed or elected in a variety of ways in the U. States. For the Federal courts they are appointed by the President, by and with the consent of the Senate; in some of the States, they are appointed by the governor, the governor and senate, or by the legislature. The judges of the Federal courts and of the courts of some of the States hold their offices during good behavior; of others, as in New York, during good behavior, or until they shall attain a certain age; and of others, for a limited term of years. — The term is applied to the Supreme Being, — and to one who has skill to decide on the merits of a question, or on the value of anything; one who can discern truth and propriety.

—*v. n.* [Fr. *juger;* It. *giudicare;* Lat. *judico; jusdico* — *jus*, right, law, justice, and *dico*, to proclaim, to make known.] To declare or set forth with authority the law in any particular case; to practise judicial investigation; to examine judicially; to decide; to hear and determine, as in cases on trial; to pass sentence; to distinguish between truth and falsehood by investigation. — To form an opinion; to bring to issue the rea-

soning or deliberations of the mind; to discern; to distinguish; to consider accurately, for the purpose of forming an opinion or conclusion.

—*v. a.* To hear and determine, as a case; to examine and decide; to try; to examine and pass sentence on; to doom to punishment; to punish.—Rightly to understand and discern; to esteem; to think; to reckon; to rule or govern.—To censure rashly; to pass severe sentence on.

"*Judge* not, that ye be not *judged*."—*Matthew.*

Judg'er, *n.* One who forms judgment, or passes sentence.

Judges, (Book of.) (*Script.*) One of the historical books of the Old Testament, containing a history of the children of Israel from the death of Joshua to the time of Eli, during which time the government of the people was in the hands of judges; whence the book takes its name. It comprises the history of about three hundred years, and consists of three parts. The first contains the history of the elders who ruled the Israelites after the death of Joshua, and the subsequent transactions to the commencement of their troubles (i.–iii. 4). In the second part of the book we have the history of the judges from Othniel to Eli (iii. 3–xvi.); being Othniel (iii. 9), Ehud (iii. 15), Shamgar (iii. 31), Deborah (iv. 4), Barak (iv. 6), Gideon (vi. 2), Abimelech (vi. 12–ix.), Tola (x. 1), Jair (x. 3), Jephthah (xii. 7), Ibzan (xii. 9), Elon (xii. 11), Abdon (xii. 13), Samson (xv. 20). The third part gives an account of an idol that was worshipped, first in the family of Micah (xvii.), and afterwards in the tribe of Dan (xviii.); followed by an account of a barbarous act committed by the Benjamites of Gibeah, which led to a war between them and the other tribes, in which the tribe of Benjamin was almost extirpated (xix.–xxi.). In this book we find most remarkable instances of God's dealing with the children of Israel. His justice and mercy are alternately and strikingly displayed; the people sinned, and were punished; they repented and found mercy. We have also presented to us some illustrious examples of faith and goodness in the characters of Gideon, Barak, Samson, Jephthah, &c. The authorship of the book, and the time at which it was written, are subjects on which considerable diversity of opinion exists. The general opinion, and that which is held by the Jews, is that it was written by Samuel, the successor of Eli, though some have ascribed it to Phinehas, Hezekiah, Jeremiah, Ezekiel, Ezra, &c.; being compiled from the public registers or records of the events. The canonical authority of the book is undoubted.

Judge'ship, *n.* The office of a judge.

Judg'ment, *n.* [Fr. *jugement.*] Act of judging; act or process of the mind in comparing its ideas, to find their agreement or disagreement, or in examining facts to ascertain truth; the faculty of the mind by which man is enabled to compare ideas and ascertain the relations of terms and propositions; the determination of the mind, formed from comparing the relations of ideas, or the comparison of facts and arguments; discrimination; discernment.—The right or power of passing sentence.—Opinion; notion; estimate.—The final trial of the human race.

(*Law.*) The sentence pronounced by a court of law upon the matter contained in the record, or in any case tried by the court. *J.* are of four sorts:—On *demurrer*, where the *facts* are confessed by the parties and the law determined by the court; 2. on *verdict*, where the law is admitted by the parties and the facts disputed; 3. by *confession* or *default*, where both the fact and the law arising thereon are admitted by defendant; and, 5. on *non-suit* or *retraxit*, where the plaintiff is convinced that either fact or law, or both, are insufficient to support his action, and therefore abandons or withdraws his prosecution. All *J.* are either interlocutory or final. *Interlocutary J.* are such as are given in the middle of a cause. *Final J.* on the other hand, are such as at once put an end to the action, by declaring that the plaintiff has either entitled himself, or has not, to recover the remedy he sues for. *J.* may, for certain causes, be suspended or finally arrested. The judge may also order immediate judgment and execution. If any defect of justice happened at the trial, by surprise, inadvertence, or misconduct, the party may have relief by a new trial; or if, notwithstanding the issue of fact be regularly decided, it appears that the complaint was either not actionable in itself, or not made with sufficient precision and accuracy, the party may supersede it by arresting or staying the judgment. A sufficient ground may, however, be laid before the court to satisfy them that it is necessary to justice that the cause should be farther considered. The costs of the suit (after being taxed) generally fall to be paid by the party against whom judgment is delivered. Judgment being signed, the party in whose favor it is given may immediately sue out execution thereon, before the judgment is entered on the roll. In criminal cases, judgment, unless any matter be offered in arrest thereof, follows upon conviction, being the pronouncing of that punishment which is expressly ordained by law.

(*Log.*) That operation of the human mind through which, by joining different ideas together, it affirms or denies, the one or the other; as when, for instance, having the ideas of the earth and roundness, it affirms or denies that the earth is round. Our *J.*, according to Aristotle, are either problematical, assertive, or demonstrative. The *problematical J.* is merely based upon opinion; but it may be the expression of our presentiment of certainty, and may afterwards be proved to demonstration; as it may be only an opinion in which we must admit the possibility of error at the moment of making our decision. The *assertive J.* is one of which we are fully persuaded ourselves, but cannot give grounds for our belief that shall compel men in general to coincide with us. The *demonstrative J.* may be either certain in itself, as a mathematical axiom is, or capable of proof by means of other judgments, as the theories of mathematics or the laws of physical science. When expressed in words, a judgment is called a proposition. (See PROPOSITION.)

Judg'ment-day, *n.* (*Theol.*) The day of final judgment for all mankind.

Judg'ment-hall, *n.* A hall in which courts are held.

Judg'ment-seat, *n.* The bench on which judges sit; a tribunal.—*Glyn.*

Ju'dicable, *a.* That may be judged. (R.)

Ju'dicative, *a.* That judges, or has been passed to judge. (R.)

Ju'dicatory, *a.* [Fr. *judicatoire;* L. Lat. *judicatorius,* from *judico.*] Judicial; dispensing justice.

—*n.* A court of justice; a tribunal; distribution of justice.

Ju'dicature, *n.* [Fr.; L. Lat. *judicatura,* the action of judging, or the place where the judgment is given, from Lat. *judico,* to judge.] The power of distributing justice by legal trial and determination; a court of justice.

Judi'cial, *a.* [Lat. *judicialis,* from *judicium,* a judgment.] Pertaining to courts of justice; as, *judicial* power.—Practised in the distribution of justice.—Proceeding from a court of justice.—Inflicted, as a penalty, or in judgment.

Judi'cially, *adv.* In the form of legal justice; by way of penalty or judgment.

Judi'ciary, *a.* [Fr. *judiciuire;* Lat. *judiciarius,* from *judicium,* judgment.] Relating to courts of justice or judicature; passing judgment or sentence.

—*n.* That which is done while administering justice.—That branch of government to which belongs the administration of justice; the judges taken collectively; as, the liberties of the people are secured by a wise and independent *judiciary.*

Judi'cious, *a.* [Fr. *judicieux,* from *judicium,* a judgment.] According to sound judgment; wise; prudent; rational; adapted to obtain a good end by the best means; acting according to sound judgment; possessing sound judgment; directed by reason and wisdom; discerning; sagacious.

Judi'ciously, *adv.* With good judgment; with discretion or wisdom; skilfully.

Judi'ciousness, *n.* Quality of being judicious, or of acting, or being, according to sound judgment.

Judi'cium Dei. [Lat., judgment of God.] A term applied in the Middle Ages to all extraordinary trials of secret crimes, as those of arms, single combat, ordeals, &c., in which it was believed that Heaven would miraculously interfere to clear the innocent and confound the guilty.

Ju'dith, a Jewish heroine, who lived in Bethulia, when Holofernes, general of the king of Syria, laid siege to that city. *J.*, in order to deliver her country, visited Holofernes, who, struck by her beauty, invited her to his tent, where, while he was sleeping, she cut off his head.

J., Book of. (*Script.*) One of the apocryphal books of the Old Testament, giving an account of the invasion of Judæa by Holofernes, general of Nobuchadnezzar, king of Assyria; and of the delivery of the town of Bethulia, in Judæa, the destruction of the Assyrian army, and the death of Holofernes through the stratagem and courage of Judith, an inhabitant of that town. The historical and geographical difficulties of this book are too great to admit of it being literally true, or even carefully based on truth. The general opinion among critics is, that it is a Jewish romance, written, probably, in the age of the Maccabees, in order to animate the Jews in their struggles against the Syrians. It is disputed whether the original language of this book was the Chaldee or the Greek. The Latin translation by Jerome is from the Chaldee, the English translation in the authorized version from the Greek. The two differ from each other in many respects. There is also a Syriac version, which was made from the Greek.

Jud'son, ADONIRAM, an eminent American Baptist missionary, b. in Malden, Mass., 1788. He was educated at Brown University, and the Theological Seminary of Andover, and in 1812, after a short visit to England, set out to found a mission in Birmah, arriving at Rangoon in the summer of 1813. It took him several years to master the language, and he then preached, and taught, and set up a printing-press. The great fruit of his labors was the Burmese translation of the Bible, the first edition of which he printed in 1835, and a second, thoroughly revised, in 1840. He also undertook, but did not quite complete, a Birmese-English dictionary. It was published in 1852. Judson was at first a Congregationalist, but he joined the Baptists before commencing his missionary task. He married three wives in succession, each of them an authoress. A memoir of his life was written by the Rev. F. Wayland, D. 1850.

Jud'son, in *Minnesota,* a post-village and township of Blue Earth co., on the Minnesota River, about 11 m. W. of Mankato.

Ju'dy's (or JUDAH'S) **Gap,** in *Missouri,* a village of Hickory co., about 90 m. S.W. of Jefferson City.

Jug, *n.* [Dan. *jugge.*] A vessel with a small mouth and a swelling belly, for holding liquors; a mug.

—*v. n.* To utter a sound resembling this word, as certain birds do,—especially the nightingale.

—*v. a.* To cook by putting into a jug immersed in boiling water.—To call or bring together by imitating the sound of a bird.

Jug, or **Yoog,** a river in European Russia, rising in the S. of the govt. of Vologda, and after a N.N.E. course of 220 m., joins the Sookhona near the village Oostioog-Velikee, and with the latter stream forms the Upper Dwina, which flows into the White Sea at Archangel.

Ju'gal, *a.* [Lat. *jugum,* a yoke.] (*Anat.*) Applied to the cheek-bone, from having a yoke-like articulation to the temporal-bone and the bone of the upper jaw.

Juga'ta, *n.* [Lat., yoked.] (*Numismat.*) Two heads represented upon a medal, side by side, or joining each other.

Ju'gated, *a.* Yoked or joined together.

Juggernaut', a town of Hindostan, prov. of Orissa, presidency of Bengal, 260 m. S.W. of Calcutta, containing a celebrated temple, sacred to the Hindoo divinities. Lat. 19° 47′ N., Lon. 85° 54′ E. *J.* is one of the most sacred places in the Indian peninsula, the principal thoroughfare being lined on either side for a great length with religious houses, terminating in the great temple of Juggernaut. This immense structure of red granite, dedicated to the god Vishnu, the chief deity of the Hindoo worship, was built in 1198, and called *J.*, or "Lord of the Universe," another name for Vishnu. Above 4,000 priests are attached to this temple of *J.* at POOREE, as the town is sometimes called, to distinguish it from the temple; one order or set of these priests, called Pundahs, or Pundits, in the autumn of every year leave the temple, and taking different roads, spread themselves over India, everywhere, in town and village, expounding their dogmas, preaching and inculcating the necessity of a pilgrimage to the holy shrine upon the days of the religious festival; each priest at the proper time setting out on his return escorting troops of devotees, till as many as 100,000 and 120,000 pilgrims are sometimes collected in the town at one time. This ceremony represents the 9th incarnation of Vishnu. On the day of the festival, 3 cars, bet. 50 or 60 ft. in height, are brought to the gate of the temple, and the several idols taken out, and hoisted by machinery into their different places; *J.*, the chief god, with his golden arms and diamond eyes, being placed in the most conspicuous situation. Long ropes are then attached to the cars, and instantly grasped by the struggling and panting thousands, numbers being crushed, or trod to death, in their wild fury to be one of those blessed laborers. The huge machines are then set in motion, and amid shrill music, rejoicing shouts, and shrieks of enthusiastic ecstasy, dragged about 1 mile to the summer- or country-house of the idol, a small temple at the entrance of a sacred grove. This ceremony is repeated for several days, till the close of the festival. The Hindoo believes, that being allowed to pull the idol on any of these occasions, expiates all sins committed in life up to the moment of touching the sacred rope. While the ceremonies last, the pilgrims are not allowed to taste of any food, but such as has been first offered up before the divinity, and this they are compelled to buy from the priests, at any price their avarice may tempt them to demand; and as this is often exorbitant and beyond the means of numbers, the mortality in the streets, woods, roads, and surrounding dist., from famine alone, is immense, while those who fall from fatigue, and perish where they lie, or sink under the infirmities of age, travel, and disease, and those who in the frantic struggle to reach the pulling ropes, are crushed or trodden into the mire, make the annual mortality round the temple of *J.* something fearful to contemplate, and can only be conjectured by the skeletons and whitened bones that, like a crop of stones, in every quarter cover the surface of the land, presenting a grim and ghastly picture to the eye of the pitying beholder.

Fig. 1459.—THE IDOL JUGGERNAUT.

Jug'gle, *v. n.* [O. Fr. *jongler;* It. *giocolare;* probably from Lat. *joculor,* to jest or joke.] To play tricks by sleight of hand; to amuse and make sport by tricks, which make a false show of extraordinary powers.—To practise artifice or imposture.

—*v. a.* To deceive by trick or artifice.

—*n.* A trick by legerdemain; an act of prestidigitation.—An imposture; a deception; a sham.

Jug'gler, *n.* [Sp. *juglar;* Provençal *joglar;* It. *giocolatore;* O. Fr. *jongleur,* from Lat. *joculator.*] One who practises or exhibits tricks by sleight of hand; one who makes sport by tricks of extraordinary dexterity; a prestidigitator;—hence, a cheat; a deceiver; a trickish fellow.—The juggler's art is one of great antiquity, and in early times was employed as a means of sustaining the power of the priesthood. The magicians of the ancient Egyptians, Persians, &c., were of this class; and doubtless most of the miracles ascribed to the heathen deities were effected by sleight of hand. The investigations of Salverte have shown in what manner most of these could have been done, and with what effect. In the depths of temples, before witnesses filled with awe and

devold of doubt. Feats of agility, as tossing knives and balls, balancing the body in the most dangerous positions, were practised in ancient as well as in modern times. Ancient jugglers performed extraordinary feats by mechanism, which is defined by Cassiodorus as "the science of constructing machines whose effects shall seem to reverse the order of nature." The Egyptian priests made gods and statues which prophesied and explained dreams. In the East, particularly in India and China, jugglery is largely practised, and brought to great perfection as an art. Many of the tricks of modern Eastern jugglers have not yet been found out. The more remarkable jugglers of modern times have been Pinetti, Eckhartshausen, and the famed Katterfelto. More recently we have had Bosco, Houdin, Anderson, Hermann, Heller, Bartolommeo, Blitz, &c. The reader will find in Beckmann's *History of Inventions* a learned and curious account of the origin and history of the principal feats of jugglers both ancient and modern.

Jug'gleress, *n.* A female who practises jugglery.

Jug'glery, *n.* The art or the feats of a juggler; legerdemain; prestidigitation.

Jug'glingly, *adv.* In a deceptive manner.

Juglanda'ceæ, *n.* [Lat. *Jovis glans; i.e.*, the nut of Jove; a name given it by way of eminence.] (*Bot.*) The Walnut family, an order of plants, alliance *Quernules*. DIAG. One cell in the ovary, and one solitary erect ovule. They consist of fine trees with the following characteristics: Leaves, alternate, pinnate, exstipulate (fig. 1286); flowers, unisexual; the male in amenta with calyx 2–6 partite, irregular — the female solitary, or in small terminal clusters; calyx superior, regular, 3- to 5-lobed; ovary inferior, 2- to 4-celled at base, and 1-celled above; ovule solitary, erect: the fruit called *tryma;* seed 2- to 4-lobed, without albumen: embryo with sinuous, oily cotyledons, and a short superior radicle. The order includes 4 genera and 27 species, chiefly native of North America; a few are found in the E. Indies, Persia, and the Caucasus. They are remarkable for their timber and oily edible seeds. — See CARYA, and JUGLANS.

Juglandin, *n.* [From Lat. *juglans.*] (*Chem.*) A secreted matter in the green shell of the walnut, which becomes rapidly brown by exposure to the air. It is used medicinally as an alterative, and, cosmetically, as a black hair-dye.

Ju'glans, *n.* (*Bot.*) The typical genus of the order *Juglandaceæ*. They are trees of large size, with alternate, unequally pinnate leaves; leaflets numerous; sterile aments axillary; fertile flowers terminal. *J. Nigra*, the Black Walnut, is common in Middle and Western States, and is valuable for its timber, which is hard, of a rich deep brown, and beautifully marked. It is much used for ornamental furniture, handles of tools, and gun-stocks. *J. Alba*, the White Walnut or Butternut, is another useful timber tree with edible seeds. The inner bark of the root is used here as a mild purgative.

Jug'town, in *New Jersey*, a village of Hunterdon co., abt. 12 m. N.W. of Flemington.

Ju'gular, *a.* [Fr. *jugulaire*, from Lat. *jugulum*, the collar-bone, the throat, from *jungo*, to join. See JOIN.] (*Anat.*) Pertaining to the collar-bone, or the bone which joins together the shoulders and the breast; pertaining to the throat or neck, as the *jugular* veins.

Ju'gular, *n.* (*Anat.*) One of the two veins, called respectively, the *external* and *internal*, which bring the blood from the head, descending upon the sides of the neck. By their union with the subclavian veins they form the *vena cavu*, which terminates in the superior part of the right auricle of the heart. (See Fig. 201.)

(*Zoöl.*) The name given by Linnæus to a certain fish which has the ventral fin anterior to the pectoral.

Ju'gulate, *v. a.* [Lat. *jugulare*, to cut the throat.] To kill by cutting the throat of.

Juice, *n.* [Fr. *jus;* Lat. *jus*, broth, juice, liquid.] The sap of vegetables; the fluid part of animal substances; as meat *juice*.

Jui'ciness, *n.* State of abounding with juice; succulence in plants.

Jui'cy, *a.* Abounding with juice; moist; succulent.

Ju'jube, *n.* [It. *guiggiola;* Lat. *zizyphum;* Gr. *zizuphon;* Ar. *ghunnab.*] (*Bot.*) The fruit of the *Zizyphus vulgaris;* it resembles a small plum, and is occasionally used as a sweetmeat. What is sold under the name of *jujube paste* professes to be the dried jelly of this fruit, but is in fact a mixture of gum-arabic and sugar slightly colored.

Ju'juy (*hoo-hwee'*), a town of the Argentine Republic, about 40 m. E. N. E. of Salta.

Jujuy, or RIO GRANDE DE JUJUY (*ree'o grän'da da hoo-hwee'*), a river of the Argentine Republic, rises near the frontier of Bolivia, and flowing S.E. abt. 300 m., joins the Vermejo, abt. 35 m. below S. Lucas.

Juke, *v. n.* [From Fr. *jucher*, to perch.] To perch on anything, after the manner of birds.

—[From Scot. *jouk*, to bow.] To duck the head by bending the neck.

Ju'lep, *n.* [Fr., from L. Lat. *julapium*, from Ar. *julab.*] (*Med.*) A demulcent, acidulous, or mucilaginous mixture. (*Dunglison.*) — A fancy beverage composed of whisky, brandy, or other spirituous liquor, mixed with sugar, crushed ice, and sprigs of young mint: — called also *mint-julep*.

Jules'burg, in *Colorada*, a post-town, cap. of Sedgwick co., on Union Pac. and D. & G. R.Rs. *Pop.* (1890) 202.

Jull, (*hoo'lee,*) a town of Peru, on Lake Titicaca, abt. 46 m. S.E. of Puno.

Ju'lia, the daughter of Cæsar and Cornelia, the most virtuous and accomplished lady of Rome; she was twice married, first to Cornelius Scipio, and secondly to Pompey the Great, whom she attended to Egypt, and beheld from the deck of her galley his treacherous murder.

Ju'lia, the daughter of Augustus Cæsar, and as universally execrated for her gross licentiousness and profligacy as the other Julia was renowned for her chastity. She was thrice married, though the list of her lovers was beyond calculation; on which account her father banished her from Rome. Her first husband was Metellus, her next Agrippa, and her last Tiberius Cæsar, who, when he attained the purple, allowed her to die of starvation. She had a daughter equally infamous.

Ju'lia, a virgin martyr of Carthage. When that place was taken by Genseric, she was sold to a heathen merchant, and carried into Syria. Refusing to take part in the festivals instituted in honor of the female deities, she was put to death about 440.

Julia Dou'na, second wife of the emperor Severus, and mother of Caracalla and Geta, distinguished as the patroness of arts and sciences. B. 170; D. 217, A. D.

Julia Gens. (*Anc. Hist.*) One of the most ancient patrician houses at Rome, was of Alban origin, and was removed to Rome by Tullus Hostilius upon the destruction of Alba Longa. It claimed descent from the mythical Iulus, the son of Venus and Anchises. The most distinguished family of the Gens was that of Cæsar.

Ju'lian, or **Jullau'us,** FLAVIUS CLAUDIUS, surnamed *the Apostate*, Roman emperor, was the youngest son of Constantius, brother of Constantine the Great, B. in 331. He was educated in the tenets of Christianity, but apostatized to Paganism. In 354 he was declared Cæsar, and sent to Gaul, where he obtained several victories over the Germans; and, in 361, the troops in Gaul revolted from Constantius, and declared for Julian. During the lifetime of his cousin, Constantius, he made profession of the orthodox faith; but, on succeeding to the throne, he threw off all disguise, re-opened the heathen temples, and sought to restore the heathen worship in all its splendor; while he labored, both by his pen and authority, to destroy Christianity. He took from the Christian churches their riches, which were often very great, and divided them among his soldiers. He sought likewise to induce the Christians, by flattery or by favor, to embrace paganism; but failing in the attempt, he shut up their schools, prohibited the followers of that religion from teaching grammar and rhetoric, and published an edict that the name of Christian should be abolished. His malice was further evinced by extraordinary indulgence to the Jews, and an attempt to rebuild the temple at Jerusalem, that the prophecy of Christ might be falsified; but it is said that flames of fire rose from beneath, and consumed some of the workmen, by which miraculous interposition the design was frustrated. He did not long survive his disappointment, being killed in 363, in his expedition against the Persians. The character of Julian is full of contradictions. He displayed learning, magnanimity, justice, and mercy; yet we find him insincere, superstitious, vain, and ambitious.

Ju'lian, CARDINAL, B. 1398, was deputed by Pope Eugene IV. to counsel Ladislaus, king of Hungary, to break the peace concluded with Amurath II. A long and disastrous war was the result, during which the Christian army was defeated at Varna, in 1444. He presided at the council of Basle.

Juliau, (*jūl'yan,*) *a.* [Lat. *Julianus* from *Julian.*] Relating or pertaining to, or derived from, Julius Cæsar; as, the *Julian* calendar.

Ju'lian, in *Illinois*, a village of Moultrie co., about 66 m. E. by S. of Springfield.

Ju'lian Alps, (*Geog.*) See ALPS.

Ju'lian Calendar, *n.* (*Chron.*) See CALENDAR.

Ju'lian Epoch, *n.* (*Chron.*) The epoch or commencement of the Julian calendar. — The first Julian year began with the 1st Jan., 46 B.C., and the 768th from the year assigned to the foundation of Rome.

Ju'lian Furnace, in *Pennsylvania*, a post-village of Centre co., abt. 95 m. W.N.W. of Harrisburg.

Ju'lian Period. (*Chron.*) An arbitrary period of time invented by Joseph Scaliger, about 1856, and produced by multiplying the solar cycle 28 by the lunar or metonic cycle 19.

Ju'lian Year. (*Chron.*) See YEAR.

Juli'en, STANISLAS AIGNAN, a distinguished French Orientalist, and member of the Institute, B. at Orleans, 1799. He early acquired a wonderful knowledge of languages, and, in 1821, was appointed assistant to Prof. Gail, of the College de France. In 1832, on the death of M. Abel Remusat, *J.* succeeded to the vacant chair, and in 1839 was elected a member of the Académie des Inscriptions. *J.*, who has received numerous foreign decorations, is author of a translation from the Chinese of *Kang-ing-Pien*, or "The Book of Rewards and Punishments;" *L'Histoire de la Vie d'Hiouen-Tsang et de ses Voyages* (1853); *Memoires sur les Contrées Occidentales* (1859); *Traité sur l'Art de fubriquer la Porcelaine* (1856), &c.

Ju'liers, [Ger. *Jülich,*] a fortified town of Prussia, cap. circle, on the Roër, a tributary of the Meuse, 24 m. W. of Cologne, and 17 N.E. of Aix-la-Chapelle. *Manuf.* Woollen cloth, leather, and vinegar. *Pop*, 5,699. *J.* is believed to be identical with *Juliacum*, in Antonine's Itinerary.

Ju'liet, in *Mississippi*, a post-office of Alcorn co.

Ju'lietta, in *Indiana*, a post-village of Marion co., on on C., H. & D. R R.

Ju'liette, in *Georgia*, a post-village of Monroe co., on Southern R.R.

Ju'lius I., POPE, succeeded to the papal see on the death of Mark, in 337. Celebrated for the part he took in the Athanasian Controversy. Died 352.

JULIUS II., *Guliano della Revere*, was nephew of Pope Sixtus IV., and was born near Savona about 1441. He was bishop successively of several sees, last of Avignon, and in 1471 became cardinal. He had been exiled by Alexander VI., but had influence to procure the election of Pius III., in September, 1503, and on his death, a month later, succeeded him. The pontificate of Julius II was almost wholly occupied with wars. He recovered part of the Romagna from Cesare Borgia, Bologna from the Bentivoglio, and Perugia from the Baglioni. Against the Venetians, who held part of the Romagna, he concluded, in 1508, the iniquitous League of Cambray, with the emperor, Louis XII. of France, and the king of Aragon, and also published a terrible bull. After much fighting, the Venetians submitted, and he made peace with them in 1510. He then made war on the French, to drive them out of Italy: conducted in person the siege of La Mirandola, and took it in 1511; saw his army defeated at Bologna, and the city again in the hands of the French, and was compelled to retire to Rome. A council being convoked at Pisa by the king of France, Julius convoked another at Rome; excommunicated Louis XII., and put his kingdom under an interdict in 1512; and died early in the following year. As an ecclesiastical ruler, *J.* has little to recommend him in the eyes of churchmen. As a political sovereign, he is described by Ranke as "a noble soul, full of lofty plans for the glory and weal of Italy;" and Professor Leo considers him, with all his defects, as one of the noblest characters of that age in Italy. He was a liberal and judicious patron of art, and a friend of the rising literature of the time. The rebuilding of St. Peter's at Rome was commenced by *J.* after the design of Bramante; and Michael Angelo and Raphael were among the great artists who found in him a patron.

JULIUS III., previously known as Cardinal del Monte, was chamberlain to Julius II., whose name he consequently assumed. He took little part in public business, but led a life of indolence at the villa still known by his name. D. 1555.

Ju'liustown, in *New Jersey*, a post-village of Burlington co., abt. 6 m. E. by N. of Mount Holly.

Julun'der, Juliu'der, a town in the Punjab, 80 m. from Lahore.

Ju'lus, *n.* (*Bot.*) Same as AMENT, *q. v.*

(*Anat.*) The first down or beard of adolescence.

July', *n.* [Lat. *Julius.*] (*Calendar.*) The name of the seventh month of the year. It formed the fifth month of the old Roman year, and was called *Quintilis* by the Romans; but shortly after the calendar had been rearranged by Julius Cæsar, the name Julius was given to this month by Marc Anthony, in honor of Cæsar, whose birthday fell on it. It contains thirty-one days.

July'-flower, *n.* Same as GILLYFLOWER, *q. v.*

Ju'mart, *n.* [Etymol. uncertain.] The chimerical offspring of a bull and a mare.

Jum'ble, *v. a.* [Old Eng. *jombre*, probably from Fr. *combler* — Lat. *cumulare*, to heap or pile up, to amass.] To heap up; to mix in a confused mass; to put or throw together without order.

—*v. n.* To meet, mix, or unite in a confused manner.

—*n.* Confused mixture; mass, or collection without order.

—A small, sweet, gingerbread-cake.

Jum'bler, *n.* One who mixes things in confusion.

Jum'blingly, *adv.* In a confused manner; promiscuously.

Jumboseer', a town of Hindostan, province Gujerat, pres. of Bombay, on a river of same name, 35 m. N.W. of Baroda. It carries on a considerable trade with Bombay, to which it sends cotton, grain, oil, and cloth. *Pop.* 12,000.

Jum'et, or **Jum'etz,** a town of Belgium, province Hainault, 3 m. N. of Charleroi. It contains glass-works, distilleries, and extensive coal-mines. *Pop.* 9,000.

Jumil'la, a town of Spain, province Murcia, 38 m. N. by W. of Murcia, and 75 S S.W. of Valencia. *Manuf.* Oil and soap.

Jum'na. [Sansk. *Yamuna*, the *Jomanes* of Pliny.] A large river of Hindostan, and the chief tributary of the Ganges. It rises on the S.W. side of the Himalayas, in about 30° 55′ N. Lat., and Lon. 78° 24′ E., and after a course of 780 m., falls into the Ganges at Allahabad. The cities of Delhi, Agra, Allahabad, Etaweh, and Kalpee are situate on its banks. Owing to its prevailing shallowness, this river is little serviceable to commerce.

Junnon'tri, a place of pilgrimage in Hindostan, at the source of the river Jumna, in the Himalayas, 10,849 feet above the level of the sea. The peak of the same name attains an elevation of 25,500 feet.

Jump, *v. n.* [Goth. *iup*, up, upwards, *iupa*, above, on high; Dan. *gumpe*, to jolt.] To spring upwards; to leap; to skip; to spring; to spring over anything; to pass to at a leap; to bound; to pass from object to object; to jolt.

—*v. a.* To pass over by a leap; to pass over eagerly or hastily.

—*n.* Act of jumping; a leap; a spring; a bound.

(*Geol.*) A break in a mineral stratum.

(*Arch.*) A hiatus in the even surface of a piece of masonry or brickwork.

Jump, *n.* [From Fr. *pipe.*] A sort of loose corset worn by females.

Jump, *adv.* Precisely; exactly; as, *jump* at the dead of night. — *Shaks.*

Jump'er, *n.* One who jumps; a leaper. — A long borer used by miners, &c.

—An under-jacket of fur. — A rude kind of sled used in the U. States.

(*Zoöl.*) The larvæ of the Cheese-fly.

Jump'ers, *n. pl.* (*Eccl. Hist.*) A class of religious fanatics, from their practice of jumping during the time allotted for divine service. They arose in Wales in 1760, and several of the more zealous itinerant preachers encouraged the people in it. They were taught to cry out *gogoniant* (Welsh for glory), amen, &c.; then to put

themselves in violent agitation; and, finally, to jump until they were quite exhausted, so as often to be obliged to fall down on the floor or the field where this kind of worship was held.

Jump'ing-deer, *n.* (*Zoöl.*) The Columbia black-tailed deer, confined to the Pacific coast of N. America.

Jump'ing-hare, *n.* (*Zoöl.*) See JERBOA.

Jump'-seat, *n.* A carriage with a movable or reversible seat. Also, applied to the seat itself.

Jump'-seat, *a.* Having a movable seat, as a certain kind of carriage.

Jump'-weld, *v. a.* See WELD.

Junca'ceæ, *n. pl.* [Lat. *juncus*, a rush.] (*Bot.*) The Rush family, an order of plants, alliance *Juncales*.—DIAG. Scattered flowers, and a minute undivided embryo. The species are sedge or grass-like herbs, with tufted or fibrous roots. The leaves are parallel-veined, either fistular, or more or less flattened and grooved. The flowers are regular, usually glumaceous, or sometimes petaloid; perianth inferior, 6-parted, persistent; stamens 6 or 3, perigynous; anthers, 2-celled, introrse; ovary superior, 1–3-celled, with single style having 3 stigmas, or sometimes 1. The fruit is capsular, 3-valved, with loculicidal dehiscence, and with 1 or many seeds in each, rarely 1-celled, 1-seeded, and indehiscent. The *J.* are found chiefly in cold and temperate climates, but a few inhabit tropical regions. Lindley enumerates 19 genera and 200 species. The chief use to which the plants of this order are applied is in making floor-mats, bottoms of chairs, &c. *Juncus effusus*, the soft rush or bulrush, is very common in ditches and moist lands throughout the U. States and Canadas. It grows in tufts, and has a soft pith which is used for the wicks of rush-lights.

Jun'cales, *n. pl.* (*Bot.*) An alliance of plants, class *Endogens*. DIAG. Hypogynous, bisexual, scaly, or scarious flowered endogens, with abundant albumen. The alliance is divided into two orders, viz., JUNCACEÆ and ORONTIACEÆ, *q. v.*

Junca'ceous, *a.* (*Bot.*) Relating or pertaining to, or resembling or consisting of, rushes.

Juncaginа'ceæ, *n. pl.* [From Lat. *juncus*, a rush.] (*Bot.*) The Arrow-grass family, an order of plants, alliance *Alismales*. DIAG. Scaly flowers, few-seeded simple axile or basal placentæ, and an embryo slit on one side, with a very large plumule.—They consist of herbaceous marsh-plants, found more or less in nearly all parts of the world, but most abundantly in temperate and cold regions. Leaves with parallel veins; flowers perfect, whitish or greenish; the perianth small, scaly, inferior, in two whorls, each consisting of three pieces; stamens 6; carpels 3–6; ovules 1–2. Fruit dry, separating into as many parts as there are carpels; seeds attached to axile or basal placentas, without albumen; embryo straight, with a lateral cleft.

Jun'cate, *n.* Cheese-cake; a kind of sweetmeat of curds and sugar; — hence, any delicacy.

"A goodly table . . . spread with *juncates*."—*Spenser.*

—A furtive or private entertainment. (Now written JUNKET, *q. v.*)

Junction, (*junk'shun,*) *n.* [Fr. *jonction;* Lat. *junctio*, from *jungo, junctus*, to join—*q. v.*) The act or operation of joining; union; coalition; combination.

—The place or point of meeting or union; as, a railroad *junction*.

Junc'tion, in *Illinois*, a post-office of Gallatin co.

Junc'tion, in *Iowa*, a township of Greene co.

Junc'tion, in *Kansas*, a township of Osage co.

Junc'tion, in *New Jersey*, a post-vill. of Hunterdon co.

Junc'tion, in *Penna.*, a post-hamlet of Lancaster co.

Junc'tion, in *Ohio*, a post-village of Paulding co., about 5 m. N. of Charloe.

Junc'tion City, in *California*, a post-village of Trinity co., about 9 m. W. of Weaverville.

Junc'tion City, in *Kansas*, a city, cap. of Geary co., on M., K. & T. and Un. Pac. R.R., 71 m. W. of Topeka; has foundries and machine shops, flour mills, elevators. Trade center of agricultural region. *Pop.* (1895) 4,769.

Junc'ture, *n.* [Lat. *junctura.*] A union of two bodies; a seam; a joint or articulation; the line or point at which two bodies are joined.

—A point of time; a point rendered critical or important by a concurrence of circumstances.

Jun'cus, *n.* [Lat., a rush.] (*Bot.*) See JUNCACEÆ.

Jundiahi, (*zhoon-de-a'ee,*) a town of Brazil, on a river of the same name, about 23 m. N.W. of São Paulo; *pop.* 5,000.

June, *n.* [Fr. *Juin;* Lat. *Junius.*] (*Calendar.*) The name of the sixth month in the year, which was formerly the fourth among the Romans. It is supposed to have derived its name from the Lat. *juniores*, young persons, as the preceding month of May was taken from *majores*, elders, or old persons. By some, the month is said to be named after Juno, the wife and sister of Jupiter, and queen of heaven. It consists of thirty days.

Jun'eating, *n.* See JENNETING.

Juneau, (*joo-noo',*) in *Wisconsin*, a S. central co.; *area*, about 800 sq. m. *Rivers.* Wisconsin, Lemonweir, Yellow, and Baraboo rivers. *Surface.* Undulating; *soil*, very fertile. *Cap.* Manston. *Pop.* (1895) 18,754.

—A post-village, cap. of Dodge co., about 46 m. E.N.E. of the city of Madison. It was formerly called *Dodge Centre.*

June'-berry, *n.* (*Bot.*) The berry of the *Amelanchier Canadensis* (Fig. 101).

Jungfrau, (*yōōng'frou,*) [the "Maiden,"] a mountain of Switzerland, between the canton of Berne and the Valais, 13,720 ft. above the level of the sea. It receives its name either from its unsullied purity, being always covered with snow, or because, until recently, its summit had not been reached. In 1804 and 1812, its summit was attained by the Aaron bros.; in 1828, by six peasants; and in 1841, by Profs. Forbes and Agassiz. It ranks as the eighth of the mountains of Europe in height.

Jungermania'ceæ, *n.* (*Bot.*) Scale-mosses, an order of plants, alliance *Muscales*. DIAG. Spore-cases opening by a definite number of equal valves, without operculum, but with elaters.—They are creeping, moss-like plants, either with imbricated, very cellular leaves surrounding a central axis, or with leaves and axis all fused into one common leafy expansion. They are found in shady woods in hot climates. The tropics are very rich in them. Their uses are unknown. The order includes 42 genera and 650 species.

Jungeypoor', a town of Hindostan, prcs. Bengal, dist. Moorshedabad, on an arm of the Ganges, 25 m. N.N.W. of Moorshedabad. It is one of the principal stations in British India for the culture of the silk-worm. Large quantities of indigo are grown in the neighborhood.

Jun'gle, *n.* [Hind. *jungal*, country.] Land mostly covered with forest-trees, brushwood, &c., or coarse, reedy vegetation, but not wholly uninhabited.

Jun'gle-fowl, *n.* (*Zoöl.*) A species of Australian birds, *Megapodius tumulus*, belonging to the family *Megapodidæ* (large-footed). The *J. F.* is about the size of a common fowl; and the mounds which it rears for the purposes of incubation are said to be very large. In some instances, they have been seen 15 feet high; and are 60 feet in circumference at the base. Mr. Gould, in his description of the birds of Australia, says that it is almost exclusively confined to the dense thickets immediately adjacent to the Nathur, and that it appears never to go far inland. It is always met with in pairs, or quite solitary; and it feeds on roots, herries, and insects. The head and crest of the *J. F.* are of a deep cinnamon color, while the back of the neck and all the under surface of the body are a very dark gray. The bill is a reddish-brown, and the tarsi and feet a bright orange.

Jun'gly, *a.* Consisting of jungles; abounding with jungles.

Juniat'a, in *Michigan*, a post-township of Tuscola county.

Juniata, in *Nebraska*, a post-village of Adams co., on B. & M. R. and Mo. Pac. R.R. *Pop.* (1897) 695.

Juniata, in *Pennsylvania*, a river formed by the union of the little Juniata and Frankstown Branch, in the S.W. central part of the State, and flowing a general E. direction enters the Susquehanna river, about 14 m. above Harrisburg.

—A S. central co; *area*, about 410 sq. m. *Rivers.* Juniata river, and Lost and Tuscarora creeks. *Surface*, much diversified; *soil*, in the valleys fertile. *Cap.* Mifflintown. *Pop.* (1897) about 17,200.

—A township of Blair co.

—A township of Huntingdon co.

—A post-township of Perry co.

Junin, (*hoo-neen',*) or XUNIN, or REYES, in *Peru*, a dept., including the valleys of Jauja and Huanuco. *Cap.* Huanuco.

—A town in the above dept., abt. 108 m. E.N.E. of Lima. It is situated on the E. side of Lake Chinchacocha, and near it is the Pampa of Junin, where Gen. Bolivar defeated the Spanish troops under Gen. Canterac, August 24, 1824.

Jun'ior, *a.* [Lat. compar. of *juvenis*, young.] Younger; not as old as another; later or lower in office or rank.

—*n.* A person younger than another in age or in standing.

Junior'ity, *n.* The state of being junior; — opposed to *seniority.*

Ju'niper, *n.* (*Bot.*) The English name of the genus JUNIPERUS, *q. v.*

Juni'perus, *n.* (*Bot.*) A genus of plants, order *Pinaceæ*. The European species *J. communis*, the common juniper, (Fig. 1460), is a bushy shrub with evergreen sharp-pointed leaves. It grows in all the northern parts of Europe, in fertile or in barren soils, on hills or in valleys, on open sandy plains, or in moist and close woods. It abounds in the Alpine region of Switzerland. All parts of the plant, when bruised, exhale a more or less agreeable terebinthinate odor. The fruits and young tops are used in medicine, having stimulant and diuretic properties. The volatile oil (*oleum juniperi*), obtained from the fruits and other parts by distillation with water, is officinal in our pharmacopœias. The fruits or berries are used to flavor gin and Hollands. Turpentine is frequently substituted for them in the preparation of gin. Juniper-wood has a reddish color, and is used occasionally for veneers. The species *J. Oxycedrus* yields, by dry distillation, the tarry oil known in France as *huile de cade;* it is principally used in veterinary medicine. The timber of this species is very durable. *J. Bermudiana* is the red or pencil cedar, and *J. Virginiana*, the Virginian red cedar. The wood of these species is used for pencils; that of the former is considered the best. *J. Sabina*, the common savin, is another interesting species. It is a native of the midland parts of Europe, and forms a small bushy shrub. The young branches, which are completely enveloped in the small imbricated leaves, are officinal in our Pharmacopœias. They, and the oil obtained from them, have acrid, stimulant, diuretic, emmenagogue properties. In large doses they are irritant poisons, and have been frequently taken to cause abortion. Savin ointment is a useful acrid application to keep open blistered surfaces.

Fig. 1460.—COMMON JUNIPER, (*J. communis.*)

a, branchlet with male flowers; *b*, part of branchlet with female flowers; *c*, unripe fruit.

Juniper Creek, in *S. Carolina*, enters Thompson's Creek from Chesterfield district.

Jun'ius, in *New York*, a post-township of Seneca county.

Junius, in *Wisconsin*, a post-office of Dodge co.

Junius's Letters, (*Lit.*) were published in the *London Public Advertiser* under the signature of "Junius," the first appearing Jan. 21, 1769, and the last, making the 69th, in Jan., 1772. The first authorized edition, printed under the author's inspection, was published in London, March 3, 1772, and was issued with an index in March, 1773. The letters of *J.* were directed against the ministry and the public charactors connected with it, and excited the greatest public interest. The classic purity of their language, the exquisite force and perspicuity of their argument, their studied and epigrammatic sarcasm, dazzling metaphors, and fierce and haughty personal attacks, attained for them a popularity which no series of letters ever possessed, and arrested the attention of the government as well as the public. Not less startling was the intimate and minute knowledge which they evinced of court secrets, showing an intimate acquaintance not only with ministerial measures and intrigues, but with every domestic incident. Every effort was made by the government to discover the author of these letters, but in vain. Since that time many volumes have been written on the subject (the last one, in 1870, by Mr. Chabot); nearly 50 persons have been credited with the authorship of the celebrated letters; but, though the strongest case appears to be in favor of Sir Philip Francis, the question is far from being a settled matter. See FRANCIS, SIR PHILIP.

Junk, *n.* (*Naut.*) Pieces of old rope or cordage, used for making mats, gaskets, points, &c., or board ship, and, when unravelled, forming oakum.—A flat-bottom vessel, generally of about from 100 to 150 tons burden, employed by the Chinese. *J.* are built in the shape of a slipper, and carry three masts, and a short bowsprit placed on the starboard bow. The masts are supported by shrouds, and on the fore and main mast is a kind of bamboo lateen or lug-sail. The quaint shape in which these vessels are built is accounted for by the Chinese in the following manner:—Between two

Fig. 1461.—CHINESE JUNK.

and three hundred years B. C., say they, the emperor, who had been for some time endeavoring to arrest the progress of navigation, in order to keep the "Celestial Land" free from the contamination of strangers, was one day thrown into a violent passion by a shipbuilder of southern China, who laid before him a perfect model of a sharp-keeled vessel, imploring his Majesty to patronize his invention; but, no sooner had he finished speaking, than the "heaven-descended monarch," grasping his slipper, threw it with unerring aim at the miscreant's head, at the same time crying, "Avaunt, monster! from henceforth build all thy vessels on the model of that old shoe."

(*Naut.*) Hard, salted beef supplied to ships making long voyages.

—A chunk; a thick lump or slab of anything; as, a *junk* of bread.

Junk-Ceylon, or **Salangan,** an island at the S.E. extremity of the Bay of Bengal, lying on the W. coast of the Malay peninsula, from which it is separated by a narrow channel. *Ext.* 25 miles long, by about 10 broad. *Desc.* Hilly and fertile, and well adapted for producing coffee and indigo. It has numerous herds of buffaloes, hogs, and deer. *Pop.* about 5,000, consisting of a mixture of Malays, Chinese, Siamese, and Birmans. Lat. 8° N., Lon. 98° 30′ E.

Junk'-bottle, *n.* A thick bottle of green glass, usually employed in holding beer, &c.

Junk'et, *n.* [It. *giuncata*, curdled milk; *giuncato*, covered with rushes, from *giunco* = Lat. *juncus*, a rush; O. Fr. *joncade*, spoon-meat made of cream, rose-water, and sugar.] A sweetmeat; a delicacy; a bonne-bouche. —A furtive entertainment; a secret feast or carouse.

—*v. n.* To feast in secret; to make a stealthy entertainment. — To feast; to banquet.

—*v. a.* To give entertainments to; to feast.

"The old woman was in a hurry to *junket* her neighbors." *Walpole.*

Junk'eting, *n.* A private feast, banquet, or entertainment.

Junk'-ring, *n.* (*Mach.*) A ring fitting a groove around a piston, to make it steam-tight. The ring is turned accurately to the diameter of the cylinder, and slightly hammered all round on the inside to increase its elasticity; it is then cut open, and put in its place: springs are sometimes used for pressing it outward.

Ju'no. (*Myth.*) The queen of the gods, according to the Grecian mythology, was daughter of Saturn and Ops, and sister to Jupiter, Pluto, Neptune, Vesta, Ceres, &c. She was born at Argos, or, according to others, in Samos, and was intrusted to the care of the Seasons, or, as Homer and Ovid mention, to Oceanus and Tethys. Juno was devoured by Saturn, according to some mythologists; and, according to Apollodorus, she was again restored to the world, by means of a potion which Metis gave to Saturn. Jupiter was not insensible to her charms, and proposed to marry her, and the nuptials of Jupiter and Juno were celebrated with the greatest solemnity: the gods, all mankind, and all the brute creation attended. By her marriage with Jupiter, Juno became the queen of all the gods, and mistress of heaven and earth. Her conjugal happiness, however, was frequently disturbed by the numerous amours of her husband, and she showed herself jealous and inexorable in the highest degree. Juno had some children by Jupiter: according to Hesiod, she was mother of Mars, Hebe, and Ilithya, or Lucina, and, besides these, she brought forth Vulcan. According to others, it was not Vulcan, but Mars or Hebe that she brought forth.

Fig. 1462.—JUNO.

The repeated debaucheries of Jupiter at last provoked Juno to such a degree, that she retired to Eubœa, resolved to forsake him forever. Jupiter, however, proposed a reconciliation, which was soon dissolved by new offences. Jupiter punished the cruelties which she had exercised upon Hercules, by suspending her from the heavens by a golden chain, and Vulcan was expelled from heaven by his father, for assisting his mother. The worship of Juno was universal, and even more so than that of Jupiter, according to some authors. Her sacrifices were offered with the greatest solemnity. She was worshipped chiefly at Argos, Samos, Carthage, and afterwards at Rome. Among the birds, the hawk, the goose, and particularly the peacock, often called the bird of Juno, were sacred to her; and the dittany, the poppy, and the lily were her favorite flowers. As Juno's power was extended over all the gods, she had the privilege of hurling the thunder of Jupiter when she pleased. Her temples were numerous, the most famous of which were at Argos and Olympia. The surnames of Juno are various; they are derived either from the functions or things over which she presided, or from the places where her worship was established. She was the goddess of all power and empire, and she was also the patroness of riches. She was represented sitting on a throne, with a diadem on her head and a golden sceptre in her right hand. Some peacocks generally sat by her, and a cuckoo often perched on her sceptre; while Iris, behind her, displayed the thousand colors of her beautiful rainbow. The Roman consuls, when they entered upon office, were always obliged to offer her a solemn sacrifice. The Juno of the Romans was called Matrona or Romana.

(*Astron.*) One of the asteroids. (*q. v.*) It was discovered by a German astronomer, Herr Harding, of Lilienthal, on Sept. 1, 1804. It holds the third place among the asteroids in order of discovery, and the fourth in point of size, being 112 miles in diameter. Its mean distance from the sun is about 253,526,000 miles, and it accomplishes its revolution around that body in 4 years and 132 days.

Juno'nia, *n.* (*Zoöl.*) A genus of lepidopterous insects, family *Nymphalidæ*, containing the Lavinia Butterfly, common in the Southern States. The wings are dark-brown above, each with a large and a small eye-like spot on both sides; the fore-wings have two orange-red spots near the middle of the front margin, and a whitish band encircling the eye-lined margin.

Ju'not, ANDOCHE, duke of Abrantes, a distinguished French general, was born in 1771, and entered the army, as a volunteer, in 1791. He first attracted the notice of Bonaparte by his coolness and courage when serving as a lieutenant at the siege of Toulon. Bonaparte at once made him his aid-de-camp. He took part in the campaigns of Italy and Egypt, and became general in 1801. A few years later he was made colonel-general of hussars, and appointed to the command of Paris. In 1806, he was placed at the head of the army in Portugal, where he remained two years, and was honored with his ducal title; but being defeated at the battle of Vimiera by Sir Arthur Wellesley (the duke of Wellington), he was compelled to capitulate. He subsequently served in Spain, and was made governor of the Illyrian provinces. D. 1813. His wife was the celebrated duchess of ABRANTES, *q. v.*

Jun'ta, *n.*; *pl.* JUNTAS. [Sp., from Lat. *junctus*, from *jungo*, to join.] A term applied in Spain to legislative assemblies or administrative councils. In the Middle Ages, the assemblies of the representatives of the nation without any preliminary call of the monarch were termed *juntas*. It was sometimes, also, used as synonymous with Cortes. In 1800, Napoleon summoned together 150 representatives of the nation, under the name of *J.*, for the adoption of a constitution which he wished to establish. After the insurrection, a new *J.* was formed, composed of the principal leaders of the insurrection, and numbering 44 members; besides which there was, in every province not subjugated by the French, a provincial *J.* subordinate to it.

Jun'to, *n.* [Sp. *junta*; It. *giunto*, from Lat. *junctus*.] A meeting or collection of men joined together for secret deliberation and intrigue for party purposes; a cabal; a faction; as, "a *junto* of petty tyrants." — *South.*

Jupe, *n.* The same as JUPON, *q. v.*

Ju'piter. [Contracted from *Jovis pater* = *Dei pater*, father, or lord, of heaven.] (*Myth.*) The Latin name of the Greek ZEUS, the supreme god of the heathens — called *Optimus*, because of the benefits he conferred on the world, and *Maximus*, from the universality of his power — was the son of Saturn and Ops, and twin-born with Juno. His father, Saturn, when he received the sovereignty of the universe from the Titans, was pledged never to rear male heirs, and consequently, as the most effectual way to prevent any after-dispute on that point, or rivalry with himself by troublesome adult sons, insisted upon Ops bringing him all the male children the moment they were born, and these he at once in true cannibal fashion devoured. Ops, however, contrived to secrete Jupiter, and giving her husband a stone to digest instead of a child, dispatched the celestial heir to the island of Crete, where, in a cave on Mount Ida, he was reared on goat's-milk. Emboldened by the success of her finesse with regard to Jupiter, Ops contrived to save some more of her children, till the Titans, discovering the fact and breach of contract, deposed and imprisoned the really innocent Saturn. By this time, however, Jupiter had grown sufficiently strong to wage war on the Titans, to release his father, and ultimately to grasp and wield the omnipotent thunder himself; and having espoused Juno as his consort of the universe, gave the sovereignty of the seas to his brother Neptune, and of the infernal regions to his other brother Pluto; and as his father Saturn was troubled with ambitious projects, and had a strong opinion on the priority of his claim to the thunder over that of his sons, Jupiter significantly despatched him to earth, where, in the kingdom of Latium in Italy, the deposed Saturn is reported to have taken up his residence. The grossly immoral conduct of Jupiter led to perpetual dissensions among the august synod —Juno forever proclaiming her wrongs with angry and vehement utterance; but all to little purpose, Jupiter appearing, by the mythology, to have retained to the last his extremely susceptible nature. The worship of Jupiter was universal, though his name varied with the country or people who sacrificed to him. Thus, in Syria or Babylon he was worshipped as Belus, in Egypt as Osiris, and in Northern Africa and Libya under the name of Ammon, or Jupiter Ammon; the inhabitants of the ancient world, as Gibbon says, "approaching with the same external reverence and the same inward contempt the altars of the Libyan, the Olympian, and the Capitoline Jupiter." The surnames of Jupiter were as numerous as his attributes or functions; he is generally represented seated on a golden throne, holding in a raised hand the thunderbolts ready to launch, and in the other a sceptre, having an eagle with expanded wings at his feet. The oak was sacred to Jupiter, because he first taught mankind to feed on acorns. The authority of Jupiter was universal, all powers in and under the earth, as well as in the skies, being subservient to his mandates, the Fates alone excepted.

Fig. 1463.—JUPITER.

Ju'piter. [King of the Gods; sign, ♃, the bird of Jove.] (*Astron.*) The planetary portion of the solar system is composed of two distinct families, called the *inner* and the *outer*. They vary greatly in several particulars. Each is made up of four members; the inner, composed of Mercury, Venus, Earth, and Mars, are all small as compared with those of the outer family, and the lengths of their days, as far as known, are nearly uniform, averaging about 24 hours. The outer group, of which Jupiter is the first and chief, consists of Jupiter, Saturn, Uranus, and Neptune. Between the two families lies the zone of asteroids, amounting in the beginning of 1897 to 426. These minor planets, or *planetoids*, as they are often and more

Fig. 1464.—TELESCOPIC VIEW OF JUPITER.

correctly called, are totally unlike the major planets save in their direction of motion around the sun. (See ASTEROIDS.) Although in both mass and volume the outer members exceed the inner, yet, contrary to what one might expect, their rotational periods—and, of course, the length of their days, as far as known—are two and one-half times shorter, averaging about ten hours. Jupiter in volume exceeds by two and one-half times the bulk of all the other planets combined, including the 20 satellites and all the asteroids; and therefore is distinctively called the "giant planet." Though it would require nearly 1,400 Earths to make so large a planet, it would take only 309 to equal it in weight, showing that his density is much less than the Earth. His diameter is somewhat less than was formerly supposed, being about 88,000 miles. Though so immense, he rotates on his axis in the astonishing short period of 9h. 55m. 40s., thereby causing his equatorial surface to move at the appalling rate of 27,500 miles an hour, or 28 times that of the Earth's equator. In consequence of this rapid rotation, his form is a spheroid, the spheroidity being apparent even in small telescopes, his equatorial diameter exceeding the polar diameter by over 5,000 miles. His mean distance from the sun is 485,000,000 miles, a distance too vast to be compared with any standard of terrestrial measurement. A cannon ball flying 500 miles an hour would require ninety years for its flight thither. Taking his solar distance as above, the diameter of his orbit must therefore be 970,000,000 miles, and its circumference over 2,000,000,000 miles, over which he moves in 10,000 of his days, or 4,333 of ours. He travels, therefore, 700,000 miles a day, 3,000 per hour, 500 per minute, and 8⅓ miles each second. His distance from the Earth varies through wide limits. When in conjunction with the sun, and of course beyond it, his distance from us equals 485,000,000 + 93,000,000 miles (the Earth's distance), or 578,000,000 miles; but when in opposition, rising when the sun sets, the Earth being between the two, his distance is 485,000,000—93,000,000 miles, or 392,000,000 miles. The ellipticity of his orbit being 24,000,000 miles, and that of the Earth's 1,500,000, he can, when in opposition, and at the same time in perihelion (nearest the sun), and the Earth in aphelion (farthest from the sun), approach nearer equal to the sum of both ellipticities, or 25,500,000 miles; making his nearest possible approach to the Earth 392,000,000—25,500,000 miles, or 366,500,000 miles. These combinations of circumstances, however, seldom occur; and when they do, the increase of brightness from the decrease of distance is hardly noticeable. The planet is always striped with belts on each side of the equator, and often with spots, both black and white, which have a motion of translation, and strangely too, those near the equator have a different rate from those in higher latitudes. Prof. G. W. Hough, of the Dearborn Observatory, determined his rotation period, from high latitude spots,

to be 9h. 55m. 35s., and from those near the equator 9h. 50m. 10s. In July, 1878, a brick-red spot, 29,600 miles in length and 8,300 in width, suddenly appeared like a floating island, having an eastern motion of 130 miles a day. Though much fainter, it is (in 1897) still visible as an elliptical ring. Jupiter is attended by an escort of five satellites or moons. The fifth was discovered in 1892, by Dr. E. E. Barnard, at the Lick Observatory, Mt. Hamilton, Cal. It requires a large telescope to even glimpse it, being the smallest known member of the solar system except the two moons of Mars. The four principal satellites were discovered in 1610, by Galileo. These names are Io, Europa, Ganymede, and Calisto, though they are invariably alluded to as I., II., III., and IV. Barnard christened his the "fifth." He was strongly urged to give it a mythological name, but he wisely refused. The three inner satellites always, and the IV. generally, suffer a total eclipse as they enter into his shadow, which phenomena are easily observed with an ordinary telescope. They are of great value in determining longitude at sea, where the telegraphic method cannot be used. The duration of these eclipses are: I., 2h. 20m.; II., 2h. 56m.; III., 3h. 43m.; IV., 4h. 56m. An observer there could, during his year, witness over 4,500 eclipses of his moons, and as many of the sun, nearly all total. Following is a list of the satellites of *J.*, giving their respective periods of revolution, distance (in miles) from the center of *J.*, and diameter (in miles):

Name.	*Period.*	*Distance.*	*Diameter.*
I.	1d. 18h. 28m.	267,300	2,350
II.	3d. 13h. 14m.	425,100	2,090
III.	7d. 3h. 43m.	678,300	3,430
IV.	16d. 16h. 32m.	1,192,800	2,920
V.	11h. 57m. 21·88s.	112,500	100

Jupon', Juppon', Jupe, *n.* [Fr. and Sp. *jupon.*] A close-fitting surcoat, formerly worn over a suit of armor.

"Some wore a breast-plate, and a light *jupon.*"—*Dryden.*

—A woman's petticoat; a corset; a jump.

Ju'ra, a frontier dept. of France, region of the E., formerly included in prov. Franche Comté, between Lat. 46° 16′ and 47° 18′ N., and Lon. 5° 19′ and 6° 12′ E., having N. Haute Saône, E. Doubs and a part of Switzerland, S. Ain, and W. Saône-et-Loire and Côte d'Or. Length, N.W. to S.E., 70 m.—*Area,* 499,401 hectares. More than two-thirds of the surface, principally in the S. and E., is covered with mountain ranges belonging to the Jura system, the principal summit of which, the Reculet, 5,633 feet high, is in this department.—*Rivers.* Numerous; the chief are the Doubs and Ain. Lakes and marshes are also numerous.—*Soil.* Various.—*Prod.* Wheat and other cereals, wine, and dairy produce. Horses, sheep, and cattle are reared in large numbers. —*Min.* Iron, marble, alabaster, gypsum, lead, coal, and copper. Mining operations are, however, little attended to.—*Manuf.* Iron, paper, cotton, and linen fabrics, chamois, and other kinds of leather, glue, mineral acids, statuary, &c. This dept. is divided into 4 arrond.—*Chief towns.* Lons-le-Saulnier (the cap.), Dôle, Poligny, and St. Claude. *Pop.* (1897) 173,028.

Ju'ra, a river of Russia, in the government of Wilna, rising near Ratova, and, after a course of 75 m., falling into the Niemen, above Tilsit.

Ju'ra, one of the Hebrides, or W. islands of Scotland, lying off the coast of co. Argyle, having the island of Islay on the S. W.; Lat. 56° 2′ N., Lon 5° 51′ W. It is 27 m. long, and 5 broad. A ridge of bleak and rugged mountains traverses the island, its highest peak, called the Paps of Jura, attaining an elevation of 2,700 feet. The inhabitants live on the E. side, where the coast is level. *Prod.* Oats, barley, potatoes, and flax. *Pop.* 761.

Ju'ra Mountains, a chain of Central Europe, usually classed with the Alpine system, and including the ranges of W. Switzerland, and those between the Lake of Geneva, the Rhone, the Saône, and the Doubs. The range commonly thus designated has a length of about 160 m., with an average breadth of 30 m., commencing S. on the banks of the Rhone, and running N.E. to the junction of the Rhine and Aar; but connected mountains of analogous composition run N. through Suabia and Franconia, and S.W. along the right bank of the Rhone to the vicinity of Narbonne, so that the Jura range, in its most extended sense, has a length of about 600 m. The Swiss Jura consists of several long, parallel chains, inclosing narrow, longitudinal valleys, such as the Val de Joux, the Val Travers, &c. Transverse valleys, similar to those of the main Alpine system, are of rare occurrence, and the range throws off only one lateral spur, viz., the chain of Mont Jorat passing between the lakes of Geneva and Neufchâtel, and joining the Bernese Alps. The slope is abrupt on the Swiss side, but more gentle towards France; and the ridge, as seen from a distance, presents a regular undulating line, with rounded, dome-like summits, contrasting strongly with the abrupt crags and towering peaks of the Alps. The culminating point of the chain, *le Reculet,* is 5,633 feet above sea-level, and the roads across the ridge have an elevation varying from 2,600 to 3,500 feet. The geological constitution of these mountains is limestone of the Oölitic series, and the vegetation nearly resembles that of the Alps.

Jurisprud'ence, *n.* [Fr.; L. Lat. *jurisprudentia*—*jus, juris,* law, and *prudentia,* knowledge of, or skill in. See PRUDENT.] The science of law; the knowledge of the laws, customs, and rights of men in a state or community, necessary for the due administration of justice.

Jurispruden'tial, *a.* Belonging to jurisprudence.

Ju'ror, *n.* [Fr. *juré;* late Lat. *jurator,* from *juro, juratus,* to swear.] (*Law.*) One who serves on a jury.

"I shall find your lordship judge and *juror.*"—*Shaks.*

—In England, the name applied to a member of a committee appointed to decide on the merits of articles exhibited by public competition, and adjudge premiums or prizes therefor.

Jurua, (*zhoo-roo-a'na,*) a considerable river of Brazil, rises about 50 m. N.E. of Matto Grosso, and flows N. to Tapjos.

Ju'ry, *n.* [Fr. See JUROR.] (*Law.*) A body of men who are sworn to declare the facts of a case as they are delivered from the evidence placed before them. The origin of this venerable institution of the common law is lost in the obscurity of the Middle Ages. Antiquaries trace it back to an early period of English history; but if known to the Saxons, it must have existed in a very crude form, and may have been derived by them from the mode of administering justice by the peers of litigant parties, under the feudal institutions of France, Germany, and the more northern nations of Europe. The ancient ordeals of red-hot iron and boiling water, practised by the Anglo-Saxons to test the innocence of a party accused of crime, gradually gave way to the wager of battle, in the days of the Normans; while this latter mode of trial disappeared in civil cases in the 13th century, when Henry II. introduced into the assizes a trial by jury. It is referred to in Magna Charta as an institution existing in England at that time; and its subsequent history is well known. Trial by jury is guaranteed by the Constitution of the United States, in all criminal cases except upon impeachment, and in all suits at common law where the subject-matter of the controversy exceeds $20 in value. The right to such a trial is also inserted in many of our State constitutions. —*A common jury* is one drawn in the usual and regular manner.—*A grand jury* is a body organized for certain preliminary purposes.—*A special jury* is one selected by the mutual assistance of the parties. This is granted in some cases upon motion and cause shown, under various local provisions.—The number of jurors must be 12, who must possess the qualifications which may be prescribed by statute, must be free from any bias caused by relationship to the parties or interest in the matter in dispute, and in criminal cases must not have formed any opinion as to the guilt or innocence of the accused. —The selection of jurors is to be made impartially; and elaborate provisions are made to secure this impartiality. In general, a sufficient number are selected, from among the qualified citizens of the county or district, by the sheriff, or similar executive officer of the court, and, in case of his disqualification, by the coroner, or in some cases by still other designated persons. From among these the requisite number is selected at the time of trial, to whom objection may be made by the parties.—The province of the jury is to determine the truth of the facts in dispute in civil cases, and the guilt or innocence of the person accused in criminal cases. If they go beyond their province, their verdict may be set aside. —Qualified persons may be compelled to serve as jurors under penalties prescribed by law.

—In England, a committee appointed to award prizes, &c., at a public exhibition.

Jury of Inquest. A jury impanelled to inquire into the cause or causes of violent or sudden death. (Called, in England, *Coroner's jury.*)

Ju'ry-box, *n.* The place where the jury sits during the trial of a cause.

Ju'ry-man, *n.*; *pl.* JURY-MEN. One who is impanelled on a jury; a juror.

Ju'ry-mast, *n.* (*Naut.*) A temporary mast substituted for one carried or cut away in a storm or engagement.

Ju'ry-rigged, *a.* (*Naut.*) Fitted with temporary rigging, as a ship.

Ju'ry-rudder, *n.* (*Naut.*) A temporary rudder improvised to meet an emergency.

Jus, *n.* [Lat.] A word frequently used in Law and Medicine. It admits of several significations, the chief of which are—that which is right or conformable to law; also the obligation which the law imposes; also, a man's privileges, whether singularly or collectively; it means likewise the power which originates from the law, as well as the place where justice is administered.

Jus quiri'tium (*Roman Hist.*) signified the fullest enjoyment of a Roman citizen of the right of security; of personal liberty, of registration on the list of property, of participation in the service of the legion, in public honors, of the right of suffrage, &c.

Jus'si, *n.* A peculiar kind of fibre brought from Manilla, of which dresses are made.

Jussieu, ANTOINE DE, (*zhoos'se-u(r,)* a French botanist and physician, B. at Lyons, 1688. After travelling over Europe, he settled at Paris, where he became a member of the Academy of Sciences, and professor of Botany in the Royal Garden. He enriched the memoirs of the French Academy with several valuable papers on botany and mineralogy, the result of observations made during his travels. He also wrote the appendix to Tournefort's *Institutions of Botany,* and abridged Barrelier's work upon the Plants of France, Spain, and Italy; he was likewise the author of a *Discourse upon the Progress of Botany.* D. 1758.

JUSSIEU, BERNARD DE, brother of the above, B. at Lyons, 1699. He distinguished himself as an able physician and botanist. He became professor and demonstrator in the Royal Garden, and was chosen a member of the French Academy of Sciences, and of several foreign societies. He published an edition of Tournefort's "History of Plants in the Environs of Paris," and was the author of a book entitled *The Friend of Humanity; or, the Advice of a Good Citizen to the Nation.* D. at Paris, 1777.

JUSSIEU, JOSEPH DE, brother of the preceding, B. at Lyons, 1704, was also a member of the Academy of Sciences at Paris, and accompanied Condamine to Peru in 1735. He was not only a good naturalist and physician, but an excellent engineer. He published a journal of his voyages. D. 1779.

JUSSIEU, ANTOINE LAURENT DE, a celebrated botanist, nephew of the preceding, B. at Lyons, 1740, was the greatest philosopher of his family, and author of the *Natural System of Botany.* He went to Paris in 1765, to complete his studies, under the direction of his uncle Bernard. In 1770 he took the degree of doctor of medicine, and was soon afterwards chosen professor of botany in the Royal Garden. In 1789 he published his great work, the *Genera Plantarum,* in which, for the first time, the whole vegetable kingdom was arranged according to a natural classification. He subsequently filled many important scientific posts in Paris, and continued till his eighty-eighth year to dictate valuable memoirs on the science of botany. The great work of Jussieu, in an improved and amended form, is one of the chief text-books on botany, not only in France but in England. D. at Paris, 1836.

JUSSIEU, ADRIEN DE, son of the above, B. at Paris, 1797, was educated for the medical profession, but devoted himself to the science which his father had so greatly benefited. In 1826 he succeeded his father as professor of botany; and, although he wrote no large work on the science, he contributed a great number of valuable memoirs relative to it to the scientific annals of France. He also contributed to the "Natural History" of Milne-Edwards. He was a member, and afterwards president, of the French Academy of Sciences. D. 1853.

Just, *a.* [Fr. *juste;* Lat. *justus,* from *jus, juris,* law, right, justice.] Keeping or observing the rules or law of right; founded on justice; conformed to justice or right; equitable; right; lawful; rightful; conformed to the laws of God; influenced by a regard to the laws of God; righteous; upright; religious; honest; conforming exactly to the laws, and to principles of rectitude; conformed to the rules of justice; doing equal justice; true;—applied equally to persons or things.—Conformed to truth and propriety; exact; accurate; regular; normal; proper; orderly; applied to a true or faithful standard; due; regular.

"He was a comely personage a little above *just* stature."—*Bacon.*

—*adv.* Exactly; precisely; accurately; nicely; closely; near, or nearly in place; near, or nearly in time; almost; merely.

"*Just* as the twig is bent the tree 's inclined."—*Pope.*

But just: barely; narrowly; scarcely; with nothing to spare; as, he was *but just* in time to catch the train.

Just now: a little while ago; a few moments back; as, we met with them *just now.*

Just, *n.* and *v.n.* See JOUST.

Just, (**St.**,) (*zhōōst,*) a monastery in Estremadura, Spain, whither Charles V. retired after abdicating the crown in favor of his son Philip.

Just, (**St.**,) a town of England, co. Cornwall, near Land's End. It is about 1 m. from Cape Cornwall, and consists principally of miners engaged in copper mines. *Pop.* About 8,000.

Just, (**St.**,) LOUIS ANTOINE DE, a French author and revolutionist, B. in Nivernais, in 1767. He early embarked upon the paths of literature, and when the revolution broke out became one of its most fiery advocates. Able, accomplished, and rigidly correct in his habits, *St. J.* speedily rose to eminence. In 1791, he brought out his *Esprit de la Revolution et de la Constitution de la France,* and in the following year was chosen representative of the dept. Aisne in the Convention. While in Paris, he was among those who sternly advocated, and voted for, the death of Louis XVI. *St. J.* played a conspicuous part in all the acrimonious debates which took place at this period between his own party and the Girondins. After the fall of the latter party, in June, 1793, *St. J.* became associated with Robespierre in the sanguinary republican govt. which followed; and *St. J.*'s name is identified with the hideous and indiscriminate bloodshed which marked the decrees of the Convention in the latter part of 1793, and beginning of 1794. On Feb. 19 in the latter year, *St. J.* was chosen president of the Convention, and in this capacity drafted the report which sent his political opponents, Danton, Hebert, and others, to the scaffold. After the dawn of a reaction in popular feeling, and the final absorption of power by the moderate republican party, *St. J.* was seized, with his colleague Robespierre (*q. v.*), and guillotined, July 27, 1794.

Just-au-corps, (*zhūst-o-kōr',*) *n.* [Fr.] A doublet; a close-fitting jacket.

Juste milieu, (*zhūst mēl'yū.*) [Fr., happy mean, just medium.] (*French Pol.*) After the revolution of 1830, this term acquired a political signification, and came into very frequent use, because of the declaration of the organs of Louis Philippe, that the *juste milieu* was the only principle of government which could secure the welfare of France.

Jus'tice, (*jūs'tis,*) *n.* [Fr.; Lat. *justitia,* from *justus,* just, from *jus,* law, right.] Practical conformity to the laws, and to the principles of rectitude in the dealings of men with each other; the virtue which consists in giving to every one that which is his due; honesty; integrity in commerce or mutual intercourse.

"Poetic *Justice,* with her lifted scale."—*Pope.*

—Equal distribution of right in expressing opinions; fair representation of facts respecting merit or demerit; equity; impartiality.—Vindicative or just treatment; merited reward or punishment; dealing out of desert.

"Equal and exact *justice* to all men."—*Jefferson.*

—Conformity with right; equity; assertion of just due or title; as, the *justice* of a demand.

"Draw thy sword, that ... thy arm may do thee *justice*." *Shaks.*

—[Fr. *justicier*; L. Lat. *justiciarius.*] A person commissioned to hold courts, or to try and decide controversies, and administer justice to individuals; a magistrate; as, a *justice* of the peace.

"The *Justice*, in fair round belly with good capon lin'd."—*Shaks.*

(*Law.*) *J.*, as opposed to equity, means merely doing what positive law requires, while equity is doing what is fair and right in the circumstances of each particular case. *J.* is not founded in law, as some assert, but in our idea of what is right; and laws are just or unjust in so far as they do, or do not, conform to that idea.

Jus'tice-Clerk, (LORD,) *n.* (*Scots Law.*) A judicial magistrate of Scotland, who holds the second place on the bench of judges.

Jus'tice-Gen'eral, (LORD,) *n.* (*Scots Law.*) The principal of the Scottish law-judges. He is also termed *Lord President of the High Court of Session.*

Justice of the Peace. (*Law.*) A public officer invested with judicial powers for the purpose of preventing breaches of the peace, and bringing to punishment those who have violated the law.—These officers, under the Constitution of the United States, and some of the States, are appointed by the executive: in others, they are elected by the people, and commissioned by the executive. In some States they hold their office during good behavior; in others, for a limited period.—At common law, justices of the peace have a double power in relation to the arrest of wrong-doers; when a felony or breach of the peace has been committed in their presence, they may personally arrest the offender, or command others to do so, and, in order to prevent the riotous consequences of a tumultuous assembly, they may command others to arrest affrayers when the affray has been committed in their presence. If a magistrate be not present when a crime is committed, before he can take a step to arrest the offender, an oath or affirmation must be made, by some person cognizant of the fact, that the offence has been committed, and that the person charged is the offender, or there is probable cause to believe that he has committed the offence.—The Constitution of the United States directs that "no warrants shall issue but upon probable cause, supported by oath or affirmation." (*Amend.* IV.) After his arrest, the person charged is brought before the justice of the peace, and after a hearing he is discharged, held to bail to answer to the complaint, or, for want of bail, committed to prison.—In some, perhaps all, of the U. States, justices of the peace have jurisdiction in civil cases given to them by local regulations. In Pennsylvania, their jurisdiction in cases of contracts, express or implied, extends to $100.

Jus'ticeship, *n.* The office or dignity of a justice.

Jus'ticiable, (*jus-tish'i-a-bl,*) *a.* That may be examined in courts of justice.

Justiciar, (*jus-tish'i-ar,*) **Justi'ciary,** *n.* [L. Lat. *justiciarius*, from *justitia*, justice.] One who administers justice; a justice; a judge.

High Court of Justiciary. (*Scots Law.*) The supreme court of criminal judicature.

Jus'ticoat, *n.* [Fr. *just-au-corps.*] A close-fitting, sleeved vest.

Jus'tifiable, *a.* That may be justified or proved to be just; that may be vindicated on principles of law, reason, rectitude, or propriety; defensible; warrantable; excusable; as, *justifiable* homicide.

Jus'tifiableness, *n.* Rectitude; possibility of being fairly defended.

Jus'tifiably, *adv.* In a manner permitting vindication or justification; rightly; equitably.

Justifica'tion, *n.* [Lat. *justificatio.*] The act or process of justifying; a demonstration of conformity to law, propriety, or right; vindication; as, his conduct admits of no *justification.*

—State of being justified or vindicated; absolution.

(*Law.*) The declaring or pronouncing a person just or righteous, according to law.

(*Theol.*) In Protestant theology, it expresses an act of Divine favor whereby a sinner is absolved from the penalty of his sins, and accepted as righteous, not on account of anything in himself, but on account of the righteousness of Christ imputed to him. In the doctrine of the Roman Catholic Church, *J.* is considered not purely as a forensic act, or act of acquittal, but, further, as an infusion of personal righteousness, and as hence equivalent to what Protestants specially call *sanctification.*

Justif'icative, *a.* Having power to justify; justificatory; vindicating.

Jus'tificator, *n.* One who supports, defends, vindicates, or justifies. — One who absolves from merited punishment.

Justif'icatory, *a.* Tending to justify; vindicatory; defensory; justificative.

Jus'tifier, *n.* One who justifies; a vindicator; one who supports or defends.

—He who pardons and absolves from guilt and punishment.

Jus'tify, *v. a.* [Fr. *justifier*; Lat. *justifico*—*justus*, just, and *facio*, to make.] To render just; to prove or show to be just, or conformable to law, right, justice, propriety, or duty; to vindicate, as a right; to defend or maintain.

"Unless the oppression is so extreme as to *justify* revolution, it would not *justify* the evil of breaking up a government." *Everett.*

—To pardon and clear from guilt; to absolve; to acquit; to exculpate.

"I cannot *justify* whom the law condemns."—*Shaks.*

(*Theol.*) To accept as just or righteous, on account of the Saviour's merits.

—*v. n.* (*Printing.*) To adjust so as to make an even surface, or true line; — said of type.

Jus'tin I., (FLAVIUS ANICIUS JUSTINUS,) a Byzantine emperor, B. 450 A. D. He rose to the rank of general from being a private soldier, before which he was a swineherd. The soldiers of the Prætorian band forced him to accept the imperial dignity on the death of Anastasius, in 518. He recalled the bishops who had been banished by the Arians, and published several severe edicts against that sect. Hearing of the destruction of Antioch by an earthquake, he laid aside the imperial robes, clothed himself in sackcloth, and passed several days in fasting and prayer, to avoid divine judgment. He rebuilt that city, and other places which were destroyed by the same calamity. D. 527.

JUSTIN II. was the nephew of, and succeeded Justinian I. in 565. He caused his cousin Justinus to be strangled, and put to death some of his senators from a suspicion of their being disaffected. He made war against Chosroes, king of Persia, who, being defeated at the head of a numerous army, was obliged to sue for peace. *J.* married Sophia, niece of Theodora, wife of the emperor Justinianus, a woman of high spirit, who, taking advantage of her husband's weakness, governed the empire in conjunction with Tiberius. D. 578.

Jus'tin, a Latin historian of the 2d century, who made an abridgment of the *Universal History* written by Trogus Pompeius. This work remains, but the original is lost.

Jus'tin (St.), or JUSTIN MARTYR, a Christian apologist of the 2d century, was a native of Sichem, in Samaria. He was carefully trained in the schools of Greek philosophy, but was converted to the Christian faith when about 30 years of age. A persecution breaking out against the Christians, under Antoninus, Justin presented to that emperor an admirable apology in their behalf, which had the desired effect. He afterwards addressed another apology to Marcus Aurelius, in which he defended the Christians against the calumnies of Crescens, a Cynic philosopher. For this, and his neglect of Pagan worship, he was condemned to be scourged, and then beheaded, which sentence was put in execution A. D. 165, in the 75th year of his age.

Justin'ian I., (FLAVIUS ANICIUS JUSTINIANUS,) a Byzantine emperor, B. 482 or 483, succeeded his uncle Justin I. in 527. Some months before the death of his uncle, Justinian had persuaded him to consent to his marriage with Theodora, a well-known actress and courtesan, who was created Augusta, and crowned the same day as her husband. About the same time, Belisarius, the friend and future general of the new emperor, was married to Antonina, a professional companion of Theodora; and to the intrigues and jealousies stirred up by these two women is to be attributed the principal part of the untoward circumstances which have cast a stain on the personal character of *J.* The political events of his reign may be summed up in the wars of Belisarius and the eunuch Narses, who obtained splendid successes over the Persians in the East, and the Vandals and Goths in Italy, and in the terrible sedition which broke out in Constantinople in 532, and was extinguished in the blood of thirty thousand persons. In the latter case, *J.* would have fled from his capital, and in all probability have lost his crown, but for the courage and talents of Theodora, whose vices were gilded by some of the rare qualities befitting an empress. The glory of his reign is the famous digest of the Roman law, known generally as the *Justinian Code*, which was compiled out of the Gregorian, Theodorian, and Hermogenian codes, by ten of the ablest lawyers of the empire, under the guiding genius of the jurisconsult Tribonian. Their labors consist — 1, of the "Statute Law," or Justinian Code, properly so called; 2 the "Pandects," a digest of the decisions and opinions of former magistrates and lawyers, — these two compilations consisted of matter that lay scattered through more than two thousand volumes, now reduced to fifty; 3, the "Institutes," an abridgment in four books, containing the substance of all the laws in an elementary form; 4, the laws of modern date, including *J.*'s own edicts, collected into one volume, and called the "New Code." These labors, which a Cæsar had not been able to accomplish, were completed by the year 541; and we can only lament that Christianity was not in its prime at that epoch, whereby the spirit of natural right and equity had been infused into them, in place of the dogmas of authority. Besides this important work of imperial reform, *J.* was a great builder and engineer, and works of public utility were kept constantly in progress in all parts of the empire. He was remarkable for temperance and chastity, and not less so for his great learning and diligent application to business; but his religious bigotry, and his weakness in the hands of Theodora, marred all his good qualities. D. 565.

JUSTINIAN II., surnamed *Rhinotmetus*, became emperor of the East on the death of his father, Constantine, 686, when he was about sixteen years of age. He was deposed and banished for his cruelty, by his general, Leontius, 695; regained his throne ten years afterwards, and, exhibiting the same ferocious disposition, was assassinated, 711.

Justin'ian, *a.* Relating or belonging to the laws established by the Roman emperor Justinian.

Justinian Code. See JUSTINIAN I., and PANDECTS.

Justle, (*jŭs'l,*) *v. n.* and *n.* Same as JOSTLE, *q. v.*

Just'ly, *adv.* [See JUST.] In a just or equitable manner; conformably with right, truth, law, justice, or propriety; honestly; fairly; impartially; accurately; fitly; exactly.

"Nothing can *justly* be despised, that cannot *justly* be blamed." *South.*

Just'ness, *n.* Quality of being just; justice; uprightness; equity; accuracy; exactness; conformity to some standard of correctness or propriety; correctness; propriety; fitness.

Jut, *v. n.* [Corrupted from JET, *q. v.*] To project outward; to shoot forward, or in advance of the main body.

"Broke by the *jutting* land on either side."—*Dryden.*

—*n.* A projection; a part of a body more prominent than the rest.

Ju'tay, in South America. See HYUTAHY.

Jute, *n.* (*Bot.*) See SECTION II.

Ju'terbogk, a town of Prussia, prov. of Brandenburg, on the river Nuthe, 27 m. S. of Potsdam. It has considerable wool and flax markets, also manufactures of woollen cloth and linens. *Pop.* 7,000.

Jutes, *n. pl.* An ancient people of Germany, who belonged to the Gothic race, and gave name to Jutland.

Jut'land, a large prov. of Denmark, formerly comprising the whole continental portion of the Danish dominions, but which is now restricted to the part of the peninsula belonging to Denmark to the N. of Schleswig, extending from about 55½° to nearly 58° N. Lat., being about 170 m. in length, and from 60 to 80 in breadth. *Area*, 9,500 sq. m. The prov. is of an oblong form, with the addition of a triangle toward the N. *Surface.* Generally flat, and much broken by indentations of the sea. *Soil.* Various. *Prod.* Rye, oats, buckwheat, and dairy produce. Cattle, horses, and hogs are extensively reared and exported. *Manuf.* Unimportant. *Cap.* Aarhuus. *Hist. J.* is supposed to have been originally the country of the *Cimbri*, (q. v.) Later, its inhabitants, known as *Jutes*, shared in the Saxon invasion of England, and subsequently formed part of the Saxon alliance against Charlemagne, and, under the denomination of Normans (Northmen), frequently ravaged the N.W. coasts of Germany and France, ultimately establishing a colony in the last named country. *Pop.* 734,935.

Jut'lander, or **Jute,** *n.* (*Geog.*) A native or naturalized inhabitant of Jutland.

Jut'landish, *a.* (*Geog.*) Belonging or having reference to Jutland, or to its people.

Jut'tingly, *adv.* In a projecting manner; prominently.

Jut'ty, *n.* A projection in a building, rock, &c.; also, a pier, mole, or jetty.

Jut'-window, *n.* (*Arch.*) A window projecting in advance of the main surface of a building.

Ju'venal, DECIUS JUNIUS, a Roman poet and satirist, was born probably at Aquinum in Campania, about the beginning of the reign of Claudius. He studied rhetoric under the most celebrated masters, and is said to have become an eminent pleader. His first essay as a poetical satirist was directed against the player Paris, and for repeated attacks of the same kind he is said to have been sent into an honorable kind of exile, by being made commander of a cohort at Pentapolis, on the borders of Egypt, in his 80th year. *J.* may be said to have been the last of the Roman poets, and as the bold and unflinching castigator of vice he stands without a rival. Good as are his intentions, however, and forcible as are his denunciations, the moral indelicacy of the age in which he lived renders these powerful satires too gross in their details for readers of the present day. English translations have been made by Dryden, Gifford, &c.

Juvenes'cence, *n.* A growing young.

Juvenes'cent, *a.* [Lat. *juvenescens.*] Reaching the age of youth; becoming young.

Ju'venile, *a.* [Lat. *juvenilis*, from *juvenis*; Sansk. *yuwan*, young. See YOUNG.] Young; youthful; as, a *juvenile* appearance.—Relating, or belonging, or adapted to youth; as, *juvenile* play.

—*n.* A youth; a grown child; a young person.

Ju'venileness, Juvenil'ity, *n.* Youthfulness; youthful age.

—Airiness or levity of manner; the manners or customs of youth.

Juven'tas. (*Myth.*) A Roman goddess, who presided over youth and vigor. She is the same as the Hebe of the Greeks, and was represented as a beautiful nymph in variegated garments.

Ju'via, *n.* (*Bot.*) The fruit of *Bertholletia excelsa*, (Fig. 347.)

Jux'on, WILLIAM, an English prelate of great learning, was archbishop of Canterbury, and is now chiefly remembered for his fidelity to Charles I., whom he attended at the Isle of Wight, and whose last requests he received on the scaffold. He is the author of a sermon entitled, *The Subject's Sorrow, or Lamentation on the Death of Britain's Josiah, King Charles*, published in 1649; and *Some Considerations upon the Act of Uniformity*, 1662. D. 1663.

Juxtapos'it, *v. a.* To place in juxtaposition or close contiguity.

Juxtapos'ited, *a.* Placed in close contiguity or propinquity.

Juxtaposition, (*-zish'un,*) *n.* [Lat. *juxta*, and *positio.* See POSITION.] A placing or being set in a position of nearness or immediate contiguity.

"Parts that are united by a mere *juxtaposition.*" —*Glanville.*

Juzail', *n.* A kind of Afghan fire-arm, or fusil.

Jyar, (*ji'ar.*) (*Chronol.*) The eighth month of the Jewish year, corresponding, at the earliest, with our April; but it may be as late as May. It has only 29 days.

Jyhtpore, Jeytpore, (*jit-por',*) a town of Hindostan, prov. of Allahabad, 20 m. from Sylhet; Lat. bet. 25° and 26° N., Lon. bet. 91° and 93° E. It contains the residence of a rajah.

J.—SECTION II.

Jab, *n.* A sharp thrust or poke, as with the end of a stick. —*v. a.* To poke violeutly.—To catch (fish) with a gaff.

Jacaran'da, *n.* See BIGNONIACEÆ.

Jacitar'a-palm, *n.* (*Bot.*) A climbing or trailing palm (*Desmoncus macroacanthus*), with slender stem and spiny leaves, growing in tropical America.

Jack, *n.* (*Mech.*) One of the various minor mechanisms or handy tools: (1) A hoisting or lifting device, as a wagon-jack; (2) A miner's wooden wedge for dislodging masses of coal; a coal-breakiug jack; (3) A lever or beater in a knitting-machine, for supporting the sinker that makes the loop; (4) A roviug-twister following the drawing-rollers in a spinning-machine; a jack-frame; (5) A clip made with a spring-back for forming a quick connection in an electric circuit; a spring-jack; (6) A hammer-like mechanism in a pianoforte; a hopper; (7) A device having hooks and levers for turning a log, as in a saw-mill; a loggiug-jack; (8) A bracket-like seat used in repairing windows, &c.; a builder's jack; (9) A device for holding a shoe-last; a laster's jack; (10) A sawhorse; (11) A bootjack.

The hoisting or lifting-jack is an important mechanism in many trades. Some of the simpler forms are made of a combination of wooden levers with a ratchet-and-pinion, as the carriage-jack or fence-jack. There is also manufactured a simple form of metal lifting-jack, consisting of a short hollow post, within which is an upright toothed support, against which works the end of the lever, through the medium of a pinion or the like, sometimes called a rack-jack. The screw-jack or jack-screw, used for both lifting and pushing, consists in its simplest form of a hollow frame or post, containing an interior or female thread, in which a long screw works, and may be used to exert pressure. It is made in an immense variety of forms, from a miniature device used by dentists to brace teeth so that they will work apart to powerful machines used in raising brick walls, &c. The common form of screw-jack has a single upright screw, but sometimes it is made with two screws, one working inside of another telescopically. It may be turned by a ratchet-lever, or by a simple cross-bar, inserted through holes in the head of the screw.

The hydraulic jack is the most powerful of the hoisting-jacks, and may be operated with very small force as compared with the power exerted, though at an increased expenditure of time. The principle of its operation consists in the pumping of a fluid, as water, through a comparatively small hole into a chamber where its pressure is exerted against the comparatively broad base of a cylinder or ram. If the aperture of the hole through which the water is pumped be equivalent to half a square inch, and the base of the ram in the water-chamber be equal to 25 square inches, then the lifting pressure on the ram will be 100 times as great (less friction) as the force exerted by the man at the lever (which is really a sort of pump-handle). At the same time the ram will be raised but a hundredth of the distance of the travel of the pump-piston. By this means the strength of a man, or even a child, may be used to lift great weights. A strong laborer, with a good hydraulic jack, can raise 10 tons 1 foot in a minute and a half, and 100 tons the same height in 15 minutes' operation of the lever. The water used in the chamber of a hydraulic jack is usually mixed with alcohol, sometimes nearly half alcohol, as in winter, to prevent danger of freezing. Whiskey being a convenient form in which to procure alcohol, is often used; hence the cant name, "whiskey-jack." The hydraulic jack is much used in railroad work and in wrecking, being especially convenient for hoisting and replacing derailed cars. In house-building and repairing, the screw-jack and hydraulic jack are indispensable, as for raising buildings, walls, &c. One of the recently erected mammoth steel buildings in New York city has a series of jacks inserted between the foundations and the base proper of the building, so that if it ever settles out of the perpendicular the jacks may be used to correct the deflection.

Jack'-in-a-box, *n.* A surprise-toy, consisting of a comic figure that springs up when the lid is opened.—A game in which sticks are thrown at an article placed on the top of a rod standing in a hole. If the article be hit so as to fall clear of the hole, it becomes the property of the thrower.

(*Bot.*) A tropical tree (*Hernandia sonora*), bearing a fruit whose seeds rattle in the seed-vessel.

(*Mech.*) An epicyclic train of bevel gears for transmitting rotary motion to two parts so that their relative motion may be variable: applied to cotton-machinery, tricycles, road locomotives, &c.—A large wooden male screw turning in a nut in a bridge-piece and rotated by a lever.

Jack-in-the-pulpit. See ARUM.

Jack'son, HELEN HUNT, daughter of the late Prof. Nathan W. Fiske, of Amherst College, was born at Amherst, Mass., October 18, 1831; married Major Edward B. Hunt, of the U. S. Engineers, who died in 1863. During her widowhood, she published, under the initials "H. H.": *Bits of Travel; Mercy Philbrick's Choice;* and *Verses, Sonnets, and Lyrics.* She was the accredited author of the *Saxe Holm* stories and poems. In 1876 she visited Colorado; was married to W. S. Jackson, of Colorado Springs; travelled through the Territories, and became interested in the Indian question; was appointed by the Government to report on the condition and needs of the mission Indians. Wrote, on this topic, *A Century of Dishonor;* and later, *Ramona.* Died August 12, 1885.

Jackson, HOWELL EDMONDS, jurist, was born at Paris, Tenn., April 8, 1832; graduated from West Tennessee College in 1848, studied two years at the University of Virginia, and graduated in law from Cumberland University in 1856; served in the Confederate army during the Civil War, and afterward practiced law at Memphis, Tenn.; member of the Tennessee legislature (1880); U. S. Senator (1881); appointed (by President Cleveland) circuit judge of the 6th district (1886) and by President Harrison associate justice of the U. S. Supreme Court (Feb. 2, 1893), to succeed Justice Lamar. His most notable service on the Supreme Bench was in connection with the Income Tax (*q. v.*) decision. Died Aug. 8, 1895.

Jackson, JOHN ADAMS, sculptor, was born at Bath, Me., in 1825; studied art in Boston and in Paris; visited New York in 1858, and settled in Florence, Italy, in 1860. He modelled busts of a number of prominent Americans, including Daniel Webster. Other works are: *Eve and the Dead Abel; Cupid on a Swan; The Culprit Fay;* the soldiers' monument at Lynn, Mass., *Hylas,* and various others.

Jackson, in *South Dakota,* a S.W. co.; *area,* 1,255 sq. m.; a Sioux reservation. Unorganized. *Pop.* (1895) 129.

Jack'son-Harms'worth Polar Expedi'tion. (*Explor.*) To Frederick G. Jackson and Alfred Harmsworth, of England, is due nearly all the knowledge which the civilized world has gained of Franz Josef Land (an island group of the Arctic region, north of Nova Zembla), a portion of which is now believed to be identical with Gilies Land, reported by the Dutch navigator of that name in 1707. It is the most northern land in the eastern half of the Polar basin, and its northern shores are washed by the Polar Sea. Mr. Jackson was the head of the party of explorers, and Mr. Harmsworth furnished the funds. The party left England on July 12, 1894, in the *Windward,* a whaler. They were F. G. Jackson, leader; Lieut. A. Armitage, second in command; Reginald Kettlitz, physician and botanist; Harry Fisher, botanist; Mr. Dunsford, surveyor; F. J. Child, mineralogist and photographer, and several others. Landing near Cape Flora, Franz Josef Land, Sept. 7, they proceeded to found the village of Elmwood, the most northern European settlement, for such it really became, having served as a habitation more or less ever since. Two good Russian log houses were erected with materials prepared before the voyage; also an observatory and four store-houses. Other huts have since been added. The party found the climate not so frigid as anticipated, grass and flowers coming out along the shores in the summer, and balmy days permitting of such sports as hockey and football. Elmwood was the basis for several expeditions during the winter of 1894–5, depots and stores being established to the north, the highest point reached being 81° 20′ N. Lat. During these expeditions no less than 60 white bears were killed, not without some adventures and narrow escapes. The plan of bear-hunting was very simple. The sportsman armed himself with a rifle and a camera, and started out, shouting and waving his arms. After a time he was pretty sure to attract the attention of some bear, which would at once approach to satisfy its curiosity. The hunter would then open his camera, take a snap-shot at the animal, and, as it came nearer, drop the animal with a bullet from his rifle. Notwithstanding the fresh meat thus obtained, scurvy broke out among those left at Elmwood, and Mr. Jackson judged it best to send most the company back to Europe, while he remained with the whaleboat, and five companions—Armitage, Fisher, Child, Kettlitz, and Blomvist, a sailor. On July 11 they embarked in the open whaleboat, carrying a month's provisions, to explore and map the coast-line. The first place reached was Cape Grant, where a depot for stores was established, a practice which Mr. Jackson carried out in all his expeditions, thus affording supplies for the return trip. Cape Crowter was reached on the 21st, and Cape Neale on the 22d. Crossing Cambridge Bay on the 28th, they found a bold headland, and named it Capt. Fridtjof Nansen. The next cape was named Mary Harmsworth, and here they found highlands rising to the height of 2,000 feet, and presenting a most imposing appearance. A storm was now coming on, and the party sought a place to land, but everywhere a precipitous ice-wall, nowhere less than 30 feet in height, lined the shore and barred their progress. The wind and sleet blinded them, and they were driven off shore in the darkening storm. For three days and nights it blew an Arctic blast, and the little company were tossed about without chance of sleep, their dismal prospects being made worse by the fact that their boat was damaged and that they had little to eat. The third day they were able to steer for Cape Grant, where they found the food they had stored, and finally reached Elmwood on August 12. One day later the sea became packed with ice and navigation impossible. The points discovered on this boat-journey are supposed to have been seen from a distance by Leigh Smith in 1880–81, but the Jackson-Harmsworth party were the first visitors, and have given to the geographers the first correct maps of the region. The highest point reached, Cape Mary Harmsworth, is in Lat. 80° 30′, and E. Lon. 42° 30′. The winter of 1895–6 was passed pleasantly by the party at Elmwood, the weather in February proving unexpectedly mild, averaging about zero. March 18, 1896, Jackson, Armitage, and Blomvist started north on sledges, with 2,000 pounds of stores, a pony, and 16 dogs. Six weeks' provisions were included, the bears being depended upon to keep them in fresh meat. In seven days they found themselves near the 81st parallel, having made a very quick trip, and on March 26 they came in sight of the open Polar sea. Standing on an elevation christened Point Bichthofen, some 700 feet above sea level, an expanse of open water spread before them—apparently nothing was lacking but a boat to carry them to the goal of all Arctic explorers. Jackson thus demonstrated that Franz Josef land forms an easy route for access to the Polar region. The southern shore, near Elmwood, can be easily reached any summer. In favorable weather the land may be crossed in a few days, and if a good boat can be transported over to the open Polar sea, its navigation would be assured. Being unable to go further, the party returned to Elmwood, where everything passed quietly until June 17. The little company were all together, resting after dinner, when Armitage espied a man in the distance. Jackson thought it must be some walrus-hunter lost from a stray vessel, and hurried to meet him. The visitor was as black as a stoker with grease and smoke, but Jackson at once suspected his identity, and exclaimed, "Aren't you Nansen?" "Yes, I am Nansen," was the answer. "By Jove, I really am awfully glad to see you." It is doubtful whether Nansen and his companion would have been able to make their way back to Europe had it not been for this fortunate meeting. Jackson remained at Elmwood through 1897, and the geography of the frozen north is likely to be further extended through his efforts. See ARCTIC EXPLORATIONS; PEARY; NANSEN.

Jackso'nian, *a.* Pertaining to any one of the name of Jackson; especially, Andrew Jackson, seventh President of the United States, or to his political principles or policy; as, the *Jacksonian* Democracy.

Jack'stones, *n. pl.* Small knobbed pieces of metal used in a children's game, for throwing up and catching, one or more at a time.

Jack'-tree, *n.* (*Bot.*) A cultivated tree of the *Artocarpaceæ,* or bread-fruit family, furnishing a heavy fruit and valuable lumber. See ARTOCARPACEÆ.

Jacobe'an, *a.* Pertaining to the time of James I., or James II., of England.

J. architecture. A style of English architecture of the early 17th century. It differs from the Elizabethan in having a greater admixture of the Italian.

Jacqueminot (*zhăk'me-nō*), *n.* [For Gen. *Jacqueminot*, of Franco.] A deep crimson hybrid perpetual rose; in the U. S. often called *Jack* for short.

Jade, *n.* (*Min.*) The various minerals to which the general name of jade is given are alike in being all silicates, but nephrite is a silicate of magnesia, jadeite a silicate of aluminа, and chloromelanite is a silicate of alumina and iron. These varieties of jade differ in color, in hardness, and in specific gravity. Of nephrite the general color is either green or white, but specimens are found which are black, or yellowish, or browuish. Interest centers principally on the green variety of jade, of which are made most of the carved ornaments and idols collected in the museums of the United States and Europe. Since early times the Chinese have considered jade a sacred stone, and have, with great labor on account of its toughness, fashioned it into vases, bracelets, thumb-rings, and other ornaments, which are highly prized by collectors in Europe and America. The Chinese use much of the variety which they call *yu*, which is by some called prehnite, but more generally recognized as nephrite, mined in Siberia and Turkestan. They also employ a rarer variety of green jade, but classed by mineralogists as jadeite. This variety, so far as known, is found in Burma only. A green variety of jade was used by the aborigines in New Zealand, New Caledonia, and the South Sea Islands. In Switzerland, Spain, and France, jadeite implements of prehistoric age are found, as well as in Peru, Mexico, and Central America. Implements of this kind discovered in the Swiss lake-dwellings are of chloromelanite. Jade, in all its varieties, can be studied to advantage in the American Museum of Natural History in New York, which has the greatest collection in existence of archæological jade objects, among which is the largest known, a votive adze from Oaxaca, Mexico. There are also fine collections in the United States Natural Museum in Washington, in the India and South Kensington Museums in London, and in the Louvre, Paris.

Jadeite, or nephrite, it is asserted, has never been found in place in Europe or in the two Americas, though hundreds of stone implements of these materials have been found there. Their presence in Europe and America is due, according to Prof. Heinrich Fischer, of the University of Freiburg, to Asiatic immigrants. This view has been ably controverted, so far at least as regards America, by Prof. A. B. Meyer, of Dresden, who contends that the discoveries of late travellers have brought to light facts which establish the occurrence of rough nephrite, at least in northwest America, especially Alaska. The same view is taken by Dr. George M. Dawson, now Director of the Geological Survey of Canada. In a paper in the *Canadian Record of Science*, for 1887, he notes the existence, from the Strait of Fuca northward, along the entire coast of British Columbia and Alaska to the Arctic Sea, of implements of jade, or closely allied materials, in considerable numbers. Of white jade especially the aggregate quantity in use by the Indians and Eskimos of the coast at any one time, previous to the introduction of iron tools, must have been great—so great, indeed, as to clearly indicate that its origin is proximately local, and to preclude a belief in the theory that it was obtained casually or in the course of trade, from remote sources.

Jag, *n.* A small load. Hence (*slang*), a small quantity of liquor—enough to intoxicate slightly.—(*Local.*) A catch of fish.

Jamboree', *n.* (*Slang.*) A reckless frolic or carousal. —In euchre, a lone hand of the 5 highest cards, which by agreement scores 16 points for the holder.

Jambo'sa. (*Bot.*) A division of the large genus *Eugenia* (*q. v.*) containing the rose-apple and allied trees, cultivated for the beauty of their foliage and for their large edible fruit, the most esteemed being the Malay Apple, *J. malaccensis*, which is particularly valued in preserves.

Fig. 2941.—JAMBOSA MALACCENSIS.

James, George Payne Rainsford, novelist, was born in London, Eng., in 1801. He became a writer of romances early in life, some of his first tales, which were of the Eastern life, finding favor with Washington Irving. His works numbered 77 in all, including his biographies and poems. Among the most popular of his novels are *Richelieu; Henry Masterton; Lord Montague's Page*, &c. He was historiographer of England, under William IV.; British consul at Norfolk, Va. (1852); for the Austrian ports (1856.) Died June 9, 1860.

James, Henry, Jr., novelist, was born in New York city, April 15, 1843; son of Henry J., Sr., a theologian of distinction. He studied law at Harvard for two years, and then turned his attention exclusively to literature, speedily taking high rank as a writer of realistic fiction, embracing analytical character study; has resided in Europe, chiefly at Rome, since 1869. Among his more important novels are: *The American* (1877); *Daisy Miller* (1878); *The Portrait of a Lady* (1881); *The Lesson of the Master* (1892); *The Real Thing, and other Tales* (1893); &c.

James, in *Tennessee*, a S. E. co.; *area*, 210 sq. m.; bounded on the W. by the Tennessee river. *Surface*, hilly; *soil*, generally fertile. *Products*, corn, wheat, oats, sweet potatoes, hutter. pork. *Cap.* Ooltenah. *Pop.* (1890) 4,903.

Janauschek (*jăn'ō-shĕk*), Francesca Romana Magnalena, actress, was born in Prague, Bohemia, July 20, 1830; educated for the stage, and from an early age displayed a talent for tragedy *rôles;* played first at Cologne and at Frankfort (1848–1860); subsequently at Dresden, and the principal theaters throughout Germany. Married Captain Frederick Pillot, of the German navy in 1852; made a successful tour in the United States (1867–1871); returned to Germany; studied English, returned to America (1873), and played (in English) the most exacting *rôles* in Shakespearean tragedy. Died Nov. 28, 1904.

Janes, Enmuñ Storer, clergyman; born in Sheffield, Mass., April 27, 1807; educated in the common schools; was a school-teacher in New Jersey (1824–1830); studied law, but afterwards prepared for the ministry; occupied pulpits in the Philadelphia and New York Conferences until 1840; elected then financial secretary of the American Bible Society; in 1844 elected a bishop of the M. E. Church, holding that office for 32 years. An indefatigable worker and constant traveller, he contributed much to the advance in his denomination. Died in 1876.

Jan'ney, Samuel M., a distinguished minister and writer of the Society of Friends, was born in Loudoun co., Virginia, in 1801, and devoted himself chiefly to literary pursuits. Among his works may be mentioned, *Life of George Fox; Life of William Penn; Conversations on Religious Subjects; History of the Religious Society of Friends.* J. was appointed Superintendent of Indian Affairs by President Grant, an office he filled with great ability. Died in 1880.

Jan'son, Kristoffer Nagel, novelist, was born at Bergen, Norway, May 5, 1841; was a teacher at Bonheim; received a literary pension from the Storthing in 1876; relinquished this in 1886, removing to the U. S., and settling at Minneapolis, Minn., as a Unitarian minister, with a congregation of Norwegians; returned to Norway in 1893. His best tales and poems are written in Norse dialect, though he has also written several prose works and many poems in the Dano-Norwegian language proper.

Jans'sen, Pierre Jules César, astronomer, was born in Paris, Feb. 22, 1824; graduated as licentiate in the mathematical sciences (1852) and as doctor of physical sciences (1860); was professor of General Physics in the Special School of Architecture (1865–1871); commanded several astronomical expeditions. In 1868 he went to India to observe the total eclipse of the sun, and discovered that with the spectroscope he could continue to trace the protuberances after the eclipse was over, a fact of value to astronomical observers. (This discovery was also made by J. N. Lockyer, in England.) In 1875, *J.* founded and organized the equipment of a physical observatory at Meudon, near Paris, of which he was made director. In 1892–93 he founded the observatory for meteorological observation, at the top of Mt. Blanc.

Jan'vier, Thomas Allibone, author (pseudonym, Ivory Black), was born in Philadelphia, Pa., July 16, 1849. He spent several years in mercantile business, but turned his attention to journalism, moving to New York in 1887. In 1881–82, and again in 1885–87, he travelled in Mexico and Spain; wrote the *The Mexican Guide, The Aztec Treasure-House, Stories of Old and New Spain, An Embassy in Provence.* Also made later journeys. Is popularly known by the magazine sketches of Ivory Black.

Japanese' Art. The Japanese undoubtedly have the merit of having created one of the few original schools of decorative art handed down to us from past ages—a school uninfluenced by any foreign admixture, if we except the first rudiments of all their arts and industries, derived in remote periods from their more advanced neighbors, the Chinese, but from that time left to native influences and powers of development. A strangely constituted race, unlike even the Chincse, voluntarily maintaining an isolated state for a long succession of centuries, the Japanese nation has grown up under the circumstances best adapted to produce originality and the "insular pride" so natural in their isolated position among a group of islands in the Pacific Ocean. Thus left to themselves, the genius of the race has led them to direct their efforts to confer beauty on objects of common utility and materials of the lowest value. The faculty of making common and familliar things tell pleasantly upon the ordinary mind, by little artistic surprises and fresh interpretations of the common aspects of natural objects and scenes, is specially their gift, and a gift as valuable as it is rare. It is from this standpoint that the art of Japan should be viewed for a right appreciation of its claims to admiration, and for the proper application of the lesson it conveys to art-workmen and manufacturers of objects of utility. Previous to the London International Exhibition of 1862, Japan had been a sealed book to the Western world. When that exhibition made its display in the "Japanese court," followed, as this was, by a great exhibition in Paris in 1867, in Vienna in 1875, in Philadelphia in 1876, in Paris in 1878, and in Chicago in 1893, the rich treasures of art-work came on us as a new revelation in decorative and industrial arts, and have continued since to exercise a strong and abiding influence on all industrial art-work. In textile fabrics, such as silks, gauzes, crapes, and embroidery; in bronzes, cloisonnés, repoussé, inlaid, and damascened work; in art-pottery, faience, and porcelain; and in lacquer, and carved wood and ivory, there was a bewildering variety; but only one opinion prevailed as to the palm of superiority due to them. The inferiority of most of the articles of the same class exhibited by the Chinese was very marked. If other test of excellence were needed, it is amply supplied by the flattery of imitation; though the mischief of merely copying Japanese art-work without any knowledge of the history, religion, popular legends, or the artistic tastes which inspire the workman in Japan, is obvious in the vulgarized reproductions and the incongruous combinations now so common. They may be *Japanesque*, but they are certainly not Japanese in spirit, feeling, or execution. Defects are exaggerated, and excellences are lost sight of altogether. The school of art of the Japanese is due to their native genius as a race. In Japan, painting is not a separate art, but simply the highest form of the decorative art. The painter works, not for galleries, public or private, but for the adornment of temples and homes. A Japanese cannot see a surface without feeling tempted to adorn it with flowers, birds, maidens, and mountains. To the average Japanese, art is not a decoration, to be indulged in occasionally, but it is, like oxygen, a constituent of the atmosphere he breathes every moment; and the humblest coolie wants his share of art as much as his oxygen. The shops contain thousands of objects for use and entertainment, and each of these objects, though it cost but a tenth of a cent, is artistically shaped or decorated. Most of their decorative designs consist of natural objects treated in a conventional way. This conventionalism is, however, so perfect and free in its allurements that nature seems to suggest both the motive and the treatment. Their flowers and their birds show a truth to nature, and a habit of minute observation in the artist, which cannot be too much admired. Every blade of grass, each leaf and feather, has been the object of loving and patient study.

It has been rashly assumed by some of the writers on Japanese art that the Japanese do not study from nature. All their work is one emphatic protest against so erroneous a supposition. It can, in fact, be shown conclusively that the Japanese have derived all their fundamental ideas of symmetry, so different from ours, from a close study of nature and her processes in the attainment of endless variety. It is a special feature in their art that, while often closely and minutely imitating natural objects, such as birds, flowers, and fishes, the especial objects of their predilection and study, they frequently combine the facts of eternal nature with a conventional mode of treatment better suited to their purpose. During the long apprenticeship the Japanese serve to acquire the power of writing with the brush the thousand complicated characters borrowed from the Chinese, they unconsciously cultivate the habit of minute observation and the power of accurate imitation, and with these a delicacy of touch and freedom of hand which only long practice could give. A hair's-breadth deviation of a line, or the slight inclination of a dot or an angle, is fatal to good calligraphy both among the Chinese and Japanese. When they come to use the pencil, therefore, in drawing they are possessed of the finest instruments in accuracy of eye and free command of the brush. Whether a Japanese art-worker sets himself to copy what he sees before him or to give play to his fancy in combining what he has seen with some ideal in his mind, the result equally shows a perfect facility of execution and easy grace in all the lines.

The Japanese artist is usually an impressionist; that is, he avoids superfluous details, seizing only what is essential to his purpose, but presenting that with such virtuosity that the mood he desires to suggest is transferred to the spectator instantaneously. Professor Fenellosa, in his work on Japan, expresses the opinion, no doubt justly, that the impetus to French impressionism was given partly by a thorough study of Japanese art. While thus indifferent to details, it is a striking fact that the Japanese artist has a keener eye than his Western colleague. Herr Ottomar Anschütz, of Lissa, Prussia, has shown that certain Japan pictures of birds and other animals which seemed unnatural were really correct, as proved by instantaneous photographs. In their methods of ornamentation, the Japanese treat every object flatly, as do their Chinese masters to this day, and this to a certain extent has tended to check any progress in pictorial art, though they have obtained other and very admirable decorative effects. Without being ignorant of chiaroscuro, or the play of light and shadow, it is true that they usually, though not invariably, paint in flat tones as on a vase, and so dispense with both. It is not a picture so much as a decoration that they produce, but it is a decoration full of beauty in its harmonized tints and graceful freedom of design. The delicacy of touch is everywhere seen, whether bird or leaf or flower, or all combined, be chosen as the subject. The Japanese artist especially excels in conveying an idea of motion in the swift flights of birds and gliding movements of fishes, one of the most difficult triumphs of art. It has been said that the golden age of Japanese art is over and gone, and that the conditions no longer exist, and can never be renewed, under which it has developed its most characteristic excellences. A feudal state, in which the artist and the workman were generally one and the same person, or at least in the same feudal relation to a chief, who was bound to support them, working or idle, and took pride in counting among his subjects or serfs those who could most excel in producing objects of great beauty and artistic value, is a condition as little likely to return in Japan as the

former isolation and freedom from all foreign influences of the psople. Under these altered circumstances it is to be feared that Japanese art has culminated, and shown the best of which it is capahle.

Japanese pictorial art divides itself into several schools, of which the earliest belongs to the 9th century, and presents as its leading names those of the celebrated Sugawara Michizane and Kose Kanaoka. But the first really native school dates from 1000 A.D., it being known in its earlier form as the Yamato Riu, in its later as tbe Tosa Riu. This was confined mainly to the painting of scenes of court ceremony, illustrations of scenes in the native romances, drawings of horses, falcons, &c. Landscape was a subordinate feature. The drawing was carefully done with a fine brush, gold and bright colors being freely employed. Koson, the last famous painter of this school, died in 1866. The Chinese school, originating about 1490, gained its high est development in the hands of the great master Kano Motonohu, or Ko-Hogen (1476–1559). The works of this school, which held prsëminence for three ceaturies, are marked by quiet and harmonious coloring aud a bold use of the pencil, the seenery displaying the conventionality—often impossible—of Chinese ert. A new departure in art came in 1760, in the work of Hokusai, who struck out a fresh path, and became ons of the most realistic of the world's painters. This school, while held in slight respect in Japan, is ths popular one among foreign appreciators of Japanese art.—*Mechanical Arts.* The Japaness have attained to great excellence in metallurgy, and in the manufacture of porcelain, lacquer wars, and silk fabrics. In some of these departments works are produced of such excellence in design and execution as to surpass the fiuest products of the Western world. A school of sword making was founded by ths Emperor Gotoba about 1200, the most famous blades being those known as Masamune, produced in the 14th century. The porcelain industry dates back to the 13th century, taking its artistic origin in ths work of Shunkei, ths "father of pottery," who dwelt at Seto in Owari, whence the the Japanese now call all kinds of earthenware Setomono. Shunkei studied in China, but Corsan art also made its way into Japan, the netive art developing under thess two foreign inspirations. Of the most celebrated wares may be named the craekled Satsuma (about 1640), the Hizen, the Kaga, and Owari, much of the art decoration of these weres being done in Tokio. The lacquer industry dates from prehistoric times, some of the finest examples dating from the 15th century. It reached its perfection hy the end of ths 17th century. Of other esteemed Japanese art work may be named bronze and inlaid metal work, euamel, &c. See CERAMICS.

Jap'ano-Chi'nese War. The conflict of 1894–95 between ths two great native powers of Eastern Asia had its origin in an effort on ths part of Japan to gain a coutrolling influeuce in Corea, end of China to maks good her long dormant claim to suzeraiuty over the Corean kiugdom. The liberal element in ths Corean governmeut had made treaties with foreign powers and opened ports to foreign trads, this leadiug to insurrections by the conservatives. An outbreak in 1894 led to the rivel powers sending troops to Coree, threats of war on the part of China, and the seizure of the king of Corea by the Japanese. On July 20, a Chiness squadron sailed from Taku, convoying a fleet of transports which carried 12,000 troops, destined for Corea. This squadron was intercepted by the Japanese fleet, and, ou refusal to return or yield, was attacked, a transport containing 1,700 troops being sunk. A declaration of war was mede by Japan on August 1, the Lieo Tung peninsula wes occupied, and on September 15, a battle took place at Ping Yang, in which the Chinese were defeated with 16,000 loss; the Jepanese loss being very small.

Two days afterward there occurred, off the mouth of the Yalu River, a notahle naval battle, being the first in which armored vessels, with modern artillery, have met in combat. Boih sides fought courageously, but the Japanese tactics aud gunnery were so far superior to the Chinese that the latter were disastrously defeeted, two of their ships being sunk end the others taking to flight, making Port Arthur, the port and stronghold at the extremity of the Liao Tung peninsula, their goal. In November this place was attacked by tbe Japanese fleet and army, and captured efter a two days' siege, the Chiuese making little resistance. The remainiug principal land engagement on Manchurian soil was the capture of Kaipbing on Jenuary 10, 1895. For a time no further advance was made, and the Chinese authorities, thinking that their foes were discouraged, re-called an embassy that was about to start for Jepan to sue for peace.

In January the Japanese fleet advanced against the port of Wei Hai Wei, a fortified stroughold on the northern coast of China proper. A force of 25,000 land troops was successfully landed, and invested the stronghold in the rear, attacking and quickly taking the landward forts. Wei Hai Wei was thereupon abandoned by its garrison and occupied by the Japanese without a fight, and the Chinese fleet, which held the harbor, now turned its guns against the fortifications which it had recently sought to defend. Several vessels of this fleet were destroyed by torpedo boats which the Japanese sent into the harbor, and the affair euded in the surrender of the Chinese fleet. China was now in a perilous position; its fleet destroyed, its two coast strongholds held by the enemy, and Pekin threatened from Wei Hai Wei, and from the army in Manchuria, which was preparing to advance to the Great Wall, and from there to march upon the capital. A continuation of the war threatened to end iu a complete conquest of the Chinese Empire, and Li Hung Chang, China's great statesman, who had been degraded from his official positions in consequence of the continued disasters to the army, was restored to all his honors, and sent to Japan to sus for peace, with full powers to coucluds a treaty.

The skilled envoy endeavored to obtain favorable terms, but found himself obliged to accept the ultimatum of Japan, and a treaty was agreed to April 10, and signed April 15, in which China ecknowledged the independenee of Corea, and ceded to Japan the island of Formosa and the Pescadore group, and that part of Manchuria occupied by the Japanese army, including Port Arthur. In addition, an indemnity of 300,000,000 taels was to be paid, 7 new treaty ports to he opened, and other minor concessions to be made. This treaty was not fully carried out. The Russian, French, and German ministers objected vigorously to the cession to Japan of the Liao Tung peninsula, and by a threat of war Japan was obliged to yield her claim to this territory. She demanded in return a furtber sum of 100,000,000 taels, but tbe matter was finally compromised for a sum of 30,000,000. The Pescadores and Formosa were not occupied without resistance, a brief one in the case of the former, but a vigorous and persistent one in the cass of Formosa, which gave the Japanese no little trouble to put down. The less immediate results of the war were the position efterward occupied by Japan as one of the leading powers of the world, the rapid iucrease of her naval and military establisbments, her disposition to take part iu world polites, her treaty of alliance with England, and the other efforts of her statesmen to strengthen her egainst the aggressive movements of Russia in Eastern Asia.

Jap'ano-Rus'sian War. The war between Japen aud China, described in the preceding article, led ten years later to a greater and more momentous war, in which the island empire was pitted against the great continental power of Russia. The causes of this war were the lease of Port Arthur by Russia, which had been active in forcing Japan to evacuate it, and ths subsequent practical occupetion of Manchuria by Russia, which grew more significant after the Boxer outbreak in China. While neither Port Arthur nor Manchuria were ectuelly ennexed, Japanese statesmen feared this eventual result, with the subsequent occupation of Corea, and the endangering of their own empire. A diplomatic effort was mads by Japan to induce Russia to withdraw her troops from Manchuria, in aecordance with her treety obligations to Cbina. This proved ineffective, and on Feb. 6, 1904, Japan severed diplomatic relations with Russia, aud on the 8th made a sudden and vigorous naval attack on the Russian ships at Port Arthur. The assault was a complete surprise, it being preceded by no declaration of war. It led to such serious damage to the Russian squadron thet this was never afterward in condition to risk an open battle with the enemy. In the only venture in force from the port, on April 13, the flagship *Petropavlovsk* was sunk by a mino or a torpedo, and Admiral Makaroff was drowned. Operations on land began with an active transportation of Japanese troops into Corea, while Russia made eernest efforts to hold Manchuria, forwarding troops via the Siberian railway to reinforce the army of occupation, and making the experienced General Kuropatkin commander-in-chief. In all their movements ths Japenese showed an unlooked-for military skill and the highest tactical ability, with the result that the story of the war from February to October wae that of an almost unchecked Japanese edvance and a neerly continuous, though skillfully executed, Russian retreat. The first battle took place on the Yalu River, the boundary between Corea and Manchuria. The army under General Kuroki crossed the Yalu in the face of the foe, and on May 1 attacked the Russians so vigorously thet they were forced to retreat, with heavy loss in men and munitions. Two other Japanese armies, under General Nodzu and Generel Oku, were landed at strategic points on the Manchurian coast, Oku cutting tbe communication between Kuropatkin and Stoessel, in command at Port Arthur, while Nodzu defeated Stoessel'e forces in a sanguinary battle at Nanshan, on May 23–26. A fourth army under General Nogi wes subsequently landed on the Liao-Tung peninsula, and began a series of operations agaiust Port Arthur, taking during the remainder of the year port efter port, uutil the central stronghold was closely invested.

Meanwhile the other three armies edvanced northward, having several sharp encounters with the enemy, who slowly retreeted, Kuropatkin finally concentrating his forces at the strong and well fortified position of Liaoyang. In the middle of July, Field Marshal Oyama was made commander-in-chief of the Japanese forces. On tne morning of August 26 Oyama ordered a general advance, he having about 200,000 men with 520 guns against 150,000 Russians with 400 guns. The battle that followed was one of the great engagements of modern times. Fierce fighting, with heavy loss on both sides, continued until Sept. 3, when Kuropatkin was obliged to retreat, though he did so by a brilliant movement, reaching Mukden, the capital of Mauchuria, with his army intect. The two armies here faced each other until Oct. 5, when Kuropatkin, with a force estimated at 300,000 men, advanced against Oyama, proclaiming that he was now prepared to force the enemy back, and to begin a campaign that would crush Japan. He failed in this, both armies, after several days and nights of desperate fighting, practically maintaining their positions. With this engagement the armies ceesed fighting and went into winter quarters. The siege of Port Arthur, however, continued with success, the eminence kuown as 203-Metre Hill being captured on Nov. 29-30. From this a plunging fire destroyed nearly all tbe Russian ships in the harbor. On the 2d of Jauuary, 1905, General Stoessel surreudered the fortress. The war in the north was resumed on Feb. 19, 1905, with an attack on the Russian lines hy tbe Japanese which developed into one of ths greatest battles in the world's history. The Russians were flanked on both wings, forced to retirs from the line of the Hem River, yielded Mukden to the Japanese on March 10, 1905, aud on March 15th evacuated Tie Pass and retreated northward hotly pursued hy tbeir foes. During this long continued struggle, between armies 750,000 strong, the loss was enormous. The Russians especially losing very heavily, while the bulk of their stores were destroyed or captured. During the remainder of the war the Russians occupied a position covering the important Railway juuctiou of Harbin, the Japanese facing them, but no eugagement in force taking place. The disasters to ths Port Arthur fleet induced Russia to send out nearly her whols remaining fleet, under Admiral Rojestvensky. This was met on May 27 in the Korean Strait by Admiral Togo with the Japauese fleet, and one of the greatest naval battles in history took place, ending in the almost complete destruction of the Russian fleet, while the Japaness suffered scarcely any loss. Peace negotiations followed, and in the summer peace commissioners met at Portsmouth, N. H., where a treaty was formulated which was signed Sept. 5, 1905. Its terms were highly favorable to Japan, which gained great additions to her power aud influence in the East.

Japon'ica, *n.* See CAMELLIA.

Jardiniere (*zhär-din-yār'*), *n.* [Fr. *jardin*, garden.] A pot, vase or stand for flowers or plants.—An ornamentul pendant attached to a form of woman's headdress in the 18th century.

Jar'ves, JAMES JACKSON, author and art-critic, was born at Boston, Mass., Aug. 20, 1818; sailed for the Sandwich Islands in 1838, and resided for some years at Honolulu, where he established the *Polynesian*, the first newspaper printed in Oceania. He travelled extensively, passing many years in Europe, making a collection of pictures to form the nucleus of an American Art Gallery, and succeeded in amassing a large number of works by the old masters, which are now deposited in Yale Uuiversity. His published works include *Art Hints* (1855); *The Art Idea; Sculpture, Painting, and Architecture in America; The Confessions of an Inquirer; Art Studies; Old Masters of Italy; Glimpses at the Art of Japan; Art Thoughts; The Experiences and Observations of an American Amateur in Europe; Italian Rambles.* Died June 28, 1888.

Jasmin (*zhäs-mang'*), JACQUES, Provençal poet, was born at Agen, March 6, 1798; entered the priesthood, hut being expelled for some misconduct, he learned the barber's trade. Attracted attention by verses which he composed in the dialect of Agen, which made him famous, and to which is largely due the revival of poetry in the dialect of southern France. The French Academy awarded him (1852) a prize of 5,000 francs. His works include many songs, odes and patriotic poems; of his longer poems the most famous is *L'Abalgo de Castèl Cuillè* (translated by Longfellow as *The Blind Girl of Castèl Cuillè*). Died Oct. 4, 1864.

Ja'taka, *n.* (Sansk.) One of the legends relating to the successive existences of Buddha, containiug much doctrinal matter; a birth-story.

Javelle' Water. (*Chem.*) A cleansing solution which exerts a prompt effect in restoriug old engravings, wood-cuts, priuted matter, and other articles which have become brown or yellow hy age. It is prepared by dissolving chloride of lime (bleaching powder) in hot water and adding a potassium carbonate. The result, after filtratiou, is an impure potassium hypochlorite. It may, when cool, be bottled and kept for subsequent use, aud is an effective means of bleaching all fabrice. It is also used as an antiseptic. Also called *Javelle's Water* aud *Eau de Javelle.*

Jay'-hawk'er, *n.* (*U. S. Hist.*) One of the free-booters during the free-soil troubles in Kansas and in the early part of the Civil War.

(*Entom.*) A large spider or terantula. (*Colloq.*)

Jean (*jān*), *n.* [Probably from *Genoa.*] A twilled undressed cloth of cotton, or of cotton warp and woollen filling.—*Satin J.* is a kind of jean woven smooth and glossy.

Jeannette', in *Pennsylvania*, a post-borongh of Westmoreland co., 4 m. from Greensburg, on Penna. R.R. A manufacturing town. *Pop.* (1897) 7,100.

Jebb, RICHARD CLAVERHOUSE, born at Dundee, Scotland, Aug. 27, 1841; graduated with high honors from St. Columba's College, Dublin, the Charterhouse, and Trinity College, Cambridge (1862); elected fellow of his college, and (1872) public orator of the university; appointed classical examiner in the University of London, and tutor at Cambridge (1875); professor of Greek at St. Andrews, and (1889) regius professor of Greek at Cambridge; president of the Society for the Promotion of Hellenic Studies. Edinburgh, Cambridge, Bologna, and Harvard Universities bestowed honorary degress upon him, and the King of Greece presented him with the gold cross of the Order of the Saviour. He has published works of profound scholarship, aud brilliancy of style. They include; *Characters of Theophrastus; Translations into Greek and Latin Verse; Modern Greece; Richard Bentley* (English Men of Letters Series); *The Growth and Influence of Greek Poetry; A Primer of Greek Literature*, &c. His monumental edition of Sophocles is the standard English translation.

Jeddo, in *Texas*, a post-town of Bastrop co. *Pop.* (1890) 559.

Jeff Davis, in *Texas*, a W. co.; *area*, 2,390 sq. m.; *Surface*, mountainous; *soil*, fertile in places; timber scarce. Cattle raising is the chief occupation. *Cap.* Fort Davis. *Pop.* (1890) 1,394.

Jefferson, Joseph, actor, was born at Philadelphia, February 20, 1829. He was the grandson of Joseph Jefferson, an English actor, and a son of Mrs. Burke, a noted singer; appeared on the stage at an early age, and attained distinction in comic parts, such as *Bob Acres*, *Caleb Plummer*, &c. He acted in England and Australia as well as in America; appeared in Dion Boucicault's version of *Rip Van Winkle* in 1865, and became identified with that character, in which he achieved a reputation ranking him with the most notable of histrionic artists. Others of his successful characterizations were *Bob Acres*, *Sir Hugh de Brass*, &c. In his later years he filled each season a limited number of engagements, usually presenting *The Rivals*, *Rip Van Winkle*, and the farce, *Lend Me Five Shillings*. In 1892 Yale College conferred upon him the honorary degree of M. A. His leisure was spent chiefly on his plantation in Louisiana and at his cottage on Buzzard's Bay, Mass., where he wrote his autobiography and gained some skill in oil painting. He died Ap. 23, 1905.

Jefferson, in *Nebraska*, a S.E. co.; *area*, 576 sq. m.; intersected by Little Blue river, and is also drained by Brush, Little Sandy and Muddy creeks. *Surface*, undulating prairie; timber scarce; *soil*, fertile. *Cap.* Fairburg. *Pop.* (1890) 14,850.

Jel'lico, in *Tennessee*, a post-village of Campbell co., 66 m. N.W. of Knoxville, on J., B. E. N. N.; L. & N. and Southern R.Rs.; has a steam tannery. Coal is produced in the district and shipped from this point. *Pop.* (1897) 950.

Jenk'in, Henry Charles Fleeming, physicist, was born near Dungeness, England, March 25, 1833; educated at Jedburgh, Scotland, Edinburgh Academy, Frankfort, Paris and Genoa; learned the trade of a machinist in Manchester, England; after serving as a draughtsman in London, he undertook the work to which he devoted many years of his life, the laying of submarine cables; was appointed professor of Engineering in the University of Edinburgh, in 1868. He was the author of numerous scientific papers, and a text-book on electricity and magnetism; and his essays on philosophic and speculative subjects rank high. Died June 12, 1885.

Jenk'ins, Thornton Alexander, born in Virginia, Dec. 11, 1811; entered the U. S. Navy, as midshipman, in 1828, and from 1834–42 was employed in the office of the Coast Survey; served in other surveys, and at successive periods held several commands, including those of second naval officer in command at the surrender of Port Hudson, July 1, 1863; was Farragut's chief of staff and fleet-captain; resumed the command of the second division of Farragut's fleet until the close of the war, after which he was appointed chief of the bureau of navigation, naval secretary of the light-house board (1869), promoted to be rear-admiral (1870), and commanded the East India squadron (1871); retired from active service in December, 1873, and died August 9, 1893.

Jen'ner, Sir William, physician, born at Chatham, England, 1815; educated at University College, London. He was made physician to the Queen Victoria (1861) and to the Prince of Wales (1863); attended the Prince Consort in his last illness; was created a baronet in 1868, and in recognition of his services during the illness of the Prince of Wales was made a K. C. B. in 1872. He is the author of numerous medical papers, and is especially noted as being the first to prove the difference in kind between typhus and typhoid fevers. Retired from professional pursuits in 1889. Died 1898.

Jer'auld, or **Ger'auld,** in *South Dakota*, a S. E. cen. co.; *area*, 550 sq. m. *Surface*, eastern half level, western half rolling; *soil*, light, fertile, and well-watered; good agricultural and grazing land. *Products*, corn, oats, wheat, barley, flax, rye, potatoes, wool, broom corn, and sorghum. *Cap.* Wessington Springs. *Pop.* (1895) 2,779.

Jer'myn, in *Pennsylvania*, a post-borough of Lackawanna co., 12 m. N. E. of Scranton, on D. & H. and N. Y., O. & W. R.Rs.; has grist mills, saw mills, powder mill, and coal mines. *Pop.* (1897) 2,860.

Jerome', Jerome Klapka, author, was born at Walsall, England, May 2, 1861; educated at the Philological School, Marylebone. Most of his life has been spent in London. He has served as clerk, schoolmaster, shorthand-writer, reporter, actor, and journalist. He has published: *On the Stage and Off*; *Idle Thoughts of an Idle Fellow*; *Three Men in a Boat*; *Novel Notes*; and several farces and plays. He founded *To-Day*, a weekly magazine, in 1893, and was editor of *The Idler* (London), 1893–97. His greatest success as a humorous writer was with *Three Men in a Boat*.

Jer'rold, William Blanchard, author, eldest son of Douglas Jerrold; born at London, England, in 1826; educated partly in France; studied painting in London. He adopted the profession of journalism, and wrote many farces and comedies. He visited Sweden (1852) as commissioner for the London Crystal Palace; also attended the Paris Exhibition in the same capacity for the London *Daily News*. He was the author of a series of articles published in the *Morning Post* (1862) on the London poor; visited Paris (1863) to examine its institutions for the poor, and for the same purpose visited the Netherlands in 1869. His works include *At Home in Paris*; *A Trip Through the Vineyards of Spain*; *Life of Napoleon III.*, &c. Died March 10, 1884.

Jer'ry, *n.* [A contemptuous abbreviation of *Jeremiah*, probably originating in England after the Restoration, in ridicule of the Puritans, among whom the use of Old Testament names was common.] One who builds houses in a mean, flimsy or unsubstantial manner. —Work of an inferior or fraudulent character.

Jer'ry City, in *Ohio*, a post-village of Wood Co., about 30 m. S. of Toledo. *Pop.* (1890) 530.

Jeru'salem, Explora'tion of. (*Explor.*) A marked advantage in visiting Jerusalem at the present time is that one can reap the fruits of recent archæological research, and thus examine the various places of interest with intelligent curiosity. The first impetus to this research was given by an eminent scholar of the United States, Dr. Edward Robinson, of whom Dean Stanley has said that "he was the first man who saw Palestine with his eyes open to what he ought to see." His work has been and is likely to long be perpetuated by the name of Robinson's Arch, which has been given to the first spring of an arch demonstrated by Robinson to have been the beginning of a bridge across the valley which separates Mount Zion and Mount Moriah, two of the elevations of the plateau on which Jerusalem is built. Very interesting results of recent research concern the Church of the Holy Sepulchre. The site on which this building stands has, for fifteen centuries and a half, been universally accepted as the place of the tomb of Christ. There has been no proof of the fact beyond the ecclesiastical tradition of centuries, save the miraculous vision which Helena, mother of the Emperor Constantine, is supposed to have had, if proof such vision can be called. Recent investigations, however, have pretty well overthrown this tradition. It has been proved, almost conclusively, that the site of the Church must have been within the wall of the city at the time of Christ. Yet we know that he died and was buried "without the gates." It appears now to be clearly established that the place of the tomb of Christ is at the west of a hill known as Jeremiah's Grotto, north of the city and beyond the walls. Calvary is also put down as on the site of the Church of the Holy Sepulchre, and the exact place where the cross was erected is pointed out to the visitor. All the probabilities, it is now proved, are against this, and the hill of Calvary, there is little doubt, is in the vicinity of the tomb of Christ.

If archæology has played havoc with some venerable traditions, it has also strengthened other traditions. The position of Mount Moriah cannot be questioned, and the limits of Mount Zion, except on a part of the nothern side, are unassailable. Moreover, no exploration nor investigation has served to weaken the assertion that what is commonly known as the Mosque of Omar—though, in reality, it is not a mosque, but a shrine—stands on Mount Moriah, in the sacred area once occupied by the precinct of the Jewish Temple. This area is called "The Noble Sanctuary," and is as beautiful as it is spacious. It occupies one-sixth part of the city, and is surrounded by massive and lofty walls. The green grass of the enclosure, dotted with olives and cypresses, adds to the charm of the architectural erections, and the aspect of the place is restful and extremely attractive. The western wall runs along the brow of the steep hill at the foot of which flows the Brook of Kedron. The view from the enclosure would be beautiful, but is cut off by the walls, though on the opposite side of the brook towers above the wall the Mount of Olives, which is 220 feet higher than Mount Moriah. The Mount of Olives, however, is rather a ridge than a mount. A few scattered olive trees alone remain to warrant the name it bears. See Jerusalem.

Jes'sie, *n.* (*Slang.*) A severe scolding or berating; as, to give one particular *jessie*.

Jes'uits, or Society of Jesus. (*Eccl. Hist.*) A celebrated religious order of the Roman Catholic Church, which was founded by St. Ignatius of Loyola (see Loyola), and has filled a large space in the ecclesiastical and political history of the world. It was in 1559 that Loyola and his companions submitted to the Pope, Paul III., the rule of the Society of Jesus, the great aim of which was expressed in their adopted motto *Ad Majorem Dei Gloriam* (to God's greater glory); and the vow of which, in addition to the threefold obligations common to all Catholic religious orders, of chastity, poverty, and obedience, comprised a fourth, whereby the members bound themselves unreservedly to go as missionaries to any country which the Pope might indicate to them. The new rule was approved by Papal bull in 1540, Loyola being elected as the first general of the order. Loyola possessed, in the highest degree, the administrative faculty, which eminently fitted him for carrying out the necessary details of such a work—classifying the different duties, and distributing the various offices; and hence, in the space of a very few years, the Society had established itself in almost every country in Europe, as well as in many places throughout the Old World and the New. The Jesuit was a man everywhere in request, as a man perfectly qualified for whatever task he undertook, whether as adviser, confessor, teacher, or superintendent of affairs. The superior thus held in his hand the reins of a spiritual government which was rapidly spreading itself over and beyond the Christianized world. With deep sagacity of the remoter consequences, he strictly forbade any Jesuit to accept ecclesiastical dignities of any sort; but, at the same time, they were not forbidden, but eagerly sought after, the office of confessors to emperors, kings, and princes, and thus they obtained great power, to be used for the advantage of their order and of the Church in general. Loyola seems to have been actuated by the belief "that all things would go well in the world—a wise conjecture, if it were brought into a state of absolute, unreasoning, ungainsaying submissiveness to a single hand ruling it for its good." The casuistry of this body is immortalized in the *Provincial Letters*, of Pascal. The privileges granted to the order were such as specially enabled them to extend their power.

At a time when Protestanism was so weakening the ranks of the Church of Rome, the Popes saw the policy of having such a body of men to oppose them as the Jesuits, and hence they obtained privileges such as no body of men, either in church or state, had ever obtained. They are totally exempted from the performance of those duties which form the chief business of other monks. They do not consume half their time in the repetition of tedious offices; they practice no rigorous austerities, appear in no processions. They are permitted to enjoy not only all the rights of the mendicant and secular orders, but are exempt from all episcopal and civil jurisdiction and taxes, so that they acknowledge no authority but that of the Pope and the superiors of their order; and are permitted to exercise every priestly function, parochial rights notwithstanding, among all classes of men, even during an interdict, but also (what is not even permitted to archbishops unconditionally) they can absolve from all sins and ecclesiastical penalties, change the objects of the vows of the laity, acquire churches and estates without further Papal sanction, &c.

The general, who is at the head of the order, has more absolute power than the general of any other religious order. He is elected for life, appoints nearly all the officers of the order, and receives monthly reports from the provincials, and quarterly reports from the superiors of the professed houses, the rectors of the colleges, and the masters of the novices. Every third year the catalogues of every province, with detailed reports on the capacity and conduct of every member, must be sent to him. The order is divided into provinces, each of which is governed by a provincial; each professed house, or house of full members, is governed by a præpositus; each college by a rector; and each residence by a superior. A provincial congregation consists of all the professed members and such coadjutors as are rectors of the colleges. A general congregation consists of all the provincials, and two delegates from each provincial congregation; and meets only for the election of a new general, or for deliberating on subjects of very great importance. The general council, which elects a new general, elects also a monitor, whose duty it is to observe the conduct and actions of the general, and, if necessary, to admonish him; and a certain number of assistants, whose advice the general is bound to seek.

A strict examination precedes the admission of new members, and five points are absolute impediments to admission, viz., murder, apostacy, or other grievous offences, subjection to degrading sentence, membership in a monastic order, marriage, and insanity, or decided weakness of intellect. Previous to admission the novice must make a confession to a superior of his sins and natural infirmities, his desires, prejudices, &c.; and these confessions must be frequently repeated during the period of his probation. At the same time the members of the order keep a strict watch over the words and actions of the novices, of whom they are bound to report to the superior whatever of importance they discover in their conduct. The novitiate lasts for two years, during which the novices are not allowed to study, but must devote their whole time to prayer and meditation, the *Spiritual Exercises*, a work composed by Loyola, being their chief guide. The novice may then offer himself for admission into the Society, and, being found qualified, takes the vows of poverty, chastity, and obedience, and becomes a scholastic. In this second stage he generally devotes fifteen or seventeen years to study and teaching in the colleges of the order, first studying belles-lettres, rhetoric, philosophy, and physical and mathematical sciences; then teaching in succession various branches, and afterwards spending four or six years in the study of theology and the Oriental languages. The candidate then spends a second novitiate, lasting for one year, during which he lives in retirement, making himself acquainted with the constitution of his order, and preparing himself for receiving the final degree of the order. A detailed report is then made by his superior to the general of the order, and in accordance with this he is admitted to the rank of either *coadjutor spiritualis* or *professus*. The coadjutors have, on the whole, the same rights as the *professi*, but cannot take part in the provincial and general congregations of the order, and cannot be elected to a higher office than the rectorate of a college. The professed members, in whose hands the supreme government of the order lies, take upon themselves the fourth vow to go as missionaries wherever the Pope may send them. Besides the above classes of members, there are also lay coadjutors, who are received for domestic employments.

The Jesuites wear no monastic habit, but dress in black, nearly like secular priests. The power acquired by the Jesuites and their intrigues speedily rendered them hated and detested in most countries where they were established. The order was suppressed in England, in 1604; in Venice, 1606; in Portugal, 1759; in France, 1764, and Spain, 1767. In 1773 the order was totally suppressed by decree of Pope Clement XIV. In Prussia, although they had to abandon the constitution of the order, they were permitted to continue as an

organized society. In Russia also the order found an asylum, from which they were not expelled till 1817. On Aug. 7, 1814, Pius VII. issued a bull by which he restored the order, with all the privileges which it possessed at the time of its suppression. A novitiate was opened at Rome on Nov. 11, 1814, and received in 1824 the direction of the *Collegium Romanum*, and in 1836 that of the *Propaganda*. In Modena, Sardinia, and Naples, they were restored in 1815, and reinstated in the possession of a part or the whole of the former property of the order, and several new houses were established. They returned to Lombardy in 1837, to Parma and Venice in 1844, and to Tuscany (for a short time) in 1846. The revolution of 1848 endangered their existence in all Italy; mobs attacked their houses in Genoa and Naples, and they were expelled from nearly every state, even from the dominions of the Pope. After the success of the counter-revolution in 1849, they returned to most of the states, except Sardinia and Tuscany; but they were again expelled by the revolutions of 1859–60 from Lombardy, Parma, Modena, and Naples. The order has again obtained a footing in most of the countries of Europe and America; and in some countries there are considerable numbers of them. In 1872, however, the Jesuits were expelled from Prussia, and also from Switzerland, and from Franco in 1880. In spite, however, of oppression and persecution, and the manifold attempts to destroy the Society of Jesus, it still retains wonderful vitality. In Italy, by recent legislation, severe measures have been taken against it. While each of the other principal religious orders is permitted to retain its "mother house" at Rome, in which the general of the order may reside, the Jesuits have been required to quit their principal convent of the Gesù. In other European and some South American states the Jesuits are still forbidden to associate or teach publicly, while in others they enjoy absolute freedom. Nowhere in Europe do they flourish so well as in Belgium, where they possess many great establishments, professed houses as well as colleges, which are largely attended both by Belgians and foreigners. In Holland also they have several considerable houses. In India they have had a regular hierarchy since 1886. During the 17th century great efforts were made by them to convert the East Indians. The most distinguished of the Jesuit missionaries in India, Robert de' Nobili, who died in 1656, at the age of 79, actually became a high-caste Brahman and thereby converted in a few years 100,000 of that theretofore inaccessible caste. In 1841, the Chinese mission was revived, and the Jesuits now administer the missionary field of Kiang-su and Chih-li. Yet, perhaps, nowhere are they doing better than in Great Britain, Ireland, and the U. S. In Great Britain they have a number of seminaries, whence recruits are obtained for missionary fields. In the U. S. there are more Jesuits than in Great Britain and Ireland together. They have two large colleges, attended by many pupils, in the city of New York. The present general of the order, Father Martin, is a Spaniard, elected in 1893, after a long vacancy in the office, and is reckoned as the twenty-fourth in the series, including Loyola.

Jes'up, in *Georgia*, a post-town, cap. of Wayne co., 57 m. S. W. of Savannah, on the S., F. & W. and Southern R. Rs.; in a farming and lumbering region; naval stores produced. *Pop.* (1897) 1,080.

Jet-propul'sion, *n.* (*Marine Eng.*) A method of propelling vessels by the direct impact of jets of steam against the water, as a substitute for side-wheels or screws. This system has been the subject of much study and experiment, but has been generally condemned owing to the rapid loss of steam and the entire loss of heat, which is largely saved in modern steam engines. It has proven practicable, however, for application to life-boats, because of the great ease and quickness with which boats so propelled can be stopped, reversed or changed in course, these advantages overcoming the increased expense of coal-consumption. See LIFE-SAVING APPARATUS.

Jet'ty, (*Engineering.*) Stone jetties were built during the early part of the present century for the protection of European harbors and river-mouths, and doubtless similar constructions have been made at much earlier periods. At the mouth of every great river the mud and sand washed down have a tendency to accumulate at a short distance from the shore, forming bars and shoals, which interfere seriously with navigation, the more so as they are of a shifting character, altering their forms and positions with every great storm. In order to improve the channels at the mouths of rivers, enabling large vessels to harbor there, jetties are built out in parallel lines into the ocean, or other large body of water into which the river empties, thus confining the waters flowing in and out of the river into a comparatively natural channel, which is so scoured by the inflow and outflow of water that the passage for vessels is deepened and maintained. Jetties are always built in pairs, and properly in lines parallel to the natural channel, usually zigzagging from the shore to deep water.

The older jetties were built of stone, and are not pretentious from an engineering point of view, but modern jetties have been built on a much larger scale, and of what would appear to be at first sight much more flimsy material. The Mississippi river jetties are the most important of these recent structures, and their construction involved an immense amount of controversy, in which the engineer in charge, Capt. James B. Eads, came out victorious, establishing thoroughly the value of the mattress system of building jetties. This work was begun in 1875 on the South Pass, which was esteemed as the least valuable of the several channels through which vessels passed from the river to the waters of the Gulf of Mexico, and was set aside for the enterprise, apparently, with the idea that if the passage was entirely spoiled, it would be no serious damage to navigation. The water at flood tide over the bar of the South Pass was then about 14½ feet deep, but the jetties, assisted by some dredging and natural scouring, have increased the channel so that 23 feet of water is maintained at flood tide throughout a channel 350 feet in width, and the pass is now the most important at the river's mouth, being used by all the larger vessels going in and out. The mattresses used in making jetties are formed of brush, as willow, woven into wooden frames 100 or more feet long. The brush is laid in the framework, first lengthwise, then crossed, then lengthwise again, and so on, until a thickness is obtained which will crush into less than a foot when loaded with stone. A trestle is usually built out along the line of the jetty, and surmounted by a track, on which inclines are run for launching the mattresses. Sometimes, however, if good weather and smooth water prevail, the mattresses are made on the shore, floated off at high tide, and towed to the point where they are to be sunk. Each mattress, when laid in place, is loaded with stone to the amount of perhaps 75 lbs. to the cubic foot, so that the jetty is built up of alternate layers of mattress and stone, in thicknesses of a foot or less, the whole being finished off with large stone blocks that cannot be readily washed away. The jetties built in this manner at the mouth of the Mississippi are in good condition after twenty years, though some repairs, due to injury to the concrete blocks by a storm, were needed in 1889.

The jetties at Galveston harbor, Texas, extend about six and a half miles from the east end of Galveston island to the outer bar, and are thus the longest in the world. They lie about 7,000 feet apart. The construction is different from that employed at the South Pass of the Mississippi, and has been carried out, since 1887, at an expense of about $7,000,000. The materials used were sandstone rip-rap and granite. A trestle was first built, and this was kept 600 or 700 feet ahead of the stone-work. From the outside of the tracks on the trestle the sandstone rip-rap was dumped, so as to form two continuous mounds. Between these mounds, through the centre of the tracks, small sandstone rip-rap was dumped, the whole structure being covered and protected with a layer of large granite blocks, the interstices of which were filled by wedges of sandstone. The base is 60 feet wide, and top about 12 feet, rising 5 feet above mean low water-mark. The channel between the jetties is to be dredged, when it is thought that a depth of 30 feet can be maintained, enabling Galveston harbor to accommodate the largest vessels afloat. The stone selected for this work was subjected to severe tests as to durability under sea-water, &c., and it is thought that it will last for centuries. Other important jetties are located at the mouth of the Columbia river, where they extend over four miles from shore, and are built to the level of high water, 15 feet wide on top. The material used is basaltic rock (lava blocks), which is plentiful in the vicinity. The work of construction was begun in 1884, and was completed at the remarkably low cost of about $2,000,000, nearly half the original estimate. All the work was done by the government, no contractors being employed, except for the furnishing of materials. The workmen were all paid by the day, and worked 8 hours a day. Special machines were used for driving the piles, which were sunk to an average depth of 22 feet in the sand, in 4 minutes each. Jetties have also been built at the mouths of the Sabine river, which flows into the Gulf of Mexico after 1,500 miles of windings through Texas, and of the Brazos river, Texas. The latter was completed by private enterprise in 1894, at a cost of $850,000, being more than a mile in length. It is constructed of mattresses, as also are the jetties at the mouth of the Panuco, a Mexican river. The U. S. government has recently completed jetties at Charleston, S. C., and St. Johns, Fla. There are other jetties at Yaquina Bay, Wilmington, Humboldt Bay, Coos Bay, and at the mouths of the Coquille and Siuslaw rivers, on the Pacific coast. Notable Old World jetties are at the North Sea entrance to the Rotterdam sea canal, at Havre, at the mouths of the Meuse, Danube, Oder, Pregel, Memel, Vistula, Niemen, Warnow, Trave, and at Kingston harbor, Ireland. The embankments built out from bridge piers to protect them are also known as jetties, being usually constructed of rubble or broken stone dumped in place, and anchored by piling. Jetties have also been built of wood, rows of piling being first driven, with sheeting between, and cross-beams notched and bolted. See HARBORS, ARTIFICIAL.

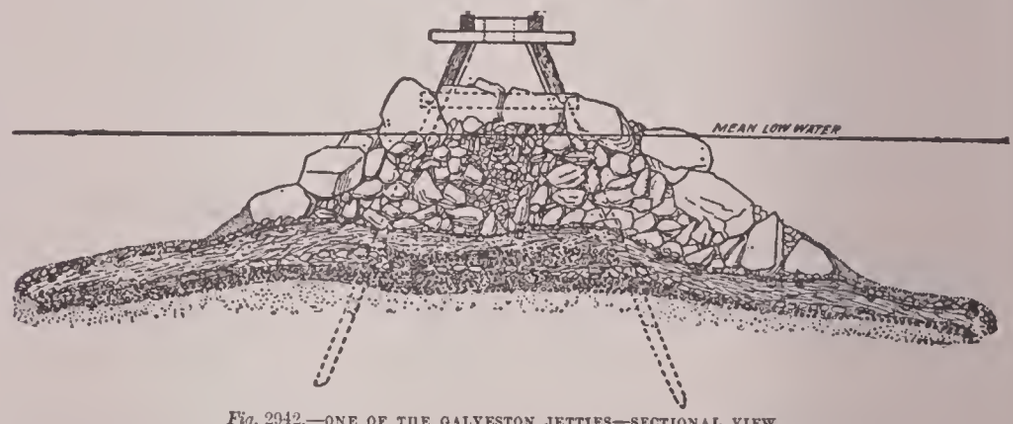


Fig. 2942.—ONE OF THE GALVESTON JETTIES—SECTIONAL VIEW.

Jev'ons, WILLIAM STANLEY, philosopher and political economist, was born in Liverpool, Eng., Sept. 1, 1835; educated at University College, London; appointed to a position in the mint at Sydney, Australia; subsequently visited the U. S., and on his return to England received the master's degree from the University of London; appointed Professor of Logic, Political Economy, and Mental Philosophy, at Owens College, Manchester (1866), and was called to the chair of Political Economy at University College, London, in 1876. He resigned his professorship (1880) to devote himself to literary work. His publications are: *A Serious Fall in the Price of Gold; The Coal Question; Elementary Treatise on Logic; Theory of Political Economy; Principles of Science; Money*, &c. He was drowned at Bexhill, Aug. 13, 1882.

Jew'ell, in *Kansas*, a N. co.; *area*, 900 sq. m.; drained by Limestone and Buffalo creeks and other affluents of the Republican river. *Surface*, nearly all level prairie; *soil*, fertile. *Products*, corn, broom-corn, wheat, oats, rye, and barley. *Cap.* Mankato. *Pop.* (1895) 17,498.

Jewell, or **Jewell City,** in *Kansas*, a post-village of Jewell co., 30 m. N.W. of Concordia, on Mo. Pac. R. R.; has some manuf. and a good local trade. *Pop.* (1895) 619.

Jew'ett, MILO PARKER, educator, was born at St. Johnsbury, Vt., April 27, 1808; graduated at Dartmouth (1828), and Andover Theological Seminary (1833); professor in Marietta College, Ohio (1835–38); founded the Judson Female Institute in Marion, Ala. (1839); established a seminary for girls in Poughkeepsie (1855). The endowing of an institution for the higher education of women was suggested by J. to Matthew Vassar, and he became (1862) the first president of Vassar College, a position which he resigned in 1864. He was the author of: *Baptism; Relations of Boards of Health and Intemperance; The Model Academy*, and other pamphlets. Died June 9, 1882.

Jewett, SARAH ORNE, author, was born at South Berwick, Me., Sept. 3, 1849. Most of her life has been spent at her native place, or in Boston. She has published works of fiction, illustrative of the provincial life of New England, which are true to nature and delicate in touch. These include: *Deephaven; Old Friends and New; The Mate of the Daylight; A White Heron; Strangers and Wayfarers; A Native of Winby*, &c.

Jig, (*Mech.*) A handy tool, specifically a rigging or fixture for maintaining in position some part or parts of mechanism while being finished or fitted to final position, so that all parts made or fitted may be uniform; as, a *jig* in which a bicycle frame is brazed; a drilling-*jig*, which insures the drilling of holes the same in each piece; a filing-*jig*, &c.

(*Mining.*) An apparatus for separating ore by jolting; a jigging machine; a jigger.

Jig'ger, *n.* [Corruption of *chigre* or *chigoe*.] See APHANIPTERA.

Jig'-saw, *n.* A fine, narrow saw set vertically in a frame, so that it can have a rapid up and down motion; used for cutting curved and irregular lines and making scroll-work.

Jim'-Crow, *n.* [Old negro song, *Jim Crow*.] A typical name for a negro.

(*Mech.*) An implement for bending or straightening rails.—A metal planing-machine furnished with a reversing tool to plane both ways, named from its peculiar motion, as the tool is able to "wheel about and turn about." The table is moved endwise by a quick-threaded screw, which allows the driving motion to be placed at the end.

Jim'-jams, *n.* (*Slang.*) The *delirium tremens*.

Jingo, *n.* Though the meaning of this word is tolerably clear, it is quite uncertain whence it came. Some make it a corruption of St. Gingulph, while others declare it an altered form of Jainko, the Basque name of the Supreme Being. In literature "Jingo" is first met with in Oldham's *Satyrs Upon the Jesuits* (1679). Its first appearance in political slang was during the Russo-Turkish war of 1877-8, when some one in the

British Parliament gave the name "Jingocs" to a party who were closely pressing Mr. Disraeli, then prime minister, to pursue a vigorous and patriotic foreign policy by actively taking sides with the Turks, borrowing the name from a popular music-hall song of the day, beginning:

"We don't want to fight, but by *jingo* if we do,
We've got the ships, we've got the men, we've got the money, too."

Hence *jingo*, on both sides of the Atlantic, now means one in favor of a spirited and demonstrative foreign policy.

—Also used attributively; as, a *jingo* policy.

Jinrik'isha, *n* (Jap.) A small two-wheeled gig, used in Japan and the East; it is provided with a hood, and is drawn by one or more men in place of a horse. It was the invention of an American missionary, and the first *J.* was built in Connecticut. It at once became popular in Japan, taking the place of the cabs and coaches of American cities, which are absent there on account of the scarcity of horses and the narrowness of the streets. From Japan it has spread to the coast cities of China, Hawaii, &c. Everywhere it is used for extensive rides and tours in the country, as well as in travelling about the cities. The *J.* men form a sort of caste, are under special regulations, and, as a class, have developed wonderful speed and endurance.

Joachim (*yō'ä-kēm*), Joseph, violinist, was born at Kittsee, Hungary, June 28, 1831. He had the advantage of instruction from the best masters, and his youth was spent in studying and playing in concerts. He first appeared in London in 1844, and in 1868 became head of the Berlin Academy of Music, where he has since remained. He has made a number of concert tours, and composed overtures, compositions for the violin, &c. These, like his playing, are pervaded by tenderness and depth of musical feeling. The degree of Mus. Doc. was conferred upon him by the University of Cambridge in 1877, and from Oxford University he received the honorary degree of D.C.L. He is the possessor of a remarkably superior violin, which was presented to him several years ago, the instrument having been purchased by a subscription headed by the Duke of Brunswick.

Johan'nesburg. (*Geog.*) The largest town in the South African Republic (or Transvaal). It came into existence with the discovery of gold in the Witwatersrand (literally, *White-waters-range*) field in 1886, and lies in the center of that gold-producing district, on the Vaal river, about 35 m. S. of Pretoria. The census of July 15, 1896, gave a population of 102,714, 51,215 being whites, 44,396 natives, and the remainder mixed races; probably more than 50,000 may be regarded as permanent residents. The town is a singular mixture of civilization and savagery. Well-dressed and wealthy Europeans may be seen in the same moment with nearly naked native mine-workers. The European population is largely Hebrew, and the newly-rich form the bulk of the local "society." These live in a beautiful, well-ordered part of the town, where are many handsome dwellings, with elaborate gardens, &c. The commoner parts of the town are built of corrugated-iron houses and tin-covered shanties, and at night life there is rough and dangerous. The railway station, of corrugated iron, is also a customs *dépôt*. In the portions devoted to mining the greatest noise prevails, from the constant operation of machinery, the diamond drills keeping up a seemingly endless clatter. On every side are tall iron chimneys sending up thick smoke, while great piles of white clay constantly impede progress. At night, small electric lights are seen all about the shanties, and the two principal streets of the town, Pritchard and Commission, are lit with arc lights. The majority of the laborers in the mines are native negroes, largely Kaffirs from Portuguese East Africa. Their chief ambition is usually to earn enough money to purchase two or three wives, and then to return to their own country. Johannesburg sets the price of wages for all South Africa, which in 1897 were about 45 shillings sterling per month. Raw Kaffir girls command £4 a month as house servants, and really competent servants are paid far more. Rents and living are high. A five-room, corrugated-iron house will rent for £14 a month. The foods demanded by civilized appetites cost enormously. Seven shillings is a common price for a pound of butter, and a dozen eggs usually command as much. Water is the dearest commodity of all, during half the year, when it is sometimes sold as high as £1 a barrel. This condition of affairs is likely to be improved, however, as the railroad is bringing in large quantities of water. This railway is narrow-gauge, and was built and is owned by Hollanders, and connects Johannesburg with the Portuguese frontier, and also with the Cape Colony system of railways. Johannesburg has a stock exchange, good schools, and the strong police arrangements needed to control the rough element induced by the proximity of the mines, and the lawless negroes, who often engage in pitched battles among themselves. As this town lies in the center of the gold-bearing strata, and the latter is almost exhaustless, it bids fair in time to become one of the great cities of the world. It was the center, in 1896, of the political excitement that brought about the "Jameson Raid" (for which see South African Republic.)

Johns Hop'kins Univer'sity. (*Educ.*) An important educational institution, located at Baltimore, Md., and named for its founder, Johns Hopkins (*q. v.*). The University was incorporated during the lifetime of its founder (Aug. 24, 1867), but was not opened for instruction until Sept., 1876. The principal object of the university is to afford instruction in letters and science to graduate students. To this is attached a collegiate department for undergraduates. A medical school opened by the Johns Hopkins Hospital, in 1893, forms practically part of the university. This had, at the close of 1896, 106 instructors, including the collegiate department and the medical faculty, to which latter alone women are admitted. At the same time its students in all the departments numbered 596, and its library contained about 77,000 volumes. The endowment was left by the founder invested in the securities of the Baltimore & Ohio R. R. Co. This company has been overtaken by misfortunes, and the income of the institution has varied with the varying fortunes of the railroad corporation. Since its opening, the university has encouraged the publication of the results of advanced scientific research. Several journals have been regularly maintained, and support has been given to many separate works. Especially notable has been the publication of a series of papers by members of the university on historical and political topics. Fourteen volumes, of about 600 pages, containing about 100 separate papers, have been issued. Fourteen extra volumes, containing prolonged memoirs, have also appeared in this series, which thus includes 28 volumes in all.

John'son, Bushrod Rust, U. S. A., born in Belmont co., Ohio, Oct. 7, 1817; graduated at West Point, in 1840; served in the Florida and Mexican wars; resigned his commission in 1847, and became professor in the Western Military Institution of Kentucky, at Georgetown. In the Civil War he became a Confederate brigadier-general, and in 1864 a major-general; commanded a division under Gen. Lee, until the surrender at Appomattox Court House; was subsequently appointed superintendent of the Military College in the University of Nashville, and chancellor of that institution. Died Sept. 11, 1880.

Johnson, Eastman, painter, was born at Lovell, Me., July 29, 1824; studied in Düsseldorf, Paris, Italy, and The Hague, spending four years at the latter place. In 1860 he was made a National Academician, and a member of the Society of American Artists in 1881; was awarded a third-class medal at the Paris Exposition of 1887. Two of his best-known works are *Old Kentucky Home*, and *Husking Bee*.

Johnson, Oliver, reformer and editor; born at Peacham, Vt., Dec. 27, 1809. He had editorial charge of several papers, and was the founder of the *Christian Soldier* (Jan. 1, 1831). For many years he was engaged as a lecturer and editor in the anti-slavery cause. From 1865 to 1870 was managing editor of *The Independent;* in 1870–72 editor of the *Weekly Tribune;* became managing editor of *The Christian Union* in 1872; author of *William Lloyd Garrison and his Times.* Died Dec. 10, 1889.

Johnson, Richard W., U. S. A., was born in Livingston co., Ky., Feb. 7, 1827; graduated from West Point (1849); entered the army as brevet second lieutenant of infantry; transferred to the cavalry as first lieutenant (1855); promoted captain in 1856, and major in 1862. From 1855 to 1861 was engaged in campaigns against Indians in Texas; appointed brigadier-general of volunteers in Oct., 1861; commanded a division of infantry in a number of engagements, and at the battle of Nashville and the pursuit of the Confederates through Tennessee was in command of a division of cavalry; received successive brevets from lieutenant-colonel to major-general U. S. A.; retired on the full rank of major-general on account of wounds received, but, under a subsequent law of Congress which retired officers on rank actually held at the time when disabled, was reduced to the rank of brigadier-general; in 1868–69 was military professor in the University of Missouri, and in 1869–70 held the same position at the University of Minnesota. He is the author of *A Soldier's Reminiscences in Peace and War*, and a *Life of Gen. George H. Thomas.* Died April 21, 1897.

Johnson, Rossiter, author and editor, was born at Rochester, N. Y., Jan. 27, 1840; educated at the University of Rochester, graduating in 1863. From 1864 to 1868 was associate editor of the Rochester *Democrat;* editor of the *Statesman*, Concord, N. H. (1869–72); in 1873–77 associate editor of *American Cyclopædia;* managing editor of the *Cyclopædia of American Biography* (1886–88); editor of Appleton's *Annual Cyclopædia* since 1883; in 1890–92 was secretary of the Authors' Club. He is the author of *Phaeton Rogers; A History of the French War ending in the Conquest of Canada; A History of the War of 1812–15 between the U. S. and Great Britain; Idler and Poet; A Short History of the War of Secession*, &c.; has edited Little Classics (1874–80), and, in collaboration with Charles A. Dana, *Fifty Perfect Poems.*

Johnson, in *Wyoming*, a N. cen. co.; *area*, 4,000 sq. m. It is drained by the Powder river and other streams. *Surface*, very mountainous in the west. Much mineral wealth. Lignite and coking coal beds underlie the whole surface. Undeveloped mines of gold, silver, tin, and other metals exist. Vast beds of pure soda and basins of petroleum are here receiving attention. *Cap.* Buffalo. *Pop.* (1890) 2,357.

Johnson City, in *Tennessee*, a city of Washington co., 25 m. S. S. W. of Bristol, on O. R. & C., Southern, and E. T. & W. N. C. R. Rs.; has foundry and machine shop, a tannery, and a furniture factory.

John'sonburg, in *Pennsylvania*, a post-village of Elk co., 110 m. S. E. of Erie, on E., B., R. & P. and P. R. Rs. *Pop.* (1890) 1,280.

Johns'ton, Alexander, author and economist, was born in Brooklyn, N. Y., April 29, 1849; graduated at Rutgers College (1870), and for three years taught in the Rutgers College Grammar School; subsequently became principal of the Latin School in Norwalk, Conn., and later was appointed to the chair of Jurisprudence and Political Economy at Princeton. He has published valuable works on U. S. history, some of which have been employed as text-books; also, a *History of American Politics; Representative American Orations, with an Outline of American Political History; The United States: its History and Constitution*, &c. Died July 21, 1889.

Johns'ton, Richard Malcolm, writer, was born in Hancock co., Ga., March 8, 1822; educated at Mercer University, graduating in 1841; admitted to the bar; commenced practice at Sparta, Ga. (1843); appointed professor of Belles-Lettres in the State University of Georgia (1857), and held this chair until 1861; established a select classical school at Rockby, in his native county, which he later removed to Chestnut Hill, near Baltimore, Md., where the school bears the name of Pen-Lucy Institute. He has published *Dukesborough Tales; a Biography of Alexander H. Stephens; Ogeechee Cross-firings*, &c., and is highly esteemed as a writer of tales of Southern life. In 1888 he was associated with George W. Cable, Edgar W. Nye, and James W. Riley, in an "Authors' Readings" tour. Died Sept. 23, 1898.

Johnston, in *South Carolina*, a post-town of Edgefield co., 52 m. W.S.W. of Columbia, on Southern R. R. *Pop.* (1897) 845.

Jokai (*jō-kī'*), Mor, novelist, was born at Komorn, Hungary, Feb. 19, 1825; studied law, but never practiced, devoting his attention to literature and journalism. In the Hungarian struggle of 1848 he was an active patriot, and after the restoration of Austrian rule, being obliged to abstain from political writing, he devoted himself largely to fiction. His works number almost 300 volumes, including novels, dramas, poems, &c. Most of his novels have been translated into German. In Jan., 1894, all Hungary united in celebrating the fiftieth anniversary of his first book, *Working Days*, and an édition de luxe of his complete works was published at $100 a copy, groups of poor people, and in some cases whole villages, combining to buy copies. *J.* founded the *Hon*, a daily political paper, and was editor of *The Comet*, the leading weekly humorous paper of Budapest. His novels include *A Hungarian Nabob; Sad Times; The Accursed Family; Black Diamonds*, etc. Died Oct. 12, 1903.

Jones, Charles Colcock, Jr., was born in Savannah, Ga., Oct. 28, 1831; educated at South Carolina College, Columbia, and at Princeton, where he graduated with high honors (1852); subsequently took the regular degree in the law department of Harvard University (1855); admitted to the bar at Savannah, Ga.; elected mayor of the city (1860). In the Civil War he entered the Confederate service as lieutenant-colonel of artillery, holding this position till the end of the war, when he resumed the practice of law. He published *Reminiscences of the Last Days of General Henry Lee; Antiquities of the Southern Indians* (a work of much interest and value); *History of Georgia*, &c. Died July 19, 1893.

Jones, Hugh Bolton, painter, was born at Baltimore, Oct. 30, 1848, where he studied art. He has exhibited at the National Academy since 1874. In 1877 he visited Brittany and Spain on a sketching tour, and exhibited at the Paris Salon and the Paris International Exhibition in 1878; elected a member of the National Academy in 1883. His works comprise: *Summer on the Blue Ridge; The Poplars—Tangier; The Wayside Pool; The Ferry Inn; Return of the Cows*, &c.

Jones, Owen, architect and decorator, son of Owen Jones, a Welsh antiquary, was born in Wales in 1809. He devoted much time and labor to the study of the Alhambra, in Granada, and is best known by his studies of that place; decorated the interior of the Exhibition building in Hyde Park (1851), and made the designs for the Egyptian, Greek, Roman, and Alhambra courts of the Crystal Palace at Sydenham; appointed director of decorations for the Crystal Palace Company (1852); architect for St. James' Hall, Piccadilly. He published: *Designs for Mosaic and Tessellated Pavements; Plans, Elevations, and Sections of the Alhambra; The Grammar of Ornament*, &c. Died in London, April 19, 1874.

Jones, In *Texas*, N. central co.; *area*, 900 sq. m.; drained by the Clear Fork of Brazos river. *Surface*, nearly all prairie; *soil*, good; adapted to stock-raising, which is carried on extensively; one of the best agricultural counties in the State, and developing rapidly. *Cap.* Anson. *Pop.* (1890) 3,797.

Jop'lin, in *Missouri*, a city of Jasper co., 16 m. S. W. of Carthage, on St. L. & S. F.; M. P.; K. C., Ft. S. & M., and K. C., P. & G. R.Rs. Here are rich lead and zinc mines. Coal is also abundant. The manufactures include several extensive smelting works, white lead works, large flour mills, foundries, and machine shops. *Pop.* (1897) 11,400.

Jor'dan, David Starr, naturalist, was born at Gainesville, N. Y., Jan. 19, 1851; educated at Cornell University, graduating in 1872; awarded the degree of M. D. from Indiana University (1875); appointed professor of Biology at Butler University, Indianapolis, and held a similar position in Indiana University (1879). He was sent by the U. S. Census Bureau to investigate the marine industries of the Pacific coast (1879–81); is author of a *Manual of Vertebrates; Synopsis of Fishes of North America*, and numerous scientific papers.

Jordan, Thomas, soldier, was born in the Luray Valley, Va., Sept. 30, 1819; graduated at West Point (1840); engaged in the Seminole and Mexican wars; was appointed captain and quartermaster in 1847; resigned in 1861, and entered Confederate Army as lieutenant-colonel; was adjutant-general of forces at Manassas Junction; accompanied Gen. Beauregard to Tennessee as chief of staff; appointed brigadier-general

from date of the battle of Shiloh. After the Civil War, was made chief of the general staff of the Cuban army; then second in command; chief in command in 1869. Not believing it possible to organize an effective force, he resigned (1870), and returned to the U. S.; was editor of the Memphis *Appeal* and (1887) of *The Mining Record*. Died Nov. 27, 1895.

Jor'dan, William George, educator, author, and editor, was born at New York, March 6, 1864. He was educated at the College of the City of New York, and in 1884 began his literary career as editor of *Book Chat*, a literary review on original lines. In the same year he began the preparation of *Jordan's Guide to Poetry and Prose*—practically a key to the treasures of literature for five centuries, by which it will be possible to locate the book and page containing any one of 125,000 famous and fugitive selections in prose and verse—and which is now (1897) approaching completion. He later became editor of *Current Literature*, but retired from this position to lecture on his new system of education, which he calls *Mental Training by Analysis, Law, and Analogy*. This system represents fresh and original thought, simple, clear and practical, on training the individual to have his mind ready on the instant. J's views on education differ in ideal, method and object from the general system employed in schools and colleges to-day. In 1897, he became managing editor of *The Ladies' Home Journal*, and now lives in Philadelphia. His writings bear the stamp of an original thinker, brilliant in style and convincing through the clearness of the reasoning and the force of attesting and illustrative facts, a good example of which will be found in this work, under the heading Education.

Jordan, in *Minnesota*, a post-village of Scott co., 39 m. W.S.W. of St. Paul, on C., St. P., M. & O. and M. & St. L. R.Rs. A manufacturing town; has brick-yards, 2 large flouring mills and a pump factory. *Pop.* (1895) 1,459.

Joss, *n.* [Chinese.] The household god or idol of the Chinese; every family has its joss.

Joss'-house, *n.* A Chinese temple or any place of worship.

Joss'-paper, *n.* Gilt paper cut in shapes and burned at funerals or as part of the religious exercises of the Chinese.

Joss'-stick, *n.* A reed or stick made of powder of fragrant wood and paste burnt by the Chinese as incense to the joss, or for measuring time.

Joule's Law. [From J. P. *Joule*.] (*Elec.*) A law which relates to the work done by an electric current in overcoming the resistance in the circuit. It is substantially as follows: In any circuit carrying a current I, in amperes, the heat energy developed, where R is the resistance of the portion of the current under consideration, equals I^2R. This formula expresses, in watts, the activity of that portion of the current. Now, an activity of one watt indicates the development of ·24 calories of heat each second; consequently, a complete expression of the heat set free is $H=I^2\times·24$ calories, equal to $IE\times·24$ calories a second. See Electricity.

Jour'nalism, *n.* Journalism is the gathering and distribution of news and opinion as exemplified in the modern newspaper. The history of the newspaper begins in Germany, the "news-pamphlet" appearing there as early as 1498. The first periodical distributing the news of the day was the *Frankfurter Journal*, a weekly publication started by Egenolf Emmel in 1615. In 1622, a like paper was published in London, called *The Weekly News*. This and its followers were the organs of stationers, and were hawked about the streets. The first newspaper which sought to influence public opinion was one published in Paris in 1631 under the guidance of Richelieu; it was in England, however, that the newspaper of modern scope and meaning was earliest developed. The political friction in the first half of the 18th century brought to its columns the pens of such Englishmen as Swift, Defoe and Bolingbroke, and gave it a power unknown in France and Germany until a half century later. Thus early was inaugurated the "leading article," which became such a feature later, and which, in the case of ably edited newspapers, is still a noteworthy feature.

The first newspaper in America appeared in Boston, in 1690, and was entitled *Publick Occurrences*. The authorities stopped its issue after the first number. The Boston *News-Letter* was started in 1704. Philadelphia's first newspaper was published in 1719, and New York's first in 1725. So slowly did journalism grow that in 1812 there were but 39 journals of all kinds in the country. The locomotive, with its increased transportation facilities, and the power-press, in which steam was used as early as 1835, did much to bring the penny paper into common use. Although London had established a successful daily (*The Courant*) as early as 1703, America had not taken so kindly to the idea. In 1832, Horace Greeley, in connection with Horatio Shepard, started a cheap paper which, while it failed, gave a noted impetus to further effort. The Baltimore *Sun*, New York *Herald*, Philadelphia *Ledger*, New York *Sun*, and New York *Tribune* were founded soon after, in quick succession, and the cheap dailies attained a circulation of from 10,000 to 15,000. In 1837 reporters came into service, and the sub-division and classification of editorial labor began, and in 1840 two reporters and two editors were necessary for the work of the daily issue. In 1847 a new, rapid Hoe press was introduced, and the following year the telegraph began to play a part in the receipt of dispatches. In 1849 the New York Associated Press was founded. This was originally a combination of the principal papers in New York to facilitate the gathering of shipping news. This rapidly enlarged its scope by using the pony expresses to Boston, Philadelphia, and Baltimore; and other combinations were formed upon the same pattern. In 1859 forms were first stereotyped by the paper-matrix process, and the Bullock circular press appeared. The Civil War gave the next great impetus to journalism. The "news-letter" had by this time been developed into a necessary feature. This idea was made further use of by the papers by sending correspondents to the front. In 1860 trade papers began to appear, and growing circulation led to experiments with wood-pulp and straw, which cheapened the item of paper and enabled a greater expenditure at other points. The New York *Tribune* made the first use of the Atlantic cables to report the news of the Franco-Prussian War, in 1870.

Up to 1883, the average price of an eight-page paper was four cents. From this time on the tendency was to compress the news and issue a paper of four pages for a less sum. At present the tendency is to increase the number of pages, without, however, increasing the price. This education of the public to the taste for news, the increased reading knowledge of the rising generations, with the growth of newspaper advertising, which has done much to make it profitable, have produced a development of journalism in America which is remarkable. In 1895 there were in the U. S. 2,050 daily papers, 40 tri-weeklies, 321 semi-weeklies, 14,685 weeklies, 385 semi-monthlies, 2,676 monthlies, 55 bi-monthlies, and 183 quarterlies, making the great total of 20,395 newspapers. New York State alone had 178 dailies and 1,127 weeklies—a total of 1,993. Little change in these figures occurred during 1896 and 1897.

The greatest element in the modern development of journalism has been coöperation. The same year (1849) had marked both the beginning of Reuter's news-gathering agency in Europe and the foundation of the Associated Press in America. Reuter's agency did not become popular until 1859, but since that time has spread over Europe, and maintains connections with a number of like associations in America. The Associated Press has agents in every considerable town and city in the world, and supplies news by the cable companies and the Western Union Telegraph. An attempt at competition was made thirty years ago in the American Press Association, which was driven out of the market. The great competitor of the Associated Press has been the so-called "United Press," which suspended business in April, 1897. The organization of these associations is marvellous and complete. They furnish identical news to all papers using their service. When their matter reaches the several offices, it is cut, retold, and suited to each paper's individual taste. The Associated Press is a mutual coöperative concern, whereas the franchise of the defunct United Press implied a previously determined expenditure. The Associated Press holds leases of 6,061 miles of wire by day and 14,450 miles by night. It has special affiliations with Reuter's and with the London *Times*. The expenses of the United Press have lately amounted to $887,000 a year, and the expenses of the Associated Press to $1,260,000, or nearly $3,500 a day. To such an extent has the coöperative idea been worked out that even the collection of local news in all of the large cities has been taken up by separate organizations.

The literary "syndicate" plays a large part in the making of newspapers, particularly of the small weeklies and the Sunday editions. Syndicates are literary agents who buy the output of authors, selling it again in manifold to various papers and furnishing generally a fixed amount per week or year. The country weekly is an important factor in the life of outlying districts. Each town of over 1,000 population has its own journal. Towns of 3,000 usually have two; of 5,000, three; and of 8,000, four. The daily begins with 12,000 population. Each county seat has from one to three of these weeklies. They treat particularly of local affairs, are generally of a strong political flavor, and have much to do with shaping the economic policies of their several regions. They often employ "patent outsides." These are composed of reprint matter made up in a central office, doing this work by wholesale for hundreds of papers, and forwarding half-printed sheets to the local offices, to be filled out with local news and advertisements on the back.

The development of the modern daily newspaper has reached a stage which for multiplicity of detail and perfect adjustment of part to whole is little short of marvellous. At the head of the vast array of talent which it calls to its service is the editor-in-chief. He it is who determines the political and social policies of the paper, decides what stand it shall take upon particular questions, and lays down the broad rules which, in his opinion, are necessary for its safe conduct. His finger is upon the pulse of his reading public. To his eye come all outside suggestion and protests, and his chair is the last court of appeal. Editorial matter is under his direct supervision, and the entire paper takes upon itself the hue of his mental complexion. A corps of editorial writers is in constant communication with him. A large part of their work—as to subject and handling—he suggests. Much they initiate themselves. A daily council is held, before the earnest work of the day begins, in which subject-matter is discussed and editorials arranged for.

In closest touch and daily consultation with the editor-in-chief is the managing editor. He takes the suggestions of his editor-in-chief, and works them out in their minutiæ. The detail of office government is under his supervision, and his is the hand which guards the entire structure; cuts here, ties there, and keeps the machine running smoothly. Next in the scale of rank, though perhaps not so in relative value, is the chair of the city editor. All matter which is "local" (in distinction from telegraphic and foreign news and editorial matter) passes through his hands. He maps out the assignments of the corps of reporters, keeps careful records of events which are to occur or are likely to happen, knows their bearing upon events in the past, estimates the value of a particular item to the particular field which the paper addresses, and studies his men with a view to using the particular talents of each one to their best advantage. He inveuts cartoons and instructs the artists. He decides which story shall be made a particular feature for the next day's paper, what shall be slurred or what shall be omitted. To him come all the "tips" and notices from private individuals, reports from various regular sources of information, such as the weather bureau, police, hospitals, &c., and all the odd ends of news clipped from other newspapers which may contain suggestions for the future. The city editor must be familiar with names and places. All information bearing upon persons whose names are of current mention must be at his fingerends. He must be quick to seize an opportunity of gaining news; must know the proper person to address, and the best methods of approaching them. Reporters sent on assignments, report to him with their information for the next day's paper, and to him they are answerable for error or failure.

Thus, much has been accomplished, in the case of the morning newspaper, by nine o'clock in the evening. At that hour "stories" begin to arrive over the wire from distant points and by special mail delivery. Much of this telegraphic matter is furnished by the various news-gathering associations, chief of which is the Associated Press. These dispatches fall to the lot of the telegraph editor, who gives them special supervision, determines what shall be used, edits them, and puts them in shape for the compositor. He is, of course, governed in his judgment by the instructions, general and particular, given him by the managing editor. Sporting matter (athletics, base-ball, racing, &c.) beturns over to the sporting editor, items of political bearing to the political editor, and others to the shipping, financial, foreign and society editors. The night city editor, who takes up the work where the city editor has left it, receives the assigned "stories" from late reporters, local material sent in by the associations, and the dispatches from near-by special correspondents (which the paper employs in places of importance, and whose work is supposed to be more specific and comprehensive than that of the news associations). He decides whether they are properly treated, and if not, what shall be their remedy. He distributes this matter for proper arrangement and editing to various desk men under him, giving instruction in each case as to the treatment, length, and style of headlines to be employed.

While this has been going on, the business end of the paper has been at work along other lines. The advertising manager has marshalled his solicitors, mapped out the day's work, received reports from men specially assigned to particular departments, examined the standings of firms wishing to make contracts, passed upon contracts brought in, made rates, and sent, properly written, to the compositor such advertisements as are intended for the next issue. The foreman of the composing-room has estimated the space to be occupied by prospective advertisements, and reports the result to the editorial room, where the "news editor waits." On the amount of such advertisement and the amount of "live" news depends the number of pages in the coming paper. To his duty falls the reading and correction of the proofs which are flowing in from the composing-room, and later, when the paper goes to press, the task of "making up" or determining the relative position of each article, and properly filling in all space. The unseen departments of a great modern newspaper are not the least interesting. The composing-room is filled with type-setting machines, where skilled compositors operate upon a key-board, similar to that of a typewriter. Adjunct to this are the proof-room (where proofs are read), the art-room (where electrotype cuts are made of illustrations), and the stereotyping room (where from the type forms are made paper matrices, from which in turn are cast the plates for the rotary press from which the paper is printed). These departments alone carry a weekly pay-roll which often runs well up into the thousands. Besides the positions mentioned, almost every great newspaper has upon its staff one or more "idea men," who are paid high salaries. They are supposed to be ever-flowing fountains of "schemes" for increasing circulation, of suggestion directed toward the betterment of every department, and are depended on to impart freshness, newness, and change—which is especially striven for. Beyond these subdivisions, positions are limited only by the capacity of the paper to pay salaries.

The expenses of a great metropolitan daily are as difficult of estimation as they are enormous. In some cases they amount to millions of dollars annually. Of this sum, the editorial salaries and pay to reporters amount, roughly speaking, to one-third; the expenses of proof-room, advertising corps, composition, stereotyping, ink, and paper, which last is one of the heaviest items, to one-third; while outside expenses, rent, Associated Press service, circulation and transportation departments, and telegraph tolls easily consume the remaining one-third.

Jowett, BENJAMIN, born at Camberwell, 1817; educated at Oxford; elected a scholar of Baliol College (1835), and fellow (1838). In 1842 he became a tutor and was ordained the same year; examiner of classical schools, and one of the commissioners for examinations for the Indian civil service; appointed Regius professor of Greek in Baliol (1855), and master of that college (1870). An article contributed to the *Essays and Review* on *The Inspiration of Scripture* was the ground of an accusation for heresy, for which he was tried and acquitted in the chancellor's court of the University of Oxford. Other works are *The Dialogues of Plato, Translated into English, with Analyses and Introductions*—a work that earned him world-wide repute for classical erudition; *Thucydides* and *Aristotle*. Died October 1, 1893.

Judd, ORANGE, editor and publisher; born near Niagara Falls, N. Y., July 26, 1822; educated at Wesleyan University, Conn., graduating in 1847; taught until 1850, when he entered Yale for the purpose of studying analytical and agricultural chemistry; became editor of *The American Agriculturist* (1853), and its owner and publisher (1856); also agricultural editor of New York *Times* (1855–63); president of the Orange Judd Company, which published *The American Agriculturist* and books on rural subjects; one of the projectors of the present system of railways on Long Island; retired from the Orange Judd Company (1883), and the next year founded *The Orange Judd Farmer*. A series of Sunday-school lessons of which he was the author (1862) have been the foundation for later popular lessons. The Orange Judd Hall of Natural Sciences at Wesleyan University was built by him. Died Dec. 27, 1892.

Judge, JOSEPH BUTE, geologist, born near Birmingham, Eng., October 10, 1811; graduated from St. John's College, Cambridge (1836); appointed geological surveyor of Newfoundland (1839), and took part, as naturalist, in the exploration and survey of Torres Strait, New Guinea, and the east coast of Australia. In 1846–50 he surveyed part of North Wales for the Geological Survey of the United Kingdom, and was appointed local director of the survey of Ireland in 1850; lecturer on Geology in the Museum of Irish Industry, and the Royal College of Science in Dublin. He was the author of *Excursions in and about Newfoundland; Narrative of the Surveying Voyage of H. M. S. "Fly," in Torres Strait*, &c.; *A Sketch of the Physical Structure of Australia*, &c. Died July 29, 1869.

Judge, WILLIAM QUAN, theosophical leader, born in Dublin, Ireland, April 13, 1851; emigrated to the U. S. (1864); admitted to the bar in New York (1872); was one of the founders of the Theosophical Society of America, and its first secretary. He made several journeys to South America and the West Indies; also travelled to Mexico and California, Central and South India, and to Europe, in the interests of the Theosophical Society. His associates in the establishment of the American Theosophical Society were H. P. Blavatsky and Col. H. S. Olcott. Died in Feb., 1896.

Jug'ful, *n.* The quantity a jug will contain.—(*Slang.*) A large quantity; as, not by a *jugful*.

Jugur'tha, a king of Numidia at the end of the 2d century, B. C. He was the grandson of Massanissa, but illegitimate, and brought up by Micipsa, along with his own sons, and left a share of the kingdom by him at his death. He, however, murdered both of them, and made himself master of the whole. The Romans therefore made war on him, and after a long struggle he was conquered, led in triumph by Marius, and starved to death in prison at Rome, 106 B. C.

Julienne (*zhu-li-'n'*), *n.* [*Julien*, a French caterer]. A clear soup containing various shredded or chopped herbs and vegetables, especially carrots.

Jumbo, *n.* Originally the name of a colossal elephant, widely exhibited, killed by accident, Sept. 15, 1885. —Hence, any very large person, animal or thing.

Jumelle, (*zhu-m'l'*), *a.* [Fr.] Twin or paired.—*Jumelle* ring. A ring made of two flat hoops of gold, one fitting within the other, the two forming one ring.

Juneau (*ju'nō*), in *Alaska*, a post-village and shipping port, located on a promontory between Linn Channel and the Taku river, opposite Douglass Island, and about 55 m. N.N.E. of Sitka. It had in 1896 a population of some 1,400, which was largely increased during 1897 by an influx of gold-seekers bound for the Yukon river district. See KLONDIKE; YUKON RIVER.

Juras'sic System. (*Geol.*) That division of the geological strata which follows the Triassic and precedes the Cretaceous. These three systems constitute the Mesozoic or middle geological age, of which the *J.* occupies the median position. The name is derived from the Jura Mountains, which display an extensive development of *J.* rocks. These also cover large areas in other sections of Europe, and occur in the western U. S. and elsewhere. The Lias formation lies at the base of the system and the Oölite above. This system is rich in fossils, embracing a number of large and peculiar forms of reptiles and the earliest birds known. Ammonite shells are also abundant.

Jurid'ic, or **Jurid'ical,** *a.* [Lat. *juridicus—jus, juris*, justice, and *dico*, to administer.] Relating to the administration of justice; acting in the distribution of justice; pertaining to a judge.
—Used in courts of law or tribunals of justice.

Juridical Days. (*Law.*) Days on which courts of justice can be lawfully holden.

Jurid'ically, *adv.* According to forms of law or proceedings in tribunals of justice; with legal authority.

Juriscon'sult, *n.* One who gives his opinion in cases of law; a jurist.

Jurisdic'tion, *n.* [Old Fr.; Fr. *jurisdiction*; Lat. *jurisdictio*. See JURIDIC.] The legal power or authority of doing justice in cases of complaint; the power of executing the laws and distributing justice.—The power of governing or legislating; the power or right of exercising authority.—The limit within which power may be exercised.

Jurisdic'tional, *a.* Pertaining or relating to jurisdiction; as, *jurisdictional* privileges.

Jurisdic'tive, *a.* Possessing jurisdiction.

Jurispru'dent, *a.* [Lat. *jus, juris*, and *prudens*, learned.] Comprehending law.
—*n.* A person learned in the law; a juris-consult.

Ju'rist, *n.* [Fr. *juriste*, from Lat. *jus, juris*, law.] A man who professes the science of law; one versed in the law, or, more particularly, in the civil law; a civilian.
—One versed in the law of nations, or who writes on the subject.

Juris'tic, or **Juris'tical,** *a.* Belonging to a jurist or to a jurisprudence. (R.)

Juste (*zhoost*), THEODORE, historian, was born at Brussels, Belgium, Jan. 11, 1818. The most important of his many works (more than 50 volumes) are: *Histoire Élémentaire et Populaire de la Belgique* (3d ed., 1848); *Hist. de la Révolution Belge de* 1790 (3 vols., 1846); *Précis de l'Histoire du Moyen Age* (5 vols., 1848); *Hist. de la Révolution des Pays Bas Sous Philippe II.*; *Les Pays-Bas au XVIme Siècle*. These writings did much to popularize the history of Belgium and France.

Jute, *n.* (*Bot.* and *Com.*) A vegetable fiber second only in utility and commercial importance to cotton and flax. It is furnished by the inner bark of plants of the genus *Corchorus*, of the order *Liliaceæ*, represented in the U. S. by the linden or bass-wood tree. These plants—of which there are two species, so nearly alike that they may be treated as one—are natives of India, where, especially in Bengal, they have been cultivated since a remote antiquity; also, in parts of China and the neighboring islands. The object was not only to obtain the fiber, but also for the sake of the edible leaves, which form a pot-herb in favor not only in India, but also in Greece and other eastern Mediterranean regions, it being among the commonest of culinary vegetables in Egypt and Syria. The species most widely cultivated for its fiber is *Corchorus capsularis*, a slender-stemmed annual from 5 to 12 feet tall. It requires a hot, humid climate, and moist soil, which is prepared for it as if for rice; the plants are weeded when 18 inches high, and the whole field is reaped as soon as it has come into flower. The stalks are then gathered into large bundles, and laid aside to undergo fermentation, which requires several days, according to the weather. The bundles are then placed under water, properly that which is clear and running, and left for about 17 to 20 days. When a test between thumb and finger shows that decomposition is sufficiently advanced, men enter the water, and, by a dextrous combination of handling and beating the stalks, separate the bark and pith from the layers of valuable fiber surrounding the stem, so that presently this can be drawn out without entangling or breaking the threads. The fiber is then washed, dried in the sun, and packed in bales for market. The most particular part of this process is the fermentation, which must be very carefully attended to in order to get high quality. Plants that are allowed to run to seed before cutting give a coarse fiber. "The best qualities of jute are of a clear, woody, white-yellowish color, with a fine, silky luster. Soft and smooth to the touch, and fine, long, and uniform in fiber. . . . In length the fiber varies from 6 to 7 feet, but occasionally it is obtained to a length of 14 feet, and, generally speaking, in proportion to the length of the fiber is its fineness of quality." The finest comes from northern Bengal, forming the trade varieties known in Calcutta as Uttariya and Deswal. This fiber is less strong than flax and hemp, and that recently prepared is more tenacious, softer, and better in color than old material. Storage causes it to grow darker, harsh, and brittle; the bales are liable to spontaneous combustion also, and many ship and warehouse fires have been due to this fact. These changes and degenerations are owing to its woody nature; and another interesting fact is that it will absorb a surprising amount of moisture from the air. It bleaches well enough to take delicate dyes.

The manufacture of jute into rope, cordage, gunny-cloth for sacking and other purposes has been one of the native hand-loom industries of India for many centuries, but it was not until about 1830 that any considerable exportation of the fiber took place, or that European manufacturers began to utilize it. Even now Great Britain and the United States take nearly the whole Indian export. In 1850 Great Britain imported nearly 25,000 tons, and 1890 the consumption increased to 525,000 tons. The United States began to import jute about 1850, receiving nearly 1,500 tons that year. By 1890 this was increased to 122,000 tons, of which the greater part was butts or cuttings, for which the demand grew owing to the invention of machinery by which they could be worked up into bagging material. This increased consumption stimulated its culture in Bengal (largely displacing indigo culture there), and built up enormous factories near Calcutta, where thousands of men are steadily employed. The greatest mart for the raw material is at Serajgung, the trade of which might be envied by any seaport. "During the busiest season the river [Brahmapoutra], then swollen by the rains to a breadth of 7 miles, is simply covered by the vast lumbering country boats that are bringing the fiber from the local marts to the great commercial center, and the sight of many steamers, and the ceaseless whir of machinery from the factories, might almost make a stranger think himself in some commercial city of the north."

The manufacture of jute is by a process analogous to that of flax or cotton, yet specially adapted to this fiber. The bales having been opened, the jute is spread out on a table, sprinkled with oil and water, and left for a day or two, when the excess of moisture is pressed out between rollers, leaving the material soft and pliable. The fiber is next straightened out by being passed through a series of carding machines having successively finer teeth, known as the breaker and finisher cards. The ribbons, or *slivers*, from these machines are stretched to uniformity of length in a drawing-frame, then slightly twisted in a roving machine, and wound upon bobbins by means of throstles (not cotton mules) making 3,000 to 4,000 revolutions a minute. The operations of preparing the warp-yarn, spinning, and weaving into cloth, are substantially the same as in cotton spinning and weaving, except that the shuttles and other parts are heavier and stronger in the working of jute threads.

The market price of unmanufactured jute in the U. S., during 1896, varied from $2\frac{13}{16}$ cents per pound in April to $3\frac{1}{16}$ cents in November. In 1890 there were in operation in Great Britain 116 jute factories, operating 14,107 looms, and giving employment to 14,408 males and 30,402 females. At the same date about 40 factories were running in the U. S. Since 1890 the demand for jute has suffered a serious decline, which appears to be due partly to the general dullness of trade, but more largely to the increased use of competing materials. In 1895, Great Britain's importations had fallen to 392,000 tons, and that of the U. S. to 110,000 tons; while in 1896 the U. S. imports suffered a still further decline to 89,000 tons.

K. This consonant, used in most ancient and modern languages, and the eleventh letter of the English alphabet, takes its derivation from the Greek *kappa*, equivalent to the Hebrew *koph*. In Latin, *k* occurs only in a few words, although it was frequently used in the same language as an abbreviation for words commencing with *c*; as, *K. T.*, for *capite tonsus*, &c. Although unknown to the Anglo-Saxon alphabet, *k* has in a great measure usurped in modern English c's place in words of Saxon origin. In the French alphabet, it is only used in words derived from foreign languages. *K*, or *c* hard, is designated a pure mute, being deficient in sound, if we except the peculiar slurpness of intonation it gives to the initial or final sound with which it is immediately associated. *K*, though termed the sharp mute of the gutturnl series (*k, g, ch, gh*), is more properly a palatal letter. When preceding a vowel, it has one invariable sound, analogous with that of c before *a*, o, and *u*, as in *kale*, *Koran*, *Kurd*; the two letters being sometimes interchangeable, as in German *Carl*, or *Karl*, Latin *kalendæ*, or *calendæ*. It was formerly the enstom to supplement c with *k* in various words of Latin derivation, as in *musick*, *publick*, &c. This practice has long fallen into desuetude. As a numeral, it was employed to express 250; and with a stroke over it, thus, $\bar{K}$, 250,000.

"*K* quoque ducentos et quinquaginta docebit."

(*Chem.*) The symbol of *potassium*. — See KALI.

Kaaba, *n.* See CAABA.

Kaar'ta, a kingdom of W. Africa, of considerable extent, W. of Bambarra, and N.E. of Senegambia. It is mountainous, but well cultivated.

Kaat'erskill, in *New York*, a small stream, rising in the Catskill Mountains, and entering the Catskill Creek near its month.

Kab, *n.* A Hebrew dry-measure. — See CAB.

Ka'bah, a ruined city of Yucatan, about 2 m. S.E. of Uxmel.

Kab'aln, *n.* Same as CABALA, *q. v.*

Kabas'son, or **Cabas'son,** *n.* (*Zoöl.*) See ARMADILLO.

Kabob', *v. a.* See CABOB.

Kabrnaug, (*kab-roo-ang'*,) an island of the Malay archipelago, between Gilob and the Philippines; Lat. 3° 47′ N., Lon. 127° E. It is 20 m. in circumference.

Ka'bul, or **Kau'bul.** See CABUL.

Kabyles', *n. pl.* An aboriginal N. African people. — See BERBERS.

Ka'desh, KA'DESS-BAR'NEA, or EN-MISI'PAT. (*Script.*) The name of a fountain, city, and the desert around (*Ps.* xxix. 8), in the S. border of the Promised Land. It is said, in *Num.* xx. 65, to lie in the "uttermost border of Edom," and was probably situated beyond the great valley El-Arabah, S. of the Dead Sea. *K.* was twice visited by the Israelites in their wanderings, — once soon after they left Mount Sinai, and again 38 years after. At the first visit, the mission and return of the 12 spies took place, the rebellion of the people, and their presumptuous effort to enter Canaan by the pass Zephath, immediately N. of *K.* (*Num.* xiii., xiv.) At their second visit occurred the death of Miriam, the murmuring of the people for water, the miraculous supply, the sin of Aaron and Moses in smiting the rock, and the fruitless request for a passage through Edom. (*Num.* xx. 1–22.)

Ka'di, Kadias'ter, *n.* Same as CADI, *q. v.*

Ka'dink Island. See ALASKA.

Kadichah, (*ka'di-shâ*,) the first wife of Mohammed, who, at the period of her marriage with the prophet, was the widow of two husbands, and 40 years of age, Mahomet being only 25. She had four sons and four daughters by Mahomet, among the last the beautiful Fatima. D. 628.

Kad'monites, *n.* (*Script.*) A tribe of Canaanites, who inhabited the Promised Land, E. of the Jordan, about Mount Hermon.

Kadom', a town of European Russia, govt. of Tambov, 230 m. S.W. from Moscow; *pop.* 6,000.

Kafas'son, *n.* (*Zoöl.*) Same as KARDASSON.

Kaf'fa, CAF'FA, a seaport of European Russia, on the S.E. coast of the Crimea; Lat. 45° 1′ 37″ N., Lon. 35° 23′ 27″ E. This town, the ancient *Theodosia*, carried on a vast trade with the Athenians, and after undergoing many vicissitudes, fell, in the 13th cent., into the hands of the Genoese, who made it the chief seat of their power during the lengthened period of their ascendancy in the Euxine. In 1475, it was taken by the Turks, and some time afterwards, by the Russians, who have since retained it. Its port is safe and good. *Pop.* 8,338.

Kaf'ir, Ka'fir, or CAF'RE, *n.* See CAFFRE.

Kaffle, *n.* Same as COFFLE, *q. v.*

Kaffra'ria. See CAFFRARIA.

Kaf'ilah, *n.* In Africa, a caravan of travelling merchants.

Kafiris'tan, Kafiris'tan, or **Caffris'tan.** ["Country of the Kaffirs or infidels."] A country of Central Asia, on the south declivity of the Hindu Kush Mountains, forming part of the north basin of Cabul. It forms a part of Afghanistan, though the tribes are generally independent. *Area*, 5,000 sq. m. The inhabitants differ from the neighboring tribes in their origin, language, creed, and complexion. In the latter, they bear a resemblance to Europeans, and are apparently of Aryan origin. Their state of isolation and independence is mainly owing to the natural strength of the region, which, though frequently invaded, has never been subdued. The soil is sufficiently fertile to render outside intercourse almost unnecessary. The inhabitants are very skilful workers in wood and metals. *Pop.* Estimated (July 1, 1897) at about 200,000.

Kaf'tan, *n.* See CAFTAN.

Kage, (*kāj*,) *n.* (*Arch.*) A screened-in chantry-chapel.

Kagool', Kagoul', or **Kagul',** a lake of Russia, S.W. of the prov. of Bessarabia. *Greatest length*, 24 m.; *breadth*, about 9 m.

Ka'han, *n.* (*Zoöl.*) The Proboscis Monkey, *Nasalis larvatus*, or *Semnopithecus nasica*, a species of the Solemn Apes, the most grotesque in appearance of all the different species, the nose being of such a length and form as to present to the mind no other idea than that of a caricature. It is a large species, measuring two feet from the tip of the nose to the tail, which is more than two feet long. The face is of a brown color, marked with blue and red; the ears broad, thin, naked, and hid within the hair; the head is large, and covered with chestnut-colored hair; the whole body is also of a similar color, except that on the breast it approaches to orange. It is chiefly found in Cochin-China and Borneo; and is sometimes seen in large troops. It feeds only on fruits.

Fig. 1465.
KAHAN. OR PROBOSCIS MONKEY.
(*Copied from Tenney's Zoölogy.*)

Kaha'ui, *n.* In the Levant, a public notary.

Kahle's, in *Pennsylvania*, a village of Jefferson co.

Kail, Kale, *n.* (*Bot.*) A variety of the cabbage. See BORECOLE.

Kail'-yard, *n.* See KALE-YARD.

Kain, *n.* (*Scots Law.*) Poultry, &c., payable to a landlord as part of rent.

Kaiouk (*kai-ook'*), or **Gaiou'-Khan,** third graud khan of the Mongols, born about A.D. 1205, was son of Oktai, and grand-son of Jenghis-Khan. He completed the conquest of China, commenced by his father, but died suddenly in the midst of his victories. *K.* is called among the sovereigns of China Ting-Tsoung. D. 1248.

Kair'wan, or **Keer'wan,** a large city of N. Africa, regency Tunis, 85 m. S. of the city of Tunis; Lat. 35° 36′ N., Lon. 10° 15′ E. This is esteemed the second city in the regency, and is famous for its fabrication of yellow Morocco boots and slippers, the delicate dye of which it has hitherto been found impossible to equal. Taken and occupied by the French Oct., 1881. *Pop.* (1897) 15,500.

Kaisari'ah, the modern name of CÆSAREA (*q. v.*).

Kaisari'ah. [Anc. *Mazaca.*] A town of Asiatic Turkey, prov. Karamania, on the Karasa, a tributary of the Euphrates, 135 m. S.E. of Angora; Lat. 38° 42′ N., Lon. 35° 20′ 20″ E. It is a considerable place and the emporium of an extensive trade. Cotton is grown in great quantities in the vicinity. *Manuf.* Cotton fabrics and Morocco leather. *Pop.* about 25,000.

Kaiser (*kī'ser*), *n.* [Ger.; Lat. *Cæsar.*] The title borne by the emperors of Austria, as representatives of the old Roman emperors.

Kaiserslau'tern, a town of Rhenish Bavaria, pleasantly situated on the Lauter, 25 m. N.W. of Landau. *Pop.* (1897) 23,110.

Kakabik'ka, a remarkable cataract of British North America, in the Kamanatekwoya river, just before it enters Lake Superior. It has a fall of 130 feet over a mica-slate rock.

Kak'uy River. See ALASKA.

Kak'odyl, Kak'odyle, Cac'odyl, *n.* (*Chem.*) An organo-metallic base, containing arsenic. It is prepared from its chloride by the action of zinc. It is a thin, transparent, colorless liquid, resembling arsenietted hydrogen in smell. It is very inflammable, and when poured into oxygen, chlorine, or the air, it inflames. It boils at 338° Fahr., and crystallizes in large transparent square prisms when cooled down to 21° Fahr. It forms salts with the halogens and acids. It also forms an acid containing three equivalents of oxygen. This acid is peculiar as possessing no poisonous property, though containing nearly half its weight of arsenic. *Form.* $(CH_3)_4As_2$, or Kd.

K., Oxide of. When a mixture of equal weights of arsenious acid and dry accetate of potash is submitted to distillation, a heavy poisonous liquid is obtained, which has a most disgusting odor of garlic, and takes fire spontaneously when exposed to the air. This liquid, the oxide of kakodyl, has long been known under the names of *alcarsin* (arsenical alcohol), and *Cadet's fuming liquor*. *Form.* $(CH_3)_4As_2O$.

Kak'oxene, Cakoxene, *n.* [Gr. *kakos*, bad, and *xenos*, guest.] (*Min.*) A native phosphate of iron, occasionally associated with the native oxides. So called, probably, in consequence of the injurious effect produced by the phosphorus which it contains, upon the iron being smelted from the ore with which it is found.

Kakoxenite, CAKOXENITE, *n.* (*Min.*) See KAKOXENE.

Kalah (*ka'la.*) [Ar., a castle.] A prefix of numerous fortresses and villages of W. Asia.

Kalamai'ka, *n.* A favorite Hungarian dance.

Kalamazoo', in *Michigan*, a river rising in Calhoun co., and flowing a general W. and N.W. course through Kalamazoo co., enters Lake Michigan from Allegan co. *Length*, abt. 200 m.

—A S.W. co.; *area*, abt. 576 sq. m. *Rivers.* Kalamazoo, Portage River of the Kalamazoo, Portage River of the St. Joseph, and Bear and Gull creeks. *Surface*, generally level; *soil*, very fertile. *Cap.* Kalamazoo. *Pop.* (1894) 42,055.

—A thriving city, cap. of the above county, on the Kalamazoo river, and 140 m. W. of Detroit. The town is handsomely located, well built, and increasing rapidly in population and importance. Kalamazoo College, under the direction of the Baptists, is here located. Celery is very largely produced near by. *Pop.* (1897) about 22,750.

Kal'amo, in *Michigan*, a post-township of Eaton co.

Kalat-kadi'ri, a strong fortress of Persia, in Khorassan, 58 m. N.E. of Meshed, and the principal stronghold of Nadir Shah.

Kalb, JOHN, BARON DE. See DE KALB.

Kal'be, Cal'be, a town of Prussian Saxony, govt. of Magdeburg, 18 miles S. of the latter city, on the river Saale. *Manuf.* Hosiery and woollens, paper, tobacco, and sugar. *Pop.* 7,500.

Kale, Kail, *n.* [A.S. *cawl*, colewort.] A kind of cabbage. See BORECOLE.

Kaleid'ophon, Kaleid'ophone, *n.* [Gr. *kalos*, beautiful, *eidos*, form, and *phōne*, sound.] An invention of Prof. Wheatstone's, in which a knob reflecting a point of light attached to a vibrating plate describes various beautiful curves corresponding with the musical notes produced by the vibrations.

Kaleidoscope, (*kāl-ī'dos-kope*,) *n.* [Gr. *kalos*, beautiful, *eidos*, form, and *skopeo*, to view.] An optical instrument, invented by Baptista Porta and Kircher, described by R. Bradley in 1717, and patented by Sir David Brewster in 1817, — which, by a particular arrangement of reflecting surfaces, presents to the eye an infinite variety of beautiful colors, and symmetrical combinations of images, — every change of the instrument affording a new and gorgeous picture. It is chiefly used as a toy, but is also useful in furnishing ideas to designers of patterns for paper-hangings, carpets, &c., and any woven or printed fabric in which symmetry of design is desirable. The simplest form of kaleidoscope consists of a cylinder of tin, in which two plain rectangular mirrors of polished metal, or of glass, having the back blackened, are fixed at such an angle of inclination to each other as may be obtained by dividing 360° by the numbers 3, 4, 5, 6, 7, 8, &c. The cylinder is covered at one end with a circular plate of metal, having a small hole in the centre, while a rim of metal is fitted over the other end, which is so constructed that two circular pieces of glass may be fixed in it, at a short distance from each other, having some pieces of colored glass, beads, lace, feathers, &c., in the space between them. The piece of glass that is placed at the extreme end of the cylinder should be ground glass, so that, while the light is admitted into the interior of the instrument, external objects may be prevented from becoming perceptible to the observer. An angle of 60° is perhaps the best angle of inclination for the mirrors, as it may be readily determined, and affords a sixfold repetition of the pattern, which presents a tolerably uniform appearance of color in all parts. If the angle of inclination be greater than 60°, the pattern will not be multiplied to so great an extent; but if less, although the pattern will be repeated a greater number of times, it will lose considerably in brilliancy, at and towards the part where the reflections of the pattern meet, by the frequency of the multiplication. In some kaleidoscopes, the mirrors are made trapezoidal in form, instead of rectangular, the broader ends being placed at the lower end of the tube. The principle of the kaleidoscope will be understood from the accompanying figure,

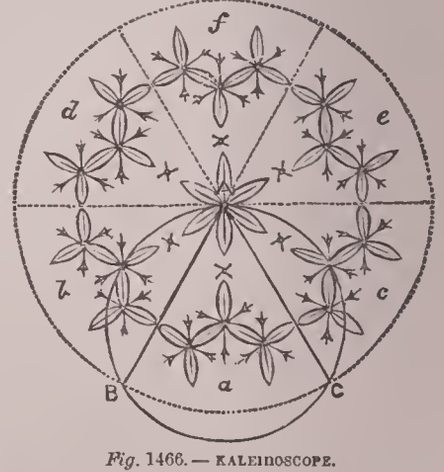


Fig. 1466. — KALEIDOSCOPE.

in which the smaller circle, A B C, represents a section of the tube of the instrument, and A B, A C, sections of

the mirrors, which are represented as inclined to each other at an angle of 60°. The objects in the space *a*, between the glasses, are seen directly by the eye; the part of the pattern in the space *b* is formed by the reflection of the objects in the space *a*, in the mirror A B; and the part c, by the reflection of the objects in the space *a*, in the mirror A C: these reflections are again mutually reflected by the opposite mirrors, and form the parts *d*, *e* of the pattern, while the images reflected in each mirror for the third time unite in the part *f*, so as to form a corresponding appearance to the other parts. It is manifest, that, unless the angle at which the mirrors are inclined be accurately determined, the reflections will not coincide, and the pattern will not be complete in the part *f*. Kaleidoscopes are made in which the angle of incidence of the mirrors may be varied at pleasure, and by the aid of a lamp and a system of lenses in connection with the instrument, the pattern may be projected on a screen, in an enlarged form, like the image thrown from a slide in a magic lantern. A pleasant effect of a similar nature, in which the images of the original object are multiplied, and produced in different directions, may be produced by fitting the edges of three, four, or six trapezoidal mirrors together, so as to form a hollow prism, and putting them into a tube, similar to that in which the two mirrors of the ordinary *K.* are inserted. Instruments of this kind, which were invented by Dr. Roget, are called *polycentral kaleidoscopes*. An instrument resembling the *K.* in its general principles, to which the name of *debuscope* has been given, was invented in Paris in 1860. It is used for forming patterns for calico-printing.

Kaleidoscop'ic, Kaleidoscop'ical, *a.* Pertaining to a kaleidoscope; variegated in appearance.

Kal'enberg, or **Cal'enberg,** a former district of Prussia, province of Hanover; *area*, 1,050 sq. m.

Kal'endar, *n.* See CALENDAR.

Kalenda'rial, *a.* Pertaining to a kalendar; having the form of a kalendar.

Kal'ender, *n.* An Eastern dervish. See CALENDER.

Kal'ends, *n.* See CALENDS.

Kale'-yard, *n.* In Scotland, a kitchen-garden.

Kâli. (*Hind. Myth.*) See UMA.

Ka'li, *n.* An Arabic word, signifying the ashes left after the combustion of vegetable substances; hence the word *alkali*. Potash is frequently termed *kali*, and potassium *kalium*, by the German chemists; hence *K.* is used as the symbol of potassium.

(*Bot.*) See SALSOLA.

Kali'da, in *Ohio*, a post-village of Putnam co., on the Ottawa river, about 112 m. N.W. of Columbus.

Ka'lif, *n.* Same as CALIPH. *q. v.*

Ka'liform, *a.* Formed like glass-wort.

Ka'lil-Pacha, grand-vizier of Amurath II. He gained the battle of Varna, in 1444, over Ladislaus, king of Hungary, who perished in the fight. He also assisted at the taking of Constantinople by Mahomet II., in 1453, but was soon afterwards banished for alleged treason.

Kalionga, CALI-YUGA, (*ka-le-yo'ga*,) *n.* (*Chronol.*) The age of iron in the Hindoo chronology. It is important as commencing the authentic period of Hindoo history; the three preceding æras being entirely fabulous. The æra of *K.* is computed to commence about 3102 B. C.

Kal'isz, a walled city of Poland, and the most W. in the Russian dominions, cap. of palatinate of same name, 128 m. W.S.W. of Warsaw, and 70 S.E. of Posen.—*Manuf.* Linen and woollen cloths, and leather. *Pop.* 13,478.

Ka'lium, *n.* (*Chem.*) See KALI.

Kal'kas, a Tartar nation of the Mongol race, who occupy extensive tracts to the N. and W. of China.

Kalk'brenner, CHRISTIAN, a German musical composer, B. at Münden, 1755, resided at Berlin, attached to the court of the Prussian king, but, in 1796, went to Paris. His most celebrated works are *Olympus*, *Saul*, and *Don Juan*; besides which he composed many smaller pieces. D. at Paris, 1806.—His son, CHRISTIAN FRIEDRICH, B. at Cassel, 1784, acquired, at an early age, a high reputation as a brilliant performer on the pianoforte. He removed in 1806 to Paris, whence he made frequent professional tours throughout Europe, his fame daily increasing, both from his own performance, and the brilliant compositions which he gave to the world. In 1823 he joined M. Pleydel as a manufacturer of keyed instruments, and continued to occupy a prominent position in the musical world till his decease. D. of cholera, 1849.

Kallifthor'gan, *n.* (*Mus.*) An instrument played as a piano, and producing an effect equivalent to a violin, violoncello, and double-bass in concert.

Kallo, (Great,) a town of Austria, in E. Hungary, co. Szabolcs, 23 m. N.N.E. of Debreczin. Saltpetre is extensively manufactured. *Pop.* 6,000, mostly Protestants.

Kallund'borg, or **Callund'borg,** a sea-port of Denmark, on the W. coast of the island of Seeland, 58 m. W. of Copenhagen. It has a good harbor, and an active trade in cattle and grain. *Pop.* 2,700.

Kal'mar. See CALMAR.

Kal'mar, in *Minnesota*, a village and township of Olmstead co., on a branch of the Zumbro River, about 10 m. W.N.W. of Rochester.

Kal'mia, *n.* [Named after Peter *Kalm*, professor at Abo, Finland.] (*Bot.*) A genus of plants, order *Ericaceæ*. They are beautiful shrubs, natives of North America. Leaves entire, evergreen, coriaceous; flowers in racemose corymbs, white and red. *K. latifolia* (Fig. 1467), the Mountain Laurel or Calico-bush, is found in woods in all the Atlantic States from Maine to Georgia, and west to Ohio and Kentucky. The wood is usually very crooked, fine-grained, and compact. Flowers in splendid corymbs, white, or variously tinged with red, abundant. *K. angustifolia*, the Narrow-leaved Laurel, or Sheep-poison, is a somewhat smaller but equally beautiful shrub, with flowers of a deep purple growing in small, axillary fascicles, and apparently whorled among the leaves. Both these species are said to be poisonous to cattle.

Fig. 1467.—THE MOUNTAIN LAUREL, (*K. latifolia.*)

Kal'mucs. See CALMUCKS.

Kaloc'sa, or **Caloc'za,** a town of Austria, in Hungary, on the left bank of the Danube, 70 m. S. of Pesth. It is the see of an archbishop, and contains a library of 30,000 vols. *Pop.* 12,600.

Kaloy'ers, *n. pl.* (*Eccl. Hist.*) See CALOYERS.

Kal'pee, or CALPEE, a large and populous town of British India, pres. of Bengal, prov. Agra, on the S. bank of the Jumna, 45 m. S.W. of Cawnpore. It is a place of considerable trade, being an entrepôt for the transport of cotton from the S.W. of India to the Gangetic provs.; and has also manufactures of sugar-candy and paper. *Pop.* Estimated at 40,000.

Kal'somine, *n.* See CALCIMINE.

Ka'luga, or **Kalouga,** a govt. of Russia in Europe, near its centre, chiefly between Lat. 53° 30′ and 55° 30′ N., and Lon. 33° 40′ and 37° E., having W. the govt. of Smolensk, N. the latter and Moscow, E. Tula, and S. Orel. *Area*, 11,470 sq. m. *Surface.* A plain, watered by numerous rivers, of which the Oka is the chief. *Climate.* Mild. *Soil.* Infertile. *Prod.* Rye, oats, wheat, barley, hemp, and flax. *Manuf.* Sail-cloth, linens, and cottons, leather, soap, candles, hardware, and sugar. Its trade is for the most part considerable. *Cap.* Kaluga. *Pop.* 987,954.

KALUGA, a town, and cap. of the above govt., is situate on the Oka, 100 m. S.W. of Moscow. This is one of the most important commercial and manufacturing places in the empire, producing sail-cloth, woollens, sugar, leather, oils, cotton-stuffs, hats, paper-hangings, earthen-ware, soap, and vitriol. *Pop.* 36,987.

Kal'wary, a town of Russia, in Poland, province Augustow, 75 m. S. of Wilna. *Pop.* 6,560.

Ka'ma, a river of European Russia, the principal tributary of the Vulga, rising in the government of Viatka, near Glazgov, and flowing in a S. W. direction, joins the Volga about 50 m. N. of Kazan. Length, 1,400 m., most of which is navigable. It is connected with a branch of the Dwina by a canal 12 miles long, establishing water communication between the Caspian and White Seas.

Kamchat'ka, a large peninsula at the N.E. extremity of Asia, forming a part of the Russian government of Primorsk, and bounded N. by the country of the Tchuktchi; E. by the Aleutian archipelago, and W. by the Sea of Okhotsk. It lies between 51° and 62° N. Lat., and 166° and 167° E. Lon.; has a length of about 800 m., and a breadth varying from 100 to 250 m. *Estim. area*, 80,000 sq. m.—*Gen. Desc.* The coastline on the W. side is tolerably regular, the Gulf of Penginsky, and its N. end, forming the only considerable exception; but on the E. side are several extensive bays, enclosed respectively between the capes Chipunsky, Kronotzky, Kamchatka, Ozernoy, and Olutorsky, the last of which is near the N. end of the peninsula. Cape Lopatka, Lat. 50° 0′ 15″ N., Lon. 152° 2′ 15″ E., is the S. extremity of the country. The coast, generally speaking, is abrupt and rocky, especially on the E. side, and the peninsula, when viewed from the sea, presents the appearance of a barren and desolate rock; but in the interior there are plains of considerable extent, having a soil well adapted for tillage. The high lands, which cover about two-thirds of the entire surface, consist of a chain of volcanic mountains, running in a S.S.W. direction. Many volcanoes in this range have been ascertained to be in a high state of action; and it seems very probable that, geologically considered, they form only one extremity of a great volcanic belt continued through the Kurile and Japanese islands, Formosa, and the islands of the East Indian archipelago. Klutchefskaya, the highest summit, is 16,988 ft. above sea-level. There are no rivers worthy the name in *K.*—*Geol.* The general geological formation of the peninsula is of igneous origin, comprising porphyry, jasper, felspar, schist, trachyte, and dolomite; the W. side, however, is composed of Neptunian, secondary, and tertiary rocks, among which may be distinguished various beds of lignites, sandstone, iron sand, and chalk, in the last of which are found large quantities of yellow amber; fossil shells have also been discovered in great variety.—*Clim.* Cold, with raw piercing winds and thick fogs.—*Veget. Prod.* Rye, barley, hemp, flax, with some kinds of fruits and vegetables. The forest-trees comprise the birch, fir, larch, poplar, cedar, willow, and juniper.—*Zoöl.* The animals usually hunted are bears, lynxes, sea and river otters, reindeer, foxes of different colors, sables, and beavers; and the number of skins exported is supposed to average about 50,000 yearly, chiefly of foxes and sables. Among the birds, the principal are moor-game of different kinds, and many varieties of water-fowl, the eggs of which, saturated with oil, constitute the chief food of the inhabitants. The seas abound with fish, including many varieties of salmon, some of which are peculiar to the country; also cod, herrings, and seals. Walruses and whales furnish oil exclusively employed for domestic purposes.—*Inhab.* The natives, comprising the tribes of the Kamchadales, Koriaks, and Lamats, would seem to be identified with the Mongolian race, rather than with the Esquimaux, as alleged by some writers. They are naturally frank, honest, and hospitable, but their character has been much corrupted by the debased morals of the Russians. Their employment, when not agricultural, is hunting and fishing. *Cap.* Petropaulovski. *Pop.* Estimated at 6,000, of whom a few are Russians.—*Hist. K.* was first known to the Russians in 1696, when Vladimir Atlassov invaded the peninsula, and made great part of it tributary to Peter the Great. The conquest was completed in 1706, after which period a regular tribute was paid, in furs, to the governor of Irkutsk.

Kami, (*ka'me.*) (*Japanese Myth.*) A name given in Japan to certain spirits or divinities, the belief in which seems to have characterized the ancient religion of that country, before it became intermingled with foreign doctrines, and still constitutes its basis. The kami are believed to be partly elemental, subordinate to the deities of the sun and moon, and partly the spirits of men,—in fact, every natural agent and phenomenon is supposed to have its own spirit or genius. The spirits of human beings survive the body, and, according to the actions of the individual in life, receive reward or punishment. When a man's life has been distinguished for its piety, or for the good he has done to his fellow-men, after death he is deified, and his *kami* is worshipped. The number of these kami at the present day is estimated at 3,000, and they are worshipped in temples without statues or images. Each kami is represented by a mirror, as the emblem of purity; and all the rites and ceremonies seem to be typical of purification. The priests who superintend the worship of these temples are called *kannushi*, or the ministers of the spirits.

Kaminietz, (*kam'e-nēēts.*) [Pol. *Kaminiec Podolski.*] A fortified town of Russian Poland, govt. Podolia, of which it is the cap., on the Smotryez, 215 m. S.E. of Kiev. *Manuf.* Unimportant.

Ka'mishin, a town of Russia, on the Volga, 105 m. S. of Saratov. It was founded by Peter the Great, and inclosed by walls.

Kam'mererite, *n.* [Named after *Kämmerer*, a German mineralogist.] (*Min.*) Hydrated silicate of alumina and magnesia, often accompanying chromite of iron.

Kamouras'ka, in prov. of Quebec, a river which traverses the co. of Kamouraska, and enters the St. Lawrence about Lat. 47° 83′ N., Lon. 69° 48′ W.

—A group of small rocky islets in the St. Lawrence River, opposite the mouth of the Kamouraska.

—A co.; *area*, about 1,018 sq. m. *Rivers.* St. Lawrence, Walloostook, St. François, and Rivère du Loupe. *Pop.* 21,254.—Its cap., of the same name, is on the St. Lawrence, about 90 m. N.E. of Quebec. *Pop.* (1897) 650.

Kam'pen, a town of the Netherlands, prov. of Overyssel, beautifully situated near the mouth of the Yssel, in the Zuyder-Zee. *Manuf.* Chiefly woollens. *Pop.* 13,500.

Kamptu'licon, *n.* (*Manuf.*) A name given to a new variety of floor-covering, composed of India-rubber, gutta-percha, and cork. Equal quantities of the two former substances, having been first liquefied in naphtha, or some other proper solvent, are mixed with cork which has been ground into a fine dust. This mixture, while warm and soft, is flattened out, by being passed under smooth, heavy rollers, into sheets ten or twelve yards long, varying in width from one to two yards, and from one-eighth of an inch to one inch in thickness. The sheets thus prepared are allowed to lie flat, until sufficiently set or hardened, when they are rolled up as fit for use. Patterns are printed on the material thus prepared, in the same way in which floor-cloth is stamped by blocks. The advantages of *K.* over ordinary floor-cloth consist in its warmth, softness, and elasticity, and if the whole floor is covered, it is perhaps more durable, but on the other hand it is easily torn, and when once laid upon a floor it cannot be removed, without considerable damage.

Kam'sin, *n.* [Ar. *khamsin*] Same as SIMOOM.

Kan, *n.* See KHAN (the more correct spelling).

Kan'abec, in *Minnesota*, an E. co.; *area*, about 522 sq. m. *Rivers.* Snake river, and some smaller streams. *Surface*, uneven; *soil*, not very fertile. *Cap.* Mora. *Pop.* (1895) 2,714.

Kanack'a, Kanak'a, *n.* A Sandwich-Islander.

Kanaga'wa, in Japan. See YOKOHOMA.

Kan'aris, a Greek patriot. See CANARIS.

Kanaw'ha, in *West Virginia*, a S.W. central co.; *area*, about 825 sq. m. *Rivers.* Great Kanawha, Elk, Coal, and Pocotalico rivers. *Surface*, diversified; *soil*, fertile. *Min.* Coal in immense quantities, and salt. *Cap.* Charleston. *Pop.* (1890) 42,756.

Kanawha Court-House, in *West Virginia*, the name of the post-office of Charleston (*q. v.*).

Kanawha Falls, in *West Virginia*, a post-village of Fayette co., on C. & O. and K. & M. R.Rs.

Kanawha River. See GREAT KANAWHA, and LITTLE KANAWHA.

Kanawha Saline, in *West Virginia*, a village of Saline co., on the Great Kanawha river, about 10 m. above Charleston.

Kan'dahar. See CANDAHAR.

Kandiyo'hi, in *Minnesota*, a S.W. cent. co.; *area*, abt.

860 sq. m. *Rivers.* Small and unimportant, but the co. contains many lakes. *Surface,* nearly level; *soil,* fertile. *Products,* wheat, in large quantities, oats, rye, barley, &c. *Cap.* Willmar. *Pop.* (1895) 16,322.
—A township of above co.

Kau'dler, JOHN JOACHIM, a German master-modeller in the porcelain manufactory at Meissen, born in Saxony, 1706. He executed many beautiful figures, particularly of the apostle St. Paul, and the death of St. Xavier. Died 1776.

Kaudo'ta, in *Minnesota,* a township of Todd co.

Kau'dy. See CANDY.

Kane, ELISHA KENT, a distinguished American traveller, b. at Philadelphia in 1822, studied medicine, and entered the U. States navy as assistant surgeon in 1843. He made his first voyage to China, and, pursuing his taste for adventures during the next three years, visited the Philippines, Ceylon and India, Egypt and Greece. At Java, his travelling-companion, Baron Loé, a Prussian, died of fatigue. Dr. Kane subsequently visited Egypt, and explored the Nile as far up as the frontiers of Nubia; he walked completely over Greece, and, after a short sojourn in the United States, set out for the coast of Africa, penetrating to the slave markets of Whydah. Prostrated by fever caught in that country, he returned in an enfeebled condition of health to his native land. He next served with the American army against Mexico, and experienced many fatigues and dangers throughout the campaign. In 1850 he accompanied the first American expedition, dispatched by Mr. Grinnell, a merchant of New York, in search of Sir John Franklin, and four years afterwards published *A Personal Narrative of the Grinnell Expedition in Search of Sir John Franklin.* In 1853 he was appointed to the command of a second expedition to the Arctic regions, for the same purpose, and was absent two years. In 1856 he published the results of his second voyage, under the title of *Arctic Explorations.* The Royal Geographical Society of London bestowed upon him its great gold medal. D. at Havana, 1857.

Kane, SIR ROBERT, a celebrated Irish chemist, b. in Dublin, 1810. After being educated for the profession of medicine, he became professor of chemistry to the Apothecaries' Hall of Dublin, and was subsequently elected member of the Medico-Chirurgical Society of the same city, and of the Paris societies of Pharmacy and Medical Chemistry. In 1830–31 he published an essay on the *Pathological Condition of the Fluids in Typhus Fever,* which gained the prize offered by Dr. Graves; and the *Elements of Practical Pharmacy.* The following year he received the degree of M. D. from Trinity College, Dublin; in 1841 he became fellow of the Irish College of Physicians. In 1844 he published a work on *The Industrial Resources of Ireland,* which excited considerable interest at the time. The lord-lieutenant of Ireland, in 1846, bestowed upon him the honor of knighthood. He afterward aided in the formation of the Museum of Irish Industry, and published several works on the application of chemistry to agriculture and manufactures. In 1848 he became president of Queen's College, Cork. Died Feb. 16, 1890.

Kane, in *Illinois,* a N.E. co.; *area* about 540 sq. m. *Rivers.* Fox or Pishtaka river, and several smaller streams. *Surface,* generally undulating; *soil,* very fertile. *Cap.* Geneva. *Pop.* (1890) 65,061.
—A post-village and township of Greene co., about 75 m. S.W. of Springfield.

Kane, in *Utah,* a S.E. co., bounded S. by Arizona; *area,* 4,172 sq. m. It is crossed by the great cañon of the Colorado river, which is joined within its borders by the San Juan river. There is some arable land at the base of the mountains and in the valleys. *Products,* wheat, corn, potatoes and live stock. *Cap.* Kanab. *Pop.* (1895) 1,908.

Kangaroo', *n.* (*Zoöl.*) The native name of the *Macropodidæ,* an extensive family of quadrupeds, order *Marsupialia,* distinguished by the female having no *placenta,* and by their young being nursed in a peculiar pouch in the body of the mother. The species vary much in appearance and habits. Some are carnivorous, while others live on vegetables. They are nearly all confined to Australia, and are characterized by a very low degree of intelligence. The Phalangers form a subfamily, having the second and third toes so completely included within the skin as to appear like a single toe, were it not for the claws, which project distinctly. They are covered with a close, thick, soft fur, and live on trees or bushes. They have a strong, prehensile tail, with which they hook themselves to the branches upon which they doze during the day. They possess a very strong odor, but their flesh is eaten. In the genus *Cuscus* the tail is long, scaly, and rat-like, and the ears are short. In the genus *Petaurus,* the skin of the body is expanded between the anterior and posterior limbs, which enables the species to leap from one tree to another. Four or five species are known, of which the most familiar is the flying squirrel of Norfolk Island. The genus *Pharcolarctus,* or Koala, bears some resemblance to the phalangers, but has no tail. The *Macropina,* or Kangaroos proper, have the tarsus and middle toe of the hind foot elongated, and the two inner ones rudimentary, equal, and united together. This genus has very large posterior limbs, and the tail is of remarkable length and strength. This organ is of great importance to the animal, since it is used as an organ of locomotion, a weapon of offence, and also as a third point when the *K.* rests on its haunches. It also assists in the astonishing leaps which these animals continually take when moving about. Their progress actually consists of a series of springs, sometimes 20 feet in length. They seldom stand on all fours, except when feeding, and are harmless and inoffensive creatures. The *Macropus major,* or Great *K.,* is the largest species. It measures 5 or 6 feet from the tip of the nose to the end of the tail, and, when sitting, appears about the height of a man. The *K.* forms an important article of food, and

Fig. 1468.— KANGAROO.

the flesh is represented by those who have tasted it as being somewhat like venison. Soup made of the tail is said to be far superior to the ox-tail soup of Europe. Individual specimens have often been brought alive into this country, and successfully kept in zoölogical gardens and menageries. The great *K.* inhabits New South Wales, Southern and Western Australia, and Tasmania. Other genera, the *Lagorchestes,* or *K.* hare, and the *Hypsiprimnus* (see KANGAROO RAT), are also found in Australia. The *Dasyurina,* or Opossums, which also belong to the *K.* family, are found in America and the West Indies. See OPOSSUM, MACROPIDÆ.

Kangaroo' Island, an island on the S. coast of Australia, discovered by Captain Flinders; *area,* estimated at about 1,900 sq. m. *Desc.* Undulating, and covered with a thick short shrub. It has no native inhabitants. Lat. 35° 43′ S., Lon. of Kangaroo Head, 137° 58′ 31″ E.

Kangaroo' Rat, HYPSIPRIMNUS, *n.* (*Zoöl.*) A marsupial animal found in Australia. It is the size of a rabbit. General color grayish, reddish-brown above, whitish below; triangular head; large ears; nasi very long; and tail elongated, flexible, terminated by a pencil of hairs. The manners of the kangaroo-rat are gentle and timid; it feeds upon vegetables, and it is said to burrow in the ground.

Kang-Hi, emperor of China, succeeded Shun-chi, founder of the Mantchou dynasty, in 1669. He had a great love for the arts and sciences of the Europeans, and liberally patronized the missionaries; but, though he was fond of geography, and directed the construction of maps and charts, he would suffer none to be laid before him unless China was represented therein as the middle of the world. He was a voluminous writer, and composed, among other works, "Maxims for State Government," and "Moral Instructions for my Son." D. 1693.

Kankakee, (*kan-kaw'kee,*) a river rising in the N. part of Indiana, and flowing a general S.W. course into Illinois, joins the Des Plaines in Grundy co., to form the Illinois River.

Kankakee, in *Illinois,* a N.E. co., adjoining Indiana; *area,* about 680 sq. m.. *Rivers,* Kankakee and Iroquois. *Surface,* mostly level; *soil,* fertile. *Cap.* Kankakee. *Pop.* (1890) 28,732.
—A village of Grundy co.
—A city, cap. of Kankakee co., on the Kankakee river and three lines of R. R., 56 m. S.S.W. of Chicago; has good water-power and extensive manufactures. *Pop.* (1897) about 10,500.

Kankakee, in *Indiana,* a township of Jasper co. *Pop.* about (1897) 500.
—A township of La Porte co.

Kan-Kiang', a river of China, which traverses the province Kiang-si from S. to N., and after a course of 350 m., flows into the Yang-tse-Kiang.

Ka'no, a town of Central Africa, in Soudan, province of Houssa; Lat. 12° N., Lon. 9° E. *Manuf.,* principally silks, in which it carries on an extensive trade. *Pop.* (1897) about 36,000.

Kano'na, in *New York,* a post-village of Steuben co.

Kano'sha, or KENOSHA, in *Nebraska,* a village of Cass co., on the Missouri river, about 30 m. above Nebraska City.

Kan'sas, a W. central State of the American Union, bounded N. by Nebraska, E. by Missouri, S. by Indian Territory, and Oklahoma and W. by Colorado. It lies between Lat. 37° and 40° N., and 94° 20′ and 102° W., being upwards of 400 m. in length from E. to W., with a uniform breadth of 208 m., and contains 82,080 sq. m., or 52,572,160 acres. Of this, nearly 40,000,000 acres are said to be excellent agricultural lands, 1,920,000 acres rich in minerals, and the remainder adapted to grazing. —*Gen. Desc.* The surface of *K.* is mostly level prairie, gently undulating toward the W., and without either any remarkable elevations or depressions. The prairies of the E. half are finely interspersed with timber, (especially along the margins of streams, the principal trees being cottonwood, sycamore, oak, ash, hickory, walnut, sugar-maple, hackberry, sumach, and willow), which, though adequate to the home demand, is not sufficiently abundant to form the basis of an export lumber-trade. *Rivers.* The most important rivers are the Kansas, Arkansas, Neosho, and Red Fork of Arkansas, besides the Missouri, which washes the N.E. border of the State. The Kansas river is formed by the Republican, Solomon's, Grand Saline, and Smoky Hill Forks. The latter enters *K.* near the middle of the W. border, and continues an almost direct E. course through the centre of the State, receiving the other forks from the N., and expanding into what is known as the Kansas river at Fort Riley, about 120 m. above where it enters the Missouri river. The Arkansas river also enters the State across the W. border, near Fort Aubrey, and after a general E. and S.E. course of about 350 m., makes its exit from Cowley co. on the S. border. The Neosho river rises in Morris co., in the E central part of the State, and flowing S.E., passes out through Neosho co.; and, finally, the Red Fork of the Arkansas river, entering at the S.W. corner, penetrates but a short distance inland, and returning forms the S. boundary as far as Comanche co. These important streams, with their numerous tributaries, intersect every portion of the State, irrigating the land, and affording communication to all points.—*Min.* This State is well supplied with coal, which is found in 19 counties, all of the bituminous variety, the aggregate annual output being about 3,000,000 tons. The best coal, that known as Cherokee, is found in the S.E. part of the State. The principal coal-yielding counties are Cherokee, Crawford, Osage, and Leavenworth. Lead and zinc-ore occur in considerable abundance, and the smelting of zinc is extensively carried on at Weir City, Pittsburg, Girard, Scammon, and Galena, the annual yield of lead and zinc being about $1,000,000 in value. *K.,* in fact, yields about one-fourteenth of all the zinc of the world. The salt deposits are claimed to be the richest and best in the U. S., the S. central part of the State, of about 2,000 m. area, being underlaid with a bed of salt 300 feet thick. Rock salt, mined at Kanopolis, Lyons, and Kingman, is brought to the surface in large lumps, in which form it is sold for stock, or ground for table use. This salt averages 97 per cent. in purity. Salt is also produced by boring, and forcing down water, which, when saturated, is pumped up again and evaporated. *K.* is also rich in gypsum, having enough to supply the world's demands for centuries. Extensive oil fields have also been discovered, and natural gas is abundant in some localities, and is coming into extensive use as a fuel. There exists an abundance of good building stone, consisting principally of sandstone and limestone, some of the latter being so compact as to bear the name of marble. The limestone is most plentiful, and yields excellent flagstones, while, in some localities, sandstone flags, 30 feet square and 2 to 6 inches thick, can be obtained almost as smooth as a floor. The layers of these are sometimes 15 to 20 feet in depth.—*Soil, Agriculture,* &c. Lying on the W. slope of the Missouri valley, *K.* occupies an important position in the grand territorial division known as the *Region of Cereals.* The extreme W. portion forms a part of a sterile belt running S.W. from Lat. 47° N. to New Mexico, but the soil of the E. part is excellent, and for the production of the heavier kinds of cereals this land is unsurpassed in richness by any of the neighboring States. For wheat and other small grains, the second-class lands, embracing the upland or rolling prairies, are preferred. These are covered with a soil averaging from 2 to 3 feet in depth, with a subsoil of fertilizing qualities sufficient to furnish inexhaustible production if skilfully managed. The fruit crop is abundant. The State has a very light rainfall in its extreme W. portion, but the fields where irrigated yield abundantly, and this system of agriculture is being rapidly developed, water being taken from the Arkansas and other rivers, while small tracts are irrigated with water pumped from artesian wells. *K.* is preëminently agricultural, though, of its vast arable acreage, only 22,303,301 acres were under cultivation at the 1890 census, leaving nearly as much more to be subdued to the plow. The estimated average of farms in 1900 was $41,662,970, with an estimated value of $532,187,610. The product of the main cereals in 1900 was: 229,937,430 bushels of corn, 38,778,450 of wheat, and 24,460,980 of oats. The farm animals comprised nearly 850,000 horses, 3,500,000 cattle, 3,600,000 swine and 275,000 sheep. There has been a large development of sorghum culture for sugar, great quantities of prairie hay are cut, and thousands of acres of planted timber now break the surface of the prairie. Creameries are numerous. Of manufacturing industries the most important is beef and pork packing (mainly at Kansas City); also flour milling, and the making of stoves and agricultural implements.—*Counties and Towns.* The State is divided into the 106 following counties:

Allen,	Doniphan,	Hodgeman,	Morris,	Saline,
Anderson,	Douglas,	Jackson,	Morton,	Scott,
Atchison,	Edwards,	Jefferson,	Nemaha,	Sedgwick,
Barbour,	Elk,	Jewell,	Neosho,	Seward,
Barton,	Ellis,	Johnson,	Ness,	Shawnee,
Bourbon,	Ellsworth,	Kearney,	Norton,	Sheridan,
Brown,	Finney,	Klugman,	Osage,	Sherman,
Butler,	Ford,	Klowa,	Osborne,	Smith,
Chase,	Franklin,	Labette,	Ottawa,	Stafford,
Chautauqua,	Garfield,	Lane,	Pawnee,	Stanton,
Cherokee,	Geary,	Leavenworth	Phillips,	Stevens,
Cheyenne,	Gove,	Lincoln,	Pottawatomie,	Sumner,
Clark,	Graham,	Linn,		Thomas,
Clay,	Grant,	Logan,	Pratt,	Trego,
Cloud,	Grey,	Lyon,	Rawlins,	Wabaunsee,
Coffey,	Greeley,	Marion,	Reno,	Wallace,
Comanche,	Greenwood,	Marshall,	Republic,	Washington,
Cowley,	Hamilton,	McPherson,	Rice,	Wichita,
Crawford,	Harper,	Meade,	Riley,	Wilson,
Decatur,	Harvey,	Miami,	Rooks,	Woodson,
Dickinson,	Haskell,	Mitchell,	Rush,	Wyandotte.
		Montgomery,	Russel.	

The principal cities are Kansas City, Topeka (the capital), Wichita, Leavenworth, Atchison, Fort Scott,

KANSAS
SCALE OF MILES
0 10 20 30 40 50
Indian Reservation Boundaries
Military Reservation Boundaries
State Capital
County Seats
Places of 20,000 and over — TOPEKA
" " 10,000 to 20,000 — Fort Scott
" " 5,000 to 10,000 — Parsons
" " 2,000 to 5,000 — Clyde
Hammond's 8 x 11 Map of Kansas.
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Longitude West from Greenwich
NEBRASKA
IOWA
MISSOURI
COLORADO
OKLAHOMA
INDIAN TER.
CHEYENNE
RAWLINS
DECATUR
NORTON
PHILLIPS
SMITH
JEWELL
REPUBLIC
WASHINGTON
MARSHALL
NEMAHA
BROWN
DONIPHAN
SHERMAN
THOMAS
SHERIDAN
GRAHAM
ROOKS
OSBORNE
MITCHELL
CLOUD
CLAY
RILEY
POTTAWATOMIE
JACKSON
ATCHISON
LEAVENWORTH
JEFFERSON
WYANDOTTE
WALLACE
LOGAN
GOVE
TREGO
ELLIS
RUSSELL
LINCOLN
OTTAWA
DICKINSON
GEARY
WABAUNSEE
SHAWNEE
DOUGLAS
JOHNSON
GREELEY
WICHITA
SCOTT
LANE
NESS
RUSH
BARTON
ELLSWORTH
SALINE
MC PHERSON
MARION
MORRIS
LYON
OSAGE
FRANKLIN
MIAMI
HAMILTON
KEARNEY
FINNEY
HODGEMAN
PAWNEE
STAFFORD
RICE
RENO
HARVEY
CHASE
COFFEY
ANDERSON
LINN
STANTON
GRANT
HASKELL
GRAY
FORD
EDWARDS
KIOWA
PRATT
KINGMAN
SEDGWICK
BUTLER
GREENWOOD
WOODSON
ALLEN
BOURBON
MORTON
STEVENS
SEWARD
MEADE
CLARK
COMANCHE
BARBER
HARPER
SUMNER
COWLEY
ELK
WILSON
NEOSHO
CRAWFORD
CHAUTAUQUA
MONTGOMERY
LABETTE
CHEROKEE
TOPEKA
WICHITA

KANSAS.

Land surface, Sq. m. 81,700
Water surface, Sq. m. 380
Pop. 1900..1,470,495
White ..1,416,319
African....52,003
Indian.....2,130
Chinese..... 39
Japanese..... 4
Native-born, 1,343,810
Foreign-born, 126,685
Males.....768,716
Females..701,779

COUNTIES.

Allen.....G 4
Anderson.....G 3
Atchison.....G 2
Barber.....D 4
Barton.....D 3
Bourbon.....H 4
Brown.....G 2
Butler.....F 4
Chase.....F 3
Chautauqua.F 4
Cherokee.....H 4
Cheyenne.....A 2
Clark.....C 4
Clay.....E 2
Cloud.....E 2
Coffey.....G 3
Comanche....C 4
Cowley.....F 4
Crawford.....H 4
Decatur.....B 2
Dickinson.....E 3
Doniphan.....G 2
Douglas.....G 3
Edwards.....C 4
Elk.....F 4
Ellis.....C 3
Ellsworth.....D 3
Finney.....B 3
Ford.....C 4
Franklin.....G 3
Geary.....F 2
Gove.....B 3
Graham.....C 2
Grant.....A 4
Gray.....B 4
Greeley.....A 3
Greenwood...F 4
Hamilton.....A 4
Harper.....D 4
Harvey.....E 3
Haskell.....B 4
Hodgeman...C 3
Jackson.....G 2
Jefferson.....G 2
Jewell.....D 2
Johnson.....H 3
Kearney.....A 4
Kingman.....D 4
Kiowa.....C 4
Labette.....G 4
Lane.....B 3
Leavenworth G 2
Lincoln.....D 3
Linn.....H 3
Logan.....A 3
Lyon.....F 3
McPherson....E 3
Marion.....E 3
Marshall.....F 2
Meade.....B 4
Miami.....H 3
Mitchell.....D 2
Montgomery..G 4
Morris.....F 3
Morton.....A 4
Nemaha.....F 2
Neosho.....G 4
Ness.....C 3
Norton.....C 2
Osage.....G 3
Osborne.....D 2
Ottawa.....E 2
Pawnee.....C 3
Phillips.....C 2
Pottawatomie F 2
Pratt.....D 4
Rawlins.....A 2
Reno.....D 4
Republic....E 2
Rice.....D 3
Riley.....F 2
Rooks.....C 2
Rush.....C 3
Russell.....D 3
Saline.....E 3
Scott.....B 3
Sedgwick.....E 4
Seward.....B 4
Shawnee.....G 3
Sheridan.....B 2
Sherman.....A 2
Smith.....D 2
Stafford.....D 3
Stanton.....A 4
Stevens.....A 4
Sumner.....E 4
Thomas.....A 2
Trego.....C 3
Wabbaunsee.F 3
Wallace.....A 2
Washington..E 2
Wichita.....A 3
Wilson.....G 4
Woodson.....G 4
Wyandotte....H 2

CITIES-TOWNS

Pop. Thousands		
51	Kansas City	H 2
33	Topeka.	G 2
24	Wichita	E 4
20	Leavenworth	H 2
15	Atchison	G 2
10	Lawrence	G 3
10	Galena	H 4
10	Pittsburg	H 4
9	Hutchinson	E 3
8	Emporia	F 3
7	Parsons	G 4
6	Ottawa	G 3
6	Newton	E 3
6	Arkansas City	E 4
6	Saliua	E 3
5	Argentine	H 2
5	Iola	G 4
5	Winfield	F 4
4	Coffeyville	G 4
4	Independence	G 4
4	Junction City	F 2
4	Wellington	E 4
4	Chanute	G 4
4	Osawatomie	H 3
3	Abilene	E 3
3	Cherryvale	G 4
3	Eldorado	F 4
3	Olathe	H 3
3	Manhattan	F 2
3	Concordia	E 2
3	Horton	G 2
3	Rosedale	H 2
3	Paola	H 3
3	Holton	G 2
3	Clay Center	E 2
2	McPherson	E 3
2	Weir	H 4
2	Hiawatha	G 2
2	Osage City	G 3
2	Girard	H 4
2	Greatbend	D 3
2	Burlington	G 3
2	Beloit	D 2
2	Columbus	H 4
2	Council Grove	F 3
2	Empire Cy.	H 4
2	Oswego	G 4
2	Eureka	F 4
2	Garnett	G 3
2	Chetopa	G 4
2	Marysville	F 2
2	Sterling	D 3
1	Dodge City	B 4
1	Seneca	F 2
1	Belleville	E 2
1	Marion	E 3
1	Frontenac	H 4
1	Kingman	D 4
1	Neodesha	G 4
1	Lyons	D 3
1	Minneapolis	E 2
1	Fredonia	G 4
1	Sabetha	G 2
1	Yates Center	G 4
1	Wamego	F 2
1	Herington	F 3
1	Garden City	B 4
1	Larned	C 3
1	Washington	E 2
1	Caldwell	E 4
1	Scammon	H 4
1	Ellsworth	D 3
1	Burlingame	G 3
1	Fort Scott	H 4
1	Humboldt	G 4
1	St. Marys	F 2
1	Peabody	E 3
1	Cherokee	H 4
1	Lindsborg	E 3
1	Lincoln	D 2
1	Pratt	D 4
1	Howard	F 4
1	Norton	C 2
1	Anthony	D 4
1	Florence	F 3
1	Frankfort	F 2
1	Clyde	E 2
1	Harper	D 4
1	Russell	D 3
1	Smith Center	D 2
1	Hays	C 3
1	Strong	F 3
1	Erie	G 4
1	Blue Rapids	F 2
1	Scranton	G 3
1	Pleasanton	H 3
1	Valley Falls	G 2
1	Osborne	D 2
1	Stafford	D 4
1	Sedan	F 4
1	Goodland	A 2
1	St. Paul	G 4
1	Nickerson	D 3
1	Lacygne	H 3
1	Stockton	C 2
1	Baldwin	G 3
1	Plumpsburg	C 2
1	Lyndon	G 3

Pop. Hundreds.		
9	Hanover	F 2
9	Oskaloosa	G 2
9	Alma	F 2
9	Troy	G 2
9	Wilson	D 3
9	Downs	D 2
9	Oberlin	B 2
9	Cedarvale	F 4
9	Medicine Lodge	D 4
9	Halstead	E 3
8	Mankato	D 2
8	Caney	G 4
8	St. John	D 4
8	Tonganoxie	G 2
8	Cottonwood Falls	F 3
8	Solomon	E 3
8	Cawker City	D 2
8	Mound City	H 3
7	Enterprise	E 3
7	Wathena	H 2
7	Hoisington	D 3
7	Highland	G 2
7	Kinsley	C 4
7	Leroy Jc.	G 3
7	Klowa	D 4
7	Neosho	G 4
7	Ellinwood	D 3
7	Douglas	F 4
7	Hillsboro	E 3
7	Bluemound	G 3
7	Jewell	D 2
7	Conway Sprs.	E 4
7	Whitecloud	G 2
7	Elk City	G 4
7	Nortonville	G 2
6	Moline	F 4
6	Toronto	G 4
6	Madison	F 3
6	Quenemo	G 3
6	Burroak	D 2
6	Mulvane	E 4
6	Grenola	F 4
6	Louisburg	H 3
6	McCune	H 4
6	Centralia	F 2
6	Axtell	F 2
6	Delphos	E 2
6	Colby	A 2
6	Endora	G 3
6	Effingham	G 2
6	Beattie	F 2
6	Chapman	E 3
6	Burrton	E 3
6	Carbondale	G 3
6	Elwood	H 2
6	Sedgwick	E 4
6	Westmoreland	F 2
6	Eskridge	F 2
6	Clifton	E 2
6	Bonner Sprs.	H 2
6	Lebo	G 4
6	Walnut	H 4
5	Onaga	F 2
5	Scandia	E 2
5	Lebanon	D 2
5	Kirwin	C 2
5	Waverly	G 3
5	Springhill	H 3
5	Oxford	E 4
5	Longton	F 4
5	Hope	E 3
5	Mound Ridge	E 3
5	Roseville	G 2
5	Hartford	G 3
5	Gypsum	E 3
5	Belle Plaine	E 4
5	Pomona	G 3
5	Altamont	G 4
5	Thayer	G 4
5	Arcadia	H 4
5	Lacrosse	C 3
5	Mound Valley	G 4
5	White City	F 3
5	McLouth	G 2
5	Leon	F 4
5	Burden	F 4
5	Glasco	E 2
5	Ness City	C 3
5	Everest	G 2
4	Robinson	G 2
4	Canton	E 3
4	Ashland	C 4
4	Severy	F 4
4	Marquette	E 3
4	Atwood	A 2
4	Colony	G 3
4	Glenelder	D 2
4	Gardner	H 3
4	Melvern	G 3
4	Hill City	C 2
4	Geneseo	D 3
4	Muscotah	G 2
4	Syracuse	A 4

Immanuel Kant

1724–1804

Lawrence, and other populous and thriving towns.—*Government.* During the Territorial organization the executive was similar to that of the other Territories, the governor being appointed by the President of the U. S. At present the State officers are a governor, lieutenant-governor, secretary of state, auditor, treasurer, attorney-general, and superintendent of public instruction, holding office 2 years; a senate of 50 members, holding for the same term; a house of representatives of 100 members, holding 1 year: a supreme court of 3 judges elected for 6 years, and 5 district courts, with a single judge each, for 4 years. All officers are elected by the people. *K.* has 8 representatives in the Federal Congress, and 10 votes in the Electoral College. The legislature holds annual sessions, and members by the Constitution can receive pay for only 50 days' service. An amendment to the Constitution of *K.*, providing that "the manufacture and sale of intoxicating liquors shall be forever prohibited in this State, except for medical, scientific, and mechanical purposes," was adopted in 1880 by 92,302 yeas to 84,304 nays.—*Educ.* &c. Greater attention has been paid to mental improvement than in most any other new State. There are about 400,000 enrolled pupils in the State. Besides the public schools *K.* has also a State university, agricultural college, normal school, blind and deaf-mute asylums, and colleges and seminaries sustained by the several religious denominations, and other institutions of public philanthropy, commensurate with her intellectual progress. The Roman Catholics have two colleges, one for each sex, at Leavenworth, and mission schools at St. Mary's, St. Bridget, and the Osage Missions.—*Hist.* The early history of this young State cannot be better expressed than by her motto: *Ad astra per aspera.* Forming a part of the great Louisiana purchase acquired from France in 1803, and subsequently included in the Missouri, Arkansas, and Indian Territories, from which it was erected into a separate Territory in 1850, the difficulties of *K.* may be said to have commenced with its birth. Made the bone of contention between rival politicians from the very beginning of its existence, and harassed alike by the victors of either party, the name of *K.* was for some years synonymous with all that was lawless and anarchical. Elections became mere farces, and the officers thus fraudulently placed in power used their authority only for their own or their party's interests. The cause of dispute was the repeal of the Missouri Compromise, an Act passed by Congress in 1820, prohibiting slavery N. of Lat. 36° 30′. The repeal of this law opened a new field for the extension of slavery, which the slave-holders of Missouri hastened to avail themselves of, while the anti-slavery party of the North made equally vigorous efforts to people the new Territory. The result was a series of conflicts, which continued for four years, fights taking place, towns being burned, and illegal voting freely indulged in. In the end the party opposing slavery triumphed; a Constitution excluding slavery was adopted in 1859, and *K.* was admitted as a State, Jan. 19, 1861. Since then its history has been one of peace and steady progress. *Pop.* (1900) 1,470,495, including 52,000 colored.

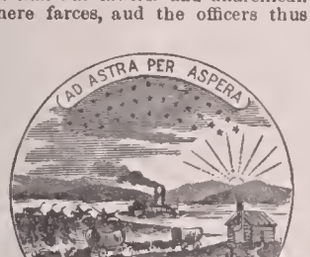


Fig. 1469.—SEAL OF THE STATE.

Kan'sas City, a city of *Missouri,* Jackson co., on the Missouri river, near the mouth of the Kansas. It contains fine public and private edifices, and is the focus of an immense cattle and railroad traffic; 17 roads center here. After St. Louis, it is the largest city in the State, and few have so speedily become so great; it was among the first to adopt electric lights, cable and elevated roads, &c. Has a very large distributing trade throughout Kansas and the Southwestern States. Kansas City, in Kansas, on the opposite side of the Kansas (or Kaw) river, is virtually a part of the same city as to business interests. *Pop.* (1864) 19,000; (1870) 32,260; (1880) 55,787; (1890) 132,716; (1900) 163,752.

Kansas, in *Kansas,* a large river, formed by the union of the Smoky Hill Fork and Solomon river, 10 m. W. of Abilene, and so called from the tribe of Indians which once dwelt on its shores. It flows E., joins the Missouri river between Wyandott and Johnson co., on the E. border of the State, and traverses a fertile plain interspersed with heavily wooded hills and bluffs. Its most important affluents are Graud Saline Fork, Big and Little Blue rivers, and Republican Fork.

Kant, IMMANUEL, a German philosopher, and one of the greatest thinkers of modern times; born at Königsberg, 1724. He was educated at the university of his native town, and after spending some years as a private tutor, took his degree at Königsberg, 1755, and began to deliver prelections on logic, metaphysics, natural philosophy, and mathematics. In 1762 he was offered, but declined, the chair of poetry, and in 1770 he was appointed professor of Logic and Metaphysics. He died Feb. 12, 1804. *K.*'s private life was uneventful, yet curious and almost ludicrous in its mechanical regularity. As Socrates could hardly be induced to go beyond the walls of Athens, so *K.* clung with oyster-like tenacity to the city of his birth, never leaving it during the thirty years of his professorship. He remained a bachelor all his life. *K.* was a man of unimpeachable veracity and honor, austere even in his principles of morality, though kindly and courteous in manners, a bold and fearless advocate of political liberty, and a firm believer in human progress. His philosophy is nearly all contained in his *Critique of Pure Reason.* He insisted upon the necessity of a stricter analysis of our intellectual powers, in order to ascertain the nature, and determine the limits, of human knowledge; the result was, that a whole system of knowledge underived from experience was proved to exist in the mind. The materials of *pure* or *à priori* knowledge are supplied by the three departments of Sense, Understanding, and Reason. In the world of sense the transcendental, or pre-existent, elements of knowledge are Space and Time; these are pure sensuous institutions, without which empirical sensations would be impossible. Sense delivers up its presentations in space and time to the understanding, whose office it is to introduce into them unity and system. All its operations are generalized into modes or forms of conception, which, after the example of Aristotle, he names "Categories of the Understanding." These are: *Quantity,* comprising unity, plurality, totality; *Quality,* comprising reality, negation, limitation; *Relation,* comprising substance, cause, reciprocity; *Modality,* comprising possibility, existence, necessity. These are the forms, as it were, in which the rude material of the senses is shaped into conception, and becomes knowledge, properly so called. He labored to show that without them no connection of the materials of sense is possible. They are the constant and invariable conditions of all mental conceptions, and are the things which connect or bind the understanding with all external objects. All our judgments he divides into two kinds, —*analytical* and *synthetical,* the former being a kind of experimental sketch, the result of a separation of the different qualities or properties of anything, the latter being independent of experience and universal in its nature. The third, and highest faculty is that of reason, —the faculty of ideas. Reason creates no new materials of its own; it only enlarges the data of the understanding, by taking in all the conditions on which they depend. "All our knowledge," he says, "begins with sense, proceeds thence to understanding, and ends with reason, beyond which nothing higher can be discovered in the human mind for elaborating the matter of intuition and subjecting it to the highest unity of thought." "Of reason, as of the understanding, there is a merely formal — that is, logical use, in which it makes abstraction of all content of cognition; but there is also a real use, inasmuch as it contains in itself the source of certain conceptions and principles which it does not borrow either from the senses or the understanding." The three great attributes of reason are absolute unity, absolute totality, and absolute causation. All these absolute ideas are involved in every act of reasoning. There are, also, according to Kant, three grand forms or ideas soaring above pure intellect, and having an existence independent of experience, which come within the province of pure reason. These are the universe, the soul, and God. The first embraces the entire mass of all real or possible physical knowledge, forming the science of *cosmology;* the second, the feelings, emotions, passions, &c., which constitute our moral and intellectual nature, forming *psychology;* and the third, all the reasonings relative to the mode of being, the attributes, and moral nature of the Deity, forming *theology.* These three ideas Kant maintains to have their birth in human reason irrespective of all experience, and to spring up inevitably so as to control and influence the working of the understanding as applied to experience. As regards the moral and religious principles of our nature, these are based upon consciousness. In order to learn our duty both to man and our Maker, we must penetrate into our internal structure, examine all the motives, impulses, and aspirations of the soul, and look at the final ends or purposes which its various faculties are fitted to produce. In this way we discover the nature of duty and of right; what is necessary and what is expedient; what is good and what is pernicious. All moral laws exist *à priori* in the mind, and are completely independent of the thinking principle. The whole moral economy of man points to another great truth — that of the existence of Deity. The practical reason of mankind clearly demonstrates that there must be a supreme, universal, infinite existence. Such is a brief outline of the philosophy of Kant. The system, as a whole, looks grand and imposing, and has an air of great strength and solidity. It is hedged round with a ponderous array of logical axioms, rules, definitions, and forms, and has a phraseology at once original and scholastic. But with all these appliances, the system is strangely defective when closely examined, though its influence upon the history of philosophy can scarcely be over-estimated. "Taken altogether," says Dr. Cairne, "it is impossible to regard his writings as any other than a prodigy of human intellect, and his influence as one of the mightiest forces that has ever ruled philosophical opinion. His mark is still on all the speculative sciences in Germany and Europe; and though his sceptre has long been broken, the most imposing systems meet in homage at his tomb. Great as the currency of his leading ideas has been, much still remains in his works to be developed by the struggle and collision of future systems; and it may be safely pronounced that no philosopher of the eighteenth cent. — perhaps none since the days of Aristotle — has left behind such monuments of thought, or has so firmly imposed the task of mastering them on the speculative of all succeeding ages."

Kant'ian, *a.* Having reference or pertaining to, or characterized by, the philosophical doctrines propounded by KANT, *q. v.*

Kant'ian, Kant'ist, *n.* A disciple of Kantism.

Kant'ism, *n.* The system of metaphysical philosophy originated by Immanuel Kant.

Kant'ist, *n.* See KANTIAN.

Kan'try, *n.* In Wales, a hundred, or division of a county.

Kantnrk', a market-town of Ireland, in Munster, co. of Cork, about 11 m. W.S.W. of Buttevant. *Pop.* (1897) about 1,700.

Kan'veh, Kan-se, or **Kan-soo.** The most N.W. prov. of China, having on the E. Shensee, S. Se-Chuen, W. and N. Mongolia; Lat. between 32° 30′ and 40° N., Lon. between 98° and 108° E. *Area,* estimated between 80,000 and 100,000 sq. m. *Surface,* mountainous. *Cap.* Lan-choo-foo, and it has 6 other large cities. Principal river, Hoang-ho. *Pop.* estimated at 16,000,000.

Kanwa'ka, in *Kansas,* a village and township of Douglas co., about 7 m. W. of Lawrence; *pop.* of township about 800.

Kaolin, (*kaʹo-lin,*) *n.* [Chinese *kao-ling,* the name of a locality.] (*Min.*) A pure white clay, resulting from the decomposition of felspar in granitic rocks. It was originally found in China, but has been discovered near St. Austell, in Cornwall, England, and at St. Yrieix, near Limoges, France. It consists of nearly pure silicate of alumina, with small quantities of oxide of iron, potash, and water. It is used for making the finer kinds of porcelain; also by photographers for extracting organic matter from their nitrate of silver solutions. It has been employed to discolorize sugar, but without much success.

Kao-Tsou I., Emperor of China, founder of the Tang dynasty, reigned from 619 to 626. — KAO-TSOU II., founder of the Haen-Tein dynasty, reigned from 935 to 942. — KAO-TSOU III., founder of the Haeu-Han dynasty, reigned from 947 to 951.

Kapi'oma, or KAPPAOMA, in *Kansas,* a village and township of Atchison co., about 25 m. W. by S. of Atchison.

Kap'nomor, *n.* [Gr. *kapnas,* smoke, and *moira,* a part.] (*Chem.*) A colorless oil, of peculiar odor, boiling at 360°, obtained from crude creosote by distillation with potash. It is insoluble in water and solution of potash, but dissolves readily in alkaline solutions of creosote.

Kap'pa, in *Illinois,* a post-village of Woodford co., abt. 14 m. N. of Bloomington.

Ka'ra. A Tartar word, signifying *black,* used in many of the Eastern languages as a prefix to geographical names; as Karamania, *the country of the black people.* It has also been employed to signify *tributary.*

Kar'agane, *n.* (*Zoöl.*) A species of fox found in Tartary; *Vulpus karagan.*

Ka'ra-His'sar. See AFIONI-KARA-HISSAR.

Ka'raites, *n. pl.* See CARAITES.

Ka'rak, or **Khar'rack,** (the *Icarus* of Arrian,) an island of Asia, in the Persian Gulf, belonging to England, 35 m. N.W. of Bushire: Lat. 29° 13′ N., Lon 50° 21′ E. *Area,* 13 sq. m. This island is of some importance as affording a secure anchorage for ships, and a station where they may water and refit. It has successively belonged to the Dutch, Arabs, Persians, and French. The English finally took possession of it during the war with Persia in 1839.

Karaman', a town of Asiatic Turkey, in Karamania, 58 m. S.S.E. of Konieh: Lat. 37° 10′ N., Lon. 33° 5′ E. It is situated at the foot of a spur of Mount Taurus, and, though formerly an important place, is now decayed. *Manuf.* Cotton fabrics. *Pop.* about 7,000. *K.* was the cap. of a Turkish kingdom, which lasted from the time of the partition of the Seljuk dominions of Iconium till 1486, when Karamania was subjected by the Ottoman sultan, Bajazet II., from which time Konieh became the seat of the pashalic.

Karama'nia, or CARAMANIA, a pashalic of Asiatic Turkey, between 37° and 40° N. Lat., and Lon. 31° and 37°, having Mount Taurus on its S. boundary. *K.* forms the eyalet of Konieh, and is watered by the rivers Sihon and Kizil-Irmak. *Chief towns.* Konieh, and Karaman. — See KONIEH.

Ka'ramsin, NICHOLAI MICHAELOVICH, the greatest of Russian historians, was b. in 1765; educated at Moscow; served for a while in the imperial guards, and travelled for two years through Middle Europe; after which he devoted himself to literature. His *History of the Russian Empire,* in 11 vols., is a valuable work, and was very highly appreciated by his countrymen. His *Letters of a Russian Traveller,* and *Agalia,* a collection of tales, are also works of merit, and in much esteem. D. 1826.

Karas'kier, *n.* In Turkey, a magistrate or judicial officer.

Ka'ra-soo, a river of European Turkey, rising between Roumelia and Macedonia, and after a S. course of 130 m. falling into the Ægean Sea opposite Thasos.

Karasuba'sar, a town of European Russia, in the Crimea, 15 m. E. of Simphropol. *Manuf.* Morocco leather, earthenware, tilee, soap, &c. *K.* is also the great Crimean mart for fruit, wine, and cattle. *Pop.* About 16,000.

Kara'tas, *n.* (Brazilian name *Karaguata acunga.*) A species of Pine-apple, native of the W. Indies,—*Ananassa Karatas.*

Kardszag, a town of Austria, in Hungary, cap. of dist. of Great Cumania, 90 m. E.S.E. of Pesth, and 35 S.W. of Debreczin. It is the centre of a fertile diet., and is a market for grain, fruit, wine, and cattle. *Pop.* 13,000.

Karel'inite, *n.* (*Min.*) An oxysulphide of bismuth found in lumps of a lead-gray color at the Sawodinsk mine in the Altai, accompanied by Telluric silver.

Kar'ical, or **Kar'ikal,** a town of Hindostan, dist.

Tanjore, 150 m. S. of Madras; Lat. 10° 55′ N., Lon. 79° 53′ E. *K.* formerly belonged to the French, to whom it was ceded by the rajah of Tanjore in 1759. It is now held by the British. It exports rice, indigo, saffron, and tobacco. *Pop.* 15,000.

Karmathes, (*kar-mai'thees,*) a Mussulman sect, founded by Karmath. They spread over part of Arabia and the mouths of the Euphrates, and held possession of the sacred city of Mecca for some time, but were exterminated in 982. It is said that the tribe of Ansairians, dwelling in Syria at the present day, are the descendants of the ancient Karmathes.

Karnes, in *Texas*, a S. S. E. co.; *area*, about 730 sq. m. *Rivers.* San Antonio and Sobolo rivers. *Surface*, diversified; *soil*, moderately fertile. *Cap.* Karnes City. *Pop.* (1897) about 4,100.

Karn'then. See CARINTHIA.

Ka'rob, *n.* Among goldsmiths, the twenty-fourth part of a grain.

Karp'fen, Korpo'na, or **Krupi'na,** a mining town of Austria, in Hungary, co. Sohl, 60 m. N. of Pesth, and 96 N. of Vienna. *Pop.* 4,500.

Kar'pholite, *n.* (*Min.*) See CARPHOLITE.

Karphosid'erite, *n.* (*Min.*) See CARPHOSIDERITE.

Karr, JEAN BAPTISTE ALPHONSE, a French author, b. at Paris, 1808, received his first instructions from his father, and afterwards entered the College Bourbon, in which he became a teacher. A copy of verses which he sent to the satirical journal *Figaro* introduced him to literary life. Having been disappointed in love, he, in 1832, published a novel written in his youth, *Sous les Tilleuls,* a *mélange* of irony and sentiment, of good sense and trifling, which at once made him popular. *Une Heure trop Tard* appeared in 1833; *Vendredi Soir*, in 1835; *Le Chemin le plus Court*, in 1836; *Einerley* and *Geneviève*, in 1838; and *Voyage autour de mon Jardin*, in 1845, followed by numerous other works. In 1839, he became editor-in-chief of the *Figaro*: the same year founded *Les Guêpes*, a monthly satirical journal, which has had a remarkable success. After the revolution of 1848, M. *K.*, disgusted with political life, retired to Nice, and almost exclusively devoted his time to horticulture and rural pursuits. He was made chevalier of the Legion of Honor, April 25, 1845. His daughter, Mdlle. Thérèse *K.*, has written *Les Soirées Germaniques offerles à la Jeunesse*, published in 1860; *Les Huits Grandes Époques de l'Histoire de France*, in 1861; *Contre un Proverbe*, and *Dieu et ses Dons*, in 1864, &c. Died Sept. 30, 1890.

Karroos. (*Geog.*) Extensive plains of S. Africa, occupying most of the terraces in the mountain-ranges of Cape Colony. In the dry season they become deserts, but, during the wet, are covered with a rich vegetation, which supplies provender to numerous herds.

Kars, a fortified city of Turkish Armenia, formerly cap. of a pashalic of same name, on a tributary of the Araxes, 85 m. N.E. of Erzeroum, and 160 E. by S. of Trebizond. This city, situate in a fertile region, was formerly the centre of a fine corn-growing district, but it was nearly destroyed during the Russian invasion, and is only slowly

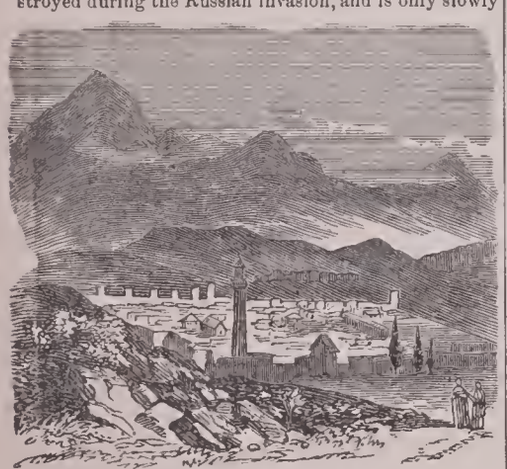


Fig. 1470.—KARS.

recovering. *K.* was deserted by its people during the first Russian occupation early in the present cent. Again besieged by the Russians during the Crimean war, 1854–5, and after a gallant defence by the Turks, commanded by the English General Williams, it capitulated Dec. 12, 1855. Taken by the Russians, Nov. 1877, and given in 1878 to them by the Berlin treaty, *q. v.* *Pop.* est. at 12,000.

Kars'tenite, *n.* (*Min.*) Same as ANHYDRITE, *q. v.*

Karthaus, in *Penna.*, a post-township of Clearfield co.

Kar'usn, or **Kar'soon,** a town of Russia, in government of Simbirsk. *Pop.* 5,000.

Kar'vel, *n.* See CARAVEL.

Ka'san. See KAZAN.

Kasanlik', a town of Turkey in Europe, at the foot of the Shipka pass. *Pop.* (1897) 21,000.

Kas'bin. See CASBIN.

Kaschau (*kăsh'ou*), a city of Hungary, 123 m. N.E. of Pesth. This is a fine, flourishing place, with numerous educational seminaries, manufactures of tobacco, cutlery, earthenware and paper, and large transit trade with Poland. *Pop.* (1897) 21,742.

Kash'an. See CASHAN.

Kashgar, or **Kashgaria,** also called EAST TURKESTAN, a Mohammedan district of China; *area*, about 574,000 sq. m. *Pop.* (1897) about 1,000,000.

Kash'mir. See CASHMERE.

Kas'imov, Kas'imow, or **Kas'inov,** a town of European Russia, govt. of Riazan, 67 m. E.N.E. from the latter place, at the junction of the rivers Babinka and Oka, 160 m. W. of Moscow. *Pop.* 8,000.

Kaskas'kia, in *Illinois*, a considerable river, rising in Champaign co., and flowing S.W. into the Mississippi River, in Randolph co. Length, about 300 m.

—A township of Fayette co.

—A post-village of Randolph co., on the Kaskaskia River, near its confluence with the Mississippi. It is the oldest town in Illinois, if not in the whole West, having been settled by the French about 1673. It was the first cap. of the Territory, and continued as such until 1818.

Kas'mark, or **Kes'mark,** a town of Austria, in N. Hungary, on the river Poprad, 125 m. N.E. of Pesth. *Manuf.* Principally linens. *Pop.* 5,000.

Kasoag', in *New York*, a post-village of Oswego co.

Kaso'ta, in *Minn.*, a p.-v., and twp. of Le Sueur co.

Kassala, a town of the Prov. of *K.*, bet. Khartoum and the Red Sea. It is the largest town in the Egyptian Soudan, after Khartoum.

Kassan', or CASSEN, a town of E. Africa, territory of Bertat, a country lying S. of Nubia, and W. of the S.W. portion of Abyssinia, on the Tumat.

Kastamou'ni. See COSTAMBOUL.

Kat, or KHAT, *n.* (*Bot.*) See CATHA.

Katahdin, or **Ktaadn,** in *Maine*, the highest mountain in the State, about 80 m. N. by W. of Bangor, and 6 m. N.E. of Penobscot river. It is situated in a region difficult of access except by birch canoes, the river being the only thoroughfare through this rough territory, and its course being interrupted by frequent shoals and falls. Altitude of the mountain, 5,385 feet.

Kate'ville, in *California*, a village of Sacramento co., about 25 m. E.S.E. of Sacramento.

Kathetom'eter, *n.* See CATHETOMETER.

Kato'na, ISTURAM, the historian of Hungary, b. 1732. At the age of 18, he entered the Society of Jesus, and subsequently held several professorships at the University of Buda. His most important work, and one of the highest authority, is his *History of Hungary*, from the earliest times down to the year 1801. It is written in Latin, and fills 41 volumes. He wrote also a summary of the History, and some other works. D. 1811.

Kato'nah, in *New York*, a post-village of Westchester co., about 44 m. N.E. of New York city.

Kat'rine, (Loch,) a celebrated lake of Scotland, dist. Monteith, in the S.W. part of co. Perth, on the frontier of Stirlingshire, 8 m. W. of Callender, and 5 m. E. of Loch Lomond. This lake (which is the most W. and largest of a chain, consisting of Lochs Vennachar, Achray, and Katrine, the principal feeders of the Teith) is about 10½ m. in length, and from 1½ to 2 m. in width, of a serpentine form, and very deep. It is embosomed among lofty mountains, divided by deep ravines, whose sides, in parts covered with wood down to the water's edge, and in others consisting of bold, rugged precipices, give it a splendid *coup d'œil* of wild and picturesque scenery. Still, however, it was but seldom visited, and, indeed, little known, till Sir Walter Scott made it the scene of his fine poem, *The Lady of the Lake*, when it at once attained celebrity, and has since been annually resorted to by thousands of tourists and visitors. At the E. end of the Loch, between it and Loch Achray, is the celebrated mountain-pass of the *Trosachs*, so beautifully described in stanzas 11–13 of the 1st canto of *The Lady of the Lake.*

Kattegat'. See CATTEGAT.

Kat'telville, in *New York*, a post-village of Broome co., about 135 m. S.W. of Albany.

Kat'tywar, a prov. of W. Hindostan; Lat. bet. 20° 42′ and 23° 10′ N., and Lon. bet. 69° 5′ and 72° 14′ E.; *area*, 850 sq. m. The climate is unhealthy, and the surface undulating. The prov. is under the protection of the English.

Ka'tydid, *n.* (*Zoöl.*) An athopterous insect, *Cyrtophyllus concavus*, belonging to the *Locustariæ*, or Locust family. It is one inch and a half long from the head to the end of the wing-covers, which enclose the body somewhat like the valves of a pod. This insect, common in the U. States, is silent during the day, hiding among the leaves; but at early twilight, in autumn, its notes come from the trees of the gardens and groves, and continue till the dawn of day; and such a resemblance do they have to the words *Katy did*, that this has become its name. The sounds are produced by a pair of taborets, one in the overlapping portion of each wing-cover, and formed by a thin, transparent membrane, stretched in a strong frame. The friction of the frames of the taborets against each other, as the insect opens and shuts its wings, produces the sounds.

Katz'bach, a river of Prussia, in Silesia, rising at Ketzchdorf, and falling into the Oder 30 m. N.W. of Breslau. Length, 34 m. On the banks of that river, Aug. 26, 1813, the French were defeated by Blücher.

Kaufbeu'ren, a town of Bavaria, in Suabia, on the Wertach, 36 m. S.W. of Augsburg. *Manuf.* Cotton and linen. *Pop.* (1897) 5,760.

Kauf'man, in *Texas*, a N. E. central co.; *area*, about 800 sq. m. *Rivers.* Trinity river, and several of its affluents. *Surface*, generally level; *soil*, fertile. *Cap.* Kaufman. *Pop.* (1890) 21,598.

—A post-village, cap. of the above co., 35 m. S.E. of Dallas, on Tex. Mid. R. R. *Pop.* (1897) about 1,450.

Kaufmann (*kouf'man*), MARIA ANGELICA, a distinguished artist, born at Coire, in the Grisons, 1741. She acquired the first principles of drawing and painting from her father, whom she soon excelled. At Milan, Florence, Rome, and Naples she increased her skill, and when, in 1766, she came to England, she was patronized by royalty, and her reputation and success quickly increased. In 1768 she became one of the first members of the Royal Academy. She remained in England 17 years, married Zucchi, a Venetian painter, and d. at Rome, 1807. Many of her paintings were engraved by Bartolozzi, but her reputation, not resting on any solid basis of excellence in art, has passed away.

Kaukauna (*kaw-kaw'na*), in *Wisconsin*, a thriving city and township of Outagamie co., on the Neenah or Fox river, and the C. & N. W. R. R., about 21 m. S. S. W. of Green Bay. Has extensive manuf. *Pop.* (1895) 5,451.

Kaun, *n.* A method of writing KHAN, *q. v.*

Kannitz, (*kou'nits,*) WENCESLAUS ANTON, Prince von, a German statesman, b. at Vienna, in 1711; and though at first intended for the Church, he finally engaged in political life. His talents, aided by a favorable exterior, opened a brilliant career to him. In 1744 he was made minister of state for the kingdoms of Hungary and Bohemia; in 1748 he assisted at the congress of Aix-la-Chapelle; was honored with the order of the golden fleece by Maria Theresa, and employed as ambassador to Paris; returned to Vienna in 1753, and took the office of Chancellor of State; concluded the treaty of alliance between Austria and France, in 1756; was made a prince of the German empire, in 1764; and d. 1794.

Ka'va, *n.* A Polynesian beverage. See AVA.

Kava'la, or **Caval'lo,** a seaport-town of European Turkey, in Macedonia, on the Ægean Sea, opposite the island of Thasos. It has a trade in cotton and tobacco. *Pop.* 4,500.

Kavass', *n.* Same as CAVASS, *q. v.*

Kaw, *v. n.* See CAW.

Kaw, in *Kansas*, a flourishing township of Jefferson co.

Kawkawlin, in *Michigan*, a post-office of Bay co.

Kawn, *n.* A Turkish caravanserai. See KHAN.

Kaw'rie Pine, *n.* (*Bot.*) See DAMMARA.

Kayaderos'seras Mountains, in *New York*, a mountain ridge in Warren co., between Lake George and Shroon River.

Kay'ak, *n.* (*Naut.*) A skiff used by the fishermen of Greenland.

Kay'aker, *n.* One who paddles a kayak.

Kayes, in *Alaska*, an island in the N. Pacific Ocean, Lat 59° 48′ N., Lon. 144° 28′ W.

Kayesikaug River, in *Wisconsin*. See SHELL RIVER.

Kayle, Keel, *n.* (*Games.*) A nine-pin; a kettle-pin. A kind of play in Scotland, in which nine holes ranged in threes are made in the ground, and an iron bullet rolled in among them.

Kays'ville, in *Utah*, a city of Davis co., about 4 m. N. of Farmington, on Un. Pac. R. R. *Pop.* (1895) 1,759.

Kazameen', a town of Turkey in Asia, prov. Irak-Arabi, on the W. bank of the Tigris, 3 m. N. of Bagdad: *pop.* estimated at 7,000, chiefly Persians.

Ka'zan, or KASAN, one of the E. govts. of Russia in Europe, having N. Viatka, E. Orenburg, S. Simbirsk, and W. Novgorod. *Area*, 24,000 sq. m. *Surface.* Diversified; forests covering about one-half the area. *Prod.* Abundant crops of rye, wheat, hemp, and flax. Fisheries good. *Manuf.* Liquors and potash.

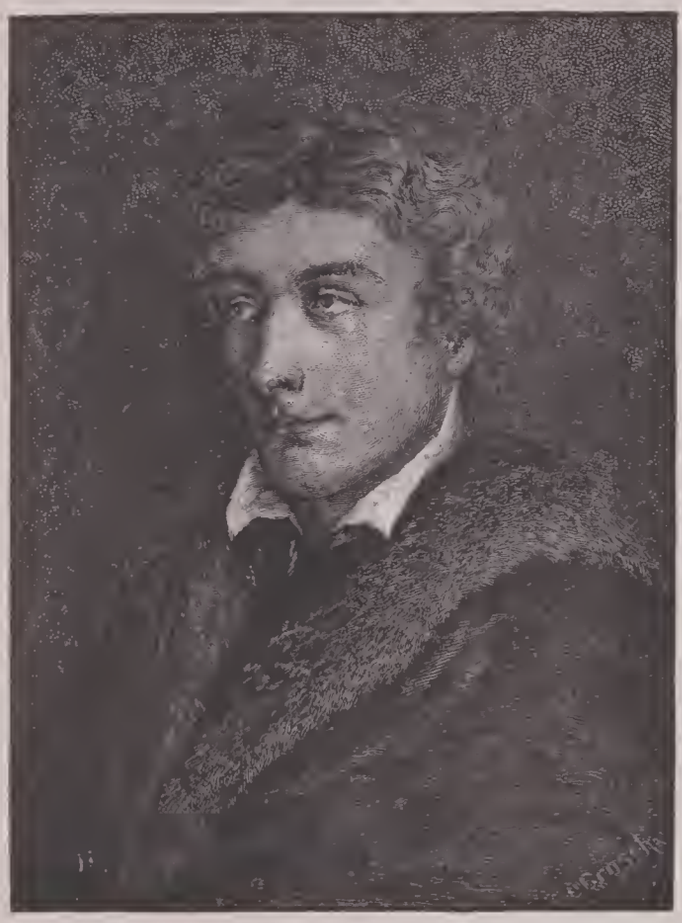
KAZAN, a large and prosperous city, cap. of the above govt., on the Kazanka, about 4 m. from its confluence with the Volga. This is a fine and well-built city, and considered one of the chief educational and literary centres of the empire. It possesses a flourishing university, and numerous auxiliary schools, lyceums, and scientific institutions. *Manuf* Woollens, cottons, hardware, earthenware, leather, soap, &c. Ship-building is also largely entered upon, and its trade is, generally, of an extensive character.

Kaz'bek. See CAUCASUS.

Ka zimirz, a town of Poland, govt. of Lublin, on the Vistula, 30 m. E.S.E. of Radom.

Kaz'zardly, *adv.* In the W. of England, a provincialism for *unfortunately.*

Kean, EDMUND, one of the greatest English tragic actors, born in London, on the 17th of March, 1790. He seems to have been placed on the stage when an infant, and to have then appeared in processions and pageants, both at Drury Lane and the Haymarket theatres. Miss Tidwell, an actress long known on the metropolitan stage, and said to have been a relation, assisted Kean in his first efforts; and recommended him, at the age of 13, to a company of players in Yorkshire. He performed there under the name of Carey, and is said to have obtained much applause in the parts of Hamlet, Lord Hastings, and Cato. He also distinguished himself by his talents for recitation; and his delivery of Satan's Address to the Sun, from Milton's "Paradise Lost," and the first soliloquy in Shakspeare's "Richard III.," having been highly applauded, he repeated his recitations at Windsor, before some of the royal family. He had also the good fortune to attract the notice of Dr. Drury, who sent him to Eton, where he remained three years, and is said to have made great progress in classical studies, devoting much of his attention to the precepts and examples of Cicero. On quitting Eton he procured an engagement at Birmingham, where he was seen by the manager of the Edinburgh theatre, who engaged him for twenty nights, on twelve of which he performed Hamlet to crowded houses. He was at this time only sixteen; and we find that his provincial engagements led him, in the course of a few years, to nearly all the principal towns in the south and west of England, playing in tragedy, comedy, opera, and pantomime. In the mean time, Dr. Drury, his old patron, had recommended him to the directing committee of Drury Lane, as fitted to revive that declining theatre. He was, in consequence, engaged there for three years, at a rising salary of eight



John Keats

1796–1820

ten, and twelve guineas a week for each successive year. His first appearance was on the 26th of January, 1814, in the character of Shylock. The house was comparatively empty; but in order to show the effect he produced on that occasion we will quote the words of a critic, who saw, and thus describes it: — "There came in a small man, with an Italian face and fatal eye, which struck all. Attention soon ripened into enthusiasm; and never, perhaps, did Kean play with such startling effect as on this night to the surprised few! His voice was harsh, his style new, his actiou abrupt and angular; but there was the decisiou, the inspiration of genius, in the look, the tone, the bearing;" — "that night was the starting-post on the great course on which he was destined to run his splendid race." In Othello, also, and Sir Giles Overreach, he has been unequalled by any contemporary. When he performed Massinger's Jew the first time, the actors, and others of his admirers, presented him with a gold cup, as a token of their esteem. In 1820, he visited the United States, and performed in New York, Philadelphia, Baltimore, and Boston; on the whole with great success. After his return to England, the extravagance and dissoluteness which had always disgraced his character, involved him in great embarrassments; and a second visit to America, in 1825, was attended with little credit or advantage. He returned again to England, and became manager of the theatre at Richmond, Surrey, where he died, after a protracted illness, May 15, 1833. — His only surviving son CHARLES, also greatly distinguished himself as a dramatic actor. D. 1868.

Ke'arney (*kär'-ny*), PHILIP, a brilliant soldier, was born in New York city, in 1815. Although educated for the law, he, at the age of 22, entered the 1st U. S. dragoons as second lieutenant, and was, shortly afterward, dispatched by the govt. to Europe, to study and report upon the system of tactics pursued in the French cavalry service. After entering the Ecolé Polytechnique, Paris, and serving as a volunteer in the ranks of the Chasseurs d'Afrique in an Algerine campaign (for which he received the Cross of the Legiou of Honor), Kearney returned to the U States in 1840. From 1841 to 1844 he acted as aide to Gen. Scott, and in 1846 became captain. *K.* served throughout the Mexican campaign, and was brevetted major for his distinguished gallantry at Contreras and Chernbusco. On the termination of the war he commanded a force sent against the Indians of the Colnmbia River. In 1851, resiguing his commission, he went to Europe, and served as volunteer aide-de-camp on the French staff throughout the Italian campaign of 1859, beiug present at the battles of Magenta and Solferino. On the outbreak of the Civil War in 1861, *K.* hastened home, was appointed brigadier-general of volunteers in May, and while in command of a division of Gen. Heintzelman's corps, exhibited his dashing courage in all the battles of the Chickahominy campaign. In 1862 (July 4), he was commissioned major-general of volunteers, and was killed at the battle of Chantilly, on Sept. 1, following.

Kearney, in *Nebraska*, a S. co.; *area*, about 525 sq. m. *Rivers.* Platte or Nebraska river, and some smaller streams. *Surface*, generally level; *soil*, fertile. *Cap.* Minden. *Pop.* (1890) 9,061.

—A thriving city, cap. of the above co., on the Platte river, and the Un. Pac. and C., B. & Q. R.Rs., 195 m. W. by S. of Omaha; has extensive manufactures, including foundries, flour mills, canning and pickling factories, &c. *Pop.* (1897) about 10,000.

Kearneysville (*kar'nez-vil*), in *West Virginia*, a post-office of Jeffersou co., 11 m. W.N.W. of Harper's Ferry.

Kearsarge (*keer'sarj*) **Mountain,** in *New Hampshire*, a mountain of Merrimac co. It has an elevation of 2,468 feet above sea-level, with a summit of bare granite.

Kears'ley Creek, in *Michigan*, enters Flint river in Genesee co.

Keas'burg, in *Kentucky*, a village of Logan co., about 196 m. S.W. of Frankfort.

Keat'chie, in *Louisiana*, a post-town of De Soto par.

Keat'ing, in *Oregon*, a post-office of Union co.

Keating, in *Pennsylvania*, a post-office of Clinton co.

—A township of McKean co.

Keat'on's Landing, or VINTON, in *Mississippi*, a village of Lowudes co.

Keats, JOHN, a young English poet, B. at London, 1796. He was apprenticed to a surgeon, but gave way to the ambition of becoming a poet. Leigh Hunt lent the kindly sanction of his name to the first poems *K.* gave to the world in 1817. In the next year he published *Endymion*, a poetical romance, and, in 1820, his last and best work *Lamia*, and other poems. These poems were very roughly treated by Gifford in the *Quarterly Review*, and *K.*, with his over-sensitive nature, took it too much to heart. Being in feeble health, from a severe pulmonary disease, he was advised to try the fine climate of Italy, where he arrived in November, 1820, and died the following month. Shelley lamented his poet-friend, in the beautiful and well-known *Adonais*. A fair and kindly appreciation of *K.* appeared in the *Edinburgh Review* from the hand of Jeffrey. Leigh Hunt, who was his earliest and warmest patron, describes him as having *a very manly as well as a delicate spirit*, and being gifted with the two highest qualities of a poet in the highest degree—sensibility and imagination.

Kech'o. See CACHAO.

Keck, *v. n.* To retch; to make an effort to vomit.

—*n.* A heaving or retching of the stomach.

Keckle, (*kek'l,*) *v. a.* (*Naut.*) To invest with a wrapping of old rope, &c., in order to prevent abrasion; as, to *keckle* a cable.

Keck'le, *n.* The same as KECK, *q. v.*

Keck'ling, *n.* Old rope or other protective substance wound around a cable.

Keck'ling-pin, *n.* In Scotland, a long needle used in knitting hose.

Keck'lish, *a.* Queasy; inclined to vomit.

Kecks'ville, in *Indiana*, a village of Martiu co., abt. 9 m. N.W. of Dover Hill.

Keck'sy, *n.*; *pl.* KECKSIES. A kex.

"Rough thistles, *kecksies*, burrs." —*Shaks*

Keck'y, *a.* Having the appearance of a kex.

Ke'dar. (*Script.*) A son of Ishmael (*Gen.* xxv. 13), father of the Kedarenians or Cedrei mentioned by Pliny, who dwelt in the neighborhood of the Nabatheans, in Arabia Deserta.

Kedge, (*kĕj,*) *n.* (*Naut.*) A small anchor (also called *kedger*) used to steady a ship and keep her clear from her bower anchor when riding in a harbor or river, especially at the turn of the tide, when she might, if not so secured, drive over her principal anchor and entangle the stock, or flukes, with her slack cable, so as to loosen it from the ground. They are also employed to remove a vessel from one part of a harbor to another; for this purpose they are carried out from her in the long-boat, and let go by means of ropes secured to them.

—*v. a.* (*Naut.*) To move or warp by means of a kedge, as a ship.

Kedge, Kedgy, (*kĕj'y,*) *a.* Lively; sportive; brisk; active. (An English provincialism.)

Kedger, (*kĕj'r,*) *n.* (*Naut.*) Same as KEDGE, *q. v.*

—In England, a dredger of oysters.

Kedgeree', a town of British India, prov. Bengal, on the W. side of the Hooghly River, near its mouth; Lat. 21° 55′ N., Lon. 88° 16′ E.

Kedi'ri, a prov. of Java, on the S. coast; *pop.* 500,000.

—KEDIRI, its cap., 60 m. S.W. of Sourabaya. It is the residence of the governor. *Pop.* 6,500.

Ked'lack, *n.* (*Bot.*) Same as CHARLOCK, *q. v.*

Ke'dron. See KIDRON.

Kee, *n. pl.* of COW. See KYE.

Kee'chi (or UPPER KEECHI) **Creek,** in *Texas*, enters the Trinity River in Leon co. LOWER KEECHI enters the same river a few miles below.

Keef'er's Corners, in *New York*, a village of Albany co.

Keefer's, or **Keefer's Store,** in *Pennsylvania*, a post-office of Franklin co.

Keek', *v. n.* [H. Ger. *kucken.*] To pry into. (Used in Scotland.)

Keel, *n.* [A. S. *cæle;* Du. *kiel.*] (*Ship-building.*) The lowest and principal piece of timber in a ship. The carcass of a ship is not unlike the skeleton of a human body, — the keel representing the back-bone, and the timbers the ribs. The entire fabric is supported by the keel; as the stem and stern parts, which are elevated on its ends, are merely continuations of it, and serve to connect and inclose the extremities of the sides by transoms, as the keel forms and unites the bottom by timbers. Some vessels are provided with what is termed a *false keel*, consisting of a strong thick piece of timber bolted to the bottom of the keel. It is chiefly employed when the planks which form the real keel cannot be obtained of sufficient depth. In Fig. 1471, A shows the main keel, B the false keel, C the keelsou, D, stemson, E, cathead, and F, the gripe. — A collier. (Eng.) — A brewer's utensil. — A niue-pin. See KAYLE.

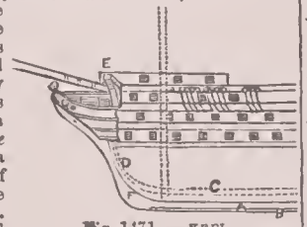


Fig. 1471. — KEEL.

(*Bot.*) See CARINA and Fig. 65.

(*Zoöl.*) A longitudinal prominence on the inferior surface of an insect.

False keel. (*Naut.*) See FALSE.

On an even keel. In an horizontal position; having an even line.

Keel, *v. n.* To navigate; to plough with a keel. — To expose the keel or bottom.

Keelage, (*kēēl'aj,*) *n.* A toll levied on a ship's bottom in port; harbor-dues.

Keel'-boat, *n.* (*Naut.*) A large covered boat or barge, used for the carrying of freight on American rivers.

—A vessel used in the English coal-carrying trade. — See KEEL.

Keeled, (*kēēld,*) *a.* (*Bot.*) Keel-shaped; as, a *keeled* calyx.

Keel'er, Keel'man, *n.* In the N. of England, one who works a keel or Tyne collier.

Keel'er, in *Michigan*, a township of Van Buren co.; *pop.* (1897) 1,180.

Keel'ersburg, in *Pennsylvania*, a post-village of Wyoming co., about 15 m. W.N.W. of Scranton.

Keel'ersville, in *Michigan*, a post-village of Van Buren co. Its post-office is KEELER.

Keel'haul, Keel'rake, *v. a.* [Low Ger. and D. *kielhalen.*] (*Naut.*) To haul under the keel of a ship, by ropes attached to the port and starboard yard-arms. (A mode of punishment formerly practised in the navies of Great Britain and Holland.)

Keel'hauling, *n.* (*Naut.*) Punishment inflicted on seamen, by hauling them under a ship's keel.

Keel'ing, *n.* [Dan. *kuller.*] (*Zoöl.*) A kiud of small cod-fish.

Keel'ing-islands. See COCOS ISLANDS.

Keel'ivine, or **Keel'ivine-pen,** *n.* In Scotland, a pencil of black or red lead.

Keel'man, *n.*; *pl.* KEELMEN, *n.* See KEELER.

Keel'rake, *v. a.* Same as KEELHAUL.

Keels, a seaport and fishing station of Newfoundland on Bonavista Bay, Lat. 48° 38′ N., Lon. 53° 26′ W.

Keel'son, Kel'son, *n.* (*Ship-building.*) One of the principal timbers in a ship: it is laid over the keel, of which it forms the interior or counter part, and across all the timbers inside the vessel. It consists, like the keel, of several pieces scarfed together, but of only half the breadth and thickness of those of the latter. In order that it may fit with greater security upon the flood-timbers and crotchets, it is notched opposite to each to the depth of an inch and a half, and secured upon them to that depth by copper spike nails. — See KEEL, and Fig. 1471.

Keel'yine-pin, *n.* See KEELIVINE.

Keen, *a.* [Sax. *cen*, D. *koen*, bold; G. *kühn;* Old G. *kuoni, koni*, brave, bold.] Quick in intelligence; acute in mind; promptly perceptive; sharp; shrewd; penetrating; as, a *keen* intellect, a *keen* look, a *keen* lawyer. — Eager; sharp; vehement.

"*Keen* contest and destruction close allied." — *Byron.*

— Sharp; well-edged; fitted to cut; as, a razor with a *keen* edge. — Severe; piercing; penetrating; as, a *keen* wind. — Acrimonious; bitter; incisive; trenchant; as, *keen* sarcasm.

NOTE. *Keen* is frequently used to form the compound of words; as, *keen*-edged, *keen*-sighted, &c.

—*v. a.* To sharpen.

"Nor when cold Winter *keens* the brightening flood." — *Thomson.*

Keene, in *Kentucky*, a post-village of Jessamine co., about 11 m. S.W. of Lexington. *Pop.* (1897) 514.

Keene, in *Michigan*, a township of Ionia co. *Pop.* (1897) 1,080.

Keene, in *Nebraska*, a post-office of Kearny co.

Keene, in *New Hampshire*, a city, cap. of Cheshire co., on the Ashuelot river, the Boston & Maine and Fitchburg R.Rs., 50 m. S.W. of Concord. *Pop.* (1897) 7,640.

Keene, in *New York*, a post-township of Essex co. *Pop.* (1897) 1,290.

Keene, in *Ohio*, a post-village and township of Coshocton co., abt. 82 m. E.N.E. of Columbus, and 30 m. N. of Zanesville.

Keen'ly, *adv.* Eagerly; vehemently; sharply; severely; bitterly.

Keen'ness, *n.* Quality of being keen; acuteness of mind; sharpness; eagerness; vehemence; sharpness or fineness of edge; quality of piercing; rigor; asperity; acrimony; bitterness; as, *keenness* of appetite, envy, invective, &c.

Keen'ville, in *Illinois*, a post-office of Wayne co.

Keenville, in *Pennsylvania*, a village of Snyder co., on the Susquehanna River, abt. 4 m. below Sunbury.

Keep, *v. a.* [A. S. *cepan*, to catch at, to catch; Lat. *capio*, to lay hold of.] To hold; to retain in one's power or possession; not to lose or part with.

"If we lose the field, we cannot *keep* the town." — *Shaks.*

— To have in safe custody; to preserve; to retain; to protect, support, or shield; to guard or sustain.

"Put your trust in God, and *keep* your powder dry." — *Cromwell.*

— To tend; to have the care of; to feed; to pasture.

"While in her girlish . . . she *kept* sheep on the moor." — *Carew.*

— To practise; to do or perform; to obey; to observe in practice; to fulfil; to perform; as, to *keep* the commandments of God. — To observe or solemnize, as a feast or fast; to commemorate; as, to *keep* one's birth-day; to *keep* a day of thanksgiving. — To hold or preserve in any state; to continue in any course, action, or condition; as, to *keep* a snob at a distance, to *keep* wine, &c. — To maintain, as an institution or establishment; to manage; to control; to conduct; as, to *keep* house. — To provide with subsistence or necessaries; to entertain; to support; as, to *keep* boarders. — To hold in one's employ or service; to maintain, as an assistant, help, &c.

"I *keep* but three men and a boy." — *Shaks.*

—Not to intermit; to practise; to use habitually; to maintain.

"Both day and night did we *keep* company." —*Shaks.*

—To hold in one's own bosom; to confine to one's own knowledge; not to disclose or communicate to others; not to betray.

"If he were wise, he would *keep* all this to himself." —*Tillotson*

—To observe; to be faithful; to perform, as duty; not to violate, neglect, or swerve from; as, to *keep* a promise. — To remain in; to confine one's self to; as, to *keep* one's bed; — hence, to frequent; to haunt.

To keep back, to withhold; to reserve.

"Some are so close and reserved . . . they seem always to *keep back* somewhat." — *Bacon.*

To keep company with, to associate with; to frequent the society of; as, to *keep company with* one's inferiors, the ship *kept company with* the rest of the fleet; to offer or receive attentions with a view to matrimony; as, who does she *keep company with*? (Used colloquially.)

To keep down, to hold in restraint or subjection; as, they were *kept down* with difficulty.

(*Painting.*) To tone down or subdue the tints of, as a picture.

To keep good or *bad hours*, to be habitually early or late in returning home, or retiring to rest.

"I rule the family very ill, and *keep bad hours.*" — *Pope.*

To keep school, to support a school; to teach a school.

To keep term, to reside in college during a term. (Applied to the English universities.)

To keep up, to uphold; to sustain; to maintain.

"Albano *keeps up* its credit still for wine." — *Addison.*

—To continue; to hinder from ceasing; as, to *keep* up a correspondence.

To keep in, to conceal; to hold secret; not to reveal.
"Syphax, your zeal becomes importunate; . . . learn to *keep* it in."
Addison.
To keep off, to hold at a distance; to debar from approach; as, he contrives to *keep* his creditors *off*.
To keep under, to oppress; to curb; to hold in submission.
"Truth may be smothered a long time, and *kept under* . . . but it will break out at last."—*Stillingfleet.*

Keep, *v. n.* To abide or remain in any position, state, or condition; to stay; as, to *keep* near, to *keep* before or behind, to *keep* out of reach.
"What! *keep* a week away? seven days and nights?" —*Shaks.*
—To last; to endure; to remain in an unimpaired state; as, this ale *keeps* well. — To lodge; to dwell; to remain for a time.
"Knock at the study, where, they say, he *keeps* *Shaks.*
To keep from, to refrain; to abstain; to avoid.
To keep on, to go forward; to continue in progression; to advance uninterruptedly.
"He, with unaltered pace *kept on*." —*Dryden.*
To keep to, to adhere strictly to; to maintain inviolate; as, *to keep* to one's promise, *to keep* to the fashion.
To keep up, to continue unsubdued; not to be hedridden.

Keep, *n.* State of being kept or supported; —hence, case; actual condition; as, to be in good *keep*.
—Means of support or sustenance; food; provisions; as, the *keep* of a family. — Charge; that which is deposited and held.
(*Arch.*) The strongest part of a feudal castle; a donjon. See CASTLE.

Keep'er, *n.* One who keeps; one who holds or possesses anything. — One who holds another in custody; as, the *keeper* of a prison. — One who has the care, charge, or superintendence of anything.
"Herne the hunter . . . a *keeper* here in Windsor Forest."—*Shaks.*
—A ring worn on the finger as the guard of another ring.
K. of the Great Seal, an English judicial officer, whose duties are now generally merged in those of the lord chancellor. — *K. of the Privy Seal.* See LORD PRIVY SEAL. — *K. of a magnet.* (*Phys.*) Same as ARMATURE, *q. v.*

Keep'ership, *n.* Office of a keeper.

Keep'ing, *n.* A holding or possessing; custody; restraint; guard; preservation; maintenance; provision; feed; support; as, to take a woman into *keeping*. — Fit proportion; unity; congruity; consistence; harmony; as, this story is quite in *keeping* with the other one.
(*Painting.*) The observance of a due proportion in the general light and coloring of a picture, so that no part be too vivid or more glaring than another, but a proper harmony and gradation be evident in the whole performance.

Keep'ing-room, *n.* A sitting-room common to family use. (New England.)

Keep'sake, *n.* Anything given to be kept for the sake of the giver; a souvenir; a memento; a cadeau; anything bestowed as a token of friendship or esteem.

Keeseville, (*keez'vil,*) in *New York*, a post-village of Essex co., on the Au Sable River, about 4 m. above Lake Champlain.

Keesh, *n.* (*Metallurgy.*) Flakes of carburet of iron sometimes found on the surface of bars of pig-iron.

Keeve, *n.* [A. S. *cyf.*] A brewer's mash-tub.
(*Mining.*) A vat or tub used in washing ores. (Sometimes written *keever.*)
—*v. a.* To place in a tub for fermentation or washing. — To overturn, as a cart. (Used in some English localities.)

Kee'zletown, in *Virginia*, a post-village of Rockingham co., about 5 m. S.E. of Harrisonburg.

Kef'fekel, *n.* (*Min.*) See KIFFEKIL.

Keg, *n.* [Fr. *caque;* from L. Lat. *cac icus*, from Lat. *cadus*=Gr. *kados*, a large vessel for containing liquids, especially wine.] A small cask or barrel; as, a *keg* of lager-beer.

Keg Creek, in *Iowa*, enters the Missouri River from Fremont co.

Ke'gonsha, in *Wisconsin*, a lake in Dane co., sometimes called FIRST LAKE. See FOUR LAKES.

Kehl, a town of the grand-duchy of Baden, circ. Mid. Rhine, on the Rhine, immediately opposite Strasburg, and 10 m. N.W. of Offenburg. *K.* was formerly a fortress, and esteemed an important bulwark of Germany. It was fortified by Vauban in 1688, ceded by France to Baden in 1697, taken by the French in 1703, 1733, 1793, and 1796; by the Austrians, also, in the latter, and again taken by the French in the year following. After the peace, its fortifications were dismantled. The town is connected by a fine bridge with the opposite bank of the Rhine, and with Strasburg.

Keighley, (*kēēth'le,*) a manufacturing town of England, in the W. Riding of co. York, on an affluent of the Aire, 16 m. W.N.W. of Leeds, and 178 N.N.W of London. This is the seat of a large manufacturing industry in cottons, woollens, and coarse stuffs.

Keil, *n.* Same as KAYLE, *q. v.*

Keilhauite, (*kīl'how-it,*) *n.* (*Min.*) An ore of titanium, containing chiefly silica, oxide of titanium, lime, and yttria.

Keir, Kieve, *n.* A boiler employed in bleaching-works.

Kei'ser, REINHARD, an eminent German musician and composer, was B. at Leipsic in 1673. He was the author of 118 operas, of which his *Circe*, brought out at Hamburg in 1734, was the last and most beautiful. He possessed a most fertile imagination, and is considered as the father of German melody. D. 1735.

Keith, (*keeth.*) a town of Scotland, in Banffshire, 20 m. from Banff; *pop.* 5,500.

Keith, in *Ohio*, a post-village of Noble co.

Keith, in *Oklahoma*, a post-office of Woods co.

Keiths'burg, in *Illinois*, a city, the former cap. of Mercer co., on the Mississippi river, C., B. & Q., and Iowa Cent. R.Rs., 32 m. N.W. of Galesburg.

Kekos'kee, in *Wisconsin*, a post-village of Dodge co., about 7 m. N.N.E. of Horicon.

Kelat', a town and fortress of Afghanistan, 84 m. N.W. of Candahar; *pop.* unknown.

Kelat', or **Kalat'**, a town and cap. of Beloochistan, prov. Kelat, 6,000 feet above the sea. Lat. 29° 6′ N., Lon. 67° 57′ E. It is fortified, and commanded by a large citadel, and has also a few manufactories for arms. *Pop.* 12,000.

Kelat', a fortress of Khorassan, in Persia, 40 m. from Mescher. It was the principal stronghold of Nadir Shah.

Kelk, *v. a.* [Gael. *clach.*] To belabor; to drub; to castigate severely. (Used as an English provincialism.)
—*n.* A blow. A large stone. The roe of fish. (Prov. Eng.)

Kell, *n.* Same as KALE, *q. v.*

Kell, *n.* A wrapper or covering; a filament.

Kel'lermann, FRANÇOIS CHRISTOPHE, a marshal of France, B. at Strasburg, 1735, and early entering the service of his country, gained great distinction in what was known as the Seven Years' War, during which he rose to the rank of brigadier. Having joined the popular side on the breaking out of the Revolution, he was given the command of the army of the Moselle or the North, and in 1792 gained the splendid victory over the Prussians, called the battle of Valmy, and though he for a time fell under the suspicion of the Convention, he was, in 1795, intrusted with the command of the armies of Italy and the Alps, having to hold both countries with a force hardly exceeding 45,000 effective men, against a well-appointed enemy of treble that strength. The ascending star of Napoleon, however, superseded *K.* as an independent commander, though his services were acknowledged by a marshal's baton in 1804, the title of Duke of Valmy, in honor of his former victory, and the post of imperial senator, and at the Restoration he was created a peer of France. D. 1820.

Kel'lersburg, in *Pennsylvania*, a post-village of Armstrong co., 48 m. N.E. of Pittsburg.

Kel'lerton, in *Iowa*, a post-township of Ringgold co

Kel'lerville, in *Illinois*, a post-village of Adams co.

Kel'logg, CLARA LOUISE. See SECTION II.

Kel'logg, in *Iowa*, a post-town of Jasper co., on Chic., R. I. & Pac. R.R. *Pop.* (1895) 640.

Kel'logg, in *Minnesota*, a post-village of Wabash co., on Chic., Mil. & St. Paul R. R.

Kel'loggsville, in *New York*, a post-village of Cayuga co., about 16 m. S.E. of Auburn.

Kel'loggsville, in *Ohio*, a post-village of Ashtabula co., about 220 m. N.N.E. of Columbus.

Kells, a town of Ireland, in co. Meath, prov. Leinster, 35 m. N.W. of Dublin. Several fine antiquities are found here. *Pop.* (1897) 2,350.

Kel'ly, in *Illinois*, a thriving township of Warren co.

Kel'ly, in *Missouri*, a township of Carter co.
—A township of Cooper co.

Kel'ly, in *Pennsylvania*, a township of Union co., on the Susquehanna river, a short distance above Lewisburg.

Kel'lyburg, in *Pennsylvania*, a village of Indiana co., about 64 m. E.N.E. of Pittsburg.

Kellysville, in *Pennsylvania*, a village of Delaware co., about 7 m. S.W. of Philadelphia. (Now BURMONT.)

Kellyville, in *Texas*, a post-village of Marion co., on the Shcr., Shreve. & Southern R. R.

Kelp, *n.* The ashes of marine plants, from which we obtain the common carbonate of soda and the valuable drug called iodine. The ashes of burnt sea-weed, or kelp, are used in the manufacture of glass, and in the formation of soap. The best quality of this saline ash is called barilla. — See SODA.

Kel'pie, Kel'py, *n.* (*Scotch Folk-lore.*) A name applied to certain supernatural beings, like brownies.

Kel'sey, in *California*, a post-village and township of El Dorado county, about 7 miles north of Placerville.

Kel'so, a flourishing market-town of Scotland, co. of Roxburgh, on the left bank of the Tweed, near its junction with the Teviot, 21 m. S.W. of Berwick-on-Tweed, and 38 S.E. of Edinburgh; *pop.* 4,739.

Kel'so, in *Indiana*, a post-village and township of Dearborn county, about 14 miles N.N.W. of Lawrenceburg.
—A post-office of Dearborn co.
—A village of Huntingdon co., about 30 m. S.W. of Fort Wayne.

Kel'so, in *Minnesota*, a p.-v. and post-township of Sibley co.

Kel'so, in *Missouri*, a village of Scott co., about 9 m. S. of Cape Girardeau.

Kel'son, *n.* The same as KEELSON.

Kelt, *n.* See CELT and KILT.

Kel'ter, *n.* Regular order or condition; as, he is not in *kelter*, that is, he is not ready. See KILTER.

Kel'vin Grove, in *North Carolina*, a village of Wake county.

Kem'pen, the name of two towns of Prussia, the one in Westphalia, 20 m, from Dusseldorf, the birthplace of Thomas à Kempis; *pop.* 4,500; — and the other in Prussian Poland, 32 m from Kalisch; *pop.* 7,000.

Kem'per, in *Mississippi*, an E. co., adjoining Alabama. *Area*, about 740 sq. m. *Rivers.* Tugaloo, or Sucarnooche creek, and some smaller streams. *Surface*, mostly level; *soil*, fertile. *Cap.* De Kalb. *Pop.* (1890) 17,961.

Kem'ble, JOHN PHILIP, the most dignified and accomplished actor on the British stage since the days of Garrick, was the eldest son of Roger Kemble, manager of a company of comedians at Prescot, in Lancashire, where he was born in 1757. Being of Catholic parents, he was sent to the English college at Douay, where he early distinguished himself by his proficiency in elocution, and had Talma for a fellow-student. Finding that his father designed him for the priesthood, he quitted the college clandestinely, returned to England, and engaging in an itinerant company, performed with great éclat at Liverpool, Edinburgh, York, &c. In 1783, he made his first appearance on the boards of Drury Lane, in the character of Hamlet. His success was complete; and from that time he maintained the character of being the first English tragedian of the age. On the secession of Mr. King, he became manager of Drury Lane theatre. In 1802, he took advantage of the peace to visit the continent of Europe, in order to study the French and Spanish theatres, with a view to the improvement of the English. On his return, he became manager of the Covent Garden theatre, where he continued till 1808. In 1817, he retired from the stage, after a long and honorable career, and, in consequence of ill health, went first to Montpelier, and thence to Lausanne, where he died, 1823, after a paralytic attack. The learning, elegance, manners, and accomplishments of *K.*, introduced him into the best company, by whom he was at once courted and esteemed. As a tragedian, when personating characters more immediately adapted to his style of excellence, such as Cato, Coriolanus, Hamlet, King Lear, Penruddock, &c., he was unrivalled. And his managerial duties were discharged with much refined and accurate taste, in the rectification of scenic decoration and the adoption of appropriate costume, adding thereby both to the splendor and illusion of the drama. He was the author of *Belisarius*, a tragedy, *Lodoiska*, an opera, and *The Female Officer*, a farce; besides which he altered and modernized many of the old dramas. — His brother CHARLES was also a distinguished actor, but excelled chiefly in comedy. He died, 1854, leaving two daughters, one of whom, Frances Anne Kemble, a celebrated actress, visited the United States in 1832, and there married a gentleman of property named Butler, from whom she obtained a divorce in 1839. She published several works, the last of which is *Records of a Girlhood*. Died Jan. 16, 1893.

Fig. 1472. — JOHN PHILIP KEMBLE.

Kem'blesville, in *Pennsylvania*, a post-village of Chester co.

Kemp, in *Texas*, a post-village of Kaufman co.

Kemp'ten (Anc. *Campodunum*), a walled town of Bavaria, circ. Suabia and Neuburg, cap. dist. of same name, on the Iller, 50 m. S.S.W. of Augsburg. It is a well-built place, with flourishing linen and cotton manufactures, and a considerable trade in cattle and wool. *Pop.* (1897) 16,450.

Kempt'ville, a village in prov. of Ontario, co. of Grenville, 92 m. N E. of Kingston. *Pop.* (1897) 1,262.

Kemps'ville, in *Virginia*, a post-village of Princess Anne co., on the N., V. B. & S. R.R.

Ken, *v. a.* [Sax. *cunnan*, Goth. *kunnan*, to know. See KEEN.] To know; to understand.
"'Tis he, I *ken* the manner of his gait."—*Shaks.*
—To see at a distance; to descry.
"At once as far as angels *ken*, he views."—*Milton.*
—*n.* View; reach of sight.
"Coasting, they kept the land within their *ken*."—*Dryden.*

Ken'ansville, in *North Carolina*, a post-village, cap. of Duplin co., about 50 m. N. of Wilmington.

Ken'dal, a market-town and borough of England, co. of Westmoreland, 40 m. S. of Carlisle, and 219 N.N.W. of London. *Manuf.* Linseys, serges, baizes, kerseymeres, carpets, and marble sculptures. *Pop.* 13,231.

Ken'dal Green, *n.* A kind of green cloth, made at Kendal, in England.

Ken'dall, AMOS, an American lawyer and statesman, B. in Dunstable, Mass., 1789. In 1807 he entered Dartmouth College, where he graduated in 1811. He studied law with W. B. Richardson, of Groton, Mass., (afterwards chief-justice of New Hampshire,) and was admitted to the bar in 1814, in which year he emigrated to Ky., where he distinguished himself both in his profession and as an editor. He was a firm supporter of Gen. Jackson, who, on his accession to office, appointed him 4th auditor of the treasury dept. at Washington. In 1835 he was promoted to be postmaster-general, in which office he was retained by Mr. Van Buren. Within a single year after assuming control of the general post-office, he succeeded in completely reorganizing it and relieving it of the indebtedness which had been so grievously felt heretofore; and, in 1836, Congress adopted a plan suggested by him, for placing it upon a substantial and effective working basis. It is no small

credit to his sagacity to state that from that day to this there has been no material change in the working of the post-office system of the country, which, as it at present exists, is a substantial monument to the memory of *K.* He retired from public life in 1840, from which time he devoted himself very successfully to the exercise of his profession. Died Nov. 12, 1869.

Ken'dall, in *Illinois*, a N. E. co.; *area*, about 339 sq. m. *Rivers.* Fox river, and the head-waters of the Au Sable river. *Surface*, undulating; *soil*, very fertile. *Cap.* Yorkville. *Pop.* (1890) 12,106.

—A post-township of Kendall co.

Ken'dall, in *Michigan*, a post-village of Van Buren co.

Ken'dall, in *Missouri*, a post-office of Shelby co.

Ken'dall, in *New York*, a post-town and townsbip of Orleans co. *Pop.* (1897) 1,782.

Ken'dall, in *Penna.*, a post-borough of Beaver co.

Ken'dall, in *Wisconsin*, a township of Lafayette co.

Ken'dall's Mills, in *Maine*, a village of Somerset co., about 21 m. N.N.E of Augusta.

Ken'dallville, in *Indiana*, a city of Noble co., on L., S. & Mich. So. and Gr. R. & Ind. R. Rs., 27 m. N. by W. of Fort Wayne. Has large manufacturiug iudustries. *Pop.* (1897) about 3,200.

Ken'drick, in *Iowa*, a township of Greene co.

Kenduskeag (*ken-dus-kag'*), in *Maine*, a small river in Penobscot co., flowing into the Penobscot river at Bangor.

—A post-town and township of Penobscot co., on the river of its own name, about 12 m. above Bangor. *Manuf.* Cheese, lumber and farming implements. *Pop.* 536.

Ken'ilworth, a market-town of England, county of Warwick, 5 m. N. of the town of Warwick. This place is famous for the ruins of its once superb castle, built in the reign of Henry I., and afterward the inheritance of the Dudleys, earls of Leicester. In 1575 Queen Elizabeth was entertained here by her powerful favorite, Robert

Leicester's Building. Cæsar's Tower.

Fig. 1473.—RUINS OF THE CASTLE OF KENILWORTH.

Dudley, Earl of Leicester (*q. v.*), for 17 days, at the then enormous expense of $5,000 per diem. (See Sir Walter Scott's fine romance, *Kenilworth.*) The castle was partially ruined in the Civil War, and is now the property of the earls of Clarendon. *Pop.* 3,357.

Ken'jua, now spelled **Kin'zua,** in *Pennsylvania*, a village and township of Warren co., on the Allegheny river, near the mouth of Kinzua creek, and about 12 m. above Warren.

Ken'jua, or **Kinzua, Creek,** in *Pennsylvania*, enters the Allegheny river in Warren co.

Kenmare' Bay, or **River,** in Ireland, a deep inlet of the Atlantic Ocean, between the coasts of Cork and Kerry, N.W. of Bantry bay.

Kenneba'go Lake, in *Maine*, a post-office of Franklin co.

Ken'nebec, in *Iowa*, a village and township of Monona co., on the Little Sioux river, about 8 m. N.E. of Onowa City.

Ken'nebec, or KENNEBECK, in *Maine*, a considerable river, rising in Moosehead Lake, and flowing a general south course to the Atlantic Ocean. Its length is about 150 miles, and its source being over 1,000 feet higher than its mouth, an immense and powerful water-power is afforded during its descent. Many large and flourishing towns are situated along its banks, as Augusta, Bath, Norridgewock, &c.

—A S.W. central co.; *area*, about 875 sq. m. *Rivers.* Kennehec and Sebasticook rivers, besides numerous lakes and smaller streams. *Surface*, diversified; *soil*, extremely fertile. *Cap.* Augusta. *Pop.* (1890) 57,012.

—A village of Washington co.

Ken'nebunk, in *Maine*, a small river of York co., enters the Atlantic Ocean at Kennebunk.

—A post-town and port of entry of York co., on the Kennebunk river, about 25 m. S.W. of Portland. *Pop.* (1897) about 3,200.

Ken'nebunk Depot, in *Maine*, a village of York co., about 25 m. S.W. of Portland.

Kennebunk'port, in *Maine*, a post-town and township of York co., at the mouth of the Kennebunk river, about 75 m. S.S.W. of Augusta. The river here forms an excellent harbor, and the inhabitants are for the most part engaged in navigation and shipbuilding. *Pop.* (1897) 2,240.

Ken'nedy, in *New York*, a post-village of Chautauqua co., on Erie R. R. *Pop.* (1897) 528.

Ken'nedy's, in *New Jersey*, a village of Warren co.

Ken'nedy's, in *Virginia*, a village of Brunswick co.

Ken'nekuk, in *Kansas*, a post-village of Atchison co.

Ken'nel, *n.* [Fr. *chenil;* It. *canile*, from Lat. *canis*, a dog. See CANINE.] A house or cot for dogs, or for a pack of hounds.—A pack of hounds or their cry.—The hole of a fox or other beast; a haunt.

—[Fr. *canal;* Lat. *canalis.*] A chaunel, or little canal; the water-course of a street.—A puddle.

—*v. n.* To lodge in a kennel; to lie; to dwell as a fox or a dog.

—*v. a.* To keep or confine in a kennel.

Ken'nel-coal, *n.* See CANNEL-COAL.

Ken'ner, in *Louisiana*, a post-village of Jefferson parish, about 12 m. W. of New Orleans.

Ken'net, *n.* (*Naut.*) A piece of timber to which the tacks or sheets are fastened.

Ken'net, in *Missouri*, a post-village, cap. of Dunklin co., about 330 m. S.E. of Jefferson City. Its former name was BUTLER.

Ken'net, in *Pennsylvania*, a township of Chester co.

Ken'net Square, in *Pennsylvania*, a post-borough of Chester co., about 35 m. W. S.W. of Philadelphia. *Pop.* (1897) about 1,490.

Ken'neth. The name of three kings of Scotland, who reigned in the dark ages of that country's history. Kenneth I. possessed the scepter only for one year, dying A. D. 605.—Kenneth II. succeeded his father, Alpin, in 823, and died 854, after a long and successful war waged with the Picts.—Keuneth III. ascended the throne on the death of his father, Malcolm, and was murdered by his soldiers and the populace in the year 994.

Kenn'gottite, *n.* (*Min.*) A mineral bearing some resemblance to Miargyrite, but containing a large amount of silver. It is found in irregular groups of crystals, varying in color from iron-black to lead-gray, at Felsöbnugo, Hungary,

Ken'nington, a suburb, of London, England. *Pop.* (1897) about 75,000.

Ken'nonsburg, in *Ohio*, a post-village of Noble co., about 37 m. E. of Zanesville.

Ken'ockee, in *Michigan*, a post-township of St. Clair co.

Keno'ma, in *Missouri*, a post-town of Barton co., on the Kan. City, Ft. Scott & M. R. R.

Keno'sha, in *Nebraska.* See KANOSHA.

Keno'sha, in *Wisconsin*, an extreme S. E. co.; adjoining Illinois on the S. and washed by Lake Michigan on the E.; *area*, about 280 sq. m. *Rivers.* Des Plains and Fox or Pishtaka rivers, besides some smaller streams. *Cap.* Kenosha. *Pop.* (1895) 17,548.

—A city, the cap. of Kenosha co., on Lake Michigan, and the Chicago & Northwestern R. R., 32 m. S. of Milwaukee. Has manufactures of wagons, leather, wire, and brass goods, &c. The harbor is excellent, with much commerce. *Pop.* (1895) 8,122.

Ken'sico, in *New York*, a post-village of Westchester co., about 29 m. N. of New York city.

Ken'sington, a town of England, county Middlesex, and now forming one of the west divisions of Loudon. There is here a fine old palace belonging the English sovereigns. Holland House (see Fig. 1301) is another prominent feature of this locality. *Pop.* (1897) 168,200.

Ken'sington, in *Connecticut*, a post-village of Hartford co., about 15 m. S.W. of Hartford. *Pop.* 1,320.

Ken'sington, in *Michigan*, a post-village of Oakland co., about 36 m. N.W. of Detroit.

Ken'sington, in *Minnesota*, a post-village of Douglass co., on M., St.P. & S. Ste. M. R. R.

Ken'sington, in *New Hampshire*, a post-township of Rockingham co. *Pop.* (1897) 560.

Ken'sington, in *Pennsylvania*, formerly a suburban village, now included within the incorporated limits of Philadelphia, on the Delaware river, about 1½ m. N. E. of the City Hall.

Ken'singtou Furnace, in *Pennsylvania*, a village of Venango co.

Kent, JAMES, a very eminent American jurist, born in Philippi, Putnam co., N. Y., 1763. He was educated at Yale College, entered on the practice of the law in 1785, sat four years in the State legislature of New York, and in 1794 was chosen professor of Law at Columbia College. Various offices and honors were successively conferred on him and he took part, with Judge Radcliffe, in the laborious task of revising the legal code of his native State. In 1804 he was appointed chief justice, and about ten years later chancellor, of the State of New York; and on his quitting the latter office on account of his age, he again undertook the professorship of Law at Columbia College. In 1826 and the four following years appeared his important work, *Commentaries on American Law*, esteemed an authority in England as well as in the U. S. Chancellor Kent was no less esteemed for his private virtues than for his professional abilities and his public services. Died in 1847.

Kent, WILLIAM, an English landscape gardener, born in Yorkshire, 1685. He was originally a coach painter, but left that occupation to study the principles of design, for which purpose he went to Rome, where he studied under Luti. As a painter, however, he never attained celebrity; his talent lay more in ornamental architecture. But it is as the inventor of the modern style of landscape-gardening that he is chiefly known; he broke up the old uniformity of straight lines and corresponding parts, and threw wood, water and ground into the beautiful shapes presented by nature, rendering that graceful, pleasing and attractive which before was stiff and formal. Died in 1748.

Kent, a maritime co. in the S.E., and sometimes called "the garden of England," is bounded N. by the Thames and its estuary, E. and S. E. by the German Ocean and the Straits of Dover, S. by Sussex, and W. by Surrey. Its greatest length from Deptford to the N. Foreland is about 64 miles and its maximum breadth about 30 miles. *Area*, 1,627 sq. m., or 1,039,419 acres. *Surface.* This is a finely diversified and beautiful county. Two parallel ridges of hills traverse its whole extent from E. to W. One district, called the *Weald of Kent*, exhibits the most delightfully diversified scenery that can be imagined. *Prod.* This county has a greater variety of agricultural products than any other in the kingdom. It is a garden of fruits and flowers. Wheat, barley and hops are produced in immense quantities. *Manuf.* Paper, gunpowder, and toys. Shipbuilding is largely carried on. *Principal Towns.* Maidstone (the capital), Canterbury, Greenwich, Dover, Rochester, and Chatham. It was in this county that the Romans first landed when they invaded Britain. It was inhabited by the Cantii, and was the first established kingdom of the Saxon Heptarchy. See WESSEX (*q. v.*). *Pop.* in 1897, 1,261,400.

Kent, an E. co. of New Brunswick, bordering on Northumberland Strait, an arm of the Atlantic Ocean; *area*, about 1,400 sq. m. *Rivers.* Cocagne, or Cocayne, and Richibucto. *Surface*, hilly; *soil*, generally fertile. *Cap.* Richibucto. *Pop.* (1897) 24,105.

Kent, a S.W. co. of prov. of Ontario, having Lake Erie on the S. E. and Lake St. Clair; *area*, about 644 sq. m. *Rivers.* Thames and Sydenham rivers. *Surface*, diversified; *soil*, fertile. *Cap.* Chatham. *Pop.* (1891) 26,836.

Kent, in *Connecticut*, a post-town and township of Litchfield co. *Pop.* (1897) 1,420.

Kent, in *Delaware*, a central co., bordering on Delaware Bay on the E. and Maryland on the W.; *area*, about 630 sq. m. *Rivers.* Duck and Mispilion creeks, and the head-waters of the Choptank and Marshy Hope rivers. *Surface*, mostly level; *soil*, moderately fertile. *Cap.* Dover. *Pop.* (1890) 32,664.

Kent, in *Illinois*, a post-village of Stephenson co.

Kent, in *Indiana*, a post-village of Jefferson co., about 10 m. W. of Madison.

—A post-village, cap. of Newton co., about 56 m. W. of Logansport. Now called KENTLAND.

Kent, in *Maryland*, a N. E. co., adjoining Delaware on the E., and washed by Chesapeake Bay on the W. and S.W.; *area*, about 315 sq. m. *Rivers.* Chester and Sassafras rivers. *Surface*, level, or generally undulating; *soil*, fertile. *Products*, general farm produce, garden truck and peaches. *Cap.* Chestertown. *Pop.* (1890) 17,471.

Kent, in *Michigan*, a S.W. co.; *area*, about 860 sq. m. *Rivers.* Grand, Rouge and Thornapple rivers. *Surface*, hilly; *soil*, very fertile. *Cap.* Grand Rapids. *Pop.* (1894) 121,919.

Kent, in *Minnesota*, a post-office of Wilkin co.

Kent, in *Missouri*, a post-office of Newton co., about 85 m. S.W. of Springfield.

Kent, in *New York*, a township of Putnam co. *Pop.* (1897) about 1,150.

Kent, in *Ohio*, a fine town of Portage co., on the Cuyahoga river and four lines of railroad, about 7 m. W. of Ravenna. Has fine water-power and extensive manufactures. *Pop.* (1897) about 4,000.

Kent, in *Pennsylvania*, a post-village of Indiana co.

Kent, in *Rhode Island*, a W. central co., adjoining Connecticut on the W. and washed by Narragansett Bay on the E.; *area*, about 180 sq. m. *Rivers.* Pawtuxet, Moosup, and Wood rivers. *Surface*, uneven; *soil*, generally fertile. *Cap.* East Greenwich. *Pop.* (1895) 30,050.

Kent, in W. Australia, a maritime co., mostly between Lat. 34° and 35° S., and Lon. 118° and 119° E.—Another in Tasmania, watered by the river Huon.

Kent'-bugle, *n.* (*Mus.*) A keyed bugle.

Kent'ish-town, a suburb of London, England, co. Middlesex. *Pop.* (1897) about 72,000.

Kent Islands, a group at the E. end of Barr's Straits, between the colony of Victoria and Tasmania.

Kentle (*ken'tl*), *n.* [W. *cant;* Fr. *quintal.*] (*Com.*) A hundred-weight; a quintal.

Kent'ledge, *n.* (*Naut.*) A kind of ballast, consisting of iron pigs.

Ken'ton, in *Delaware*, a post-village of Kent co., about 10 m. N.W. of Dover.

Ken'ton, in *Kentucky*, a N. co., adjoining Ohio; *area*, about 152 sq. m. *Rivers.* Ohio and Licking rivers. *Surface*, moderately hilly; *soil*, very fertile. *Cap.* Independence. *Pop.* (1890) 54,167.

Kenton, in *Missouri*, a post-office of Christian co.

Ken'ton, in *Ohio*, a city, cap. of Hardin co., on the Scioto river, and three railroad lines, 56 m. N. of Springfield. Has extensive manuf. *Pop.* (1897) about 6,300.

Ken'tontown, in *Kentucky*, a post-village of Robertson co., about 50 m. E. N. E. of Frankfort.

Kent's Hill, in *Maine*, a post-village of Kennebec co., about 14 m. N.W. of Augusta.

Kent's Mills, in *Virginia*, an unimportant village of Wythe co.

Kent's Store, in *Louisiana*, a post-office of East Feliciana parish.

Kent's Store, in *Virginia*, a post-office of Fluvanna county.

Kentuck'ian, *n.* A native or inhabitant of Kentucky.

Kentuck'y, an E. central State of the American Union, having Illinois, Indiana and Ohio on the N.; Virginia and West Virginia on the E.; Tennessee on the S., and Missouri, Illinois and Indiana on the W. It lies between Lat. 36° 25′ and 39° 15′ N., and Lon. 81° 50′ and 89° 26′ W.; being about 400 m. in length from E. to W., and varying from 40 to 180 m. in breadth. *Area*, 41,263 sq. m.—*General Description.* The surface of *K.* is diversified, being broken and mountainous in the S. E., with a general slope to the N. and N.W. In the central part the surface is undulating, and in the W. comparatively level. The latter portion is mostly occupied by an extensive tract called the *Barrens*, which, contrary to what the name seems to imply, is not sterile, but comprises some of those fine pasture lands for which the State is distinguished.—*Rivers.* The chief streams are the Ohio, Mississippi, Tennessee, Cumberland, Kentucky, Green, and Licking rivers. The Ohio washes the entire

N. and N.W. border, the Mississippi forms the W. boundary, and the others, with their numerous tributaries, intersect every part of the State. The larger inland rivers are navigable in winter, but in the summer they are much diminished, while some of the small ones are entirely dried up. — *Climate.* In the E. and central part of *K.* the climate is highly salubrious; but in the W., especially along the Mississippi, it is very unhealthy. Great extremes of heat and cold are experienced in this State; and, considering its latitude, the winters are sometimes long and severe. Rain falls abundantly in winter and spring, but is generally scanty in summer and autumn, the weather in those seasons being characteristically dry and constant. The mean annual temperature is about 55° F.; the thermometer falling to 20° or 15° in winter, and rising to 94° or 100° in summer. In some of the S. cos., however, cattle and sheep can remain without shelter throughout the year. — *Min. K.* lies wholly in the great region of stratified rocks of the W. These traverse the State in layers, so nearly horizontal that often for considerable distances no perceptible dip meets the eye. The Silurian groups, which are here almost exclusively of a calcareous character, extend throughout the State from N. to S. They are nearly 100 m. in width, and form the great central axis of the lowest rocks. At Louisville they dip beneath the limestone of the Devonian age, which here lies in horizontal strata, forming the bed of the river, and the reefs which occasion the falls at this place. The carboniferous limestone comes next in order; and further W. are the coal-measures, which form the S. termination of the great coal-fields of Illinois and Indiana. Commencing at Rome on the Ohio River, these coal deposits can be traced almost to the Mississippi, and extend nearly across the State. It is here that the Breckinridge coal, so well known for its excellence in yielding coal-oil, is obtained. Iron of a superior quality is found in many places, and numerous salt springs occur, yielding salt in sufficient quantity to supply not only *K.*, but a great part of Ohio and Tennessee. Nitre and fine white marble are also plentiful. The limestone of *K.* abounds in fossil remains of the elephant, horse, mastodon, megalonyx, &c. These limestones also abound in caves, the largest of which is the *Mammoth Cave*, q. v. — *Soil, Agric. &c.* The soil of *K.* is generally fertile. In the central part of the State is a tract comprising about 11,350 sq. m., and known as the *Garden of Kentucky.* It is of surpassing fertility, and all the European grains, Indian corn, and tobacco are cultivated to great advantage. This comprises the famous Blue Grass region, which rests on the lower Silurian blue limestone, whose gradual disintegration keeps the soil constantly rich, there being fields here which have been cultivated without fertilizers for 100 years. The bottom lands along the rivers are similarly kept fertile by the annual inundations of their streams. The leading cereal crop is Indian corn, to which nearly 3,000,000 acres are devoted. There are also about 1,000,000 acres in wheat and 600,000 in oats, while 300,000 acres are devoted to tobacco, of which the State produces a very large annual crop. Hay is harvested to the value of nearly $10,000,000 yearly. In addition, *K.* is said to yield more than half the hemp and flax produced in the U. S. The principal fruits are the apple and peach, but the vine, mulberry, and a great variety of other fruits are cultivated. More than one-third of the entire surface of the State (about 10,000,000 acres) still bears its original forest growth, largely composed of valuable hard-wood timber, the leading growth of the upland and mountain regions being the oak, elm, hickory, walnut, chestnut, tulip, and pine, while the chestnut, cherry, oak, sycamore, elm, and locust flourish in the lowlands and barrens. Of the 4,500,000 acres which are classified as third-class and waste, perhaps 1,000,000 are swamps and arid wastes, while the remainder is forest-clad or yields grasses of considerable value, while beneath lie coal, iron and stone.—*Political Divisions.* As late as 1776, *K.* formed part of Fincastle county Virginia, and in that year was made a Virginian county under its present name. In 1780 it was divided by Virginia into the three counties of Fayette, Liucolu, and Jefferson. Later, these counties were subdivided, so that in 1792, when *K.* was admitted into the Union as a State, it possessed nine counties. From that time on the making of new counties was actively prosecuted, so that at present the State possesses 119 counties, as follows:

Adair,	Edmonson,	Knox,	Ohio,
Allen,	Elliott,	Larue,	Oldham,
Anderson,	Estill,	Laurel,	Owen,
Ballard,	Fayette,	Lawrence,	Owsley,
Barren,	Fleming,	Lee,	Pendleton,
Bath,	Floyd,	Leslie,	Perry,
Bell,	Franklin,	Letcher,	Pike,
Boone,	Fulton,	Lewis,	Powell,
Bourbon,	Gallatin,	Lincoln,	Pulaski,
Boyd,	Garrard,	Livingston,	Robertson,
Boyle,	Grant,	Logan,	Rockcastle,
Bracken,	Graves,	Lyon,	Rowan,
Breathitt,	Grayson,	McCracken,	Russell,
Breckinridge,	Green,	McLean,	Scott,
Bullitt,	Greenup,	Madison,	Shelby,
Butler,	Hancock,	Magoffin,	Simpson,
Caldwell,	Hardin,	Marion,	Spencer,
Calloway,	Harlan,	Marshall,	Taylor,
Campbell,	Harrison,	Martin,	Todd,
Carlisle,	Hart,	Mason,	Trigg,
Carroll,	Henderson,	Meade,	Trimble,
Carter,	Henry,	Menifee,	Union,
Casey,	Hickman,	Mercer,	Warren,
Christian,	Hopkins,	Metcalf,	Washington,
Clarke,	Jackson,	Monroe,	Wayne,
Clay,	Jefferson,	Montgomery,	Webster,
Clinton,	Jessamine,	Morgan,	Whitley,
Crittenden,	Johnson,	Muhlenburg,	Wolfe,
Cumberland,	Kenton,	Nelson,	Woodford.
Daviess,	Knott,	Nicholas,	

The most important towns are Louisville, Covington, Newport, Lexington, Paducah, Owensboro, Henderson, Frankfort (the capital), and Bowling Green.—*Industry.* The inhabitants of *K.* are more devoted to agricultural than mechanical pursuits, the rearing of horses and cattle being one of the chief branches of rural industry. The Kentucky horses are of acknowledged excellence, and are sent in large numbers to the Atlantic States, while the principal supply of saddle and carriage horses for the Gulf States are drawn from the *K.* blue grass pasture fields. The State possesses nearly 500,000 horses, valued at about $25,000,000. In addition to these interests *K.*, has active mechanical industries. In the last census year there were 7,745 manufactories, with a capital of $79,811,980, their products being principally flour, tobacco, cigars, and whiskey, iron and steel wares and machinery, malt liquors, leather, jean, carriages and wagons, agricultural implements, lumber, and meals.—*Finance.* *K.* is prosperous financially, it being practically out of debt, with taxable property assessed at over $600,000,000.—*Schools.* The State has a permanent school fund of $2,312,596, consisting of irredeemable bonds issued by the State and counties for school purposes. There are more than 7,000 public schools, with an enrollment of about 400,000 school children. Higher education is provided for by 14 colleges for male and 18 for female students,

Fig. 1474.—THE NEW STATE CAPITOL AT FRANKFORT.

with an agricultural college, numerous academies, and a number of technical educational institutions.—*Public Institutions.* These embrace a handsome State capitol at Frankfort, erected at a cost of more than $1,000,000; institutions for the blind and the deaf and dumb, lunatic asylums at Anchorage, Lexington, and Hopkinsville; a State penitentiary at Frankfort; a house of refuge at Louisville. In addition to these, there are various county, religious, and charitable institutions.—*Government.* The governor, lieutenant-governor, auditor, attorney-general, registrar of land-office, and superintendent of public instruction, are each elected for 4 years. The governor must be 35 years of age, a citizen of the United States, and have been a resident of the State for six years. He is ineligible to the office for the 4 years succeeding his term. The lieutenant-governor, with the same qualifications as the governor, is *ex-officio* president of the senate. The secretary of state is appointed by the governor, by and with the advice and consent of the senate, and holds office during the governor's term. The judiciary consist of a court of appeals, 14 circuit courts, and the various county courts. The court of appeals consists of a chief justice and three judges, the attorney-general, a clerk, sergeant, and reporter. All judges and other court officers are elected by the people. The legislature consists of a senate of 38 members, and a house of representatives of 100 members. The senators must be 30 years of age, and are chosen for 4 years, and half every second year. The representatives must be 24 years of age, and are chosen for 2 years. *K.* sends 2 senators and 11 representatives to the Federal Congress, and has 13 votes in the Electoral College.—*History.* With the earliest history of *K.* is associated the name of Daniel Boone, whose exploits in hunting and Indian fighting in the then distant and unexplored wilderness date as far back as 1769. He founded Boonesborough in 1775, and Harrodsburg being settled about the same time, these two towns are, with the exception of the French settlements, the oldest in the W. Soon after *K.* was made a co. of Virginia, and the first court held at Harrodsburg in 1777. In 1790 *K.* became a separate territory, and in 1792 was admitted into the Union. Since then, with the exception of the interruption occasioned by the Civil War, its progress has been very rapid. *Pop.* (1890) 1,868,635—1,590,462 white, 288,071 colored; (1900) 2,147,174.

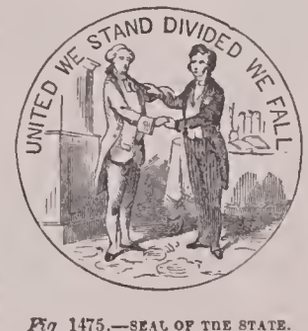


Fig 1475.—SEAL OF THE STATE.

Kentuck'y, in *Kansas*, a township of Jefferson co.

Kentucky River, in *Kentucky*, a beautiful stream, celebrated for the romantic beauty of its scenery. It rises in the Cumberland Mountains, on the S.E. frontier of the State, and flowing N.W. it enters the Ohio River at Carrollton, in Carroll co., after a course of about 260 m. It is navigable by steamboats for 60 m. up to Frankfort.

Kentuck'ytown, in *Texas*, a post-village of Grayson co., on the St. L. Southwestern R.R.

Kent'ville, a town, cap. of Kings co., Nova Scotia.

Kent'y, a town of Austrian Poland, in Galicia, 35 m. W.S.W. of Cracow. *Manuf.* Woollens, linens, and leather. *Pop.* (1897) 3,515.

Ken'yon, in *Arkansas*, a post-village of Jackson co., about 28 m. E. by N. of Batesville. *Pop.* (1897) 65.

Ken'yon, *Minnesota*, a post-village and township of Goodhue co., about 14 m. E. by S. of Faribault, on Chic. Gt. W. R.R.

Ken'yonville, in *New York*, a post-vill. of Orleans co.

Ke'okuk, in *Iowa*, a S.E. co.; *area*, about 576 sq. m. *Rivers.* Skunk river, and the S. Fork of English river. *Surface*, generally level; *soil*, fertile. *Cap.* Sigourney. *Pop.* (1895) 23,732.

—An important city of Lee co., on the Mississippi river, and the Chic., Bur. & Quincy and 4 other R.Rs., 46 m. below Burlington. It is well built and conveniently located for an immense inland trade, being the natural outlet for the fertile and populous valley of the Des Moines river. *Pop.* (1897) about 16,500.

—A township of Wapello co.

Ke'okuk Falls, in *Oklahoma*, a post-village of Pottawatomie co. *Pop.* (1897) 250.

Keosau'qua, in *Iowa*, a post-town, cap. of Van Buren co., on the Des Moines river, and C., R. I. & P. R.R., about 48 m. N.W. of Keokuk. *Pop.* (1895) 1,263.

Kep'ler, JOHANN, one of the greatest astronomers and mathematicians of modern times, was B. in the village of Magstadt, in Würtemberg, 1571. His parents were in narrow circumstances, and he owed his education to the kindness of the duke of Würtemberg. He graduated M. A. at Tübingen, where he studied under the celebrated Mæstlin, in 1591, and soon after was appointed lecturer on astronomy at Gratz. His acquaintance with Tycho Brahe began in 1600, when he was joined with him at Prague as imperial mathematician. Tycho dying the same year, the arduous task of forming the new astronomical tables (called *Rudolphine*, in honor of the emperor) devolved on him. In 1613 he was at the assembly at Ratisbon, and assisted in the reformation of the calendar. He was the author of numerous works on astronomy, all of them invaluable contributions to science, besides his Tables and Ephemerides; among others, the *New Astronomy*, which contains the great treatise on the Motion of Mars. His fame rests upon his inestimable discovery that the planets' orbits are elliptical. The character and career of this magnate of science are thus criticised by Delambre, an eminently reliable authority. "Kepler," he says, "was ardent, restless, burning to distinguish himself by his discoveries. He attempted everything: and, having once obtained a glimpse, no labor was too severe for him in following or verifying it. All his attempts had not the same success, and, in truth, that was impossible. Those which have failed seem to us only fanciful; those which have been more fortunate, appear sublime. When in search of that which really existed, he has sometimes found it; when he devoted himself to the pursuit of a chimera, he could not but fail; but even there he displayed the same qualities, and that obstinate perseverance that must triumph over all difficulties but those which are insurmountable." D. 1630.

Kepler's Laws. (*Astron.*) The term applied to the statement of certain analogies that exist between the relative distances of the planets from the sun and the times in which they complete their revolutions round that body; and also between the rate of motion at which any heavenly body travels in its orbit, and its distance from the body or centre about which it revolves. Kepler's First Law, so called because it was the first which was discovered and enunciated by that astronomer, is, that *equal areas are described in equal times.* By this it is meant, that, if a straight line were drawn from the earth to the sun, round which the earth revolves, this line would pass over equal portions of the area of the ellipse which the earth describes in its orbit in equal times, wherever the planet might be in its course. Kepler arrived at this conclusion from observing that the planets travelled fastest when they were nearest to the sun at their perihelion, and slowest when they were at their aphelion, or greatest distance from that body. His Second Law, which was deduced, like the first, from observations of the planet Mars, is, that *planets describe ellipses, having the sun as a common focus;* while the Third is, that *the squares of the periodic times of the planets are in proportion to each other as the cubes of their mean distances from the sun*

Kerar'gyrite, *n.* [Gr. *keras*, a horse, *argyros*, silver.] (*Min.*) Native chloride of silver.

Ker'asine, *a.* (*Min.*) Horn-like; corneous.

Ke'rate, *n.* [Gr. *keras*, horn.] (*Min.*) Same as KERARGYRITE, *q. v.*

Ker'atome, *n.* [Gr. *keras*, and *temno*, to cut.] (*Surg.*) An instrument for dividing the cornea in operating for cataract.

Keratonyx'is, *n.* [Gr. *keras*, horn, and *nyxis*, puncture.] (*Surg.*) A term applied by the German surgeons to the operation of couching, performed by introducing a needle into the cornea or horny coat of the eye, and depressing or breaking the opaque lens.

Ker'bela, or MESHED HOSSEIN, a town of Asiatic Turkey, prov. Irak-Arabi, 50 m. S.W. of Bagdad, and 6 W.

KENTUCKY AND TENNESSEE
SCALE OF MILES
10 0 10 20 30 40 50 60
State Capitals
County Seats
Places of 25,000 and over LOUISVILLE
" " 10,000 to 25,000 Henderson
" " 5,000 to 10,000 Bristol
" " 3,000 to 5,000 Harriman
KENTUCKY
TENNESSEE
INDIANA
ILLINOIS
OHIO
MISSOURI
MISSISSIPPI
ALABAMA
GEORGIA
NORTH CAROLINA
VIRGINIA
W. VIRGINIA
LOUISVILLE
NASHVILLE
MEMPHIS
KNOXVILLE
CHATTANOOGA
LEXINGTON
COVINGTON
NEWPORT
CINCINNATI
Frankfort
NORTHEASTERN PORTION OF TENNESSEE
Same Scale as Main Map
Longitude 87° West from 86° Greenwich
Hammond's 8 x 11 Map of Kentucky and Tennessee
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of the Euphrates. The tomb of Hossein, son of Ali by Fatima, the daughter of the Prophet, is an object of pilgrimage to the thousands of the sect of Ali who annually pay their devotions here. *Pop.* Estim. at 20,000.

Kerb'-stone, or **Kirb'-stone,** *n.* See CURBSTONE.

Ker'by, or **Ker'byville,** in *Oregon,* a post-village, former cap. of Josephine co., on the Illinois river, about 250 m. S. by W. of Salem. *Pop.* (1897) 158.

Ker'chief, *n.* [From Old Fr. *couvrechef — couvrir,* to cover, and *chef,* the head.] A cover for the head; a headdress; any loose cloth used in dress.

Ker'chiefed, or **Ker'chieft,** *a.* Dressed; hooded; covered.

Keresoun'. [Anc. *Cerosus.*] A seaport-town of Turkey in Asia, on the S. shore of the Black Sea, pashalic of Trebizond, from the town of which name it is distant 88 m. W. by S.; Lat. 40° 5′ 10″ N., and Lon. 38° 24′ E. *Trade.* Ship-building. This place was conquered and annexed to the Turkish empire by Mahmoud II. *Pop.* about 3,000, chiefly Greeks and Armenians.

Kerf, *n.* The cut or slit made in wood or other material by a saw or an axe.

Kergnelen's Land, (*kerg'len,*) or ISLAND OF DESOLATION, an island in the Antarctic Ocean; Lat. 49° 20′ S., Lon. 69° 30′ E.; *area,* abt. 3,000 eq. m. It was discovered by a Frenchman named Kerguelen, but received the latter name from Capt. Cook in 1779, on account of its desolate appearance. It is chiefly of a rocky surface, but is said to contain coal deposits.

Kerhonk'son, in *New York,* a post-village of Ulster co.

Keri-chetib, (*ke're-ket'ib,*) *n.* (*Philol.*) A term applied, in philology, to various readings in the Hebrew Bible. The signification of *keri* is, that which is read; while *chetib* means that which is written. When instances of such readings occur, the *chetib,* or false reading, is placed in the text, while the *keri,* or true reading, is placed in the margin with a Hebrew character under it. The number of *keri-chetibs* is estimated at a thousand, and most of them are attributed to Ezra; but as several corrections of this kind appear in his own writings, it is probable that many were made at some subsequent period.

Kerkouk', (*Corcura* of Ptolemy,) a large town of Asiatic Turkey, cap. of a sandjak in Lower Kurdistan, 100 m. S.E. of Mosul, and 130 N. of Bagdad. Great quantities of naphtha are exported. *Pop.* est. at 13,000.

Kerl, *n.* See CARL.

Ker'man, (anc. *Caramania,*) a province of the Persian empire, bet. Lat. 25° 30′ N., and Lon. 54° 30′ and 60° 20′ E., having N. Khorassan, E. Afghanistan and Beloochistan, S. the Persian Gulf, and W. the provs. of Fars and Laristan. *Shape,* triangular; *extreme length,* 380 m.; *breadth,* 250 m.; *estim. area,* 65,000 sq. m. *Surface,* various: for the greater part mountainous. A great want of water exists. *Clim.* Unhealthy. *Soil,* in some parts highly productive, yielding wheat, maize, barley, cotton, tobacco, saffron, and madder in the highest perfection. Fruits and various gums and spices are also largely produced. Camels, sheep, and goats are extensively reared. *Min.* Iron, copper, and sulphur. *Manuf.* Fine woollen stuffs, carpets, goats' and camels' hair shawls, coarse linens, and matchblocks. *Cap.* Kerman. *Pop.* Estimated at 600,000.

KER'MAN, or SER'JAN, (anc. *Carmana,*) cap. of the above province, is located 230 m. E. of Shiraz, and 340 S.E. of Ispahan. *K.* was formerly one of the most celebrated and opulent cities of the empire; but in 1794 it was besieged and nearly razed to the ground by Aga Mohammed Khan. It has still, however, a considerable trade, and is celebrated for its manufacture of shawls, carpets, and arms. *Pop.* estimated at 30,000.

Kermanshah', a walled city, cap. of Persian Kurdistan, 82 m. W.S.W. of Hamadan, and 320 S.W. of Ispahan; Lat. 34° 26′ N., Lon. 47° 15′ 15″ E. *Manuf.* Cottons, carpets, and swords. Considerable advantages accrue to the town in consequence of its situation on the great caravan route connecting Persia, Cabul, and Asiatic Turkey. *Pop.* estimated at 30,000.

Kermes, (*ker'mēz.*) [Ar., little worm.] (*Zoöl.*) The *Coccus ilicis* of Linnæus, an insect of the genus *Coccus,* produced in the excrescences of a small oak, the *Quercus coccifera,* and found in many parts of Asia and the South of Europe. The body of this insect is full of red-dish juice, and when dead, and transformed into an apparent grain or berry, it is used for the purpose of dyeing a brilliant red color. They were long taken for the seeds of the tree on which they live, and hence called *grains of Kermes.* Kermes is now nearly superseded by the use of cochineal, but though much inferior in brilliancy to the scarlet cloths dyed with real Mexican cochineal, they retain the color better, and are less liable to stain. This is said to have been the celebrated Phœnician dye. The tapestries of Brussels, which have lost little of their original brilliancy, even after a lapse of 200 years, were dyed with kermes.

K. Mineral. (*Chem.*) A compound used in medicine, consisting of a mixture of teroxide and tersulphide of antimony. It is prepared by boiling finely-powdered sulphide of antimony with carbonate of soda and a large quantity of water. The liquid, as it cools, deposits the kermes, which is collected on a filter and dried at a low temperature. Its chemical composition may be represented by the formula $2SbS_3SbO_3$, according to Liebig; but crystals of the teroxide of antimony may be easily detected with a microscope.

Kern, *n.* An Irish foot-soldier; a boor. — A hand-mill consisting of two stones, by which corn is ground.

(*Printing.*) That part of a type projecting over the body or shank.

Kern, in *California,* a S. co.; *area,* 7,971 sq. m. *Rivers.* Kern river, and numerous smaller streams. Kern Lake is situated in the S.W. part of the co. *Surface,* diversified, the Coast Mountains forming the entire S.W. boundary; *soil,* generally fertile. *County-seat,* Bakersfield. *Pop.* (1890) 9,805.

Kern'-baby, *n.* An image dressed up with corn, carried before the reapers at their harvest-home; called also *corn-baby.*

Ker'nel, *n.* [Sax. *cyrnel;* Ger. and Dan. *kern,* the core of anything, the seed of fruit; allied to *corn,* and to Lat. *granum.* See COAN and GRAIN.] The edible substance contained in the shell of a nut; anything included in a shell, husk, or integument; the seed of pulpy fruit. — The central part of anything; a small mass around which other matter is concreted; a nucleus; a hard concretion in the flesh.

—*v. n.* To harden or ripen into kernels, as the seeds of plants.

Kerneled, Kernelled, (*ker'neld,*) *a.* Having a kernel.

Ker'nelly, *adv.* Full of kernels; resembling kernels.

Ker'nersville, in *N. Carolina,* a post-village of Forsyth co., abt. 110 m. W.N.W. of Raleigh.

Kern Lake, in *California,* a lake of Kern co., near the E. slope of the Coast Mountains, abt. Lat. 35° 10′ N., Lon. 119° 20′ W. It covers an area of abt. 120 eq. m. It receives the Kern River as its outlet, and communicates with Tule Lake. It is sometimes called UPPER TULE LAKE.

Kern River, in *California,* a river of Kern co., enters Kern Lake from the N.

Kerns'port, in *Pennsylvania,* a village of Lehigh co., abt. 68 m. N.N.W. of Philadelphia.

Kerns'ville, in *Pennsylvania,* a village of Northampton co., abt. 105 m. E.N.E. of Harrisburg.

Ker'odon, *n.* (*Zoöl.*) A small rodent quadruped, of the genus *Cavia* or GUINEA-PIG, *q. v.*

Ker'olite, *n.* [Gr. *keros,* wax, and *lithos,* stone.] (*Min.*) A native hydrated silicate of manganese, which occurs in kidney-shaped masses of a white, yellow, or green color, in Harford co., Maryland.

Ker'osene, *n.* [From Gr. *keros,* wax.] (*Chem.*) A liquid hydro-carbon obtained from bituminous coal. Its properties will be examined under PETROLEUM, *q. v.*

Kerr, in *Texas,* a S. central co.; *area,* abt. 1,100 eq. m. *Rivers.* Guadalupe River and some smaller streams. *Surface,* mountainous; *soil,* in the valleys fertile. *Cap.* Kerrville.

Ker'ria, *n.* [In honor of William *Kerr,* a botanical collector who sent plants from China.] (*Bot.*) A genus of plants, order *Rosaceæ.* They are slender shrubs, native of Japan, with leaves simple, ovate, accuminate,

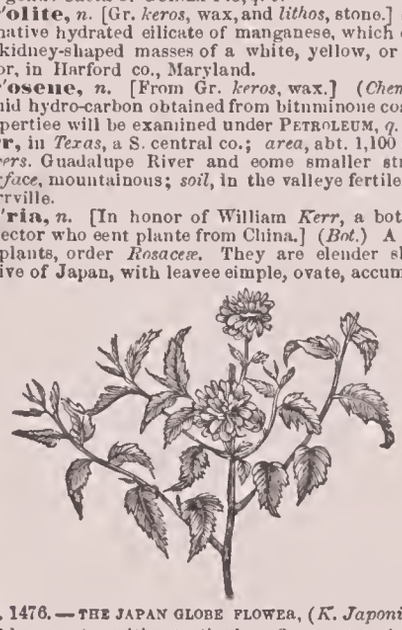


Fig. 1476. — THE JAPAN GLOBE FLOWER, (*K. Japonica.*)

doubly serrate, without stipules; flowers terminal on the branches, solitary or few together, orange-yellow. *K. Japonica,* the Japan Globe-Flower, now common in our gardens, is distinguished by its numerous stems, with a smooth bark, leaves minutely pubescent, with a very sharp, slender point. Flowers double in cultivation.

Kerr'town, in *Pennsylvania,* a post-village of Crawford co., 5 m. S.W. of Meadville.

Kerr's Store, in *Pennsylvania,* a village of Clarion co.

Kerrs'ville, in *Penna.,* a post-vill. of Cumberland co.

Kerr'ville, in *Texas,* a post-town, cap. of Kerr co., on the Guadalupe River, abt. 100 m. W. by S. of Austin.

Ker'ry, a maritime co., in the S.W. part of Ireland, prov. Munster, having N. the æstuary of the Shanuon, E. and S. the counties of Limerick and Cork, and W. the Atlantic Ocean *Area,* 1,159,356 acres, of which 552,862 are unimproved mountain and bog, and 14,669 water, including the lakes of Killarney (*q. v.*), so famous for their picturesque scenery. *Surface.* This county is particularly wild, rugged, and mountainous. Macgillicuddy's Reeks, the highest mountains in Ireland, lie to the W. of Killarney; and several other mountain ridges rise to above 2,000 feet in height. The coast is deeply indented by Tralee and Dingle bays, and the æstuary of the Kenmare River; Dunmore Head, between the bays now named, in Lat. 52° 7′ 30″ N., Lon. 10° 28′ W., is the most W. land in Ireland, and, consequently, in the United Kingdom. *Clim.* Mild, but extremely moist. *Soil.* Very fertile, producing the choicest and greenest herbage for large herds of the pure Irish breed of middle-horned cattle, and flocks of goats. *Agric.* There are some extensive dairy farms, but agriculture, generally, is at a low ebb. The cereals, dairy produce, cattle, and garden-stuffs, form the chief marketable commodities. *Min.* Though comparatively unworked, the minerals are of considerable value and importance; copper mines are worked near Killarney, and excellent slates are raised in Valentia Island. *Manuf.* Trifling. *Prin. towns.* Tralee (the cap.), Killarney, Kenmare and Dingle. *Pop.* (1897) about 170,100.

Ker'sey, *n.* [Ger. *kirsey;*—probably a corruption of *Jersey,* whence it originally came.] (*Manuf.*) A kind of coarse cloth, usually ribbed, and woven from long wool. It is chiefly manufactured in the N. of England.

Ker'seymere, *n.* [Ger. *kasimir;* Fr. *casimir;* — probably from the Indian town of Cashmere, celebrated for the stuffs of its loome.] A thin stuff, generally woven plain from the finest woole; cassimere.—See CASSIMERE.

Kerseynette', *n.* (*Manf.*) A thin woollen cloth; — also called *cassinette.*

Ker'shaw, in *S. Carolina,* a N.E. dist. *area,* about 756 sq. miles. *Rivers.* Wateree River, and Little Lynch's, Rice, and Pine creeks. *Surface,* undulating; *soil,* in some parts fertile. *Cap.* Camden.

Kertsch, (*kersh,*) a seaport of Russia in Europe, in the Crimea, on a spacious bay on the W. side of the Straits of Yenikale. The town occupies the site of the ancient *Panticapæum,* the seat of the Bosphorian kings, and once the residence of Mithridates. The quarantine for the Sea of Azoff has been established here; and it seems probable that it will, at no distant period, supersede Taganrog as the emporium for that outlet of Russian produce. *Exp.* Common salt and hides. The harbor is excellent. During the Crimean War, an allied Anglo-French squadron entered the bay, May 24, 1855, capturing 250 Russian vessels, and a large quantity of guns and stores. *Pop.* about 13,000.

Keshe'na, in *Wisconsin,* a post-village of Shawano county.

Kes'itah, *n.* [Heb., a lamb.] A Hebrew gold coin, weighing about 4 dwts. 22 grs. English weight.

Kes'mark, (Ger. *Kaisersmarkt,*) a royal free city of Hungary, co. Zips, on the Poprad, a tributary of the Vistula, at the foot of the Tatra Mountains, 130 m. N.E. of Peeth. *Manuf.* Linen. *Pop.* about 4,200.

Kes'lop, *n.* [A.S. *cese-lib,* curded milk.] The stomach of a calf prepared for rennet; rennet. (Local Eng.)

Kes'trel, *n.* (*Zoöl.*) A species of European falcon, common in England, and much resembling the American Sparrow-hawk.

Keswick, (*kēz'zik,*) a town of England, co. Cumberland, on the Greta, at the foot of Skiddaw, 22 m. S. by W. of Carlisle. It is finely situated, and annually visited by thousands of tourists. *Pop.* about 3,000.

KESWICK LAKE, or DERWENTWATER, is abt. 3 m. in length, by rather more than a mile in breadth, extending over an area of 1,282 acres. It has numerous small islands, is embosomed among lofty mountains, and, from its exquisite scenery, is deservedly called the *gem of the English lakes.*

Kes'wick, in *Virginia,* a post-village of Albemarle co., on C. & O. R.R., 7 m. N.E. of Charlotteeville.

Keszdi-Vasar'thely, [Ger. *Neumarkt*] A town of Transylvania, in the Szekler-Land, 45 miles N.E. of Cronstadt. There is here a very celebrated military school, supported by the Austrian govt. *Manuf.* Hats, paper, cloth, and liquors. *Pop.* about 4,000.

Kesthely, a thriving market-town of Hungary, co. Szalad, near the west end of Lake Balatan, 38 m. S. W. of Veszprim, and 98 S. of Presburg. *Pop.* 4,227.

Fig. 1477. — A KETCH.

Ket, *n.* [Dan. *kiöd.*] Any sort of filth; carrion.

Keteh, (*kĕch,*) *n.* [Fr. *qaaiche;* Ger. and Du. *kilz.*] A vessel of abt. 100 to 250 tons burden (Fig. 1477), carrying 2 masts, viz., a main- and a mizzen-mast; chiefly employed as yachts, but sometimes built very strong, and used as bomb-vessels.

Keteh'up, *n.* A sauce. See CATCHUP.

Ke'tones, Ace'tones, *n. pl.* (*Chem.*) A term used by some chemists to designate a product of the dry distillation of the baryta, lime, or lead salts of the volatile acids. Among these products is a compound which has been termed the *ketone* of the acid, and which bears the same relation to the acid from which it has been obtained, as *acetone* does to *acetic acid.* — See ACETONE

Kets'kemet, or **Kuz'kemet,** a market town of Hungary, on the N. side of the Danube, co. Pesth, 50 m. S.E. the cap. *Manuf.* Leather, and soap. Stock-breeding is, however, the main employment of the inhabitants. *Pop.* 43,957.

Ket'tering, a market-town of England, co. Northampton, 14 m. N.E. of the town of Northampton. *Manuf.* Woollens and worsteds.

Ket'tle, *n.* [A. S. *cell, cetel,* or *cytel;* Du. *ketel;* Icel. *ketill.*] A vessel of iron or other metal, used for heating and boiling water, or other liquors.

Ket'tle Creek, in *Pennsylvania,* enters the W. branch of the Susquehanna river in Clinton co.

—A village of Potter co.

Ket'tle-drum, *n.* See DRUM.

Ket'tle-pins, *n. pl.* Nine-pins; kayles; skittles.

Ket'tle River, in *Minnesota,* a river rising in Carlton co., and flowing S. into the St. Croix River.

Ken'per, *n.* (*Geol.*) The German term for the upper portion of the new red-sandstone formation.

Kev'et, *n.* (*Zoöl.*) The *Antilope kevella* of Pallas, a species of antelope resembling the Gazelle.

(*Naut.*) On shipboard, one of the timbers projecting at a small angle from the sides, to which are belayed the sheets and tacks by which the mainsail and the fore-

sail are extended; a kevel.—*Kevel-heads* are the ends of certain top timbers which, projecting above the ordinary line of gunwale, form bitts round which ropes can be made fast.

Kew, a village and parish of England, co. Surrey, on the S. bank of the Thames, 7 m. W. of London. Here is *K.* palace, a residence of the English monarchs, and the famous Kew Gardens, comprising 205 acres, and open to the public.

Kewas'kum, in *Wisconsin*, a post-village and township of Washington county, about 6 miles N. of West Bend.

Kewanee', in *Illinois*, a post-village and township of Henry county, about 32 miles north-east of Galesburg.

Kewaunee, (*ke-wa'nee,*) in *Wisconsin*, a small river flowing into Lake Michigan from Kewaunee co.

—An E. co., bordering on Lake Michigan; *area*, abt. 460 sq. m. *Rivers*, Kewaunee and Red rivers. *Cap.* Kewaunee.

—A post-village and township, cap. of Kewaunee county, on Lake Michigan, about 27 miles east of Green Bay.

Kewee'naw, in *Michigan*, an extreme N. co., washed on all sides but the S.W. by Lake Superior; *area*, about 330 sq. m. *Rivers*, small and unimportant. *Surface*, hilly; *soil*, not very fertile. *Min.* Copper and iron in abundance. This tract, while forming a part of Houghton co., was called KEWEENAW POINT, a name still frequently given to the entire peninsula, though properly applicable only to the extreme N.E. part. *Cap.* Eagle River.

Keweenaw Bay, (*ke-wee'naw,*) an inlet of Lake Superior, between Keweenaw Point and Houghton co. It is about 30 m. in length; greatest width 12 m.

Kex, *n.* A dry stalk of hemlock; kecksy.

Key, (*kē,*) *n.* [A.S. *cæg*, from *cæggien*, to shut up; allied to Gr. *kliis*, a key, from *kleïo*, to close; Lat. *clavis*, from *claudo*, to shut; Fr. *clef.*] An instrument for shutting and opening a lock. See LOCK.—An instrument by which something is screwed or turned: as, the *key* of a watch.—An index, or that which serves to explain a cipher; that which serves to explain anything difficult to be understood.

(*Bot.*) Same as SAMARA, *q. v.*

(*Arch.*) A piece of wood let into the back of another, in the contrary direction of the grain, to preserve the last from warping. The term is also applied to the portion of lime and hair rendering that forces its way between the joints of the laths, in plasterer's work, and serves to uphold the body of the work.

(*Mach.*) A wedge-shaped piece of wood or other material, which is driven into a mortise or seat prepared for it, in order to fix the parts of a machine firmly together; a jib.

(*Carpentry.*) The board of a floor which is last laid down.

(*Mus.*) A certain fundamental sound or tone to which the whole of a piece must have a certain bearing, and with which it usually begins, and always ends. There are only two principal keys, viz., the major, or that of C, and the minor, or that of A. From these two natural keys are deduced all the other keys in which we employ flats and sharps. The key in music is the same as the subject in an oration; in the latter, some principal person or thing, to which the discourse is referable, is always kept in view; so in every regular piece of music, there is one fundamental note, viz., the *key-note*, by which all the rest are regulated, and with which the piece begins and ends. Again, as in an oration there may be several distinct articles which refer to different subjects, at the same time having a visible connection with the principal subject, so in a musical composition there may be several keys to which the different parts belong, but they must all be under the influence of, and have a sensible connection with the principal key.—The term is also applied to one of those movable projecting levers, of ivory or wood, which are placed on the key-board of all such instruments as the pianoforte, organ, or harmonium, &c., to receive the fingers of the performer.

(*Her.*) A common heraldic bearing in the insignia of sees and religious houses, particularly such as are under the patronage of St. Peter. Two keys in saltire are frequent (Fig. 719), and the keys are sometimes *interlaced* or linked together at the *bows* (*i.e.* rings). Keys *endorsed* are placed side by side, the wards away from each other. In secular heraldry, keys sometimes denote office in the state.

(*Theol.*) In the Roman Catholic Church, the *Power of the Keys* denotes metaphorically the power by the Pope, successor of St. Peter, to inflict spiritual punishment, or to absolve of it, founded upon the saying of Jesus Christ to Peter: "I will give unto thee the keys of the kingdom of heaven." (*Matt.* xvi. 29.)

The key of a country is a pass, strait, or fortress whose possession gives the control of a country.

—[Lat. *cautes*, a cliff; Fr. *cayes*; Sp. *cayo.*] A ledge of rocks near the surface of the water; a general name given to the islets and reefs in the Gulf of Mexico and W. Indies. See BAHAMAS, FLORIDA KEYS, KEY WEST, and the names having the prefix CAYO.

—[Old Fr. *quai*; Ger. *kai*, from L. Lat. *kaia.*] Same as QUAY, *q. v.*

Key, *v. a.* To fasten with a key or wedge-shaped piece of wood or iron.

Key'age, *n.* Money paid for lying at the key or quay.

Key'-board, *n.* (*Mus.*) A name applied to that portion of a pianoforte, organ, harmonium, &c., upon which those pieces of wood or ivory, called *keys*, by means of which the sounds are produced, are placed. The key-board of a pianoforte presents various numbers of keys, according to the compass of the instrument to which it belongs; thus, one containing six octaves presents forty-three white keys and thirty black; the black keys representing the sharps and flats, and the white, the natural notes.

Key'ed, (*keed,*) *a.* Furnished with keys; set to a key, as a tune.

Key'-hole, *n.* An aperture in the door or lock through which the key is put.

Key'-note, *n.* (*Mus.*) See KEY.

Key'port, in *New Jersey*, a post-town of Monmouth co., on Raritan Bay, 22 m. S.S.W. of New York; has considerable trade, and is a summer resort. *Pop.* 3,386.

Keys, or **Keyns,** *n.* (*Old Eng. Law.*) A guardian, warden or keeper.

Keys'burg, in *Illinois*, a village of Pike co., about 77 m. W. by S. of Springfield.

Keysburg, in *Kentucky*, a village in Logan co., about 160 m. N.W. of Frankfort.

Keysport, in *Illinois*, a post-village of Clinton co., on the Kaskaskia river, about 12 m. above Carlyle.

Key'stone, *n.* (*Arch.*) The stone placed at the top or vertex of an arch to bind the two sweeps together. In the Tuscan and Doric orders it is merely a plain stone projecting a little; in the Ionic, it is cut and waved somewhat like consoles; and in the Corinthian and Composite orders, it is a console ornamented with sculpture. In making an arch, the length of the keystone, or thickness of the archivolt at top, is allowed by the best architects to be about one-fifteenth or one-sixteenth of the span. See ARCH.

Key'stone, in *Minnesota*, a post-office of Wright co.

Keystone, in *Ohio*, a post-office of Jackson co.

Keystone, in *Pennsylvania*, a post-village of Perry co.

Keys'ville, in *Georgia*, a post-village of Burke co., located on the A. S. R. R.

Keysville, in *Virginia*, a post-village of Charlotte co., about 73 m. S.W. of Richmond.

Keytesville (*keets'vil*), in *Missouri*, a post-village and township, cap. of Charlton co., about 90 m. N.W. of Jefferson City.

Key'-way, *n.* (*Mech.*) The mortise made to receive a key.

Key West, in *Florida*, the most W. of the Pine Islands in the Florida Keys, about 60 m. S.W. of Cape Sable. It has an area of about 4 sq. m., and forms a part of Monroe co. It is of coral formation, with an elevation of about 20 feet above the sea, and has little available soil. It contains the city of Key West. The present name is a corruption of the Spanish *Cayo Hueso*, the Bone Island. There is a light-house on Whitehead's Point at the S.W. extremity of the island, exhibiting a fixed light 83½ feet above sea-level; Lat. 24° 32′ 58″ N., Lon. 81° 48′ 7″ W.—The city of KEY WEST, near the N.W. part of the island, had in 1897 a population of over 20,000, and has an excellent harbor, with about 25 feet of water. A safe passage, about 60 m. in length, leads by *K. W.* from the Gulf Stream to the Gulf of Mexico. It has 12 feet water at ebb-tide, and vessels from the N. bound for New Orleans or Mobile, or from the latter for the former, avoid the delay and danger of the more W. passage round the Tortugas. Owing to the frequent accidents to shipping from stranding on the banks and reefs in this dangerous vicinity, the U. S. government has organized an establishment at *K. W.* for the assistance of ships in distress, and made it a seat of an admiralty court for the adjudication of claims for salvage. There is a large cigar-making industry, a business in sponging, fishing, and wrecking, and in fancy turtle and other shell work. Turtles, sponge, fruits, &c., are exported.

Khaliff, *n.* See CALIPH.

Khal'kas Country, in the Chinese Empire, N. part of Mongolia; Lat. between 47° and 53° N., Lon. 90° and 112° E., having on the N. Siberia, and W. Turkistan. The surface is mostly mountainous, but there are also vast and fertile plains. In the S. it comprises part of the desert of Gobi. The Yenisei, Selenga, and Orkleon rivers rise in this region, and it also contains many large lakes, the principal being Oebs Nor. It is divided into 4 khanats, governed by native chiefs, tributary to the Chinese. *Cap.* Oorga. The inhabitants are Mongol Tartars. *Pop.* unknown.

Kham'sin, *n.* A hot wind. See KAMSIN.

Khan, (*kān,*) *n.* A Tartar word, signifying sovereign or chief. It is a title adopted by the sovereign princes of Central Asia, and is one of the titles of the Turkish sultan. It was first assumed by Jenghis when he became supreme ruler of the Mongols and Tartars. In Persia the word is used in a more extended sense, being applied to governors of provinces and officers of a certain rank. Khan is also the Turkish name for a caravansary, a place for the accommodation of travellers. See CARAVANSARY.

Khan'ate. Khanat, *n.* The jurisdiction or the country governed by a khan.

Khar'koff, a govt. of European Russia, having N. Tchernigoff and Kourak, on the E. Voronetz, and on the W. Poltawa. *Area*, 20,931 sq. m. *Surface*, flat; *soil*, very fertile, with nearly 470,000 dessiatines of forests. *Rivers.* The Donetz, Orkol, Vorskla, and others; none of which are navigable. *Prod.* Great quantities of grain are raised, besides flax, hemp, tobacco, hops, and potatoes. The govt. is also prolific in cattle. *Manuf.* Leather and liquors.

KHARKOFF, the cap. of the above govt., is situated on the Lopank, 295 m. W.N.W. of Odessa. It contains a university, and has a thriving commerce.

Khatmandoo', CATMANDOO, or KATHMARO, the capital town of Nepaul, in a mountainous region, about 145 m. N.N.W. of Patna; Lat. 27° 42′ N., Lon. 85° 15′ E. *Pop* 50,000.

Khedive, or KHIDIV-EL-MISR, Persian-Arabic for King of Egypt. A title first borne in 1863 by the grandson of Mehemet Ali.

Khe'lat, or KELAT, a city and cap. of Beloochistan, situate on an elevated plain about 250 m. N. of the Indian Ocean. The fortifications held by the British are strong, but the city is meanly built.

Kher'son, or CHERSON, a S. govt. of European Russia, on the W. shore of the Black Sea, between the rivers Dniester on the W., and Dnieper on the E. *Area*, 28,305 sq. m. Besides the great boundary rivers, already specified, it is divided into two not very unequal portions by the Bug. *Surface.* In the N. part, *K.* is undulating and covered with immense forests; but elsewhere it consists mostly of an immense steppe, without trees, and covered with grass the height of a man. Generally, the soil on the W. side of the Bug is decidedly more fertile than that on the E. side. *Prod.* Agriculture is little practised,—the rearing of cattle and sheep forming the chief industry of the inhabitants. Among the horned cattle, buffaloes are common. *Manuf.* Leather, tallow, candles, and cloth. The commerce of the govt. centres entirely at Odessa and Kherson, and is very extensive. *Pop.* 1,331,992.

KHERSON, cap. of the above govt., is seated on an eminence on the right bank of the Dnieper, abt. 60 m. to the N. of Kinburn Fort, at the entrance to the æstuary of that river. It was founded in 1778, fortified in 1780, and is divided into 4 dists.; the citadel, the admiralty, and the Greek and military suburbs. The cathedral contains the tomb of Prince Potemkin (*q. v.*), the powerful favorite of the Empress Catherine II. A monument is also erected to the memory of John Howard (*q. v.*), the English philanthropist, who D. here in 1790. *Exp.* Hemp, corn, cordage, timber, tallow, wool.

Khilaut, *n.* A robe of honor. (India.)

Khi'va (Anc. *Chorasmia*), a khanate of Turkestan, in Central Asia, extending between 36° and 44° N. Lat., and 52° and 64° E. Lon., having E. the Karakalpack territories and Bokhara, S. Afghanistan and the Persian province of Khorassan, W. the Caspian Sea, and N. the Kirghiz Steppe and the Sea of Aral. The Oxus, or Amu Darya, is the principal river. The surface, climate, and products are much the same as in Bokhara (*q. v.*). Wheat, barley, millet, seramum, lentils, fruits, linseed, cotton, hemp, flax, rice, &c., are grown. The vine thrives well, but, the inhabitants being strict Mohammedans, little wine is made. Many of the fruits are good, and the melons are excellent. Horned cattle are few; sheep and goats are much more numerous, their flesh, with that of the horses, forming the chief animal food of the people. The country is an artificial oasis, won from the surrounding desert by irrigation from the Amu Darya and from wells dug in the ancient bed of that stream. The inhabitants consist of Turcomans, Usbegs, and Karakalpacs, all more or less nomadic, the Turcomans being much given to brigandage. *K.* came under a Russian protectorate in 1873, after a war with Russia, the reigning khan being under control of a Russian agent, and his country under mortgage to pay an indemnity of $1,370,000. There is a considerable export of cotton under Russian control.

KHIVA, a town of Central Asia, capital of the above khanate, in a fertile plain near the Amu Darya, 290 m. W.N.W of Bokhara. It is irrigated by branch streams from a canal, which nourish large numbers of shade trees. The manufactures include fine carpets and common silk and cotton goods. It was formerly the largest slave market in Turkestan. *Pop.* about 15,000.

Kho'i, a town of Persia, province Azerbijan, and cap. of a district 70 m. N.W. of Tabreez. It is situated on a tributary of the Kûr, about 25 m. N. of the lake of Urmiah, and is a handsome, well-built town, in much better repair than most others in Persia. A large and handsome bazaar, with a caravansary, furnishes ample accommodation to the merchants who carry on a considerable trade with Turkey and E. Persia. *Pop.* Estimated at 30,000.

Kho'jent, or **Kho'jend,** a town of Central Asia, capital of the district of Syr Darya, Russian Turkestan. This city, the ancient *Jaxartes*, is situated on the right bank of the Syr Darya or Sihun (formerly Jaxartes) river, 90 m. W. of Khokand, 150 m. N.E. of Samarcand. It is a decaying town, its importance depending on its transit trade, which has greatly decreased under Russian control. Coarse cotton goods are manufactured.

Khokand', **Khokan,** or **Kokan,** a former independent khanate of Turkestan, Central Asia, now the Russian province of Ferghana. It has N. the Kirghiz Steppe, E. and S.E. Chinese Turkestan, S. the table-land of Pamere and Bokhara, and W. the desert territory of the Karakalpaks.—*Gen. Desc. K* is, for the most part, mountainous, comprising a portion of the region which forms the W. wall of the great table-land of E. Asia. The Syr Daryn, which rises not far beyond the E. boundary, traverses it E. and W. about its centre, watering many fertile tracts. *K.* is divided into eight provs. or districts. Great extremes of climate are experienced at different seasons. The products are very similar to those of the countries to the S. and W. This khanat has a greater extent of cultivable and pasture land than Bokhara. In the S., corn and fruits, especially grapes and melons, grow in great perfection. This was the patrimonial kingdom of the Emperor Baber, who celebrates in lively terms its beauty and fertility. Cotton and the mulberry are articles of constant culture, silk being the chief staple, and one for which *K.* is famous. The pastures of the Jaxartes are excellent; sheep are the principal live-stock, and wool is an important product. The camel, horse, and ass are extensively used; and horse-flesh is a common article of food.

Game is very plentiful. Coal, iron, copper, jasper, and lapis lazuli are the chief mineral products. After agriculture, and the rearing of sheep and silk-worms, the chief occupation of the people is the manufacture of embroidered silks and cotton goods. The inhabitants are mostly Usbeeks; to which race, as in Bokhara and Khiva, the khan belongs. In religion they are fanatical Moslems. *Pop.* estimated from 600,000 to 960,000. *Hist.* Baber, the conqueror of Hindostan, was born in *K.*, ascended the throne of Ferghana in 1494. *K.* abounds with localities connected with the history of Jenghis Khan and Timur the Great. In 1875 *K.* was annexed to Russia, under the name of Ferghana.

Khokand, a city of Central Asia, former cap. of above khanate, on the Syr Darya, 230 m. N. E. of Samarcand, and about the same N. W. of Cashgar. *Pop.* estimated (1897) at 55,400.

Kholoom', KHULM, or TASH-KUKGHAN, a walled town of the khanate of Koondooz, in Central Asia, on the Kholoom, a tributary of the Amu Darya., 40 m. E. by S. of Balkh, and 68 W. by S. of Koondooz The inhabitants are chiefly Tadjiks and Usbeeks. It is a place of considerable trade. *Pop.* estimated (1897) at 15,000.

Khon'sar, a town of Persia, province Irak-Adjimi, 82 m. N. N. W. of Ispahan; Lat. 30° 7′ N., Lon. 50° 26′ E. *Products.* Fruit. *Pop.* (1897) estimated at abont 12,000.

Khotan', or ILCHI, a town of Chinese Turkestan, province Yarkand, on the high-road between that city and Lassa, 260 m. E. S. E. of the former; Lat. 37° 10′ N., Lon. about 78° E. It is inhabited chiefly by Usbecks, and is a place of considerable size, being the station of a Chinese governor and garrison. *Manuf.* Silk fabrics, leather, and paper. *Pop.* estimated (1897) 40,000.

Khot'bah, *n.* [Arab.] A particular form of prayer used by the Mohammedans at the commencement of public worship in the great mosques on Friday, at noon. It was originally performed by the prophet himself, and by his successors, up to A. D. 906. At that time Mohammed VIII. appointed special ministers for the purpose, and that arrangement has been adhered to ever since. The khotbah consists of a confession of faith in the Mohammedan religion, and a general petition for its success. It is divided into two portions, between which the officiating priest makes a considerable pause, which is regarded by the worshippers as the most solemn part of the ceremony. The sultan of Turkey has always considered it one of his chief prerogatives to have his name inserted in the *K.*

Khuzistan', or KUZISTAN', a prov. of Persia, in Lat. 30° and 32° 7′ N., Lon. 47° 45′ and 51° E. The N.E. portion is hilly; the S.W. is mostly composed of level plains, which are flooded during the rainy season, changing to an arid waste in summer. *Prod.* The usual eastern cereals, also silk, cotton, and indigo.

Khy'ber Pass. See AFREEDIS and JELALABAD.

Khy'erpoor, or **Khy'erpur,** a town of Hindostan, in Scinde, 15 m. E. of the Indus; Lat. 27° 30′ N., Lon. 68° 48′ E.; *pop.* 16,500.

Ki, or **Key Islands,** in the Malay archipelago; Lat. 6° S., Lon. 133° E. *Prod.* Timber, tortoise-shell, and cocoanut-oil. *Pop.* 10,000.

Kiakhta, or **Kiachta,** (*ke-ak'ta,*) a town of Asiatic Russia, govt. and prov. Irkutsk, within the Siberian frontier, on a river of same name, a tributary of the Selenga; Lat. 50° 20′ N., Lon. 106° 35′ E. The Russians here exchange furs, sheep, and lambs. It is the centre of all the trade carried on between the Russian and Chinese empires. The great fair is held in December, when merchants flock thither from every part of the Russian empire. They bring cloths, furs, beavers, Russia and Morocco leather; and receive in exchange nankeens, silk stuffs, tea, rhubarb, &c. *Pop.* abt. 10,000.

Kiamitia, (*ki-a-mish'e-a,*) in *Texas,* a village of Red River co., on Red River, abt. 35 m. N.N.W. of Clarksville.

Kiamitia River, in *Texas,* enters Red River in Red River co.

Kiang'-Se, a prov. of China, bet. Lat. 24° and 30° N., Lon. 113° 20′ and 118° 30′ E. *Prod.* Hemp, grass-cloth, porcelain, iron, tin, lead, and gold. *Pop.* 34,000,000.

Kiang'-Soo, a maritime prov. of China, between prov. Ho-nan, Shan-tung, Gan-hway, and Tche-kiang, having also on the E. the Yellow Sea; Lat. bet. 31° and 35° N., Lon. 116° and 122° E. *Surface,* level, and highly cultivated. *Pop.* 41,000,000.

Ki'antone, in *New York,* a post-township of Chautauqua co..

Kib'bal, or **Kib'ble,** *n.* (*Mining.*) An iron bucket, in which the ore is raised from mines.

Kibe, *n.* [From Ger. *kerb,* a notch.] An ulcerated chilblain; a chap in the heel caused by cold.

Kibed', *a.* Troubled with kibes, as, *kibed* heels.

Kib'lings, *n. pl.* A name given in Newfoundland to parts of small fish used for bait.

Ki'by, *a.* Having kibes; troubled with kibes.

Kick, *v. a.* [Sp. *cocear,* from Lat. *calcare,* to tread upon, from *cala,* the heel.] To strike with the foot.

—*v. n.* To practise striking with the foot or feet; to thrust out the foot or feet with violence, either in wantonness, resistance, anger, or contempt; to manifest opposition; as, to *kick* against oppression.

—*n.* A blow with the foot or feet; a striking or thrust of the foot.

Kickapoo', in *Illinois,* a post-township of Peoria co., about 12 m. N.W. of Peoria.

Kickapoo, in *Kansas,* a post-village of Leavenworth co., on the Mississippi River, about 5 m. above Leavenworth.

Kickapoo, in *Wisconsin,* a post-village and township of Vernon co., on the Kickapoo River, about 12 m. S.E. of Viroqua.

Kickapoo' Creek, in *Illinois,* enters Salt Creek in Logan co.

Kickapoo Creek, in *Texas,* enters the Neches River in Henderson co.

Kickapoo River, in *Wisconsin,* enters the Wisconsin River about 18 m. above its mouth.

Kick'er, *n.* A person who, or animal which, kicks.

Kick'ing, *n.* The act of one who kicks.

Kick'shaw, *n.* [Corrupted from Fr. *quelque chose,* something.] Something fantastical or uncommon, or something that has no particular name.

(*Cooking.*) A dish so changed by cooking that it can scarcely be known; an entrée; a salmi, &c.

Kid, *n.* [Goth. *gaitei;* Ger. *kitze;* Gr. *aix, aigos,* from *aisso,* to dart, to spring.] A young goat.—A bundle of heath or furze.

(*Slang.*) A child.—A joke, or jest.

—*v. n.* To bring forth kids.—(*Slang.*) To banter.

Kid'der, *n.* One who engrosses corn or other merchandise to enhance its value.

Kidder, in *Pennsylvania,* a township of Carbon co. *Pop.* (1897) about 1,000.

Kiddermin'ster, an important manufacturing town of England, co. Worcester, on the Stour, 4 m. above its junction with the Severn; 13 m. N. of Worcester, and 16 W S. W. of Birmingham. *K.* is principally noted for its carpets, which have been manufactured there since 1735. *Pop.* (1897) 25,700.

Kid'dle, Kid'el, *n.* [L. Lat. *kidellus.*] A weir or dam in a river to catch fish.

Kid'dow, *n.* (*Zoöl.*) A name of the Guillemot. See URINÆ.

Kidd'ville, in *Kentucky,* a village of Clark co., about 55 m. E. S. E. of Frankfort.

Kiddville, in *Michigan,* a post-village of Ionia co.; on Flat river, about 6 m. S. E. of Greenville.

Kiddville, in *Missouri,* a village of Sullivan co.

Kid'el, *n.* See KIDDLE.

Kid'ling, *n.* [Dim. of *kid*] A young kid.

Kid'nap, *v. a.* [*Kid,* contracted from Ger. *kind,* a child, and *nap* or *nab,* to catch, to steal; Sw. *nappa,* to catch.] To steal, as a child; to steal, as a human being, man, woman, or child; or to seize and forcibly carry away any person whatsoever from his own country or state into another.

Kid'napper, *n.* One who steals or forcibly carries away a human being; a man-stealer.

Kid'napping, *n.* (*Law.*) The forcible abduction and conveying away of a man, woman, or child, from their own country, and sending them to another. It is an offence at common law, punishable by fine and imprisonment, and formerly also by pillory. According to the Jewish law, "He that stealeth a man and selleth him, or if he be found in his hand, he shall surely be put to death," (*Exod.* xxi. 16.) By the civil law, likewise, the offence of spiriting away and stealing men and children, called *plagium,* was punishable with death.

Kid'ney, *n.* [Of uncertain etymol.] (*Anat.*) The name of a double gland having for its office the secretion of the urine. The form of the *K.* resembles that of a French bean, its average length being from 4 to 4½ inches, its breadth 2 inches, and its thickness 1 inch. The two kidneys are situated in the lumbar region, one on each side of the spine, on a level with the last two dorsal and the first two lumbar vertebræ; they are of a brownish-red color, flattened from before backwards, and grooved on the interior border for the great vessels. They are covered by a thin, firm, transparent cellular envelope, and internally are composed of two substances,—an exterior or cortical, and an interior or medullary. The cortical substance is the seat of the greater part of the secretory process, and is made up of a great number of uriniferous tubes, much convoluted, and inorculating with each other, and lined with epithelial cells of a spheroidal and projecting form. Scattered through the plexus formed by these tubes and the blood-vessels, are dark points, which have been called *corpora Malpighiana,* from their discoverer. These last are convoluted masses of minute blood-vessels included in flask-like dilations of the uriniferous tubes, forming a close relation between the circulating and secreting systems. The medullary substance is composed principally of tubes passing nearly straight inward to the central receptacle of the secretion. Both substances are imbedded in interlacing fibres, most abundant in the medullary. The *K.* are well supplied with blood-vessels and nerves, in accordance with the importance of their function. The renal arteries come directly from the aorta, and the large veins terminate in the vena cava. The nerves come from the renal plexus. The renal arteries divide, soon after entering the organs, into minute twigs, which pierce the capsule of the Malpighian tufts. From the convolutions of these tufts arise the efferent vessels, which surround the uriniferous tubes, and from which tho renal veins are formed; and thus the urinary secretion is produced from blood which has passed through the Malpighian capillaries. The uriniferous tubes end in a number of conical bundles pointing towards the interior, and are there embraced by membranous ducts proceeding to the central reservoir or pelvis of the *K.*, from which arises the ureter, the membranous tube which conducts the renal secretion of the bladder.

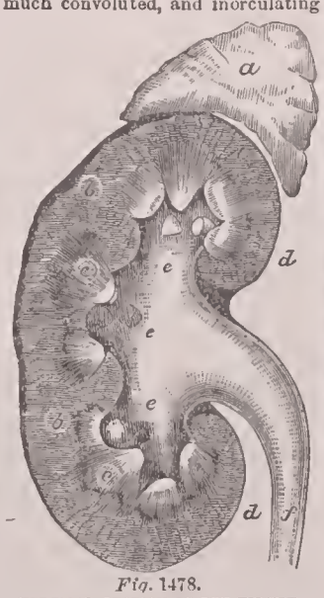


Fig. 1478.
VERTICAL SECTION OF THE KIDNEY.
a, supra-renal capsule; *b b,* cortical substance of kidney; *c c,* medullary substance of kidney; *e e e,* the sinus or pelvis; *f,* the ureter, proceeding to the bladder.

(*Med.*) The kidneys are subject to a variety of dangerous and painful diseases, arising from various causes. They may be arranged in two distinct classes,—those which are the result of some cause acting locally, as calculi, retention of urine, or a blow on the loins; and those which are the result of a constitutional cause acting upon the kidney by inducing an abnormal condition of the blood. (For disease of the *K.* arising from renal calculi, see CALCULUS.) In retention of urine, the ureter, pelvis, and infundibula become much dilated, and the cortical substance expanded and lobular on the surface. The mucous membrane frequently becomes ulcerated, inflammatory deposits occur in the substance of the *K.*, and the gland is destroyed by a slow atrophy, or more rapidly by suppurative inflammation. Both *K.* are usually affected, but in different degrees. Disease of the *K.* from external violence is not of frequent occurrence. Among the diseases resulting from a constitutional cause is scrofulous disease of the *K.*, which occurs in the form of small scattered deposits of tubercular matter, or it presents itself in the form of a thick curdy deposit, which leads to the formation of a large abscess. Cancer of the *K.* is a disease less uncommon than it was formerly supposed to be. In the great majority of cases, some of the neighboring parts are complicated, in one or other of which the disease obviously originated. Hydatids are occasionally formed in the *K.* They are generally numerous or multiplied, and contained in a mother-cyst, which frequently acquires a large size, forming a tumor which may be often felt externally. Inflammation of the *K.* (nephritis) is characterized by pain in the lumbar region, often extending anteriorly through the abdomen, or descending to the groin and testes, with retraction of the latter, disordered state of the urinary secretion and excretion, febrile disturbance, sometimes numbness of the thigh, and nausea or vomiting. The whole of these symptoms are not always present, except in some of the more severe cases. Inflammation of the *K.*, like other inflammatory diseases, results from cold, wet, intemperance, &c.; and its treatment requires to be very active, local depletion by leeches, and cupping, being freely employed, followed by warm fomentations.—See BRIGHT'S DISEASE.

Kid'ney-bean, *n.* A variety of the bean, shaped like a kidney. See PHASEOLUS.

Kid'ney-form, or KID'NEY-SHAPED, *a.* Formed like a kidney.

Kid'ron, [Heb., the turbid.] The brook, or winter-torrent, which flows through the valley of Jehoshaphat (as it is now called), on the E. side of Jerusalem. *The brook K.* is the only name by which *the valley* itself is known in Scripture; for it is by no means certain, nor even probable, that the name "valley of Jehoshaphat"

Fig. 1479.—JERUSALEM AND ITS VALLEYS, FROM THE SOUTH, (the Kidron valley opening on the right, and Hinnom on the left.)

in *Joel* (iii. 12) was intended to apply to this valley. The word rendered "brook" (2 *Sam.* xv. 23; 1 *Kings* ii. 37, &c.) may be taken as equivalent to the Arabic *Wady,* meaning a stream *and* its bed or valley, or properly the valley of a stream, even when the stream is dry. The Septuagint, Josephus, and the Evangelists (*John* xviii. 1), designate it a storm brook, or winter torrent. The brook *K.* derives all its importance from its vicinity to the Holy City, being nothing more than the dry bed of of a winter torrent, bearing marks of being occasionally swept over by a large volume of water. No stream flows

through it, except during the heavy rains of winter, when the waters descend into it from the neighboring hills. But even in winter there is no constant flow, and the resident missionaries assured Dr. Robinson that they had not during several years seen a stream running through the valley. The ravine in which the stream is collected takes its origin above a mile to the N.E. of the city. This ravine deepens as it proceeds, and forms an angle opposite the temple. It then takes a S.E. direction, and, passing between the village of Siloam and the city, runs off in the direction of the Dead Sea, through a singularly wild gorge, the course of which few travellers have traced. It is in this ravine that the celebrated monastery of Santa Saba is situated.

Kid'ron, in *Ohio*, a post-office of Wayne co.

Kids'ville, in *North Carolina*, a P. O. of Lincoln co.

Kidwell, in *West Virginia*, a post-office of Tyler co.

Kie, *n. pl.* [Cf. KEE.] Kine.

Kie'fekill, Kef'fekill, *n.* (*Min.*) An argillaceous mineral; meerschaum.

Kiel (*kēl*), a seaport town of Prussia and formerly belonging to the Danish duchy of Holstein, on the N. shore of the prov., at the bottom of a beautiful bay, and at the terminus of a line of railroad from Hamburg, and of the great Kiel ship canal. (See CANAL.) *K.* is handsome, well-built, and thriving. It possesses a flourishing university, founded in 1665. The harbor is safe, and has water sufficient for large ships. Since its acquisition by the Prussian government, the latter has taken steps to form at *K.* a grand arsenal and naval station. A good deal of trade and ship-building is carried on. *Pop.* (1897) about 74,000.

Kiel, in *Wisconsin*, a post-village of Manitowoc co., on the Sheboygan river, about 25 m. E.N.E. of Fond du Lac.

Kien'-Long, Emperor of China, distinguished for his love of literature, was born about 1710, and died at the end of the 18th century, aged 90, having reigned above 60 years. He carried on several successful wars, especially one against the Tartar tribes, which lasted about 6 years, and was terminated in 1760. It was during this war that *K.* published an edict against the Christian religion.

Kier, in *Iowa*, a post-office of Buchanan co.

Kie'sel-schiefer, *n.* [Ger.] (*Min.*) A peculiar siliceous schist of the lower division of the lower carboniferous series of the Rhine is thus named. This schist is often black, and loaded with carbon. It is found in other countries, not unfrequently in the same state and association.

Kiev, or **Kieff,** a large govt. of Russia in Europe, comprising a part of the Ukraine, and bounded by the provinces of Podolia, Volhynia, Minsk, Tschernigov, and Pultawa, from which last it is separated by the Dnieper; Lat. between 48° 30′ and 51° 50′ N., Lon. between 28° 40′ and 33° 25′ E. *Area*, 19,682 sq. m. In the N. portions the surface is flat and marshy; the S. is covered with ranges of hills, branches of the Carpathian mountains, running from N.W. to S.E. The chief river is the Dnieper, with its tributaries, the Pripet and the Teterev. The soil, chiefly loam, and partly clay and sand, is very fertile; so that, although agriculture is backward, the returns are considerable. The climate is exceedingly mild; everything is in blossom in April, and frosts do not set in until November. Agriculture and horticulture are the chief occupations of the inhabitants. Wheat is extensively exported to Odessa. There are numerous distilleries, and beet-root sugar, tobacco, cloth, china, and delft are manufactured. Large cargoes of timber and firewood are floated down the Dnieper to the ports of the Black Sea annually. *Pop.* (1897) 3,150,000.

KIEV, or KIEFF, the cap. of the above govt., is situated on the Dnieper, in Lat. 50° 27′ N., Lon. 30° 27′ 45″ E. It consists properly of three towns, viz., the *Oldtown; Podole*, or the lower town, and the Fortress of *Petschersk*, the last regularly defended. It is 270 m. from Cherson, and has barracks for the garrison; also magazines, officers' houses, and several churches; likewise a government-house, beautiful public gardens, a gymnasium, and an endowed university, containing a library of 35,000 vols., with cabinets of medals, mineralogy, zoology, and botany. The church of St. Sophia, at *K.*, being the earliest Christian church in Russia, is an object of great interest, and of frequent pilgrimage to the followers of the Greek faith. This city was founded in the ninth century, and in 1124 it is said that 400 churches were destroyed by fire. At present it possesses more than 70 churches of imposing architecture. It has an extensive trade, but few manufactures. *Pop.* (1891) 183,640.

Kieve, *n.* [See KEEVE.] A vat or tub.

Kightaghook, (*kik-ta-gook'*,) or KIGHTAGHOUK, in *Alaska*, a village on the Oonalaklik River.

Kikekunem'alo, *n.* A resin resembling copal. It forms an excellent varnish.

Kil, or **Kill,** a prefix, signifying "a wood," and, also, "church," and connected with the names of numerous parishes in Ireland and Scotland.

Kilbir'nie, a town of Scotland, in Ayrshire, 2 miles from Beith. *Manuf.* Woollens and cottons. *Pop.* 6,000.

Kil'bourn, in *Iowa*, a post-village of Van Buren co., about 48 m. N.W. of Keokuk.

Kil'bourn City, in *Wisconsin*, a post-village of Columbia co., on the Wisconsin River, abt. 105 m. W.N.W. of Milwaukee.

Kil'da, (St.,) a group of islands in Scotland, belonging to the Hebrides, the principal island giving its name to the rest; Lat. 57° 48′ 32″ N., Lon. 8° 32′ 2″ W.

Kil'dare, an E. co. of Ireland, in Leinster; *area*, abt. 654 sq. m., — about 50,000 acres of which consist of the *Bog* of Allen. *Rivers.* Boyne, Barrow, and Liffey rivers. *Surface*, generally level; *soil*, very fertile. *Prin. crops.* Wheat, oats, and barley. *Chief towns.* Athy, Kildare, and Naas.

—A market-town, episcopal see, and parish of Ireland, in the above co., abt. 30 m. W.S.W. of Dublin. The town is finely situated on an elevated plain, and presents a curious picture of ancient wealth and grandeur mingled with modern poverty and wretchedness. It contains an ancient cathedral, — the chapel of which is said to date from the 5th century, — a round tower, the ruins of a castle, and an abbey.

Kil'dare, in *Wisconsin*, a post-township of Juneau co., about 6 m. E. of Manston;

Kil'derkin, *n.* A small barrel, containing 18 gals.

Kildow'ery, a town and parish of co. Cork, Ireland, about 25 m. N. of Cork; *pop.* 2,500.

Kild'wick, a town of England, in Yorkshire, 4 miles from Skipton. *Manuf.* Principally woollens. *Pop.* 13,000.

Kil'gore, in *Ohio*, a post-village of Carroll co., abt. 25 m. W.N.W. of Steubenville.

Kil'gore, in *Pennsylvania*, a post-village of Mercer co.

Kilgore, in *Texas*, a post-village of Gregg co.

Kilken'ny, a S.E. co. of Ireland, in Leinster; *area*, about 796 sq. m., of which nearly 40,000 acres are uncultivated. *Rivers.* Nore, Barrow, and Suir. *Surface*, diversified, in some parts rising to an elevation of 1,000 feet; *soil*, generally fertile. *Min.* Anthracite coal, and a fine variety of black marble. *Cap.* Kilkenny. *Pop.* (1897) 85,750.

—A city, cap. of the above co., on the Nore river, about 62 m. S.E. of Dublin. It is built upon both sides of the river, which divides it into what is called the Irish and English towns. It contains many educational institutions, among which may be mentioned Kilkenny College, in which Swift, Congreve, Bishop Berkeley, Farquhar, and many other distinguished men received the earlier part of their education. *Pop.* (1897) 10,900.

Kilkenny, in *Minnesota*, a post-village and township of Le Sueur co., about 19 m. W. of Faribault. *Pop.* of village, 220.

Kilker'ran Bay, an arm of the Atlantic Ocean, on the W. coast of Ireland, in Connaught, co. Galway.

Kill, *v. a.* [A. S. *cwellan.*] To deprive of life, animal or vegetable, in any manner or by any means; to butcher; to slaughter for food. — To appease; to calm; to still; as, to *kill* pain.

Kill, *n.* [Du. *kil.*] A channel or arm of the sea; a stream; — also used in composition; as, Schuyl*kill*, Cats*kill*, &c.

—A kiln. See KILN.

Killal'a, or KILLAL'LA, a seaport-town of Ireland, in Connaught, co. Mayo, on an inlet of the same name, about 7 m. N.N.W. of Ballina; *pop.* 1,450.

Killaloe, (*kil-la-loo'*,) a town of Ireland, in Munster, co. Clare; *pop.* 2,800.

Killa'ney, a bay, fishing-village, and coast-guard station of Ireland, in Connaught, co. Galway.

Killar'ney, a town of Ireland, co Kerry, celebrated for the fine scenery in its vicinity, 1½ m. from the E. margin of the lake of the same name, 162 m. S.W. of Dublin, and 44 E. by N. of Cork; *pop.* 5,000.

KILLARNEY, (LAKE OF,) a lake of Ireland, renowned for the exquisite beauty of its surrounding scenery. It consists properly of three lakes connected by a winding channel, through which vessels pass from the one to the other. It lies at the E. extremity of the highest mountain range in Ireland, known as Macgillicuddy's Reeks. The largest division, or what is called the *Lower Lake*, occupies an area of about 3,000 acres; its W. shore is formed by the summits of Toomies and Glenna, respectively 2,150 and 2,090 feet above sea-level, having their

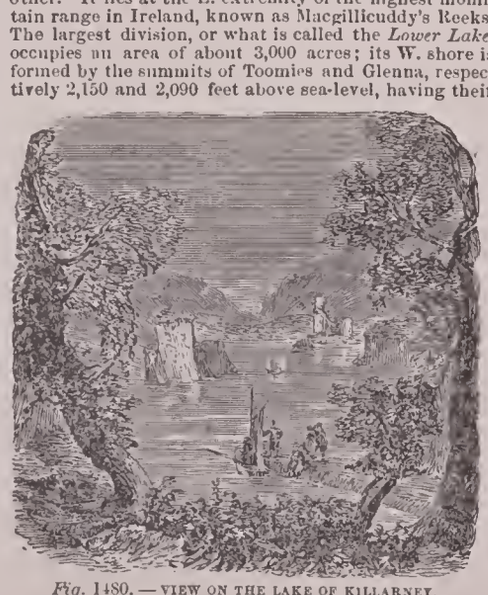


Fig. 1480. — VIEW ON THE LAKE OF KILLARNEY.

precipitous sides well clothed with forest-trees; on the opposite shore is the striking contrast of flat land, in a high state of cultivation, ornamented by the fine demesne of Lord Kenmare. The lower lake is said to contain no fewer than 33 islands, many of them, and one especially, Innisfallen, being extremely picturesque; in fact, the last-named islet has been pronounced to be the most beautiful spot in Europe. The *Upper Lake*, comprising about 720 acres, presents scenery of a wildly magnificent character, in some parts, however, softening into features kindred to those of the lower lake. The lake of *K.* connects with the Flesk, Lane, and other rivers, and is well stocked with fish and pearl oysters.

Killashan'dra, or KILLESHAN'DRA, a market-town of Ireland, co. Cavan; *pop.* 1,000.

Kill'buck, in *Illinois*, a post-village of Ogle co., abt. 85 m. W.N.W. of Chicago.

Kill Buck, in *New York*, a P. O. of Cattaraugus co.

Kill'buck, in *Ohio*, a post-township of Holmes county.

Kill'buck Creek, in *Indiana*, enters the W. fork of White River in Madison co.

Kill'buck Creek, in *Ohio*, enters the Walholding River about 6 m. N.W. of Coshocton, in Coshocton co.

Kill'-cow, *n.* A butcher.

Kill'-deer, or **Kill'-dee,** *n.* (*Zoöl.*) A small bird of N. and S. America, the *Ægialetis.* or *Charadrius vociferus*, belonging to the Plover family. It takes its popular name from its peculiar note.

Kill'er, *n.* One who, or that which, deprives of life.

Kil'lesse, *n.* [Fr. *coulisse.*] (*Arch.*) A gutter, groove, or channel; a cullis.

Killiecrank'ie, a celebrated pass through the Grampian Mountains, in Scotland, co Perth, abt. 15 m. N.W. of Dunkeld. The road which traverses it is cut out of the side of one of the contiguous mountains; and below it, at the foot of a high precipice, in the bottom of the ravine, the river Garry dashes along over rugged rocks, but so shaded with trees as to be hardly discernible. At the N. extremity, the Revolutionary army, under General Mackay, was utterly defeated, in 1689, by the Royalists, under Grahame of Claverhouse, Viscount Dundee (*q. v.*), who fell in the moment of victory.

Killikinick', *n.* See KINNIKINICK.

Kil'lingly, in *Connecticut*, a post-township of Windham co., adjoining Rhode Island.

Kil'lingworth, in *Connecticut*, a post-village and township of Middlesex co., about 22 m. E. by N. of New Haven.

Killmal'lock, or KILMAL'LOCH, a market-town of Ireland, in Munster, co. Limerick, about 19 m. S.W. of Limerick; *pop.* 1,200.

Kill Mills, in *New Jersey*, a post-office of Warren co.

Kil'lough, or ST. ANN'S PORT, a seaport-town of Ireland, in Ulster, co. Down, on a bay of the same name, about 1 m. W.S.W. of Ardglass; *pop.* 1,100.

Kil'low, *n.* [A corruption of *coal*, and *low*, a flame, from its resemblance to soot.] An earth of a blackish or deep-blue color. (*Woodward.*) — A Turkish dry-measure of very variable dimensions.

Kil'lybegs, a seaport-town and parish of Ireland, in Ulster, co. Donegal, abt. 14 m. W. of Donegal; *pop.* 700.

Killyleagh, (*kil-le-la'*,) a seaport-town and parish of Ireland, in Ulster, co. Down, about 16 m. S.S.E. of Belfast; *pop.* 1,000.

Kilmacthom'as, a town of Ireland, in Munster, co. of Waterford, about 12 m. W.S.W. of Waterford; *pop.* 1,200.

Kilmar'nock, a town of Scotland, co. Ayr, 12 m. N.N.E. of Ayr. *Manuf.* Carpets, blankets, tartans, and other woollen cloths; also, silks, muslins, calicoes, gloves, &c. *Pop.* 22,620.

Kilmar'nock, in *Maine*, a township of Piscataquis co.

Kilmar'nock, in *Virginia*, a post-village of Lancaster co., about 90 m. E. by N. of Richmond.

Kiln, (*kil,*) *n.* [A. S. *cyln, cylene.*] A large stove or oven; a fabric of brick or stone, which may be heated for the purpose of hardening, burning, or drying anything; a pile of brick constructed for burning or hardening; as, a lime-*kiln*.

Kiln'-dry, *v. a.* To dry in a kiln, as meal or grain.

Kiln'-hole, *n.* The mouth or chimney of a kiln.

Kil'ogram, Kil'ogramme, *n.* [Fr. *kilogramme.*] A French measure of weight, equal to 1,000 grammes = 2·2046 lbs. avoirdupois.

Kil'olitre, Kil'oliter, *n.* [Fr. *kilolitre.*] A French measure of liquids, equal to 1,000 litres = 35·3171 cubic feet, or about 264 wine-gallons.

Kil'ometre, Kil'ometer, *n.* A French measure of length, equal to 1,000 metres = 1,093½ yards nearly.

Kilostere, (*ke-lo-stâr'*,) *n.* A French measure of volume or solidity, equal to 1,000 cubic metres = 35,316·6 English, or 35,310·5 American cubic feet.

Kilroy', in *Iowa*, a village of Clayton co., on the Mississippi River, about 95 m. N.N.E. of Iowa City.

Kilrush', a town and watering-place of Ireland, in Munster, co. Clare, about 27 m. S.W. of Ennis.

Kilt, *n.* [Gael. *cealt.*] A loose dress, extending from the waist to the knee, in the form of a petticoat, worn in the Highlands of Scotland by men, and by children in the Lowlands. The Highlanders designate the kilt as the *philibeg*. This singular national dress is now almost wholly confined to a few Highland regiments.

Kilt'ed, *a.* Wearing a kilt.

Kilt'er, *n.* See KELTER.

Kilwin'ning, a town of Scotland, co. Ayr, on the Garnock, 3 m. N.N.W. from Irvine, noted for having the first Masonic lodge in Scotland; *pop.* 4,000.

Kilworth', a market-town of Ireland, in Munster, co. Cork, on the Funcheon River, about 2 m. N.N.E. of Fermoy; *pop.* 1,700.

Kilworth', a village of Middlesex co., Upper Canada, about 114 m. S. of Toronto.

Kim'ball, in *Michigan*, a township of St. Clair county.

Kim'berton, in *Pennsylvania*, a post-village of Chester co., about 75 m. E. by S. of Harrisburg.

Kim'bo, *a.* [Celt. *cam*, crooked, bent.] Crooked; arched; bent.

"So that John was forced to sit with his arms a-*kimbo*." *Arbuthnot.*

Kimbol'ton, in *Ohio*, a post-village of Guernsey co., about 88 m. E. of Columbus

Kim'mell, in *Indiana*, a post-office of Noble co.

Kimms'uick, in *Missouri*, a post-village of Jefferson co., about 21 m. S. by W. of St. Louis.

Kim'shaw, or **Kim'shew,** in *California*, a township of Butte co.

Kin, *n.* [Sax. *cyn*, race, tribe, sort; Icel. *kyn*, race; Old Ger. *kind*, progeny, Lat. *genus*; Gr *genos*, root.] Relation, properly, by consanguinity or blood; relatives; kindred.

—Persons of the same race; a relation; the same generical class; a thing related. See KINDRED.

—*a.* Kindred; of the same nature; congenial.

—*n.* (*Mus.*) A Chinese instrument, having a body of thin wood, carved like the top of a violin, to increase the resonance, and having five silken strings of different sizes.

Kin'ate, *n.* (*Chem.*) A salt resulting from the combination of kinic acid with a base.

Kincar'dine, or the **Mearns,** a maritime co. of Scotland, having N. the co. Aberdeen, and river Dee; E. the German Ocean; S. and W., co. Angus, *area*, 394 sq. m. The surface is extremely diversified, and there are about 50,000 acres of level and fertile country. *Rivers.* Dee, N. Esk, Bervie-water, and Cowie. *Prod.* Mostly cattle. *Min.* Granite and sandstone. *Manuf.* Coarse linens, and wooden snuff-boxes. *Cap* Stonehaven.

Kincar'dine, a seaport-town of Scotland, co. Perth, on the N. side of Frith of Forth, 21 m. W.N.W. of Edinburgh. *K.* has a good harbor.

Kinchafoo'na Creek, in *Georgia*, enters Flint River at Albany in Flint co.

Kind, *n.* [O. Ger. *kind*; Icel. *kynd*, progeny. See KIN.] Race; genus; generic class; sort, in a sense more loose than genus. — Sort or species; particular nature; natural state; produce or commodity. — Nature; natural propensity or determination.

"Some of you, on pure instinct of nature,
Are led by *kind* t' admire your fellow-creature."—*Dryden.*

Kind, *a.* [A. S. *cyn.*] Congenial; having feelings or dispositions becoming the common nature or kind; humane; benevolent; beneficent; bounteous; disposed to do good to others, and to make them happy; having tenderness or goodness of nature, as persons or feelings; feeling for each other; compassionate; sympathetic; affectionate.

Kindergar'ten. See SECTION II.

Kind'-hearted, *a.* Having kindness of heart or nature.

Kind'-heartedness, *n.* Benevoleuce; kindness of nature.

Kin'dle, *v. a.* [Icel. *kynda*, to kludle, *kyndr*, a fire, *kyndill*, a candle.] To set on fire; to cause to burn with flame; to light.—To inflame, as the passions; to exasperate; to rouse; to provoke; to excite to action; to heat; to fire; to animate.

—*v. n.* To take fire; to begin to burn with flame.—To begin to rage or be violently excited; to be roused or exasperated; to become animated.

Kin'derhook, in *Arkansas*, a small village of Cleburne co.

Kinderhook, in *Illinois*, a post-village and township of Pike county, about 90 miles west by south of Springfield.

Kinderhook, in *Indiana*. See WEST KINDERHOOK.

Kinderhook, in *Michigan*, a post-township of Branch co.

Kinderhook, in *New York*, a post-village and township of Columbia co., about 16 m. S. by E. of Albany; *pop.* of village (1897) 1,010.

Kinderhook, in *Ohio*, a post-village of Rickaway co., on C. & M. V. R.R., 7 m. W. of Circleville.

Kinderhook Creek, in *New York*, enters the Hudson River about 5 m. above Hudson in Columbia co.

Kin'dler, *n.* One who kindles; one who inflames.

Kind'liness, *n.* The quality of being kindly; affection; affectionate disposition, benignity; as, *kindliness* of heart.

Kind'ling, *n.* The act of causing to burn, or of inflaming.

—*pl.* Materials for commencing a fire.

Kind'ly, *a.* Natural; homogeneal; congenial; kindred; of the same nature. — Kind; benevolent. — Mild; bland; softening

"And in soft silence shed the *kindly* show'r."—*Pope.*

—*adv.* With good will; with a disposition to make others happy, or to oblige, benevolently; favorably.

Kind'ly-natured, *a.* Having a kind disposition or nature.

Kind'ness, *n.* Quality of being kind; good-will; benevolence; that temper or disposition which delights in contributing to the happiness of others; benignity of nature. — Any act of benevolence; beneficence; charity; hospitality; attention to the wants of others.

Kin'dred, *n.* [Sax *cynryn*, *cynren*, a family course — *cyn*, kin, and *ryne*, a course of years.] Relationship by birth or marriage; consanguinity. — Affinity; relatives by blood or marriage, more properly the former; the relation of persons descended from the same stock or common ancestor — See CONSANGUINITY.

—*a.* Related; congenial; of the like nature, or properties; cognate.

"True to the *kindred* points of Heaven and Home." *Wordsworth.*

Kine, *n.* [Contracted from *cowen*, old pl. of *cow.*] Cows. (Now only used in poetry.)

Kinemat'ic, Kinemat'ical, *a.* Belonging or relating to kinematics.

Kinemat'ics, Cinematics, *n.* [Gr. *kinema*, a motion.] The science of pure motion. It differs from geometry by the admission of the conceptions of *time* and *velocity*, and from dynamics proper by the exclusion of the conception of *force* as a cause of motion. Roberval's Method of Tangents, and Newton's Fluxions, are purely kinematical methods. From the kinematics of a point all the properties of curves may be deduced, and that frequently with great simplicity. A curve, in fact, may be conceived to be generated by a point moving along a line which at the same time incessantly turns around that point. The line is the tangent of the curve, and the relative velocities of translation and rotation determine its curvature.

Kinesip'athist, *n.* One who is skilled in, or practises, kinesipathy.

Kinesip'athy, *n.* [Gr. *kinesis*, motion, and *pathos*, disease.] A mode of treating disease by gymnastics or appropriate movements.

Kinet'ic, *a.* [From Gr. *kineo*, to move.] Motory.

Kinet'ics, *n. sing.* The same as KINEMATICS, *q. v.*

Kine'toscope, *n.* [Gr. *kinetos*, moving, and *skopeo* to, view.] A movable panorama. See also SECTION II.

King, *n.* [A. S. *cyng*, *cynig*, *cyning*; Dan. *konge*; Du. *koning*; Icel. *konungr*; Ger. *könig*; O Ger. *kuning.*] The chief magistrate or sovereign of a nation; a monarch; a sovereign; a prince; a ruler. — There is some difference of opinion as to the origin of the word; probably, as *kon-ung*, *cyn-ing*, it expresses one chosen from the people to rule them, the termination appearing in such words as ætheling, while the first syllable, connected with the Greek γενος, Latin *genus*, &c., appears also in γυνή and *quean*. It would therefore primarily mean one chosen from and by the people to represent and guide them; but it has passed through as many shades of meaning as there are states or nations to be governed. Thus it is applied equally to the constitutional monarchs of England and an absolute sovereign like Louis XIV.; to the chief magistrate of Poland in former times, who was *elected*, and to that of Holland, who succeeds by *hereditary* right; to the head of a savage tribe or barbarous horde, as well as to that of the most refined and civilized nation. It is expressed in Greek by the word *basileus*, and in Latin and its cognate languages by *rex*; but all the nations of Europe have adopted into their respective languages the equivalent terms in use among the people with whom they carry on intercourse. Thus we speak of the *Shah* of Persia, the *Grand Signior*, the *Pasha* of Egypt, the *Dey* of Algiers, &c. In countries where the kingly office is hereditary, some form has always been gone through on the accession of a new king, in which there is a recognition on the part of the people of his right; a claim from them that he should pledge himself to the performance of certain duties; and generally a religious ceremony performed, in which the anointing him with oil and placing a crown upon his head are conspicuous acts; the whole solemnity being styled the *coronation*. In modern Europe, the Pope and the Emperor of Germany assumed as a joint prerogative the right of conferring the dignity of king. Frederick I. of Prussia was the first sovereign who assumed the title, and had it acknowledged by the other states of Europe without their authorization.

(*Games.*) A card having the picture of a king. — The chief piece in the game of chess.

King, *v. a.* To supply with a king; to make royal; to raise to royalty. (England.)

King, RUFUS, an American statesman and diplomatist, was b. in 1755, at Scarborough, Me., entered at Harvard College in 1773, studied law, was admitted to the bar in 1778, and elected a member of Congress in 1784. In 1796 he was appointed, by President Washington, minister plenipotentiary to the court of St. James, the functions of which office he continued to discharge till 1803, when he returned home. In 1813 he was a third time sent to the Senate, and his speech on the burning of Washington by the English was a most striking display of oratory. In 1819 he was once more reëlected, and continued until the expiration of the term in 1825. He then accepted the appointment of minister plenipotentiary at the court of London, but was taken ill, and returned home, and soon after died, aged 72, in 1827.

King, in *Washington*, a W. central co., bordering on Admiralty Inlet; *area*, about 1,944 sq. m. *Rivers.* Dwamish, Cedar, and Snoqualmie rivers. *Surface*, much diversified, the Cascade Mountains forming the E. border. *Soil*, in some parts fertile. *Cap.* Seattle. *Pop.* (1897) about 80,000.

King-and-Queen, in *Virginia*, an E. co.; *area*, about 400 sq. m. *Rivers.* York, Mattapouy, and Piaukatank rivers. *Surface*, undulating; *soil*, fertile. *Cap.* King-and-Queen Court-House. *Pop.* (1890) 9,669.

King-and-Queen Court-House, in *Virginia*, a post-village, cap. of King-and-Queen co., about 30 m. E. by N. of Richmond.

King-at-arms, *n.* (*Her.*) An officer whose business is to preside over the chapters, and to direct the proceedings of heralds. See HERALD'S COLLEGE.

King'-apple, *n.* A kind of apple.

King-becom'ing, *a.* That is appropriate to a king

King'bird, *n.* (*Zoöl.*) See FLY-CATCHER.

King Charles' South Land, an island of Terra del Fuego. It is the largest island in the group, having a low and level surface, except in the S. part, where Mount Sarmiento rises to an elevation of 7,000 feet.

King'-crab, *n.* (*Zoöl.*) See LIMULUS.

King'-craft, *n.* The craft of kings; the art of regal government.

King'cup, *n.* (*Bot.*) The crow-foot. See RANUNCULUS.

King'dom, *n.* [A. S. *cynedom*, *cyningdom.*] The quality and attributes of a king; government; rule; supreme administration. — The territory or country subject to a king; an undivided territory under the dominion of a king or monarch; the inhabitants or population subject to a king. — A primary division of plants, animals, or minerals; as, a mineral, or vegetable *kingdom*.

King'field, in *Maine*, a post-township of Franklin co., about 52 m. N. by W. of Augusta.

King'fish, *n.* (*Zoöl.*) See OPAH.

King'fisher, *n.* (*Zoöl.*) See ALCEDINIDÆ.

King George, in *Virginia*, an E. co., adjoining Maryland; *area*, about 176 sq. m. *Rivers.* Potomac and Rappahannock rivers. *Surface*, hilly; *soil*, not very fertile. *Cap.* King George Court-House.

King George Archipelago, in *Alasku.* See SITKA.

King George Court-House, in *Virginia*, a post-village, cap. of King George co., abt. 70 m. N.N.E. of Richmond.

King George's Islands, two islands in S. Pacific Ocean, discovered by Byron in 1765; Lat. 14° 35′ S., Lon. 149° 2′ W.

King George's Sound, a capacious bay on S. coast of Australia; Lat. of entrance, 36° 6′ 15″ S., Lon. 118° E.

King'-killer, *n.* A regicide; a person who kills a king.

King'less, *a.* Without a king.

King'let, *n.* A petty king; a weak or insignificant king.

King'liness, *n.* State of being kingly.

King'ling, *n.* A kinglet; a petty king.

King'ly, *a.* Belonging to a king; suitable to a king, royal; regal; sovereign; monarchical; as, a *kingly* government.

—August; splendid; noble; becoming a king; as, "A *kingly* entertainment."—*Sidney.*

—*adv.* With an air of royalty; with superior dignity.

King'-post, *n.* (*Arch.*) The middle or *chief* post of a roof, standing on the tie-beam, and reaching up to the ridge; it is often formed into an octagonal column with capital and base, and small struts or braces, which are usually slightly curved, spreading from it above the capital to some of the other timbers. — See ROOF.

King of Prussia, in *Pennsylvania*, a post-village of Montgomery co., about 3 m. above Norristown.

King's, a N.W. co. of Nova Scotia, bordering on the Bay of Fundy, and Mines Basin; *area*, about 812 sq. m. *Rivers.* Le Have and Annapolis rivers, and some smaller streams. *Surface*, much diversified; *soil*, generally fertile. *Min.* Copper, silver, and iron. *Cap.* Kentville. *Pop.* (1891) 22,489.

King's, a S. central co. of New Brunswick; *area*, about 1,565 sq. m. *Rivers.* St. John, Hammond, and Kenebekasis rivers. *Surface*, diversified; *soil*, fertile. *Cap.* Hampton. *Pop.* (1891) 23,090.

King's, in *New York*, a S.E. co., forming the extreme western end of Long Island, in which is located the city of Brooklyn; *area*, about 37 sq. m.; bounded by the East and Hudson rivers, New York Bay and the Atlantic Ocean, and by Queen's co. on the E. The county-seat was Brooklyn, and the co. had a population of 838,547 in 1890, Brooklyn alone having 806,343. Coney Island is at the S.W. corner of this co. Now a part of Greater New York.

King's, in *Illinois*, a post-village of Ogle co., about 10 m. E. of Oregon

Kings'borough, in *New York*, a village of Fulton co., about 60 m. S.W. of Albany.

King's Bridge, in *New York*, a village of New York co., at the N. end of Manhattan Island, about 13 m. N. of the City Hall; now included in Greater New York.

Kings'burg, in *California*, a post-town of Fresno co., on So. Pacific R.R., 10 m. S. of Fresno.

Kings'bury, in *Indiana*, a post-village of La Porte co., about 5 m. S. of La Porte.

Kings'bury, in *New York*, a post-town and township of Washington co., about 55 m. N. of Albany; *pop.* of township in 1897, 4,710.

Kings'bury, in *Texas*, a post-village of Gaudalupe co., on So. Pacific R.R., 45 m. S. of Austin.

King's Corners, in *Ohio.* See NEW LONDON.

King's County, an E. central co. of Ireland, in Leinster; *area*, about 772 sq. m., about 156,000 acres of which are uncultivated. *Rivers.* Shannon, Brosna, Barrow, and Boyne rivers. *Surface*, slightly diversified; *soil*, fertile. *Chief towns*, Burr and Tullamore. *Pop* (1897) 61,400.

Kings'court, a town of Ireland, in Ulster co., Cavan, about 5 m. S.W. of Carrickmacross. *Pop.* (1897) 815.

King's Creek, in *Ohio*, enters Mad River in Champaign co.

King's Creek, in *S. Carolina*, enters Broad River in York district.

King's'-cush'ion, *n.* A seat made by two persons crossing their hands.

Kingsess'ing, in *Pennsylvania*, a former township, now included within the limits of Philadelphia, on the Delaware River, about 5 m. S.W. of the State House.

King's-evil, *n.* (*Med.*) A term applied to any severe scrofulous condition of the body, and for which, in the Middle Ages, the touch of the sovereign's hand was thought to be the only effective cure. Edward the Confessor, in the 11th century, was the first monarch who touched, as it was called, for the Evil; and George the First, at the beginning of the 18th, the last king who attempted it. Dr. Johnson, when a boy, was touched for the Evil by Queen Anne. — See SCROFULA.

King's Ferry, in *New York*, a P. O. of Cayuga co.

King'ship, *n.* The state, office, or dignity of a king; royalty.

King's Island, an island of S. Australia, the W. extremity of Bass's Straits; Lat. 35° 50′ S., Lon. 144° E.

King's Island, an island of British N. America, in the Pacific Ocean; Lat. 52° 10′ N., Lon. 128° W.

Kings'ley, CHARLES, an English clergyman, novelist, and poet, chaplain-in-ordinary to Queen Victoria, B. at Holne Vicarage, Devon, 1819. After devoting some time to preparation for the profession of the law, he entered the Church, became curate at Eversley, a moorland parish in Hampshire, and that living becoming vacant, he was presented to it by the patron, the late Sir John Cope, Bart. Mr. K. had mixed much with workingmen, as may be inferred from his *Alton Locke*, and also taken part in the ragged-school movement, and in various efforts to ameliorate the condition of the working classes, to such an extent as to have earned the name of "Chartist Parson." He, too, distinguished himself as a dramatic and lyric poet, the *Saint's Tragedy* having been published in 1846, and was the author of several novels; *Alton Locke*, &c. He gave us also *Phaeton; Loose Thoughts for Loose Thinkers*, published in 1852; *Hypatia, or New Foes with an Old Face*, in 1853; *Alexandria and her Schools — Lectures*, in 1854; *Westward Ho!* in 1855; *Two Years Ago*, in 1857; *Miscellanies from Fraser's Magazine*, in 1859; *The Roman and the Teuton Lectures*, delivered at Cambridge in 1864; *Hereward, the Last of the English*, in 1866, &c. He was appointed Professor of Modern History in the university of Cambridge in 1859, and made Canon of Westminster, 1873. D. 1875. *Letters and Memorials*, by Mrs. Kingsley (1877).

Kings'ley, in *Pennsylvania*, a twp. of Venango co.

King's Mountain, in *N. Carolina*, a post-village of Gaston co., about 200 m. W.S.W. of Raleigh. It is the scene of an important victory won by the American militia over the British troops, Oct., 1780.

King's Point, in *Missouri*, a post-village of Dade co.

Kings'port, in *Tennessee*, a post-village of Sullivan co., about 270 m. E. by N. of Nashville.

King's River, in *California*, enters Tule Lake in Tulare co.

King's River, in *Missouri*, enters the White River in Barry co.

King's Settlement, in *New York*, a post-office of Chenango co.

King's Spear, *n.* (*Bot.*) See ASPHODELUS.

Kings, (THE BOOKS OF.) (*Script.*) The name of two of the historical books of the Old Testament. Originally, they formed only one book, and were first divided by the Seventy, by whom they are entitled the third and fourth books of Reigns or Kingdoms, — the books of Samuel, which they divided in the same way, being the first and second. The Books of Kings take their name from their contents, being a history of the theocracy under the kings from the reign of Solomon till the dissolution of the state. They may be divided into three parts, — 1, giving an account of the reign of Solomon (i.–xi.); 2, the history of the two kingdoms of Judah and Israel (xii.–2 *Kings* xvii.); 3, the history of the kingdom of Judah after the disruption of Israel (xviii.–xxv.). The period embraced by the two books is 455 years. Great uncertainty exists as to the author and the time at which these books were written: some ascribe the authorship to Ezra, others to Jeremiah or Isaiah; but it is a mere matter of conjecture. Jewish tradition ascribes the authorship to Jeremiah, and there is present throughout a considerable resemblance to his style. The books, though compiled to a considerable extent from more copious annals, yet present a tolerable degree of unity and compactness. A definite plan is seen running through the whole, and there is a uniformity of style and method. The scope of the work is to show God's merciful dealings with His people, and His keeping promise with them. The kingdom is preserved to Solomon entire, and after it was divided, God endeavored to recall both Israel and Judah to a sense of their covenant-relation to him by admonitions and chastisements, though they were finally subverted because they continued rebellious and stiff-necked. But though severely punished, the seed of David was not allowed to perish, and the exiled king Jehoiakim is brought back to Judah, and set upon the throne of his ancestors, as an evidence of God's remembrance of His promise made to His servant David. The historical character and credibility of these books commend themselves to the reader by strong external and internal evidence; besides their being repeatedly referred to in the New Testament. The Jews have uniformly regarded them as divinely inspired.

Kings'ton, the capital and chief commercial city of Jamaica, W. Indies. It is a seaport, with an excellent harbor of the same name, on the S. coast of the island, and has a large shipping trade in fruits, &c., with the United States and Europe. It was founded after the destruction of Port Royal by an earthquake in 1693 and was made the capital of Jamaica in 1872. It was injured by a violent hurricane in 1880, largely consumed by fire in 1892, and in Jan'y, 1907, was visited by a destructive earthquake, which practically destroyed it, with a loss of 1000 or more lives. *Pop.* about 50,000.

Kingston or **Kings'town,** a town on the S.W. coast of the island of St. Vincent, British West Indies.

Kingston, an important city of prov. of Ontario, in the co. of Frontenac; cap. of that county, and terminal of Rideau canal. It is situated on the St. Lawrence river, at the east end of Lake Ontario, and 172 m. S. W. of Montreal. Lat. 44° 12′ N., Lon. 75° 41′ W. The city is located upon the site of old Fort Frontenac, built in 1672 by governor-general Frontenac. The harbor is secure for vessels of all kinds, and commerce is in a flourishing condition. It is the military and naval depot of the province, and is one of the strongest posts in British America, being defended at every practicable point by forts and batteries. *Pop.* (1897) 21,250.

Kingston, a town of New Brunswick, cap. of King's co., on the St. John's river, about 25 m. N. of St. John's.

Kings'ton, in *Georgia*, a post-village in Bartow co.

Kingston, in *Illinois*, a village of Adams co.
—A post-village and township of DeKalb co., about 200 m. N.E. of Springfield.
—A village of Peoria co., on the Illinois river, about 20 m. below Peoria. Its post-office is KINGSTON MINES.

Kingston, in *Indiana*, a post-village of Decatur co., about 6 m. N.E. of Greensburg.

Kingston, in *Kentucky*, a post-village of Madison co., about 45 m. S.E. of Lexington.

Kingston, in *Maryland*, a post-village of Somerset co., about 10 m. S. of Princess Anne.

Kingston, in *Massachusetts*, a post-town and township of Plymouth co., about 33 m. S.E. of Boston. *Pop.* (1897) 1,705.

Kingston, in *Minnesota*, a post-township of Meeker co., about 8 m. E. of Forest City.

Kingston, in *Mississippi*, a post-office of Adams co., about 100 m. S.W. of Jackson.

Kingston, in *Missouri*, a post-village, cap. of Caldwell co., about 120 m. N.W. of Jefferson City. *Pop.* 495.

Kingston, in *North Carolina*. See KINSTON.

Kingston, in *New Hampshire*, a post-township of Rockingham co. *Pop.* (1897) 1,140.

Kingston, in *New Jersey*, a post-village of Somerset co., about 13 m. N.E. of Trenton. *Pop.* (1895) 459.

Kingston, in *New York*, a flourishing city, cap. of Ulster co., on the Hudson river, about 55 m. S. of Albany. It is a very important manufacturing place. Its foundation is almost contemporary with that of New York city, and the house is still standing in which the first constitution of the State was framed. In 1777 K. was taken and burned by the British. It is also situated on Rondout creek, which is its harbor. *Pop* (1897) 23,750.

Kingston, in *Ohio*, a village of Champaign co., about 5 m. N. by E. of Urbana.
—A township of Delaware co.
—A post-village of Ross co., about 10 m. N.E. of Chillicothe. *Pop.* (1897) 792.

Kingston, in *Pennsylvania*, a village of Cumberland co., about 6 m. E.N.E. of Carlisle.
—A post-borough and township of Luzerne co., on the N. branch of the Susquehanna river, opposite Wilkesbarre. *Pop.* (1897) 2,540.

Kingston, in *Rhode Island*, a post-village, cap. of Washington co., about 27 m. S. by W. of Providence.

Kingston, in *Tennessee*, a post-village, cap. of Roane co., about 145 m. E. by S. of Nashville. *Pop.* (1897) 890.

Kingston, in *Utah*, a post-office of Piute co.

Kingston, in *Wisconsin*, a post-township of Green Lake co., on Grand river.
—A township of Juneau co.

Kingston-upon-Hull. See HULL.

Kingston-upon-Thames, a town of England, co. Surrey, 12 m. S.W. of London. It is a place of great antiquity, and on the N. side of the church is a large stone on which, according to the traditions, the Anglo-Saxon monarchs were seated during their coronation. *Pop.* (1897) 29,750.

King'stone, *n.* (*Ichth.*) Another name for the Angel-fish. See SQUALIDÆ.

Kings'town, or DUNLEARY, a seaport town of Ireland, in Leinster, 7 m. S.E. of Dublin. *Pop.* (1897) 18,550.

Kings'tree, in *South Carolina*, a post-village, cap. of Williamsburg co., on the Black river, about 76 m. E.S.E. of Columbia. *Pop.* (1897) 580.

Kings'ville, in *Maryland*, a post-village of Baltimore co., about 16 m. N.E. of Baltimore.

Kingsville, in *Missouri*, a post-village of Johnson co., about 44 m. S.E. of Kansas City.

Kingsville, in *Ohio*, a post-village and township of Ashtabula co., about 60 m. N.E. of Cleveland.

Kingsville, in *Pennsylvania*, a post-village of Clarion county.

Kingsville, in *South Carolina*, a post-village of Richland co., about 25 m. S.E. of Columbia.

King's Yellow, *n.* (*Painting.*) A pigment of a fine yellow color, which is a mixture of arsenious acid and tersulphide of arsenic, or orpiment.

King-teheou (*king-tchou*), a fortified city of China, province of Hoo-pih, Lat. 30° 28′ N., Lon. 111° 37′ E. *Pop.* Unascertained.

King-te-Chiang, a large town of China, in Kiangsi, 95 m. from Nan-chang-foo. It is the principal seat of the porcelain manufacture in China, for which about 500 furnaces are employed. Lat. 29° 25′ N., Lon. 115° 50′ E. *Pop.* (1897) about 500,000.

KingWil'liam, in *Virginia*, an E. co.; *area*, about 270 sq. m. *Rivers.* Pamunkey and Mattapony rivers. *Surface*, undulating; *soil*, fertile. *Cap.* King William Court-House. *Pop.* (1890) 9,605.

King Wil'liam Court House, in *Virginia*, a post-village, cap. of King William co., about 27 m. N.E. of Richmond.

King Wil'liam's Cat'aract, a fall of the Essequibo river, in British Guiana. Lat. 3° 14′ 35″ N., Lon. 57° 44′ W.

King'-wood, *n.* A beautiful hard wood exported from Brazil. It has violet streaked tints, and is used in turnery and small cabinet-work.

King'wood, in *New Jersey*, a post-township of Hunterdon co., about 7 m. W. of Flemington.

Kingwood, in *Pennsylvania*, a post-village of Somerset co.

Kingwood, in *West Virginia*, a post-village, cap. of Preston co., on the Cheat river, about 80 m. E.S.E. of Wheeling. *Pop.* (1897) 1,090.

Ki'nic, or **Qui'nic, Acid,** *n.* (*Chem.*) A peculiar dibasic acid, occuring in cinchona bark, in combination with lime and the cinchona alkaloids. It is prepared by mixing an aqueous decoction of the bark with milk of lime, until a faint alkaline reaction is perceived, the tannic acid and the alkaloids being precipitated, and kinate of lime remaining in the supernatant liquor. The salt is crystallized from the mother-liquor by evaporation, and decomposed by oxalic or sulphuric acid. Kinic acid crystallizes in colorless oblique rhombic prisms, freely soluble in boiling water, less so in cold water, and still less so in alcohol and ether. Most of the kinates are soluble in water, with the exception of the sub-kinate of lead.

Kink, *n.* In a rope or chain, a curvature reduced to a sharp bend by the too rapid drawing from a coil or twist. It is very dangerous on shipboard, causing a stoppage in the run of tackle through blocks, and weakening the rope by a sudden reversal of the direction of the strain. The best rope kinks very seldom.
—A fit of laughter, or of coughing.
—*v. n.* To be entangled; to set fast or stop, as a rope. — To be disentangled. (Local, Eng.) — To laugh immoderately. (Local.)

Kinkajou, or Potto, *n.* (*Zoöl.*) The *Cercoleptes candivolvulus*, a singular carnivorous quadruped of South America, belonging to the family *Ursidæ*, and allied to the raccoons. It has a very long tail, which is prehensile at the end; the muzzle is short, the tongue slender and extensile; with two pointed molars before, and three tubercular ones behind. It eats like a squirrel, holding the food in its hands; is a nocturnous animal; climbs like a lemur, with agility; and is said to be a great destroyer of wild bee's nests. In captivity it is very mild, and climbs about the chairs, &c., if suffered to go at large.

Fig 1481. — KINKAJOU. (*Cercoleptes candivolvulus.*)

Kin'kersville, in *Ohio*. See KIRKERSVILLE.

Kin'kle, *n.* Same as KINK (*q. v.*).

Kin'kler, in *Texas*, a P. O. of Lavaca co.

Kinmit'ty, a town of Ireland, in Leinster, in King's co., about 13 m. S. W. of Tullamore. *Pop.* (1897) 1,745.

Kin'mundy, in *Illinois*, a city of Marion co., on Ill. Cent. and C. & E. I. R.Rs., about 24 m. N.E. of Centralia. *Pop.* (1897) 1,160.

Kin'nekuk, in *Kansas*. See KENNEKUK.

Kin'ney, in *Texas*, a S.W. co., adjoining Mexico; *area*, about 1,700 sq. m. *Rivers.* Rio Grande, and several of its tributaries. *Surface*, generally level; *soil*, fertile. *Cap.* Brackettsville. *Pop.* (1897) 4,350.

Kin'ney Four Corners, in *New York*, a post-office of Oswego co., about 6 m. S.S.W. of Oswego.

Kinnickin'nick, or KINNICK KINNICK, in *Wisconsin*, a small river, flowing into Lake St. Croix, in St. Croix co.
—A township of St. Croix co., on the St. Croix river.

Kinnikinic', Killikinic', *n.* [N. A. Ind.] A mixture smoked by the North American Indians, consisting of dried sumac and willow leaves or bark, finely chopped and grated, and mixed with tobacco; hence a brand name frequently used for manufactured tobacco. — The Bearberry. See ARCTOSAPHYLOS.

Kino, *n.* (*Bot.*) See PTEROCARPUS.

Ki'none, KINOILE, *n.* (*Chem.*) A yellow crystalline substance, obtained by heating one part of kinic acid, four parts of peroxide of manganese, and one part of sulphuric acid, diluted with water. It crystallizes in long needles, which fuse at 212° Fahr. It is sparingly soluble in water, but dissolves more freely in alcohol.

Kinross', a small co. of Scotland lying between the cos. of Perth and Fife; *area*, 78 sq. m. The middle part of this co. is occupied by the lake LOCH LEVEN (*q. v.*). *Cap.* Kinross. *Pop.* (1897) 6,550.

Kinsale (*kin-sail'*), a town of Ireland, co. Cork, on a bay at the mouth of the River Braudon, 13 m. from Cork. The harbor, protected by a regular fort, is compact, secure, and capacious. *Pop.* (1897) 4,500.

Kin'sale, in *Virginia*, a post-village of Westmoreland co., about 60 m. N.E. of Richmond.

Kin'ship, *n.* Kindred; relationship.

Kins'man, *n.*; *pl.* KINSMEN. A man of the same race or family; one related by blood; a relative.

Kinsman, in *Ohio*, a post-township of Trumbull co.

Kin'ston, or KING'STON, in *North Carolina*, a post-village, cap. of Lenoir co., about 80 m. S.E. of Raleigh. *Pop.* (1897) 1,870.

Kins'woman, *n.*; *pl.* KINSWOMEN. A female relative.

Kin'tal, *n.* See QUINTAL.

Kint'ledge, *n.* (*Naut.*) A kind of ballast. See KENTLEDGE.

Kint'nersville, in *Pennsylvania*, a small village of Bucks county.

Kintyre, in *Illinois*, a village of Winnebago co.

Kinvar'ra, a seaport town of Ireland, in Connaught, co. Galway, 11 m. S.S.E. of Galway. *Pop.* (1897) 360.

Kin'zers, in *Penna.*, a post-village of Lancaster co.

Kiu'zua, in *Pennsylvania*, a post-office of Warren co.
Kio'kee Creek, in *Georgia*, entsrs tho Savannah River in Columbia county.
Kiong-Tchon, (*ke-ong-tchou'*,) a maritime clty of China, cap. of island of Hai-nan, on its E. coast; Lat. 20° N., Lon. 110° 22′ E. It is inclosed with strong walls, has two colleges, and a large public library; also an extensive trade with Siam, Macao, Assam, and Singapore. *Pop.* Estimated at 100,000.
Kiosk', *n.* [Turk.] A pavilion or summer-house, with a tent-shaped roof opcn on all sides, and isolated. It is generally square in shape, and supported by pillars, around the foot of which is a balustrade.
Ki'otome, *n.* [Gr. *kion*, a pillar, a support, and *temnein*, to cut.] (*Surg.*) An instrument invented by Desault, to cut any accidental *brides* or filaments in the rectum aud bladder; also used for the removal of the tonsils.
Ki'owee River, in *S. Carolina*. Seo Savannah River.
Kip, *n.* The hide of a young beast.
Kipe, *n.* [A. S. *cepan*, to catch.] An old hasket for catching fish.
Kip'-leather, *n.* Leather made from the hide of a young ox or cow, bsing intermediate betwsen calf-skin and cow-hids.
Kip'per, *v. a.* To cure fish by salting, peppering, and drying them; as, *kippered* salmon.
—*a.* Amorous;—hence, lively; spirited; gay. (Prov. Eng.)
—*n.* A salmon during the spawning-season.—In Scotland, a salmon gutted, salted, and cured in smoke. (Often called *kippered salmon*.)
Kip'per-nut, *n.* (*Bot.*) Samc as Earth-nut, *q. v.*
Kip'per-time, *n.* In England, the season of salmon-spawning, when angling is forbidden; it extends from the 3d to the 12th of May.
Kip'pure, a mountain of Ireland, in Leinster, abt. 11 m S.S.W. of Dublin; height, 2,473 feet.
Kip'-skin, *n.* Same as Kip-leather, *q. v.*
Kir'by, in *Ohio*, a post-village of Wyandot co., aht. 9 m. W. of Upper Sandusky.
Kir'by, in *Pennsylvania*, a post-village of Greene co.
Kir'by, in *Vermont*, a township of Caledonia co., abt. 38 m. N.E. of Montpelier.
Kir'byville, In *Pennsylvania*, a post-office of Berks co.
Kirchentag, (*kirk'en-tâg.*) [Ger., church-diet.] (*Eccl. Hist.*) A Protestant association founded in Germany in 1848, and composed of miuisters and laymen of the Lutheran, German Reformed, United Evangelical, and Moravian churches. It is of the nature of the Evangelical Alliance, *q. v.*, but takes a wider range of subjects, embracing questions of social reform, as well as those of a more strictly religious nature. The inner mission is specially patronized by it. Its doctrinal basis rests upon the confessions of the 16th century. It holds an annual meetiug, tho place of which is changed from year to year. The first meeting took place in 1848, at Wittenberg, in the church to which Luther affixed his theses. It is possessed of no legislative power.
Kir'gheez, Kirghis, Kirguis, Kirohiz. Kirghuises, or Kirohis-Kaisaki (Cossacks of the Steppes). A numerous and widely extended people of the steppes of Asia, occupylng a great part of the southern frontier of Asiatic Russia, between Lat. 44° and 55° N., and Lon. 53° and 82° E. The area over which they extend is estimated at 1,330,000 sq. m., chiefly composed of barren plains, and abounding in salt lakes, some of which are 100 m. in length. The *K.* are a Mongol race, divided into hordes, and numbering about 1,200,000.
Kiria, or **Kerrea,** (*keer'e-a,*) a town of Chinese Turkestan, 130 m. E.S.E. of Khotan; Lat. 37° N., Lon. 82° 50′ E. Near it are gold mines wrought by the Chiuese government. *Pop.* Unknown.
Kirk, *n.* [Gr. *kyriakon;* Ger. *kirche.*] A church; a place for the worship of God;—used chiefly to desiguate the form of religion cstablished in Scotland.
Kirk, John Foster, an American historian, b. at Fredericton, New Brunswick, and educated in Nova Scotia. In 1842 he repaired to the U. States, of which country he became a naturalized citizen 20 years afterwards. Durlng the last 11 years of the historian Prescott's life, *K.* acted as his secretary, and while thus engaged became a frequent contributor to the English reviews. His chief work was the *History of Charles the Bold* (1863–67); editor of *Lippincott's Magazine* (1871); afterward professor in the University of Pennsylvania; uow retired.
Kirkealdy, (*kir-ka'de.*) a town of Scotland, co. Fife, on N. shore of the Frith of Forth, 10 m. N. of Leith. The harbor consists of an inner and an outer basin. It is wholly artificial, being formed of 3 piers, and is dry at low water; still the town possesses considerable shipping, and carries on an extensive trade. *Pop.* 11,500.
Kirk'cudbright, or Stewartry of Kirkcudbright, a mar. co. of Scotland, houndsd on the E., N., and W. by the cos. of Dumfries, Ayr, and Wigtown, and S. by the Irish Sea and the Solway Frith. *Area*, 954 sq. m., one-fourth of which is arable. *Surface*, exceedingly diversified, but in general hilly. *Rivers.* Cree, Fleet, Dee, and the Orr or Urr; lakee are numerous.
Kirk'cudbright, the chief town of the above county, on the Dee, 6 m. above its confluence with the Solway Frith, 24 m. S.W. of Dumfries. The harbor is the most commodions in the S. of Scotland. *Pop.* 4,000.
Kir'kersville, or Kinkersville, In *Ohio*, a post-village of Licking co., abt. 22 m. E. by N. of Columbus.
Kirkintilloch, (*kir-kin-til'lok,*) a town of Scotland, co. Dumbartou, 6 m. N.N.E. of Glasgow. *Manuf.* Hats and cottons. *Pop.* 7,000.
Kirk-kilissa, (*kirk-ki-lis'sa,*) a decaying town of European Turkey, 30 m. E.N.E. of Adrianople. *Pop.* abont 28,000.
Kirk'land, Caroline Stansbury, an American authoress, b. in New York clty, 1801, died there, 1864. She was the daughtsr of a bookseller in New York; was married to Prof. Wm. Kirkland of Hamilton College, who sstablished a seminary at Geneva, on Seneca Lake, and subsequently removed to N. Y. Her principal works, for the most part characterized by an acuto perception, richness of observation, and a light and somewhat sarcastic turn of thought, are *The New Home*, published in 1839; *Forest Life*, published iu 1842; *Western Clearings*; *Essay on the Life and Writings of Spenser*; *Holidays Abroad, or Europe from the West;* and *The Evening Book*; these latter appearing at intervals of abont two years. She is also the authoress of a volnme dcsigned for youthful reading, entitled *A Book for the Home Circle.*
Kirk'land, iu *Indiana*, a flonrishing township of Adams co.
Kirk'land, in *Maine*, a township of Penobscot co.
Kirk'land, in *N. Carolina*, a post-village of Cabarras co., abt. 147 m. W. by S. of Raleigh.
Kirk'land, in *New York*, a post-township of Oneida co., abt. 10 m. W.S.W. of Utica.
Kirk'lin, in *Indiana*, a village and township of Clintou co., abt. 31 m. N. of Indianapolis.
Kirk'man, *n.* A person belonging to the Church of Scotland.
Kirk'-session, *n.* The lowest ecclesiastical court of the Kirk of Scotland.
Kirk's Mills, in *Pennsylvania*, a P.O. of Lancaster co.
Kirks'ville, in *Missouri*, a thriviug city, cap. of Adair co., on the Q., O. & K. and the Wabash R. Rs., 70 m. N.W. of Quincy, Ill.; a trade and educational center, in a rich farming district. *Pop.* (1897) 4,100.
Kirk'ville, in *New York*, a post-village of Onondaga co., abt. 13 m. E. of Syracuse.
Kirk'ville, in *Kentucky*, a post-village of Madisou co.
Kirk'wall, a sea-port town of Scotlaud, cap. of co. of Orkney, on a neck of land projecting into the sea, 26 m. N.N.E. from John O'Groat's; Lat. 58° 59′ 2″ N., Lon. 2° 57′ 2″ W. *Manuf.* Linon and straw plait. *Pop.* 3,900.
Kirk'wood, in *Delaware*, a P. O. of New Castle co.
Kirk'wood, in *Iowa*, a village of Polk co., abt. 7 m. N.W. of Des Moiucs.
Kirk'wood, in *Missouri*, a post-village of St. Louis co., abt. 14 m. W. by S. of St. Louis.
Kirk'wood, in *New Jersey*, a post-office of Camden co.
Kirk'wood, in *New York*, a post-village and township of Broome co., abt. 216 m. N.W. of New York city. It is the birth-place of Joseph Smith the founder of Mormonism.
Kirk'wood, in *Ohio*, a village and township of Belmont county, abt. 1 m. W. by S. of Wheeling, Wcst Virginia.
Kirk'wood, in *Pennsylvania*, a P. O. of Lancaster co.
Kir-mo'ab. [Heb., the wall, stronghold, or citadel of Moab.] (*Anc. Geog.*) A fortified city of Palestine, in the territory of Moab, mentioned in *Isaiah* xv. 1, was noticed in an act of the Council of Jerusalem in 536. In 1131, Fulk, Count of Anjou, and Latin king of Jernsalem, erected a castle here, which successfully resisted a siege by Saladin in 1183.
Kirschenwasser, (*kĕrsh'vâs-sĕr.*) *n.* [Ger., cherry-water.] (*Drinks.*) A spirituous liquor, obtained in Germany by fermenting the sweet and small black cherry. From tho rude manner in which this beverage is obtained from the bruised fruit, and from the distillation of the cherry-stones (which contain prussic acid) with the liquor, it has frequently a nauseous taste, and is sometimes poisonous. When properly made and sweetened, it bears a close resemblance to noyeau in taste.
Kirt'land, in *Ohio*, a post-villago and township of Lake co., abt. 160 m. N.E. of Columbus. The village was formerly inhabited by abt. 3,000 Mormons, whose temple is said to have cost $40,000.
Kir'tle, *n.* [Sax. *cyrtel;* Dan. *kiortel;* Sw. *kjortel*, a woman's gown, mantle.] An upper garment; a gown; a short jacket; a mantle.—A quantity of flax weighiug abont 100 pounds.
Kir'tled, *a.* Wearing a kirtle.
Kir'wanite, *n.* [Named after Richard *Kirwan*, the mineralogist.] (*Min.*) A hydrated silicate of alumina, lime, and protoxide of iron, occurring in small nodules of a dark olive-grecn, iu the basalt of the Mourne Mountains, Ireland.
Kisari'a. See Cæsarea.
Kish, *n.* (*Chem.*) A substance occasionally prodnced in iron-smelting furnaces. In appearauce it resembles plumbago, but is said to consist chiefly of carbou aud mangancse.
Kish, *n.* In Ireland, a measure of fuel; as, a *kish* of turf.
Kish'enev, Kish'enau, a town of Russia in Europe, capital of the govt. of Bessarabia, situated on the Buik, 49 m. N.W. of Odessa, Lat. 47° 8′ N., Lon. 28° 50′ E.; *pop* 94,124.
Kishicoquil'las Creek, in *Pennsylvania*, enters the Juniata River near Lewistown.
Kish'me, Kismis, or **Kism,** called also Jezira Derauz (Long Island), in the Persian Gulf, 15 m. S.W. of Ormus; Lat. 26° 57′ 30″ N., Lon. 56° 70′ E. *Area*, 700 sq. m. *Surface*, generally dry and barren. *Pop.* 5,500.
Kishwaukee, in *Illinois*, a post-village of Winnebago co., on Rock River, abt. 90 m. W.N.W. of Chicago.
Kiskimin'etas, in *Pennsylvania*, a river flowing into the Alleghany River, aht. 30 m. above Pittsburg.
—A post-township of Armstrong co.
Kiss, *v. a.* [Sax. *cyssan;* Dan. *kysse;* Icel. *kyssa*, from *koss*, a kiss; Ger. *küssen.*] To salute with the lips.—To treat with fondness.—To touch geutly.

"When the sweet wind did gently *kiss* the trees."—*Shaks.*

—*v. n.* To salute with the lips.

"Let 's *kiss* before we part."—*Dodsley.*

Kiss, *n.* [Sse the verb.] A salute given by joining the lips; a smack; a buss.

"A long, long *kiss*, a *kiss* of youth and love."—*Byron.*

—A kind of confectionery.

(*Hist.*) Kissing, as a religious act, was practissd in the time of the patriarch Job, b. c. 2130, who protests (*Job* xxxi. 26 and 27) that he had not kissed his hand to the sun or to the moon. This mark of devotion was paid to Baal (1 *Kings* xix. 18), b. c. 910. It passed to the Greeks, and from them to the Romans. Dr. Winsemius declares that the custom was unknown in England till 449, when the Princess Rowena, daughter of Hengist, King of Friesland, pressed her lips to the cup, and saluted Vortigern with a "little kiss." From a passage in Evelyn's Diary, it appears that men kissed each other in the streets of Londou towards the end of the 17th century. The Spanish conquerors found the custom prevalent in the New World.—The *kiss of peace* (osculum pacis) was anciently given by the faithful one to the other, as a testimony of cordial love and affection. After the priest had given the salutation of peace, the deacon ordered the people to salute onc another with a holy kiss. It was also given before the Eucharist, until ths 12th or 13th century, when the *Pax* (q. v.) was introducsd. Towards the end of the 3d century the kiss of peace was given in baptism. Henry II. of England refused to give Becket the kiss of peace, at that time the nsual pledge of reconciliation, in 1169.
Kiss'er, *n.* One who kisses.
Kis'ser, an island of the Malay Archipelago, N. of Timor; circumference 20 m.: *pop.* 8,000.
Kissimee', or **Kissimmee',** or **Kissinee',** in *Florida*, a lake in the S. central part of the peninsula, abt. 40 m. N. of Lake Okechobee, with which it is connected by Kissimee River.
Kiss'ing-comfit, *n.* Perfumed sugar-plums for sweetening the breath.
Kiss'ing-crust, *n.* Crust formed where one loaf touchcs another in the oven.
Kist, *n.* [A. S. *cyst.*] A chest. (Scotland.)—The amount of a stated payment.
Kist'na, or **Krish'na,** a river of Hindostan, riecs in the W. Ghauts, near Lat. 18° N., and Lon. 74° E.; and flowing E., falls into the Bay of Bengal, after a course of 800 m., in Lat. 15° 50′ N., Lon. 81° E.
Kit, *n.* [Du. *kit.*] A large bottle; a vessel used for various purposes; as, a *kit* of milk, a *kit* of fish.

(*Mus.*) A small narrow-bodied violin, about 16 inches long, capable of being carried in the coat-pocket, used chiefly by teachers of dancing.

(*Mil.*) The equipment in necessaries, such as shirts, hoots, brushes, &c., of a soldier, but not applicable to his uniform, arms, or accoutrements. The soldier has to replace necessaries, worn out or lost, at his own expense, but he obtains the articles at wholesale, and very low, prices. As these necessaries are so cheaply procured, it is held a very heavy military offence to make away with them, and is ordinarily punished with great severity.

—The whole of any set of things, as the bench and tools of a cobbler, a sailor's chest and contents, &c.
Kit'-cat, *n.* A game played by boys, with a stick and a piece of wood called a cat. (Called also *tip-cat.*)
—*a.* (*Painting.*) Applied to portraits painted on canvas three quarters in length;—so called from the size adopted by Sir G. Kneller for painting the 48 portraits of the celebrated members of the *Kit-cat Club*, q. v
Kit-cat Club. (*Eng. Hist.*) A celebrated association, formed about 1700, which held its first meetings at a small house in London, originally consisting of thirty-nine noblemen aud gentlemen distinguished for the warmth of their attachment to the house of Hanover. The Duke of Marlborough, Sir Robert Walpole, Addison, Garth, and many famous men of the period, were members. The club is said to derive its name from Christopher Katt, a pastry-cook, at whose honse in Shire Lane the members dined. It was dissolved in 1720.
Kitchen, (*kitsh'n,*) *n.* [A. S. *cycene;* Fr. *cuisine;* Sp. *cocina;* Lat. *coquina*, from *coquo*, to cook.] The room of a honso appropriated to cookery; a cook-room.—The largest *K.* in the world is probably that which has been lately erected, as it is said, on the banks of the Uruguay River, in S. America, for the purpose of furnishing the world with Liebig's Extract of Meat. It covers 20,000 sq. feet; each of the boilers will contain 12,000 pounds of flesh, and 80 head of cattle must be slaughtered every hour to supply them.
Kitch'en-garden, *n.* A garden or piece of ground appropriated to the raising of vegetables for the table.
Kitch'en-maid, *n.* A woman employed in the kitchen.
Kitch'en-stuff, *n.* The fat of meat gathered from the cooking-pots and dripping-pans.
Kitch'en-wench, *n.* Ths woman employed to clean cooking-utensils.
Kitch'en-work, *n.* Work done in the kitchen, as cooking, washing, &c.
Kite, *n.* [A.S. *cyta.*] (*Zoöl.*) A genus of *Falconidæ*, distinguished from the rest of the family by having a much weaker bill and talons, the wings larger, and tho tail rather long and forked. They are remarkable for their gracefulness of flight, and power of sailing and wheeling about, or gliding in the air. The common *K.*, *Milvus vulgaris* (Fig. 1482), is found in almost all parts of

Fig. 1482.—Kite. (*Milvus vulgaris.*)

Europe, N. and center of Asia, and N. of Africa. The American *K., Milvus Mississippiensis*, is 32 inches long, and its entire plumage is dark-brown mixed with fulvous.

(*Sports.*) A device of light material, having a plane or planes which, being exposed at an angle to the wind, and held with a string, is sustained in the air by the wind-pressure on its lower surface. Tho first record of its use dates to about 400 B. C. The primitive toy form consists of two crossed sticks, on which a sheet of paper is stretched, and a tail of strings and bits of paper attached for balancing. The Chinese and Japanese made them at an early date, in a variety of forms, and excelled in their use as toys. The first record of the use of kites for scientific purposes is in 1749, when Dr. Alexander Wilson and Thomas Mellville, of Scotland, raised thermometers by kites to take temperatures above the earth's surface. Later came Dr. Franklin's well-known experiment of flying a kite in a thunder-storm, when he obtained a shock that demonstrated that lightning was a display of electricity, as he had suspected. Within recent years the Malay kite, a form of the cross-stick kite, has been much improved, and cellular or box-kites, having several planes, have come into use, largely for purposes of scientific investigation. For a full description of these, and their uses, see KITES, in SECTION II.

—A name of reproach, denoting rapacity.—An accommodation note; a fictitious commercial paper; as, he is flying his *kites* on the market.

Kite, *v. a.* [Literally, to *fly a kite.*] To raise money, or sustain one's credit, by the use of mercantile paper which is fictitious; as *kiting* transactions.

Kite'-flyer, *n.* One who practices kite-flying.

Kite'-flying, *n.* The act of exchanging checks, notes, or drafts by way of accommodation, or for the purpose of raising money.

Kite'-foot, *n.* A variety of the tobacco-plant;—so called from its fanciful resemblance to a bird's foot.

Kith'ara, *n.* [Gr.] (*Mus.*) Same as CITHERN (*q. v.*).

Kit'ish, *a.* Resembling the bird *Kite.*

Kit-kat-roll', *n.* A bellied roller drawn by a horse, and used for rolling land.

Kit'sap, in *Washington*, a N.W. co., adjoining Admiralty Inlet and Hood's Channel or Canal; *area*, about 392 sq. m. *Rivers.* Small and unimportant. *Surface*, much diversified. *Cap.* Port Orchard. *Pop.* (1890) 4,624.

Kitt'son, in *Minnesota*, an extreme N. W. co., *area*, 1,065 sq. m. It is bounded on the W. by the Red River of the North. *Surface*, nearly level, well watered, banks of streams heavily timbered, the rest prairie; *soil*, fertile. *Cap.* Hallock. *Pop.* (1895) 6,289.

Kittan'ning, in *Pennsylvania*, a manufacturing post-borough, cap. of Armstrong co., on the Allegheny river, about 45 m. above Pittsburg. It is the seat of the University of Kittauning. In its vicinity are found one strata of cannel and five of bituminous coal, and two each of iron ore and limestone; also pure fine clay, and good building-stone. *Pop.* (1897) 3,450.

Kit'tatinny Moun'tains, or BLUE MOUNTAINS, an extensive mountain range of the U. States, which, though subject to slight interruptions, and designated by various local names, constitute an important ridge, distinctly traceable from Ulster co., N. Y., through New Jersey, Pennsylvania, Maryland, Virginia, North Carolina, and Georgia into Alabama. *Length*, over 800 m. *Elevation*, from 800 to 2,500 feet.

Kit'ten, *n.* [Ger. *kätzchen*, dim. of *katze*, cat, *q. v.*] A young cat, or the young of a cat.

—*v. n.* To bring forth young, as a cat.

Kit'tery, in *Maine*, a post-township of York co.; *pop.* about 3,800.

Kit'ti-wake, *n.* (*Zoöl.*) The popular name of the *Larus trydactylus*, a species of Gull. See LARIDÆ.

Kittoe'tan Creek, in *Virginia*, enters the Potomac in London co., above the Point of Rocks.

Kitt's, (St.,) or SAINT CHRISTOPHER, an Island of the Leeward group, W. Indies, belonging to Great Britain, abt. 46 m. W.N.W. of Antigua; Lat. 17° 17′ 7″ N., Lon. 60° 42′ 2″ W. *Area*, about 100 sq. m. *Surface*, diversified, a mountainous ridge extending through the centre from N. to S., and at Mount Misery (an extinct volcano), rising to an elevation of 3,711 feet. The soil is very fertile, and produces all the tropical fruits. *Min.* Sulphur, and salt. The climate is dry and salubrious. *Prin. Exp.* Sugar. *Chief towns.* Basseterre (the cap.), and Sandy Point. Discovered by Columbus in 1493. *Pop.* 24,000.

Kiv'er, *v. a.* To cover. (Vulgar).

Ki'wi, KIWI-KIWI or KIVI-KIVI, *n.* (*Zoöl.*) See APTERYX.

Kiz'ilar, a town of Asiatic Russia, govt. of Stavropol, on the river Terek, 40 m. from its mouth; Lat. 43° 53′ N., Lon. 45° 43′ E. It contains a fortress, tanneries, silk-worm nurseries, &c. The climate is unhealthy. *Pop.* 9,000.

Kiz'ilirmak, a river of Asiatic Turkey, rising in the center of that peninsula, flowing N., and emptying into the Black Sea. S.E. of Sinope. *Length*, 500 m.

Kizilou'zen, Kiziloo'zen, or **Kizilu'zen,** a river of Persia, province of Irak-ajemi, rising near Senna, and after a N.E. course of 300 m., flows into the Caspian Sea, 35 m. S.E. of Resht.

Kjobenhavn. See COPENHAGEN.

Klagenfurt. See CLAGENFURTH.

Kla'math, in *Oregon*, a S. co., *area*, 5,520 sq. m. It is drained by Sprague, Williamson, and Lost rivers. *Surface*, diversified; *soil*, fertile, well timbered and watered. *Cap.* Klamath Falls. *Pop.* 3,500.

Klamath, in *Oregon*, two lakes, called respectively UPPER and LOWER, or GREAT and LITTLE. They lie near the E. foot of the Cascade Range, about 5 miles apart, connected by a small river. They receive numerous small streams, and the Lower or Little gives rise to the Klamath river.

—A river rising in Lower Klamath Lake, and flowing S.W. into California, enters the Pacific Ocean between Klamath and Del Norte cos.

Klamath Agency, in *Oregon*, a P. O. of Klamath co.

Klamath Falls, in *Oregon*, a post-village, cap. of Klamath co.

Klap'ka, GYÖRGY, an Hungarian general, B. at Temeswar, 1820. He entered the army at the age of 18; but, being sent, in 1847, into a frontier regiment, he became disgusted with the profession, and resigned. When the revolution of 1848 broke out, he resumed the profession of arms. Fighting against Austria, he took command of a company of Honveds, and distinguished himself in the war against the Servians. Towards the close of 1848 he was the chief of the staff of Gen. Kis, and after the defeat of Kaschau (Jan. 4, 1849), replaced Messaros at the head of his *corps d'armée.* Under Kossuth he was Minister of War, and entered completely into the views of the government of the Revolution. Quitting the ministry, he took command of Comorn, and vainly endeavored to reconcile Kossuth and Görgei. After the unfortunate capitulation of Vilagos (Aug. 13, 1849), *K.* maintained himself heroically in Comorn, and menaced Austria and Styria until he heard of the alleged defection of Görgei. In Sept., 1849, a convention was signed between the defenders of the place and Gen Haynau, and *K.* went into exile, first to London, and afterwards to Switzerland and Italy. His *Memoirs*, published at Leipsic in 1850, were followed by *The National War in Hungary and Transylvania*, in 1851. In the unfortunate arrangements set on foot by Garibaldi for the attempt on Rome, in 1862, when he sought to excite the Hungarians to take the field, a judicious counter proclamation from *K.*, pointing out the headlong temerity and rashness of the undertaking, kept them quietly in their homes. Died in 1892.

Klap'roth, HEINRICH JULIUS VON, a distinguished German Oriental scholar and critic, B. at Berlin, 1783, was the son of Martin Henry Klaproth, (*q. v.*) He was intended by his father to pursue the study of the physical sciences, but abandoned them in favor of the Oriental languages, in which he became one of the ablest modern scholars. In 1805 he was selected to accompany the Russian ambassador into China, and in 1807 the Academy of St. Petersburg commissioned him to visit the Caucasian provinces. Subsequently he settled at Paris, where he founded and organized the Asiatic Society. He has left many valuable works: *Asia Polyglotta; Travels in the Caucasus; Tableaux Historiques de l'Asie depuis la Monarchie de Cyrus; Mémoires relatifs à l'Asie; Tableau Historique, &c., du Caucase;* besides a large number of smaller works, memoirs, &c. Died in Paris, 1835.

Klap'roth, MARTIN HEINRICH VON, an eminent German chemist and mineralogist, was B. at Berlin in 1743; became chemical professor there; and D. in 1817. He was the discoverer of uranium, the earth zirconia, and mellitic acid; he also made interesting experiments on copal, and completed the discovery of tellurium and titanium. Among his works are, *A System of Mineralogy, Chemical Essays*, and, in conjunction with Wolf, a *Dictionary of Chemistry.*

Klat'tau, a town of Bohemia, on the Bradlenka, 70 m. S.W. of Prague. *Manuf.* Woollen cloth, and stockings. *Pop.* 7,500.

Klausenburg, (*klŏw'sen-burg,*) or **Clausenburg,** a town of Austria, in Transylvania, on the Szamos, 72 m. N.N.W. of Hermannstadt. *Manuf.* Woollens, chinaware, and paper. *Pop.* 28,000.

Klaus'thal, or CLAUS'THAL, a celebrated mining-town of Prussia, in Hanover, on a bleak plateau of the Upper Harz Mountain, 25 m. N.E. of Göttingen. It is situated 1,792 feet above sea-level. In the vicinity are mines of silver, lead, zinc, copper, and iron. *Pop.* 15,400.

Kle'ber, JEAN BAPTISTE, a French general, B. at Strasburg, 1754. He was originally an arcbitect, but preferred the military profession, and entered into the Austrian service, in which he remained from 1776 to 1783. When the French revolutionary war broke out, he entered as a grenadier into a volunteer regiment of his native department, and rose rapidly into command. He displayed great skill and bravery at the siege of Mentz, after which he was employed in La Vendée; but the sanguinary scenes there so disgusted him, that he obtained his recall, and was engaged in the army of the N., defeated the Austrians, took Mons, and drove the enemy from Louvain. He also captured Maestricht, and contributed to the splendid successes which distinguished the campaigns of 1795 and 1796 on the Rhine. The Directory gave him command of the army of the Sambre and Meuse, which he resigned to Hoche, and for a time retired from the service. Napoleon I., however, who well knew the value of his talents, prevailed upon him to join the expedition to Egypt. He was wounded at the battle of Alexandria, but he marched into Syria, where he commanded the corps of observation during the siege of Acre, and defeated the Turks in several actions. When Napoleon left Egypt, he appointed *K.* commander-in-chief of the army; and though, under the then existing circumstances, no situation could be more difficult or disheartening, yet he maintained himself successfully against the enemy, captured the city of Cairo, and made an alliance with Murad Bey; but in the midst of new preparations which he was making for securing possession of the country, he was assassinated by an Arab, June 14, 1800. Of all the military characters that figured during the æra of the French revolution, few of them surpassed *K.* for coolness, courage, humanity, and integrity.

Kleck'nerville, in *Pennsylvania*, a village of Crawford co., about 9 m. N. of Meadville.

—A post-village of Northampton co.

Kleptoma'nia, *n.* [Gr. *klepto*, I steal, and *mania*, madness.] (*Med.*) A species of insanity, which manifests itself in an irresistible propensity to steal or pilfer

Klias'ma, or **Kliaz'ma,** a river of Russia, rising near Klin, in govt. of Moscow, and flowing E., joins the Oka at Gorhatof. *Length*, 350 miles, of which 150 are navigable.

Klick, *v. n.* To make a small, sharp noise; to click.—To steal or pilfer by taking away suddenly with a snatch.

—*n.* A small, sharp noise, made by striking two objects together.

Klick'er, *n.* One who clicks; that which clicks.

Klick'ing, *n.* A regular, sharp noise.

Klick'et, *n.* (*Fort.*) A small gate made through a palisade for the purpose of sallying forth.

Klik'itat, in *Washington*, small river rising in Skamania co., and flowing E. and S., enters the Columbia river in Klikitat co., about 12 m. below the Dalles.

—A S. co., adjoining Oregon; *area*, about 1,176 sq. m. *Rivers.* Columbia, Klikitat, and Wowunchee rivers. *Surface*, mountainous—Mount Adams, a peak of the Cascade range, in the N.W., rising to an elevation of 9,570 ft.; *soil*, in some parts fertile. *Cap.* Goldendale. *Pop.* (1890) 5,167.

Kline's Grove, in *Pennsylvania*, a post-village of Northumberland co.

Klines'ville, in *New Jersey*, a small village of Hunterdon co.

Klines'ville, in *Pennsylvania*, a post-village of Berks county.

Kling'erstown, in *Pennsylvania*, a post-village of Schuylkill co.

Klink'-stone, *n.* (*Min.*) See CLINKSTONE.

Klinom'eter, *n.* See CLINOMETER.

Klopema'nia, *n.* (*Med.*) Same as KLEPTOMANIA.

Klop'stock, FRIEDRICH, a celebrated German poet, B. at Quedlinburg, 1724. After receiving a regular education, and studying theology, he abandoned all professional views, and devoted himself entirely to literature. He shifted his residence from place to place, residing a considerable time at Copenhagen, whither he had been invited with a pension; and the last thirty years of his life were passed at Hamburg, where he died in 1803. His greatest work, the sacred epic called *The Messiah*, was published partly in 1748, but not completed till 1773. Its strained dignity, its overflow of feeling, and its artificiality of diction, have long ceased to receive the admiration which was once lavished on it. His odes, especially those of a religious cast, are still much valued by his countrymen, in spite of their frequent obscurity. He made himself respectably known also by philological writings. D. 1803.—His first wife, MARGARET, is author of a tragedy entitled *The Death of Abel*, and also of *Letters from the Dead.*

Knab, (*năb,*) *v. a.* To seize with the teeth; to apprehend.

Knack, (*năk,*) *n.* [Ger. *knack*, from *knicken*, to crack, to snap.] A nice trick; dexterity in some slight operation.—Habitual facility of performance; adroitness.—A little machine; a petty contrivance; a toy.

—*v. n.* To make a sharp, quick noise, as when a stick breaks.

Knack'er, *n.* A maker of knacks or toys; a harness-maker.—A rope-maker.—One who buys old horses for slaughter, and cuts them up for dogs'-meat.

—*pl.* Two pieces of wood, struck by moving the hand.

Knack'-kneed, *a.* See KNOCK-KNEED.

Knack'y, (*năk'y,*) *a.* Having a knack; crafty; cunning.

Knag, (*năg,*) *n.* [Dan. *knag*, a crack, a wooden peg, a cog of a wheel.] A knot in wood, or a protuberant knot; a wart.—A peg for hanging things on.—The shoot on a deer's horns.—The rugged top of a rock or hill.

Knagged, (*năg'd,*) *a.* Full of knots; knaggy; as, a *knagged* branch.

Knag'giness, *n.* The state of being knaggy.

Knag'gy, *a.* Knotty; full of knots; rough with knots; —hence, rough in temper.

Knap, (*nap,*) *n.* [See KNOB.] A protuberance; a hillock; the brow of a hill; nap.—A blow; a buffet.

—*v. a.* To strike so as to make a sharp noise.

—*v. n.* To make a short, sharp sound.

Knapsack, (*năp'săk,*) *n.* [Ger. *knappsack*—*knappern*, to craunch or crunch, to chew, and *sack*, a sack or bag; Fr. *canapsa.*] A frame of leather, or a sack for containing necessaries of food and clothing, borne on the back by soldiers, travellers, &c.

Knap'weed, *n.* (*Bot.*) A name applied to some species of plants of the genus *Centaurea.*

Knar, Knarl, (*nar, narl,*) *n.* A knot in wood. See GNARL, and KNARL.

Knaresborough, (*nĕrs'bro,*) a town of England, co. York, on the Nidd, 16 m. N.W. of York. *Manuf.* Chiefly linens. *K.* has a famous "dripping well," the waters of which have a singularly petrifying quality.

Knarled, (*nărl'd,*) *a.* Same as GNARLED, and KNURLED.

Knar'ry, *a.* Knotty.

Knave, (*nāv,*) *n.* [Sax. *cnaper*; Ger. *knabe*, boy; Icel. *knapr, knapi.*] This word, in its original signification, denoted a boy: whence, a knave-child is used by several old writers to denote a boy, as distinguished from a girl. Afterwards it came to signify a servant-boy, and, at length, any male servant. It was also applied to the servant or officer that bore the weapon or shield of his superior. In its present use, it denotes a petty rascal; a villain; a false, deceitful fellow; a dishonest man or boy.

(*Games.*) One of a pack of playing-cards with the figure of a soldier or servant painted on it;—sometimes called the *jack*; as, the *knave* of clubs.

Friedrich Klopstock

1724–1803

Knav'ery, *n.* The practices of a knave; dishonesty; deceptiou in traffic; trickery; petty villany; fraud; mischievous pranks or practices.

Knav'ish, *a.* Partaking of knavery; dishonest; fraudulent.

—Waggish; mischievous.

"Cupid is a *knavish* lad." — *Shaks.*

Knav'ishly, *adv.* Dishonestly; fraudulently.

—Waggishly; mischievously.

Knav'ishness, *n.* Quality or habit of knavery; dishonesty; fraud.

Knead, (*nēd,*) *v. a.* [Sax. *cnedan;* Du. *kneden;* Ger. *kneten;* Icel. *knoda.* See KNOT.] To work and press, as ingredients into a mass, usually with the hands; particularly, to work into a well-mixed mass the materials of bread, cake, or paste.

Kneading-trough, (*need'ing-trôf,*) *n.* A trough or tray in which dough is worked and mixed.

Kne'belites, *n.* (*Min.*) A mineral composed of silica, protoxide of iron, and protoxide of manganese.

Kneck, (*nĕk,*) *n.* (*Naut.*) Tho twistiug of a rope or a cable.

Knee, (*nee,*) *n.* [A. S. *cneow;* Ger. *knie;* Lat. *genu;* Gr. *gonu;* Heh. *kanagh,* to bend the knee.] (*Anat.*) Oue of the most important joints of the human body, which is formed hy three hones — the lower extremity of the *femur* or thigh-bone, the upper extremity of the *tibia* or larger bone of the leg, and the patella or *knee-pan,* which is situated in front of the jeiut, and serves to protect it from injury, as well as to afford leverage to the muscles of the thigh in moving the leg. It is a small, flat, triangular hone, anteriorly a little convex and rough, for the insertion of muscles and ligaments; posteriorly smooth, covered with cartilage, and divided, by a middle longitudinal ridge, into two slightly concave surfaces, corresponding with the two convex eminences or *condyles* of the femur. The entire joiut is hound togcther by a nuiuber of ligaments.

(*Arch.*) A naturally or artificially bent piece of timher, on which anothor is received to relievc a weight or strain; the term is also applied to wrought-iron knees, for the same purpose.

(*Ship-building.*) An angle, formerly of timber, but in modern times nearly always of iron, for bracing together internally parts which form angles with each other. The priucipal knees are those supporting the hcaus, and fasteued to them and to the ribs. There are, however, various other knees in different parts of the ship. They tend to bind the whole vessel into one hollow body, in which the parts are mutually dependent. Tbe *knee of the head* sustains the figure-head and the projecting bow above the water-line; it is braced on to the stem.

Knee'-brushes, *n. pl.* (*Zoöl.*) The tufts of hair on the knces of some antelopes. — Also, the thick-set hairs on the legs of bees, with which they carry the pollen to the hive.

Knee'-crooking, *a.* Obsequious; toadyish.

Kneed, *a.* Having knees; as, in-*kneed,* or out-*kneed.*

(*Bot.*) Having joints resembling the knee when bent; geniculate.

Knee'-deep, *a.* Rising to the knees. — Sunk to the knees.

Knee'-high, *a.* Rising or reaching up to the knees.

Knee'-holly, Knee'-holm, *n.* (*Bot.*) See RUSCUS.

Knee'-joint, *n.* (*Anat.*) See KNEE. — (*Mach.*) Same as TOGGLE-JOINT, *q. v.*

Knee'-jointed, *a.* (*Bot.*) Having joints resembling the knee when hent; kneed; geniculate.

Kneel, (*nēēl,*) *v. n.* [Du. *knielen;* Dan. *knælen.*] To bend tbe knee; to fall on the kuees; to rest on the bended knees.

Kneel'er, *n.* One who kneels.

Kneel'ing, *n.* The act of bending the kuees, or of resting on the bent knees. — *K.,* as a posture in prayer, is recommeuded hy numerous examples in Scripture; and prostration was occasionally practised as a sign of deep humility and contrition.

Kneel'ingly, *adv.* In a kneeling posture.

Knee'-pan, *n.* (*Anat.*) See KNEE.

Knee'-rafter, *n.* (*Arch.*) A rafter in the principal truss of a roof, the lower end or foot of which is crooked downwards so that it may rest more firmly on the walls.

Knee'-timber, *n.* (*Carpentry.*) A bent piece of wood formed out of a tree that has grown crooked, so that the fibres of the wood follow the curve.

Knee'-tribute, Knee'-worship, *n.* Genuflexion; worship or obeisance shown hy kneeling.

Knell, (*nel,*) *n.* [A. S. *cnyll;* Ger. *knall,* a strong, quick sound, a clap, an explosion.] The sound of a bell rung at a funeral; the stroke of a bell; the tolling of a bell.

"The curfew tolls the *knell* of parting day." — *Gray.*

Knell, *v. n.* To sound, as a funeral hell; to toll.

"*Knells* us back to a world of death." — *Coleridge.*

Knicker, (*nĭk'r,*) *n.* A small hall of earth or clay baked hard and oiled, used as a marhle by hoys in playing. (Prov. Eng. and U. S.)

Knickerbocker, (*nĭk'er-bŏk'r,*) *n.* A descendant of the old Dutch scttlers of New York.

—*n. pl.* Wide, baggy pants terminating at the knee. Also, a term given to spatterdashes or gaiters.

Knickerbocker, (Dietrich,) a pseudonym of Washington Irving, (*q. v.*)

Knick-knack, (*nĭk'nak,*) *n.* Any trifle or toy. (Colloq.)

Knick'-knackery, *n.* Knick-knacks; toys; bijouterie.

Knife, (*nīf,*) *n.; pl.* KNIVES. [Sax. *cnif;* Fris. *knuf;* Dan. *kniv;* Ger. *kneif.*] A cutting-instrument with a sharp edge, used in the household and by various trades; as, a table-*knife,* a chopping *knife,* a pen-*knife,* &c. — A sword or dagger.

Knife'-rest, *n.* An article for a dinuer-table, to rest carving-knives on.

Knife'-tray, *n.* A tray in which knives are deposited.

Knight, (*nīt,*) *n.* [A. S. *cniht, cneoht;* Ger. *knecht;* O. Ger. *kneht.*] (*Her.*) A title of honor, which gives the person to whom it is applied precedence next to a baronet and above an esquire. In England, a *K.* takes the title of *Sir* before his Christiau namc; and the wife of a *K.* is styled *Lady,* although her legal appellation is that of *Dame.* The title seems to have been first adopted when the feudal system came into operation in Europe. It is now occasionally bestowed for services in the field, or for attainments in literature, and distiuction in various branches of science and art. In addition to those who are simply *K.* by royal creation, there are others who are *K.* in virtue of belonging to the first and second class of some order of knighthood. There are also some who aro styled *K.,* and bclong to some inferior order which does not carry rank with it, and who do not in consequence prefix the title of *Sir* to their Christian names, such as the Naval *K.* of Windsor; and there are degrees of knighthood connected with Freemasonry which are merely nominal, and are uet recognized except by the meinhers of the society, although the recipients assume the *K.*'s helmet (*q. v.*), and wear it on their armorial bearings. The degrees of knighthood to which allusion has been made are those of *K.* Commander of the Templars, *K.* of St. John of Jerusalem, &c. The sovereign alone has the power of conferring knighthood, which is done by laying the blade of a sword on the shouldcr of the recipient of the honor, and uttering a short form of words, by which he is declared to be a *K.* — See KNIGHTHOOD.

Knight, *v. a.* To create one a knight, which is done by the king, who gives the person kneeling a blow with a sword, and bids him "Rise, *Sir.*"

Knight, CHARLES, an English publisher and author, b. at Windsor, 1791. While in partnership with his father, he, in 1811, established the *Etonian* uewspaper, and in 1827 edited the *Plain Englishman,* the pioneer of cheap literature of an improving character. In the same year he settled in London, where he at once acquired reputation as a publisher of works of a high class, and started *Knight's Quarterly Magazine,* containing some of the carlier writings of Lord Macaulay. In 1827, *K.* became the editor and publisher of several of the works of the Useful Knowledge Society, the *British Almanack,* and *Companion to the Almanack,* and the *Library of Entertaining Knowledge.* In 1832, he commenced the editorship and publicatiou of the *Penny Magazine,* which he coutinued for 11 years; and, in 1838, he began the *Penny Cyclopædia,* a work on which he expended $200,000 for original contributions. *K.* is the nuthor of *William Shakespeare, a Biography,* and, also, editor of the *Pictorial Shakespeare.* He published also two pamphlets, *The Struggles of a Book against Excessive Taxation,* and *The Case of the Authors as regards the Paper Duty;* the English public are also largely indebted to *K.* for his co-operation in obtaining the removal of that oppressive duty. *Once upon a Time* appeared in 1853, followed, two years later, by *Knowledge is Power* — the latter, a re-issue, with large additions, of two small vols., viz., *Results of Machinery,* and *Rights of Industry,* which had a large circulation at a time when a spirit hostile to scientific progress, and to the proper uuion of capital and labor, was too common among the producing classes. A new edition of this book was called for in 1866. This indefatigable author next edited the *English Cyclopædia,* in 22 vols., based upon the *Penny Cyclopædia,* and was, at the same time, engaged on his *Popular History of England,* completed in 1862. New editions of both these works have lately been published. His other productions comprise the autobiographical *Passages of a Working-Life during Half a Century,* (1863–5); *Half-Hours with the Best Authors; Half-Hours of English History;* and, in 1866, *Half-Hours with the Best Letter-Writers,* &c. D. 1874.

Knight'age, *n.* The hody, dignity, or fraternity of knights.

Knight-ban'neret, *n.* (*Her.*) A person who received the order of knighthood, under the royal standard, for some distinguished service in the field. Shakspeare (*King John,* I. 1) speaks of —

"A soldier by the honour-giving hand
Of Cœur-de-Lion, knighted in the field."

The time and place at which the dignity was first conferred have excited much controversy. In 5 *Rich.* II., s. ii. c. 4 (1382), bannerets are mentioned among those summoned to Parliament. "No man," says Hallam (*Middle Ages,* iii. ch. 9. pt. 2), "could properly be a banneret unless he possessed a certain estate, and could bring a certain number of lances into the field. His distinguishing mark was the square banner, carried by a squire at the point of his lance; while the knight-bachelor had only the ceronet or pointed pendant. When a hanneret was created, the general cut off this pendant to render the hanner square." Selden states that the first account of this dignity occurs in the reign f Edward I. Edmondson traces it as far back as 736. The Black Prince made Sir John Chandos a knight-banneret in 1367. The order was discontinued from 164–; the last, Sir John Smith, having heen created by Charles I. after the hattle of Edgehill. It was, however, revived hy George II. after the hattle of Dettingen, June 27, 1743; and Sir William Erskine was made a knight-banueret by George III. in 1764, for distinguished services in the war on the continent of Europe.

Knight-bar'onet, *n.* (*Her.*) An hereditary knight in Great Britain. See BARONET.

Knight-er'rant, *n.* [*Knight,* and Lat. *errans, errare* to wander.] (*Chivalry.*) A knight wandering in search of adventures, sometimes under vows, for a certain period. Knight-errantry was not altogether a fiction of romance. It originated partly from the frequency of private war in feudal times, which made military aid constantly acceptable to the great barons; and as a knight had, for the most part, no other tie to the soil than his duties towards his feudal superior, he was at liberty to follow his own bent whenever his services were not needed by him. Such a mode of life peculiarly suited the tastes of the men of that age, and in some degree served the exigencies of society. Knights, therefore, were perpetually errant, or travelling in quest of adventures or employment; some, for the pleasures of the expcditiou, and some for its expected profits. They often succored the oppressed or the unsuccessful, and they cheerfully engaged themselves to redress those wrongs which laws were too feeble to remedy, and for redressing which, honor, plunder, or rich donations became usually their compensation. — Cervantes wrote *Don Quixote* in ridicule of knight-errantry.

Knight-er'rantry, *n.* The manner of wandering knights; the practice of wandering in quest of adventures.

Knight-errat'ic, *a.* Pertaining to knight-errantry.

Knight'-heads, *n. pl.* (*Naut.*) The timbers on each side ncarest the steru, and continued high enough to secure the bowsprit.

Knight'hood, *n.* The character or dignity of a knight; a military order, honor, or degree of ancient nobility, conferred as a reward of valor or merit. — The whole body of knights

(*Hist.*) The institution of *K.* originated in the honor anciently bestowed upon those who excelled in horsemanship. Hence the Latin, French, Italian, Spanish, and Dutch words for knight are all derived from terms which signify "horse." Some zealous antiquaries consider that Pharaoh conferred the honor of *K.* upon Joseph when he put his ring on his finger and invested him in robes of dignity (*Gen.* xli. 42). B. C. 1715; but there is no evidence of the existence of any such institution until Romulus established the equestrian order at Rome. Modern *K.* did not originate in this order, but in the tenure which compelled feudal vassals to hold their lands hy furnishing armed men for the service of the sovereign, the obligation to furnish one soldier constituting one *knight's fee.* The earliest mode of conferring the honor of *K.* in England was the consecration of the novitiate's sword by the priest at the altar. The first knight created by the stroke of a sword was Athelstau, who was dubbed by Alfred the Great in 900. The chivalric element was not introduced into *K.* until the period of the Crusades, when devotion to God and to the fair sex became the chief characteristics of all good knights. Ecclesiastics were prohibited from conferring *K.* by a council held in 1102. In the reigns of Edward VI. and Elizaheth, all persons possessed of lands yielding a yearly income of $200 were compelled to receive *K.* or pay a fine; and in 1629 Charles I. recruited his exhausted exchequer hy reviving this obsolete custom. The compensation exacted from those knights who declined to perform military service was abolished by Charles I. (1640), and the service itself was abolished by Charles II. (1660). About 180 orders of *K.* have beeu instituted at various periods since the 6th century, when the Order of the Round Table is said to have been instituted hy the British king, Arthur. Among these are a few orders for females only; such as the Spanish order of *Maria Louisa,* the Austrian order of the *Star of the Cross,* and the German order of the *Slaves of Virtue.* Every European court possesses several orders of *K.* All the orders which present some historical interest are noticed under their respective titles. — See, also, CHIVALRY.

Knight'liness, *n.* Qualities of a knight.

Knight'ly, *a.* Pertaining to a knight; becoming a knight.

—*adv.* In a manner becoming a knight.

Knight-mar'shal, *n.* (*Eng. Law.*) An officer in the royal household who has jurisdiction and coguizance of offences committed within the household and verge, and of all contracts made therein, a member of the household being one of the parties.

Knight of the Shire. (*Eng. Pol.*) The designatiou given to the representative in parliament of English counties at large, as distinguished from such cities and towns as are counties of themselves (which are seldom, if ever, called shires); and the representatives of which, as well as the members for other cities and towns, are called *citizens* or *burgesses.*

Knight's Bridge, in *California,* a village of Plumas co., abont 30 m. N.W. of Quincy.

Knight's Fee, *n.* (*Feudal Law.*) See KNIGHTHOOD.

Knight's Service, (Tenure by.) (*Feudal Law.*) The most general method of holding land in England, from the time of the Conquest to the termination of the civil war. The whole country was supposed to be divided into knight's fees (of which William the Conqueror created 60,000), for each of which the owners of the land were obliged to furnish a knight, completely armed and equipped, for the service of the king in time of war. Thus every noble who owned a great extent of land, was obliged to serve the king in time of war, and for a certain period in each year, with as many knights under him as there were knight's fees upon his estate or estates; and such noble became, in turn, the feudal superior of a certain number of knights, who held land under him on the same conditions as the noble himself held his lands from the king, and were obliged to render him suit and service in a similar manuer, and in pro-

portion to the extent of land in their occupation. There were also other burdens, besides military service, which fell heavily at times on those who held lands by this kind of tenure. The holder of a knight's fee was obliged to pay a sum of money towards the amount required for the ransom of his feudal superior when he was taken prisoner in battle, and towards the expenses that were incurred when his eldest daughter was married. Such payments were termed "aids;" and, in addition to these, the tenant was obliged to contribute when the heir had to pay a compartition to the king for leave to enter on the enjoyment of property which had come to him after he had attained his majority. When any heir had inherited land during his minority, his feudal superior became his guardian, and was entitled to the management of his land, and the profits arising therefrom, until the rightful possessor became of age; and he also had a right to demand a sum of money from his ward, whether male or female, in case he or she refused the wife or husband that he might be pleased to select for him or her. Besides these, there were also rights arising from primer seisin, fines upon *alienation* and *escheat*, the first of which was the king's right to demand a sum equivalent to a year's profit of the land, from any heir who held land direct from the sovereign, when he happened to have attained his majority before the land descended to him from his father, or any other relative or connection. This system of tenure was virtually brought to an end during the time of the Commonwealth under Oliver Cromwell, and finally abolished by Act of Parliament in the reign of Charles II.

Knight's Ferry, in *California*, a post-village, the former cap. of Stanislaus co., on the Stanislaus river, about 15 m. E. by S. of Stockton.

Knight's Island, an island of British N. America, in Hudson's bay, off the coast of New N. Wales.

Knight's Island, in *Alaska*, an island in Prince William Sound, about Lat. 60° 13′ N., Lon. 148° W.

Knight's Landing, in *Cal.*, a v. of Yolo co., on the Sacramento river, about 25 m. S. by W. of Marysville.

Knights of Labor. See LABOR ORGANIZATIONS.

Knights of Pythias. See PYTHIAS, KNIGHTS OF.

Knights of the Round Table. (*Lit.*) See ROUND TABLE, KNIGHTS OF.

Knights'town, in *Indiana*, a post-town of Henry co., on Blue river, about 32 m. E. of Indianapolis.

Knights'ville, in *Rhode Island*, a village of Providence co., about 5 m. S. W. of Providence.

Knit, (*nit,*) *v. a.* [A. S. *cnyttan*; Sw. *knyta*; Dan. *knytte*, to tie in a knot.] To tie in a knot; to unite, as threads by needles; to connect in a kind of network; as, to *knit* stockings. — To join, or cause to go together, as bones. — To unite closely, as in love.

—To draw together; to contract, as one's brows.

—*v. n.* To unite or interweave by needles. — To unite closely; to grow together.

—*n.* Texture.

Knit'ster, *n.* A female who knits.

Knit'table, *a.* Capable of being knit.

Knit'ter, *n.* One who knits.

Knitting, (*nit'ting,*) *n.* The formation of network by knitting-needles or machinery; also, the network thus formed. — Union or junction.

Knit'ting-needle, *n.* A long needle which women use in knitting.

Knit'ting-sheath, *n.* A small sheath, fastened to a person's side, to receive the end of a knitting-needle.

Knit'tle, *n.* The string by which a purse or money-bag is opened or closed.

(*Naut.*) A small line used for seizings, hammock-clues, &c.

Knob, (*nob.*) [A.S. *cnæp*; Ger. *knopf*; O. Ger. *knoph*, from *knuphan*, to tie.] A hard protuberance; a hard swelling or rising; a round ball at the end of anything; a bunch; as, the *knob* of a door-lock.

—In the U. States, a circular knoll; a rounded hill or mountain.

(*Arch.*) See KNOP.

Knobbed, (*nŏbd,*) *a.* Furnished with knobs; comprising knobs; as, a *knobbed* deer-horn.

Knobbiness, (*nŏb'bi-nes,*) *n.* The state or condition of being knobby or protuberant.

Knobby, (*nŏb'be,*) *a.* Full of knobs; characterized by protuberances; as, a *knobby* loaf. — Hilly; characterized by rounded hills. (American.)

Knob Mountain, in *Pennsylvania*, a spur of the Blue Ridge, in the N.E. part of Columbia co.

Knob'noster, in *Missouri*, a post-village of Johnson co., about 208 m. W. of St. Louis.

Knob'view, in *Missouri*, a post-village of Crawford co., about 97 m. S.W. of St. Louis.

Knock, (*nŏk,*) *v. n.* [A.S. *cnucian*; Sw. *knacka*; W. *cnociaw*, to beat, rap, or knock, from *cnoc*, a sudden rap.] To strike or beat with something hard, thick, or heavy; as, to *knock* at a door for admittance. — To drive or be flung against; to strike or be thrown against; to clash; as, one hard substance *knocks* against another.

To knock up, to become wearied, worn out, or fatigued; to fail of strength or power of further exertion; to give out; to become spent, as with labor. (Used in England colloquially.)

"The horses were beginning to *knock up* under the fatigue." *De Quincey.*

—To become advanced in pregnancy; as, his wife is *knocked up*. (Used in a vulgar sense in some of the U. States.)

To knock off, to cease; to desist; to abandon; as, the men *knock off* work at six o'clock. — *To knock under*, to submit; to own defeat; to yield; to cave, or cave in; as, after three rounds, Tom *knocked under*.

—*v. a.* To strike or drive against.

"When heroes *knock* their knotty heads together."—*Rowe.*

—To strike, rap upon, or beat, as for admittance; as, *I knocked* at the door in vain.

To knock down, to fell to the earth; to prostrate by a stroke or blow, or by a succession of such.

"A man who is gross in a woman's company ought to be *knocked down*."—*Richardson.*

To assign to one who seeks to purchase; as, to *knock down* goods at auction.

To knock on the head, to kill or make senseless by a blow on the head; — hence, by implication, to render abortive; to frustrate; to quash, as a scheme, design, project, or intention; as, premature discovery *knocked* the affair *on the head*. (Used colloquially.)

To knock off, to sell to a bidder by the blow or tap of an auctioneer's hammer. — To force off by blows; as, the prisoner's chains were *knocked off*.

To knock out, to beat out by a blow or series of blows; as, to *knock out* a man's brains.

To knock up, to awaken with noise; to cause to rise by making a knock or knocks, as on a door.

"A sober Englishman would *knock* his servants *up*, and rise by five o'clock."—*Pope.*

—To tire or weary beyond further effort or endurance; as, the last ten miles *knocked* all of us *up*.

(*Book-binding.*) To place in even order at the edges, as sheets of printed matter.

—*n.* A sudden stroke, or blow, with something hard or heavy.

"Ajax thinks that Agamemnon feels the *knocks*."—*Dryden.*

—A loud stroke, rap, or tap for admission; as, a "thrice-repeated *knock*." — *Dryden.*

Knock-down, (*nŏk'down,*) *a.* That which overthrows by one sudden act or stroke; as, a *knock-down* blow.

Knock-down argument, an unanswerable argument. (Colloq.)

"A *knock-down argument*; 'tis but a word and a blow."—*Dryden.*

—A blow which fells one prone to the ground.

Knocker, (*nŏk'er,*) *n.* One who, or that which, knocks; specifically, an instrument or kind of hammer, used for rapping upon a door for admittance into a house. — The *K.*, now generally superseded by the door-bell, was formerly an important article of iron-work connected with architecture, and was often finished with more

Fig. 1483. — KNOCKER — (15th century.)

care and accuracy than might be expected from such materials. Those of the early English and Decorated styles were usually in the shape of rings, with a spindle going through the centre of a circular escutcheon (Fig. 1483); and frequently they were of other forms, and adorned with animals' heads, leaves, flowers, &c.

Knock'ing, *n.* A striking repeatedly against; a rapping; a tapping; a beating.

Knock-kneed, (*nŏk'nēēd,*) *a.* Having the knees curved inward so that they touch or knock together in walking; — the opposite of *bow-legged*.

Knock'lade, a mountain in the co. of Antrim, Ireland, about 2 m. S. of Ballycastle; *height*, 1,695 feet.

Knockmel'edown Mountains, a mountainous range in Ireland, between cos. Waterford and Tipperary, Munster; *length*, about 18 m; highest point (Knockmeledown) 2,690 feet.

Knock'-stone, *n.* A block of stone used for shattering things upon.

Knoll, (*nōl,*) *v. a.* To ring a bell, generally for a funeral. See KNELL.

"His knell is *knolled*."—*Shaks.*

—*v. n.* To sound, as a bell.

"If ever you have been where bells have *knoll'd* to church?" *Shaks.*

Knoll, *n.* The ringing of a bell; a knell; as, the curfew *knoll*.

—[Sax. *cnoll*; Ger. *knollen*, a lump, a knot; W. *cnol*, the top, a round hillock.] The top or crown of a hill; but, more generally, a little round hill or mount; a small elevation of ground; a high mound; a knob.

Knoll'er, *n.* One who tolls a bell.

Knop, (*nŏp,*) *n.* (*Arch.*) A boss; a foliated ornament. (Sometimes called *knob* or *knot*.)

Knoppern, (*nŏp'pern,*) *n.* [Ger. *knopper*.] A kind of gall-nut.

Knop'-weed, *n.* See KNAP-WEED and HORSE-KNOP.

Knosp, (*nŏsp,*) *n.* [Ger. *knospe*.] The closed bud of a flower or leaf; — hence, a carved ornament resembling the same.

Knot, (*nŏt,*) *n.* [Ger. *knoten*; Icel. *knutr*, *hnutr*, from *hnyta*, to bind, to tie; Sw., Goth. *knut*.] A complicated arrangement of threads, cords, &c., made by knitting or tying; a union of strands of rope made by interweaving; a close tie; an entanglement; as, the Gordian *knot* — The most useful knots, represented in Fig. 1484, are: 1. *Thumb* or *over-hand knot*, tied at the end of a rope to prevent it from opening out, &c.; 2. *Right* or *reef-knot*, for securing all lashings where the ends of the rope meet together; 3. *Draw-knot*, which offers great facility in undoing; 4. *Running-knot*, used to bind or draw anything close; 5. *Sheepshank*, serving to shorten a rope without cutting it or unfastening the ends; 6. *Clove-hitch*, which binds with excessive force, and by which alone a weight can be hung to a smooth pole; 7. *Timber-hitch*, very useful in hauling to move a weight; 8. *Single bowline-knot*, difficult to undo, useful to throw over a post, &c., to haul on, used for the draw-loop of a slip noose; 9. *Double bowline-knot*, for slinging a cask; 10. *Running bowline-knot*; 11. *Woolding* or *packing-stick hitch*, used to tighten ropes; 12. *Men's harness hitch*, passing over the shoulder and under the opposite arm of men drawing a carriage, &c.; 13. *Stopper-hitch*,

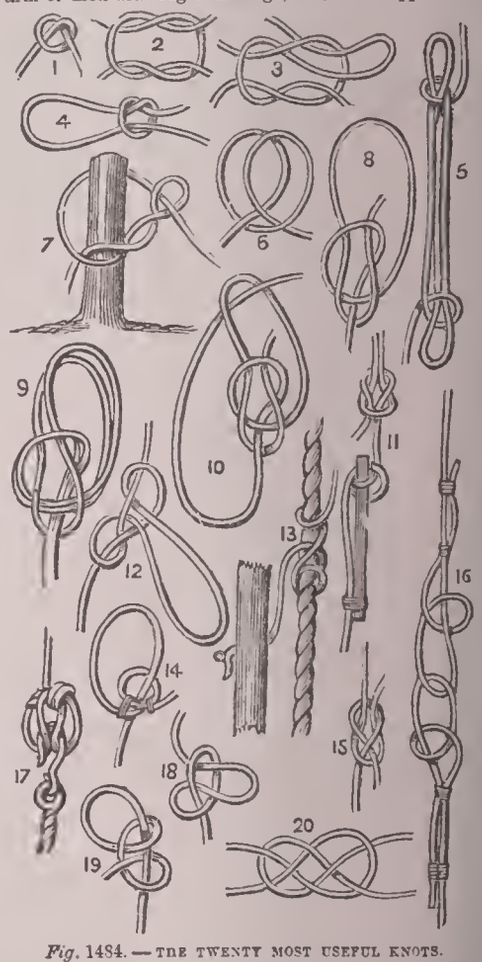


Fig. 1484. — THE TWENTY MOST USEFUL KNOTS.

for stoppering the fall of a tackle, &c.; 14. *Inside clinch*, for fastening a cable to the anchor-ring, &c.; 15. *Common* or *sheet bend*, a very secure method of joining two ropes, or fastening a rope to a loop; 16. *Hawser bend*, for joining two ropes, easily undone; 17. *Cat's paw*, the turn in the bight of a rope, for hooking a tackle to it; 18. *Drag-rope* or *lever-hitch*, used for fixing handspikes or capstan bars to the ropes attached to heavy carriages &c., which have to be moved by men; 19. *Half hitch*, cast on the bight of a rope; 20. *Carrick bend*. A *wall-knot* is a knot made at the end of a rope to prevent it from passing through a hole. — Every knot in a rope weakens its power of resisting a sudden jerking strain. Such ropes which will resist the strain of 10 pounds falling 8 feet, will not resist it if there is a knot in any one of them, or even if the knots used in attaching them to the point of support, or to the weights, be roughly or carelessly made. Therefore, no knot which is not absolutely necessary ought to be allowed to remain on the rope; the tighter and harder a knot becomes, the worse it is; the more loose and open a knot is made, the better it is.

—A bond of association or intimate connection; a union.

"Confirm that amity with nuptial *knot*."—*Shaks.*

—Any figure of which the lines are frequently intersected in an involved or intricate manner; as, a true-lover *knot*.

"Flowers . . . in beds and curious *knots*."—*Milton.*

—A difficulty; an intricate matter; an intrigue or involved condition of affairs; a perplexity; a dilemma.

"A man shall be perplexed with *knots* and problems of business." *South.*

—A cluster; a group; a collection; a band; a clique; a coterie; a confederacy; as, a *knot* of conspirators.

"I am now with a *knot* of the knight's admirers."—*Addison.*

Henry Knox

1750–1806

—A hard protuberance in wood, caused by the outgrowth of a branch; a joint in the stem of a shrub or plant; a hard place grown in timber by the transverse direction of fibres against the grain.

(*Naut.*) A division of the log-line, which bears the same relation to a mile as half a minute bears to an hour. When a ship is said to be going eight *knots*, for instance, it signifies that she is progressing at the rate of eight nautical miles of 6,086 feet per hour.—See LOG.

(*Mech.*) Same as NONE, *q. v.*

(*Arch.*) Same as KNOP, *q. v.*

—*v. a.* To complicate, or tie in a knot, or knots; to form, as a knot.

"Here's a queen is always *knotting* threads."—*Sir C. Sedley.*

—To cohere; to unite closely; as, our opponents are again *knotted* together.—To complicate; to entangle; to involve; to perplex; as, "*knotted* law-like nets." *Butler.*

—*v. n.* To form knots or joints, as in plants, thread, &c.—To knit knots for fringe.—To unite in sexual commerce.

Knot'-berry, *n.* (*Bot.*) See RUBUS.

Knot'-grass, *n.* (*Bot.*) A name applied to several species of the genus *Polygonum.* q. v.

Knot'less, *a.* Free from knots; without knots; as, a *knotless* plank.

Knot'ted, *a.* Full of knots; having knots or knobs; as, *knotted* hair.

(*Geol.*) Noting rocks which have detached points, chiefly of mica, less decomposable than the other parts.

(*Bot.*) Applied to a cylindrical body swollen into knobs at intervals.

Knot'tiness, *n.* Quality of having many knots or swellings; fulness of knots.—Difficulty of solution; involution; complexity.

Knotts'ville, in *Kentucky*, a post-village of Daviess co.

Knotty, (*nŏt'te,*) *a.* Full of knots; as, *knotty* wood.—Having many knots.—Indurate; rugged; hard; as, "*knotty* heads." (*Rowe.*)—Complex; difficult; intricate; hard of solution; as, a *knotty* argument.

"A thousand *knotty* points they clear."—*Prior.*

Knot'-weed, *n.* (*Bot.*) See POLYGONUM.

Knot'-wort, *n.* (*Bot.*) See SPERGULA.

Knout, (*nowt,*) *n.* [Fr.; Russ. *knut.*] The name of the severest judicial punishment inflicted in Russia. The culprit is bound to two stakes, and receives on his bare back the specified number of lashes from a whip of plaited thongs interwoven with wire. From 100 to 120 lashes are the highest number inflicted, and are considered equivalent to a sentence of death. If the criminal survive, he is banished for life to Siberia. Formerly, the nose was slit, the ears cut off, and the letter *F* (for *vor*, rogue) branded on the forehead; but this aggravation was abolished by Alexander I. Although the punishment is still in use in the Russian army, it is now rarely resorted to, except in the infliction of a small number of lashes, usually from 3 to 10, and that more with the view of disgracing than of injuring the culprit.

—*v. a.* To inflict punishment with the knout.

Know, (*nō,*) *v. a.*, (*imp.* KNEW, *pp.* KNOWN.) [A. S. *cnawan*; O. Ger. *kannan*; Icel. *kenna*; Gr. *gignosko*, from the root *gno.*] To have a clear and certain perception, as of truth, fact, or anything that actually exists; to have full assurance of; to have satisfactory evidence of anything, though short of certainty.

"I *know* not, I ask not, if guilt 's in that heart,
I but *know* that I love thee, whatever thou art."—*Moore.*

—To be informed of; to be taught or instructed; to learn; to possess experience of; as, he ought to *know* better than to act thus.—To distinguish; to recognize by recollection, remembrance, representation, or description.

"At nearer view, he thought he *knew* the dead."—*Flatman.*

—To possess a familiar acquaintance with; to enjoy more or less personal knowledge of; to be no stranger to.

"To *know* her was to love her."—*Rogers.*

—To take approving notice of; to countenance; to acknowledge; to view in a friendly manner; to recognize.

"The Lord *knoweth* the way of the righteous."—*Ps.* i. 6.

—To have carnal knowledge of, or sexual intercourse with.

"And Adam *knew* Eve his wife."—*Gen.*

To know how, or *how to.* To be acquainted with the manner of; to have competency sufficient for; as, he *knows how* not to do it.

—*v. n.* To have clear and certain perception; not to be doubtful; to be informed;—often before *of.*

"*Know* then thyself, presume not God to scan."—*Pope.*

—To take cognizance; to examine;—preceding *of.*

Knowable, (*nō'a-bl,*) *a.* That may be known; that may be discovered, understood, or ascertained; as, "*knowable* by reason."

Know'ableness, *n.* The state or quality of being knowable.

Know'-all, *n.* One who knows, or is supposed to know, everything;—hence, a pedant; a wiseacre.

Know'er, *n.* One who knows; any learned person.

"A general *knower* of mankind."—*Southern.*

Knowing, (*nō'ing,*) *p. a.* Shrewd; acute; well-informed; astute, or highly intelligent; as, a *knowing* man.

Know'ingly, *adv.* With knowledge; understandingly.

Know'ingness, *n.* The state or quality of being knowing or intelligent.

Knowledge, (*nŏl'ej,*) *n.* [Sax. *cnawan*, to know, and *lecgan*; Icel. *leggia*, to lay, to play. See LAY.] Act or process of knowing; a clear and certain perception of that which is placed before the eye or the understanding; a clear and definite apprehension of that which exists, or of truth and fact; indubitable recognition of the affinity or agreement, or disagreement and repugnancy, of our ideas.—Learning; erudition; mental illumination; scholarship; intellectual instruction; acquisition gained and maintained by the act of knowing.

"*Knowledge* is power."—*Bacon.*

—A cognition; the object of the act of knowing;—generally in the plural.

"Mathematics . . . are the most abstracted of *knowledges.*" *Bacon.*

—Information; notice; cognizance; power of knowing; as, the facts of the case came to his *knowledge.*—Acquired skill; acquaintance with any fact or person gained by practical experience; as, he has a perfect *knowledge* of his business.—Sexual commerce; copulation;—generally after *carnal*; as, *carnal knowledge.*

(*Phil.*) According to Locke, *K.* is the perception of the connection and agreement, or disagreement and repugnance, of any of our ideas. *K.* is the possession of truth, and may be historical or empirical, philosophical or scientific, or rational. Historical *K.* is so named, because in it we know only the fact—only that the phenomenon is. It is also called empirical or experiential, if we may use the term, because it is given us by experience or observation, and not obtained as the result of inference or reasoning. In philosophical, scientific, or rational *K.*, we have the *K.* of the cause why or how a thing is. It is the *K.* of effects, as dependent on their causes, and is synonymous with science. The schoolmen divided all *K.* into two species,—*cognitio intuitiva*, and *cognitio abstractiva.* By intuitive *K.* they signified that which we gain by an immediate presentation of the real individual object; by abstractive, that which we gain and hold through the medium of a general term; the one being, in modern language, a perception, the other a concept.

Know'ersville, in *New York*, a village of Albany co., about 19 m. W. of Albany.

Knowles, (*nōls,*) SHERIDAN, an Irish dramatist and theologian, b. at Cork, 1784. His father was author of a "Dictionary of the English Language," and among his relatives were Sheridan the great orator, and Sheridan the lexicographer. At an early age he was taken to London, became acquainted with Hazlitt, Lamb, and Coleridge, and began writing dramatic pieces. He also appeared occasionally as an actor. His first really original play was *Caius Gracchus*, acted at Belfast, in 1815. This was followed by *Virginius*, *William Tell*, *Love*, *The Hunchback*, *The Love Chase*, and many others. He acted in some of these plays, but not with full success, and he frequently gave popular lectures. In his old age he became a Baptist preacher and polemical theologian; making speeches at Exeter Hall, London, and publishing *The Rock of Rome*, and *The Idol Demolished by its own Priests.* D. 1862.

Knowles'ville, in *New York*, a post-village of Orleans co., abt. 40 m. N.E. by N. of Buffalo.

Knowl'ton, in *New Jersey*, a post-township of Warren co.

Knowl'ton, in *Wisconsin*, a township of Marathon co.

Knowltonia, (*nōl-to'nī-a,*) *n.* (*Bot.*) A genus of S. African plants, order *Ranunculaceæ*, with flowers resembling those of *Adonis*, and succulent fruit. *K. vesicatoria*, which has bi-ternate leathery leaves, and flowers in few-flowered umbels, is remarkable for its acridity and blistering power. The bruised leaves are used at the Cape of Good Hope instead of cantharides; they raise a blister in half an hour, and it keeps open a long time. The sliced root seems to be still more powerful.

Knowl'ton Mills, in *New Jersey*, a village of Warren co., about 10 m. N. of Belvidere.

Knowl'ton, a village of Broome co., province Quebec, about 28 m. S. E. of Stanstead.

Known, (*nōn,*) *pp.* of KNOW, *q. v.*

Know'-nothings, *n. pl.* (*Amer. Pol.*) The name given to a formerly existing political party in the U. States, organized as a secret faction, whose principal tenets were opposition to the naturalization of foreigners, and to their right of eligibility for office. The most extreme members of the party also advocated uncompromising antagonism to Roman Catholicism. They published their "platform" of political principles, June 15, 1855. From members invariably replying "I don't know," when questioned as to the tendencies of the society, the name originated.

Know'-nothingism, *n.* The political principles of the Know-nothings. (U. States.)

Knox, HENRY, an American general and statesman, b. in Boston, 1750. He received a common-school education, and was brought up to the business of a bookseller. By availing himself of the advantages afforded him by his opportunity of procuring and perusing military books, he became an adept in military science. At the battle of Bunker Hill he was actively engaged, as aide to Gen. Ward, in reconnoitring the enemy's movements, and upon his report Ward issued his orders. He soon attracted the attention of Gen. Washington as an engineer and artillerist, and at the recommendation of the latter he was promoted to the command of an artillery regiment then forming. In the winter of 1776 he was sent to the forts on the border for supplies of ordnance, and was successful, notwithstanding the severity of the season, and the watchfulness of the enemy, and was thus instrumental in procuring the evacuation of N. Y. He particularly distinguished himself in the repulse of Cornwallis at Assunpink in 1777, at Princeton,—on which occasion he received from Congress the appointment as Brigadier-General of Artillery,—and at the battle of Monmouth, in 1778, on which latter occasion Washington, in his general order after the battle, had "the satisfaction to inform Gen. Knox and his officers that the enemy had done them the justice to acknowledge that no artillery could have been better served than the American." For his signal service at Yorktown he was promoted to the rank of Major-General by Congress. He was appointed Secretary of War in 1785, to which dept. that of the Navy was at that time joined. He was the constant friend and adviser of Washington during his administration, and rendered him valuable service in disbanding the army, in Shay's rebellion, and in the conduct of Indian affairs. He resigned his position in the cabinet in 1795, and retired into private life. D. in 1806.

Knox, (*nŏks,*) JOHN, the founder of Scottish Calvinism, was b. 1505, and educated at St. Andrew's. Becoming a convert from the Roman Catholic faith, he espoused the tenets of the Reformation with a zeal amounting to bigotry. In 1552, he was appointed chaplain to Edward VI. of England, but soon relinquished the post, declining to conform to the liturgy of the English Episcopal Church. He then went to Geneva, and during his absence on the continent of Europe, the Scottish bishops passed sentence of death upon him for heresy. Against this sentence he energetically protested, and, returning to Scotland, after the accession of Mary, distinguished himself by the fury of his denunciations against both popery and prelacy. D. at Edinburgh, 1572. *K.* was the author of a *History of the Reformation of Religion within the Realm of Scotland*, and other works.

Fig. 1485.—JOHN KNOX.

Knox, in *Illinois*, a N. W. co.; *area*, about 720 sq. m. *Rivers.* Spoon river, and some smaller streams. *Surface*, mostly level; *soil*, very fertile. *County-seat*, Galesburg. *Pop.* (1890) 38,752.

—A township of Knox co.

Knox, in *Indiana*, a S.W. co., adjoining Illinois; *area*, about 510 sq. m. *Rivers.* Wabash and White rivers, besides several smaller streams. *Surface*, level; *soil*, fertile. *Cap.* Vincennes. *Pop.* (1890) 28,044.

—A township of Jay co.

—A post-town, cap. of Stark co., on the S. bank of Yellow river, about 100 m. N. by W. of Indianapolis.

Knox, in *Iowa*, a township of Clarke co.

—A township of Pottawattomie co.

Knox, in *Kentucky*, a S. E. co.; *area*, about 350 sq. m. *Rivers.* Columbia river and some smaller streams. *Surface*, diversified; *soil*, generally fertile. *Cap.* Barbourville. *Pop.* (1890) 13,762.

Knox, in *Maine*, a S. E. co., bordering on the Atlantic Ocean and Penobscot Bay; *area*, about 328 sq. m. *Rivers.* St. George and Medomac rivers. *Surface*, much diversified; *soil*, fertile. *Cap.* Rockland. *Pop.* (1890) 31,473.

—A post-town of Waldo co. *Pop.* (1897) 670.

Knox, in *Missouri*, a N. E. co.; *area*, about 510 sq. m. *Rivers.* North, South, and Middle Fabius, and N. Fork of Salt river. *Surface*, generally level; *soil*, fertile. *Cap.* Edina. *Pop.* (1897) 14,200.

Knox, in *New York*, a post-town and township of Albany co., about 22 m. W. of the city of Albany. *Pop.* (1897) 1,502.

Knox, in *Ohio*, a N. E. central co.; *area*, about 527 sq. m. *Rivers.* Vernon and Walhonding rivers. *Surface*, gently undulating or hilly; *soil*, very fertile. *Cap.* Mount Vernon. *Pop.* (1890) 27,600.

—A township of Columbiana co.

—A township of Guernsey co.

—A township of Holmes co.

—A township of Jefferson co.

Knox, in *Pennsylvania*, a post-borough of Clarion co. *Pop.* (1897) 1,360.

—A township of Clearfield co.

Knox, in *Tennessee*, an E. central co.; *area*, about 526 sq. m. *Rivers.* Clinch, Holston, and French Broad rivers. *Surface*, much diversified; *soil*, fertile. *Cap.* Knoxville. *Pop.* (1890) 59,557.

Knox Cen'ter, in *Maine*, a village of Waldo co., about 35 m. E.N.E. of Augusta.

Knox'dale, in *Pennsylvania*, a post-village of Jefferson county.

Knox'ville, in *California*, a post-office of Napa co. —A village of Placer co.

Knox'ville, in *Georgia*, a post-village, cap. of Crawford co., about 25 m. W.S.W. of Macon. *Pop.* (1897) 625.

Knox'ville, in *Illinois*, a city, the former cap. of Knox co., about 41 m. W. by N. of Peoria. *Pop.* 1,860.

Knox'ville, in *Indiana*, a village of Dubois co., about 48 m. E.S.E. of Vincennes.

Knox'ville, in *Iowa*, a city, the cap. of Marion co., on C. & N.W. and C., R. I. & P. R.Rs., 36 m. S.E. of Des Moines. *Pop.* (1895) 2,862.

Knox'ville, in *Kentucky*, a post-village of Pendleton co., a few m. W. of Falmouth.

Knox'ville, in *Missouri*, a post-village and township of Ray co., about 140 m. N.W. by W. of Jefferson City.

Knox'ville, in *New York*, a village of Steuben co.

Knox'ville, in *Ohio*, a post-village of Jefferson co., about 141 m. E. by N. of Columbus.

Knox'ville, in *Pennsylvania*, a post-borough of Tioga co., about 165 m. N. by W. of Harrisburg. *Pop.* 700.

Knox'ville, in *Tennessee*, a city, the cap. of Knox co., on the Tennessee river, 180 m. E. of Nashville, on the Southern, Knox. & Augusta, Knox., Cumb. Gap & L., and Marietta & N. Ga. R.Rs. In the center of a highly productive coal and iron region; zinc is also mined, and there are more than a score of fine marble quarries. The manufactures are extensive, including iron works, car works, cotton and woollen mills, car wheels, lumber, zinc works, saddlery and harness factories, and very extensive marble yards. It is the trade center of a wide region, and has large distributing and shipping trade. Here are the University of Tennessee, a Deaf and Dumb school, State Agricultural College and an Insane Asylum. *Pop.*, with suburbs (1897), about 40,000.

Knox'ville, in *Texas*, a village of Cherokee co., about 18 m. W. by S. of Henderson.

Knubs, (*nŭbs,*) *n. pl.* Waste silk from a cocoon.

Knuc'kle, *n.* [A. S. *cnuc;* Du. *kneukel;* Ger. *knöchel*, dimin. of *knee;* A. S. *hnigan*, to bow, to bend.] One of the small knee-like joints of the fingers. — The knee-joint of a calf; as, a *knuckle* of veal. — The joint-pieces penetrated by the rivets of a hinge.

—*v. n.* To knock.

To knuckle to, to exert one's self energetically; as, to *knuckle to* work. — *To knuckle to* or *under*, to yield; to confess to being vanquished; to submit; as, his adversary was compelled to *knuckle under*.

—*v. a.* To administer a blow with the knuckles of the fist.

Knurl, (*nûrl,*) *n.* [Ger. *knorren.*] A knot; a hard substance.

Knurled', *a.* Full of knots; gnarled.

Knurl'y, *adv.* Full of knots; hard; knotty.

Knutsford, (*nuts'ford,*) ("Canute's ford,") a town of England, co. Chester, on the Bollin, 24 m. E.N.E. of Chester. *Manuf.* Cotton velvets, thread, worsted, and leather. *Pop.* 5,000.

Koaho'ma, in *Mississippi*. See COAHOMA.

Koa'la, *n.* (*Zoöl.*) See PHALANGISTIDÆ.

Kob, Ko'ba, *n.* (*Zoöl.*) A species of antelope, about the size of the European stag.

Ko'balt, *n.* (*Chem.*) See COBALT.

Ko'bellite, *n.* (*Min.*) A mineral resembling Antimony Glance in general appearance, but with a brighter lustre and a radiated structure. It is a sulpho-bismuthate of lead, in which part of the lead is replaced by iron and copper.

Ko'blentz. See COBLENTZ.

Ko'bold, *n.* [Ger., a spirit.] (*Superstitions.*) A spirit, differing from the spectre in never having been a living human creature. It is the German correspondent of the English *goblin*, of which it is probably the origin. From it the metal *Cobalt* derives its name. The *K.* is said to be connected with a house or family, and always to appear in human shape. Among the superstitious peasantry, the *K.* are believed to be inclined to mischief and teaslug, but, on the whole, more desirous of doing good than evil to men, except when irritated. In the mines they are believed to appear, sometimes in the form of a blue flame, sometimes in that of a dwarfish child, and to point out rich veins. The miners, however, are afraid of disturbing the underground kobolds.

Koch'ville, in *Michigan*, a township of Saginaw county.

Koek, CHARLES PAUL DE, a popular French novelist, son of a Dutch banker, B. at Passy, 1794. *K.* has composed upwards of 50 novels, besides a great number of vaudevilles and *vers de société*. For the last 30 years he has been a great favorite with the middle classes, not only of France, but, it may be said, of all Europe, being everywhere conventionally tabooed, but everywhere read with avidity. His novels, though displaying no great literary genius, are remarkable for fertility of humorous invention, the naturalness of the narration, and the liveliness of his pictures, though sometimes disfigured by the licentious freedom of their representations. D. 1871.

Ko'diak, in *Alaska*, an island in the N. Pacific Ocean, off the W. coast of the peninsula of Alaska; *area*, abt. 3,750 sq. m. *Surface*, mountainous. It has the harbor and station of St. Paul on the N. side.

Koff, *n.* (*Naut.*) A small vessel. (Dutch.)

Ko'hath. (*Script.*) The son of Levi and father of the Kohathites, who was appointed to carry the ark and the sacred utensils of the tabernacle during the journeyings of the Israelites in the desert. (*Ex.* vi. 16–24; *Num.* iv. 4–15.)

Koh-i-noor', *n.* See DIAMOND.

Kohl, (*kōl,*) JOHN GEORGE, a German writer and traveller, B. at Bremen, 1808. After having studied science in his native town, and law in the universities of Göttingen, Heidelberg, and Munich, he travelled over Livonia, visited a great part of Russia, and returning to Germany in 1838, settled at Dresden, whence he made those journeys to various parts of Europe which have since rendered his name popular as a traveller. Among the numerous works written by him may be mentioned *Sketches and Pictures in St. Petersburg*, and *Travels in the South of Russia*, published in 1841; *A Hundred Days' Travel in the Austrian States; Travels in Styria and Upper Bavaria;* and *Travels in England*, in 1842; *The British Isles and their Inhabitants*, in 1844; *Travels in Denmark, and in the Duchies of Schleswig and Holstein*, in 1846; *Remarks on the Danish and German Nationalities and Language as found in Schleswig*, in 1847; and *Travels in Istria, Dalmatia, and Montenegro*, in 1851. In 1854 he started for the United States, where he remained four years, and wrote *Travels in Canada*, published in 1855: *Travels in the North-western Parts of the United States*, in 1857; and *Kitahi-Gamis, or Tales from Lake Superior*. In 1857 he contributed to the Smithsonian Institute two treatises on the maps and charts of the New World at different periods, and wrote as a supplemental volume to Hakluyt's great work, a descriptive catalogue of all maps, charts, and surveys relating to America. In 1861 he published a *History of, and Commentary on, Two Maps of the New World, made in Spain at the commencement of the reign of the Emperor Charles V.* *K.*, who has lectured before various learned societies, has written some works of a more purely scientific nature. His *History of the Discovery of America* was translated into English in 1862.

Kohlra'bi, *n.* (*Bot.*) See BRASSICA.

Ko'kan. See KHOKAN.

Ko'komo, in *Indiana*, a city, cap. of Howard co., on the Penna. and 3 other R.Rs., 54 m. N. of Indianapolis; in the natural gas belt; has glass works and other manuf. *Pop.* (1897) 9,500.

Kolapoo, or **Kolapur,** (*kol-a-por',*) a rajahship of Hindostan, in the presidency of Bombay; Lat. between 15° 50′ and 17° 17′ N., Lon. between 73° 47′ and 74° 46′ E. *Area*, 3,445 sq. m. *Pop.* 550,000.

Kolemokee' Creek, in *Georgia*. See COLAMOKA.

Kölliker, RUDOLPH ALBERT, (*ke(r)lle-ker,*) an eminent modern German physiologist and microscopical observer, B. in Zurich, 1817. He is professor of anatomy and physiology at the university of Würzburg, and has distinguished himself by his discoveries in science, chiefly by the aid of the microscope. In 1841 he put forth an important paper on the reproductive organs and fluid of invertebrate animals. His greatest effort is a work on the *Microscopic Anatomy or Histology of the Human Body*, the publication of which was commenced in 1850. Messrs. Busk and Huxley have translated the introduction of this important contribution to science, which, it is stated, has placed its author at the head of living histologists.

Köln. See COLOGNE.

Kolom'na, a town of European Russia, govt. Moscow, on the Moskwa, near its junction with the Oka, 62 m. S. E. of Moscow. *Manuf.* Silks, woollens, and cotton-prints.

Kolyma, or **Kovyma,** (*ko-lē'ma,*) a river of Asiatic Russia, in Siberia, rising in the Stanovoy Mountains, Lat. 61° 30′ N. After a N.E. course of 700 m., it flows into the Frozen Ocean, Lat. 69° 40′ N., Lon. 161° 30′ E.

Komorn'. See COMORN.

Kongsberg, (*kongs'bairg,*) a town of Norway, govt. of Aggerhuus, on the Louven, 40 m. S.W. of Christiania. *K.* is noted for its silver mines, which are the most important in the kingdom. *K.* has a school of mines, and a govt. manufactory of arms and powder. *Pop.* 4,500.

Ko'nlah, or **Koulch,** (anc. *Iconium,*) a large town of Asiatic Turkey, capital of the prov. of Karaman, situated in a rich, well-watered plain, in Lat. 37° 54′ N., and Lon. 32° 40′ E. It is surrounded by walls from two to three miles in circuit, built from the ruins of ancient Seljuk edifices, and surmounted by square towers. Its numerous minarets, and its mosques and other public buildings, give it an imposing appearance, but, like most of the towns of Asia Minor, it is now in a sadly ruinous condition. Many interesting remains of Saracenic architecture are to be met with, and some imposing ruins are found here. *K.* is the chief emporium for the products of the interior. Carpets and colored morocco leather are manufactured, and cotton, wool, and skins are exported to Smyrna.—Paul and Barnabas preached in this ancient city (*Acts* xiii. 51) in 45, from which they were compelled to flee, on account of a conspiracy against them (*Acts* xiv. 1–6). Councils were held here in 231 and in 378. The Saracens captured it in 1074. The Crusaders took it in 1097, and again under Frederick I. (Barbarossa), June 10, 1190. The Mongols seized it in 1244, and the Turks in 1486. Ibrahim Pacha won here a decisive battle over the Turks in Dec., 1832. *Pop.* 50,000.

Kön'igsberg, a walled town of Prussia, prov. Brandenburg, 41 m. N. of Frankfort-on-the-Oder.

Konigsberg, (*ke(r)'nigs-berg,*) a city of Prussia, prov. of E. Prussia, on the Pregel, 4 m. from its entrance into the Frische Haff, Lat. 54° 42′ 8″ N., Lon. 20° 30′ 2″ E. *K.* contains many beautiful edifices, among which the cathedral is conspicuous, which, besides its architecture and ornaments, is remarkable for its organ, erected in 1721, and containing 5,000 pipes. The university, founded in 1544, has connected with it a library of 106,000 vols., a botanical garden, and an astronomical observatory. *Manuf.* Woollens, silk, leather, and tobacco. A part of the town is built on an island formed by the Pregel. The houses have their foundations on piles, as at Venice and Amsterdam. *Pop.* 122,636.

Königsgrätz, (*ke(r)'neegs-gratz,*) a town of Austria, in Bohemia, on the Elbe, at the confluence of the Adler, 64 m. E.N.E. of Prague. *Manuf.* Cloth, musical instruments, and shoes. *Pop.* 10,400. For the battle fought here in 1866, see SADOWA.

Kon'igsmark, PHILIP CHRISTOPHER, COUNT, a celebrated Swedish soldier. He was descended from an ancient noble family of Brandenburg, a branch of which had passed into Sweden, where it had produced many distinguished soldiers. Philip went to Hanover, where the elector, Ernest Augustus, appointed him colonel of a regiment of dragoons. The electoral prince, George Louis, afterwards George I., king of Great Britain, had married his cousin Sophia-Dorothea, of Zell, a beautiful, witty, and accomplished princess. Alienated from her husband by his gloomy and jealous character, Sophia was naturally attracted by the friendship of *K.*, whom she had known when young, and gladly availed herself of his offer to aid her to fly from the court of Hanover, where she was most unkindly treated, to France. On the night of the intended elopement, 1694, the count was attacked by four soldiers, and, after a desperate resistance, cut down and murdered; and Sophia Dorothea was thereafter shut up in the gloomy castle of Ahlden, in the Duchy of Zell, where she was kept a close prisoner for 32 years. See Henri Blaze, *Les Koeningsmark*, (1856); Moreri's *Grand Dic. Historique*, Amsterdam, (1740); and *Grand Dic. Universel Hollandais.*

KÖNIGSMARK, MARIA AURORA, COUNTESS VON, the sister of the preceding, and one of the mistresses of Augustus II., king of Poland, was B. about 1678. She was equally celebrated on account of her personal charms and extraordinary talents, and of the part which she played in politics. While a girl, she wrote and spoke Swedish, German, French, Italian, and English, read the classics in the original languages, had an extensive knowledge of history and geography, and composed poems in French and Italian. She played on several instruments, composed music, sang, and painted with great skill,—all which accomplishments were aided by a refined wit and superior conversational powers. Thus gifted and accomplished, she arrived, in 1694, in Dresden, with her two sisters. The elector fell in love with her at first sight; she yielded, appeared at court as his mistress, and bore him a son, the famous Marshal Saxe (*q. v.*), to whose training she gave up the remainder of her life. Though the passion of the fickle king cooled, and another favorite supplanted the countess, he always remained on terms of friendship with her, and by his influence she was appointed, by the court of Vienna, superintendent of the abbey of Quedlinburg. D. 1768. See Baron Pöllonitz's *La Sax Gallant;* Cramer's *Leben der A. von K.*

Ko'nite, *n.* (*Min.*) See CONITE.

Kon'lite, *n.* (*Min.*) A compound of carbon and hydrogen, found with brown-coal in foliaceous or granular crystals.

Kon'rad, Konradin. See CONRAD, CONRADIN.

Koo'doo, *n.* (*Zoöl.*) The Striped Antelope, *Antilope strepsiceros*, a magnificent animal (Fig. 1486), superior to any other antelopes for size and height, and for bold and widely-spreading horns. It is 8 feet in length, and 4 feet in height at the shoulder; with ponderous horns beautifully twisted, having a prominent spiral ridge running obliquely from the base to the point, and extending to the length of about four feet. The color of the back and sides is a light-brown, with a narrow white

Fig. 1486.—KOODOO, OR STRIPED ANTELOPE.
(*Antilope strepsiceros.*)

band along the spine, and several similar stripes descending obliquely down the sides and hips; the belly and under parts being of a pale hue. The head is large, the ears broad, and the limbs thick and robust; yet, notwithstanding its heavy make, it takes long bounding leaps with surprising agility. It inhabits the woody parts of Caffraria, along the banks of the rivers, and when pursued takes to the water.

Koo'lo-kam'ba, *n.* (*Zoöl.*) See GORILLA.

Koom, Khoum, or **Kum,** a town of Persia, prov. Irak-ajamee, 80 m. S.W. of Teheran; Lat. 34° 45′ N., Lon. 50° 29′ E.; *pop.* 8,500.

Koordistan'. See KURDISTAN.

Kooril'ian, *a.* and *n.* (*Geog.*) See KURILIAN.

Kooskoos'kia River, in *Idaho.* See CLEARWATER RIVER.

Koos'kovine, KOUSKOVINE, KUSKOVINE, or KOUSKOGUIN, in *Alaska,* a river flowing into Bering Sea, about 150 m. N. of Bristol Bay.

Koo'tenai, or KOOTENAY, a river rising on the W. slope of the Rocky Mountains in British N. America, and after flowing a S. W. course into Montana, turns to the W., traversing a part of Idaho, then N. W. into the British possessions again, emptying into Kootenai lake.

Ko'peck, *n.* A Russian coin. See COPECK.

Kop'roli, or KUIPERLI MEHEMET, grand-vizier of Turkey during the minority of Amurath IV. He remained in power till his death. He was a sagacious governor, and filled the treasury, which had been emptied by the prodigality of the previous reigns. He was, however, cruel and relentless to those who gave him offence. D. 1661.

KOPROLI, *Achmet,* son of the preceding, succeeded his father as grand-vizier. He made war against Hungary in 1662, and lost, in 1664, the battle of St. Gothard, against Montecuculi, but concluded an advantageous peace at Temeswar. In 1669 he took Candia. D. 1675.

KOPROLI, *Mustapha,* son of the preceding, was grand-vizier under Soliman III. He made war in Hungary. He took Widdin and Belgrade, and was killed at the battle of Salenckemen, 1691.

KOPROLI, *Niuhman,* son of the preceding, was nominated by Achmet III. grand-vizier in 1710. He remained in power only two months. He was the victim of a strange hallucination, believing that he had a fly constantly on his nose. A French physician cured him, by feigning to perform an operation upon the feature, and afterwards showing him a dead fly, with which he had previously provided himself.

Ko'ran, ALCORAN, *n.* [Ar. *Al-goran,* or, less frequently, *Korau* — root *kara,* to read.] The sacred book of the Mohamuedans; which, according to their belief, was dictated to their prophet by the angel Gabriel, partly at Mecca, partly at Medina. One tradition has it that it was sent by God, through the agency of the angel, to the prophet, written on parchment made of the skin of that ram which was so providentially sent to Abraham. There is little doubt that it was originally preserved by oral tradition, or handed about, having been written on different fragments of parchment, or on palm-leaves, by the prophet's slave or scribe, Said-ben-Thabet, and that these were collected into a volume by Mahomet's successor, Abu-bekr, about two years after Mahomet's death. It is held in the greatest veneration among Mahometans, and they never touch it, it is said, with unwashed hands; and on the cover of it is written, "Let none touch but they who are clean." They swear by it, take omens from it, carry it in war, write its verses on their banners, and make it their companion throughout all troubles and dangers. The doctrine of the Koran is as ancient, they say, as the first prophets since God chastised Adam's children; that Noah repaired what the first had lost; then Abraham succeeded, then Joseph, then Moses; that Christ established, and Mahomet confirmed it. The principal articles of belief, are, that there is but one God, eternal and all-powerful, and that his divine law was fully declared by his prophets, and by Christ himself. Mahomet, however, is the last, and by far the most illustrious apostle; and as the Gospels have been maimed and altered, the Koran is to be revered as the only genuine revelation. Man is immortal, and will be judged at the last day. Sinners will be cast into hell. Moslems, true and virtuous, will be rewarded with everlasting happiness in a paradise enlivened by beautiful virgins. The hope of salvation, however, is not confined to the Mussulman; for all who believe in God, and do good works, will be saved. With reference to the description of the Mohammedan heaven, an old writer informs us that there are described in the Koran seven paradises: the first, they say, is of fine silver; the second, of gold; the third, of precious stones, where there is an angel, between whose one hand and the other is 70,000 days' journey, and that he is always reading on a book; the fourth is of emerald; the fifth, of crystal; the sixth, of the color of fire; and the seventh, a delicious garden, watered with fountains, and rivers of milk, honey, and wine; with divers sorts of trees, always green, and apples, whose kernels are changed into girls, so handsome and sweet, that if one of them should spit into the sea, the waters thereof would be no more bitter. They add that this paradise is guarded by angels, of which one has a cow's head with horns, which have 40,000 knots, and that there are 40 days' journey betwixt each knot. There are others which have 70 mouths, and every month 70 tongues, and each tongue praises God 70 times a day, in 70 different idioms. Before the throne of God there are 14 wax-candles lighted, which contain 50 years' journey from one end to the other; that all the apartments of heaven are garnished with all that may be conceived most pompous, rich, and magnificent; that the blessed are there fed with the most rare and delicious viands, and that they marry women who continually renew their beauty. They add, that their wives do not enter paradise, but behold the happiness of their husbands at a distance. One of the most weighty obligations imposed by the Koran is to propagate Islamism, *i. e.* Mohammedanism; and besides this, many practical duties are pointed out. Prayers at appointed periods, fasting, and charity, are indispensable. Cleanliness and religious ablutions are strongly urged, and, once in a man's life, a pilgrimage to Mecca, Mahomet's birthplace. In many usages the Koran restricts, while it indulges, the prejudices of Mohammedans; as, for instance, instead of unlimited polygamy, four wives are, at most, by it allowed. Murder, adultery, calumny, perjury, and pork, are sinful, and prohibited; and usury, gaming, and wine are forbidden. The Koran is, doubtless, the offspring of fraud and impostnre; but its religion must surely have been a blessing to the Eastern world, substituting, as it did, the exercise of prayer and charity for the sacrifice of human victims, and breathing a spirit which was purity itself when placed in juxtaposition with the bloodthirstiness, rapine, and discord which prevailed when Mahomet produced his Koran.

Korat', a state of Asia, tributary to Siam, in Lat. 15° 40′ N.; *pop.* about 60,000.

Kordofan', a country of E. Africa, subject to the sovereign of Egypt, between the kingdom of Darfur and that of Sennaar; Lat. bet. 11° and 15° N., Lon. 28° and 32° E. The Bahr-el-Abiad (White Nile) traverses its S. E. part. The principal town is Obeid, or El Obeid The climate is very unhealthy The population, comprising negroes, Arabs, etc., is estimated at 300,000.

Kore'a. See CORE'A. (*Ko-ree'a.*)

Kör'ner, KARL THEODOR, an eminent poet, often called the *German Tyrtæus,* was B. at Dresden, 1791; and, after studying at Leipsic, became a dramatist, and secretary to the management of the court theatre of Vienna. Being an enthusiast for the liberty of Germany, he entered as a volunteer into the Prussian army, in 1813; signalized himself equally by his bravery and his martial songs; was promoted for his conduct at the battle of Lützen; was afterwards twice wounded; made a lieutenant; and fell in a skirmish with the French, in Mecklenburg, August 26, 1813. His lyrical poems were published after his death, under the title of *The Lyre and Sword;* but innumerable editions of his works, consisting of his dramas, poems, and other literary remains, have since been published in Germany; and many of his writings have been repeatedly translated into English.

Korn'thal, (Society of.) (*Eccl. Hist.*) A religious community in the kingdom of Würtemberg, founded by one Hoffman, a burgomaster of Leouberg. Perceiving that a difference of religious belief led many of the inhabitants to emigrate to other countries, he thought that this would be prevented if dissenters were removed from under the jurisdiction of the Lutheran consistory, and were allowed the free exercise of their own religious worship. In 1819 he obtained a royal edict granting relief and toleration to about forty families of dissenters, who bought the lordship of Kornthal, about two leagues from Stuttgart, and formed themselves into a community somewhat after the Moravian model. Their numbers, for a period, rapidly increased. Their mode of worship nearly resembles that of the Protestant churches, and their discipline resembles that of the Moravian Brethren.

Körös, NAGY, (*ke(r)esh',*) or GREAT KÖRÖS, a town of Hungary, co. Pesth, 49 m. S.E. of Pesth. Black cattle and sheep are extensively reared. *Pop.* 17,700.

Körös Kiss, or LITTLE KOROS, a small town of Hungary, co. Pesth, 38 m. S.W. of Koros Nagy; *pop.* 6,500.

Korot'cha, KOROTSCHA, or KAROTCHA, a town of European Russia, 68 m. S.E. of Kursk. *Pop.* (1897) 6,480.

Kort'right, in *New York,* a post-town of Delaware co. *Pop.* (1897) 1,650.

Kos, *n.* Among the Jews, a measure of capacity, equivalent to 4 cubic inches.

Koscins'ko, THADDEUS, a celebrated Polish general and patriot, was descended from an ancient and noble, though not wealthy, family in Lithuania, and was B. in 1756. He was educated at the military school of Warsaw, and completed his studies in France. On his return to Poland he had a commission given him, but being refused promotion, he went to America, where war was then carrying on against Great Britain. He was made a colonel of engineers, and aide-de-camp to Washington. At the conclusion of the war he returned to his native country, and lived in retirement; but when the Polish army was formed, in 1789, the diet appointed him a major-general. He declared himself for the constitution of May 3, 1791, and served under Prince Joseph Poniatowski. In the campaign of 1792 he distinguished himself against the Russians at Zieleneck and Dubienka. At the latter place, under cover of some works which he had thrown up in the course of 24 hours, he repulsed, with 4,000 men, three successive attacks of 18,000 Russians, who prevailed only after the loss of 4,000 men. When King Stanislaus submitted to Catharine, he, with 16 other officers, left the army, and was, therefore, obliged to retire from Poland. He went to Leipsic, and the legislative assembly of France, at this time, gave him the rights of a French citizen. The Poles becoming impatient under the oppression of Russia, all eyes were turned towards *K.,* whom they chose for their leader, and invested with the full powers of generalissimo. *K.* then advanced to meet the Russian forces. Without artillery, at the head of only 4,000 men, part of whom were armed only with scythes and pikes, he defeated 12,000 Russians at Raslavice, April 4, 1794. His army soon increased to 9,000 men, the insurrection extended to Warsaw, and in a few days the Russians were driven from that palatinate. But the enemy poured in on all sides, and at length, after having for six months delayed the fall of Poland, he was wounded and taken prisoner, Oct. 4, at the battle of Maceionice. He was sent to Russia, and confined in a fortress near St. Petersburg, till the accession of the emperor Paul, who set him at liberty. In 1797 he took his departure for this country, but returned to Europe the following year, and settled in Franco. D. at Soleure, in Switzerland, 1817.

Koscins'ko, in *Indiana.* a N. co.; *area,* abt. 558 sq. m. *Rivers.* Tippecanoe river, Turkey creek, and several small lakes. *Surface,* mostly level or gently undulating; *soil,* fertile. *Cap.* Warsaw. *Pop.* (1897) 29,850.

Koscius'ko, in *Mississippi,* a post-village, cap. of Attala co., 70 m. N.N.E. of Jackson. *Pop.* 1,454.

Koscinsko, (Mount,) (*kos'ce-us'ko,*) a mountain of Australia, in Victoria, the most lofty of the Australian Alps, at the head of the river Murray. Height, 6,500 feet.

Koshkonong', in *Wisconsin,* a post-village and township of Jefferson county, near the lake of its own name.

Koshkonong' Creek, in *Wisconsin,* rises in Dane co., and flows into the lake of its own name.

Koshkonong' Lake, in *Wisconsin,* an expansion of Rock River in Jefferson co. It covers an area of abt. 25 sq. m.

Kosseir. See COSSIER.

Kossuth', LOUIS, ex-Governor of Hungary, was B. Sept. 16, 1802, at Monok, in the county of Zemplin, where his father was a small owner of the noble class. Louis was educated at the Protestant College of Scharasehpatack, where he qualified himself for the profession of an advocate, obtained his diploma in 1826, and in 1830 became agent to the Countess Szapary, and as such sat in the Comital Assembly. At the age of 27 he took his seat in the National Diet of Presburg, as representative of a magnate. He published reports of the proceedings of this assembly on lithographed sheets, until they were suppressed by the government, and afterwards in MS. circulars. The government, which determined not to allow reports of parliamentary debates to become current in Hungary, prosecuted him for high treason; and in 1839 he was sentenced to four years' imprisonment. After about a year and a half of confinement, he was liberated under an act of amnesty. With the commencement of the year 1841, *K.* brought out the first number of the *Pesti Hirlap* (Pesth Journal), which, at starting, was issued four times a week, and, soon after, daily. The success of the new journal was very great, the circulation at one period reaching the number of 10,000. About this time *K.* married. Throughout the ensuing six years the *Pesth Journal* was a bold and unceasing opponent of the Austrian design of substituting for the constitutional government of Hungary, one based on the Imperialist principles. In the Diet, the liberal opposition, headed by Count Louis Batthyany, was likewise very decided. In 1847 *K.* became the representative of the city of Pesth in the Diet, and in March, 1848, he proposed that a deputation should be sent to the king of Hungary (the emperor of Austria), asking that a new ministry, composed of Hungarians, together with certain constitutional reforms, should be granted. *K.* was a member of this deputation, which reached Vienna soon after the minister, Prince Metternich, had quitted it, and while the city was in a most excited state. The deputation was received by the emperor, who acceded to their request, and decreed that a new and liberal ministry should be formed, with Count Louis Batthyany as president, and *K.* as minister of finance. Many more reforms followed this decree, in the benefits of which the Servians and Croatians participated with the Hungarians. The Servians and Croats were, at the outset, greatly pleased with the new concessions, but were soon afterwards led to believe, by Austrian agents, that Hungary sought to enslave them, and to destroy their religion and nationality. Accordingly, in June, 1848, they rose against the Hungarians, being secretly provided by Austria with arms and stores, and commanded by disguised officers of the Austrian army. Several desperate encounters took place on the frontiers, and many villages were laid waste. *K.,* by his great eloquence and energy, roused his countrymen into fierce activity; ten battalions of Honveds, or defenders of home, were organized, and these, with some regiments of hussars and of the line, formed the nucleus of what was subsequently the great Hungarian army. Three months afterwards, Jellachich, Ban of Croatia, invaded Hungary at the head of 30,000 Servians and Croats. He was met by the Hungarians, under Guyon and other leaders, and defeated. About the same time, Field-Marshal Count Lamberg was sent from Vienna as commander-in-chief of the Hungarian army. He went to Pesth to assume his post; but the infuriated populace murdered him on the Buda-Pesth bridge. The rupture between Hungary and Austria was now complete, the parliament of the former addressing the nation in a "Remonstrance," which roused the entire population. In October, the Hungarian army crossed the frontier, and advanced to within a short distance of Vienna, but was there defeated. The Hungarian parliament now retired from Pesth to Debreczin, where they proclaimed the deposition of the house of Hapsburg, and the independence of Hungary. The measure, proposed by *K.,* is said to have led to that great division among the Hungarians which ultimately proved fatal to their cause. It certainly furnished to Görgei a pretext for surrendering unconditionally to the Russians. *K.* was nominated by the parliament provisional governor of Hungary. Meantime, the Austrians, under Prince Windischgrätz, invaded Hungary. The Austrians were defeated in several engagements; but, in May, 1849, a Russian army entered Hungary, and closely pursued Görgei to Arad. In the south, the Hungarians were defeated by the Austrian army, under General Haynau, in August, 1849. On receiving news of this disaster, *K.* resigned his civil and military power as dictator to Görgei, who, on the 14th of the same month, surrendered himself and his whole army to the Russians. The Hungarian struggle was thus terminated. *K.* was compelled to retire to Turkey. He reached Shumla with Bem, Dembinski, Perczel, Guyon, and

5,000 men, and was allotted a residence in Widdin. Austria and Russia wished the refugees to be given up, in which case they would probably have been executed. Through the intervention of France and England, the demand was refused. The late Sultan behaved with great humanity and disinterestedness on the occasion. The refugees were removed to Kutayieh, in Asia Minor, where they remained prisoners until August 22, 1851, when, at the intervention of the U. States and England, *K.* was allowed to depart with his family and friends. He reached Southampton Oct. 28, sailed for the U. States Nov. 21, and making a tour, agitating in favor of Hungary, was enthusiastically received in all our principal cities. His designs having received a fatal blow by the *coup d'état* of Louis Napoleon, *K.* soon returned to England, where he long resided, occupying himself chiefly with writing for newspapers, and delivering lectures against the house of Hapsburg. One of the last occasions on which his name was brought prominently before the public, was in 1860, when the Austrian government instituted a successful process against Messrs. Day & Sons for lithographing several millions of bank-notes for circulation in Hungary, signed by *K.*, as governor of that country. In Nov., 1861, he published in the *Perseveranza*, an Italian journal, a long letter, setting forth the situation of Hungary, and urging the Italians to commence war against Austria, with the view of enabling the Hungarians to develop their strength against that power; issued an inflammatory address to the Hungarians, June 6, 1866, and, after the close of the war of that year advised the Hungarians to reject the concessions offered by Francis Joseph. He was elected deputy for Waitzen, Aug. 1, 1867. After the restoration of the Hungarian autonomy in 1870, *K.* was again elected a member of the Diet. His *Memories of my Exile* appeared in 1880.

Kossuth', in *Illinois*, a village of Boone co.

Kossuth, in *Indiana*, a post-office of Washington co.

Kossuth, in *Iowa*, a N. co., adjoining Minnesota; *area*, about 984 sq. m. *Rivers.* Des Moines and numerous smaller streams. *Surface*, generally level; *soil*, fertile. *Cap.* Algona. *Pop.* (1895) 18,345.

—A post-village of Des Moines co.

Kossuth, in *Kansas*, a post-office of Linn co.

Kossuth, in *Maine*, a post-township of Washington co.

Kossuth, in *Michigan*, a village of Iona co.—In *Mississippi*, a post-town of Alcorn co.—In *Ohio*, a post-village of Auglaize co., about 40 m. N. by W. of Piqua.

Kossuth, in *Pennsylvania*, a post-village of Clarion co.

Kossuth, in *Wisconsin*, a township of Columbia co.

—A village and township of Manitowoc co., about 10 m. N. by W. of Manitowoc.

Kostro'ma, a town of European Russia, and cap. of govt. of same name, on the Volga, 200 m. N.E. of Moscow. *Manuf.* Leather, linen, Prussian blue. It is the capital of the Greek eparchie. *Pop.* 16,500.

Fig. 1487. — RUSSIAN INN, KOSTROMA.

Kostro'ma, a river of Russia, which, after a S. course of 130 m., joins the Volga at Kostroma.

Ko'tah, a town of Hindostan, cap. of a state of same name, under British protection, in Rajpootana. The town is in Lat. 25° 10′ N., Lon. 75° 52′ E., on the Chumbul.

Koth, *n.* [Ger., rubbish.] A sort of scoriæ thrown up by the volcanoes of the Andes.

Ko-tow', *n.* and *v.* See KOW-TOW.

Kot'zebue, AUGUST FRIEDRICH FERDINAND VON, a prolific German writer, B. 1761, at Weimar. At the age of 16 years he entered the university of Jena, where his inclination for the drama was confirmed by his connection with a private theatre. In 1781 he went to St. Petersburg, at the suggestion of the Prussian minister at that court, and became secretary to the governor-general, Von Bauer, who recommending him to the Empress, she became his patroness, and he was finally appointed president of the government of Esthonia. In 1795 he retired to a country place abt. 35 m. from Narva, but soon after went to Weimar, and from thence again to St. Petersburg. He had, however, scarcely arrived on the frontiers, before he was arrested and sent to Siberia, without any reason being assigned. A short drama of his, an indirect eulogy of Paul I., was translated into Russian, and laid, in manuscript, before the emperor, who was so delighted with it, that he recalled *K.*, and took him into favor. After the death of Paul, he again went to Germany, but, in 1806, revisited Russia, to avoid the French, and never ceased to write against Napoleon. Some subsequent years were spent in travelling, and the remainder of his life in pouring forth his innumerable literary productions. He is said to have written many of the Russian state papers and proclamations. In 1817 he received a salary of 15,000 roubles, with directions to reside in Germany, and to report upon literature and public opinion. This invidious office *K.* is said to have filled in a manner hostile to the freedom of his native land, and he was regarded with aversion by the liberals of Germany. His strictures on the conduct of the students of the German universities highly exasperated them, and the feeling was so strong in the case of a young enthusiast named Sand, that he went to *K.*'s house at Mannheim, and there deliberately murdered him, March 23, 1819, and then immediately gave himself up to justice. *K.* was author of 98 dramas, and his name appears to about 200 more, which are either translations, or were written by other persons and re-touched by him. Among his other numerous productions are, *A History of the German Empire*; *A History of Ancient Prussia*; and various *Recollections*, such as of Paris, Rome, Naples, &c.

Koughs'town, in *New Jersey*, a village on the line between Hunterdon co., abt. 4 m. S.E. of Flemington.

Koul, *n.* In Persia, a soldier of patrician birth.

Kou'miss, Ku'miss, *n.* [Mongol.] A Tartar beverage of fermented mare's milk.

Kou'pholite, *n.* [Gr. *kouphos*, light, and *eidos*, stone.] (*Min.*) A species of zoölite or prehnite, from the Pyrenees, occurring in small rhomboidal plates, of a pearly lustre, and of a yellowish or green color.

Kou'rie, *n.* The name of a new gum, obtained from trees in New Zealand, the species of which are not ascertained. It is said to be an excellent strong and water-proof cement for caulking tanks, and cementing pieces of glass, stone, or wood together. Before using, it is fused, and mixed with one-third part of its weight of castor-oil.

Kouskovime, in *Alaska*. See KOOSKOVIME.

Konssoo', *n.* (*Bot.*) See BRAYERA.

Kout's Station, in *Indiana*, a post-office of Porter co.

Kowaree', or **Kwa'ra, River.** See NIGER.

Kow'-tow, KOU-TOU, *n.* [Chin.] A genuflexion; a profound obeisance by bowing the head, performed by the Chinese. (In English parlance, a cringing, obsequious salutation.)

—*v. a.* To perform the Chinese ceremony of bowing down to the ground; — hence, to bow to in a cringingly deferential manner; as, to *kow-tow* like a toady.

Koyl'ton, in *Michigan*, a township of Tuscola co.

Koz'lov, or KOSLOW, a town of European Russia, govt. of Lambov, 52 m. W.S.W. from Lambov. It has considerable trade in cattle and tallow. *Pop.* 23,000.

Kraal, (*krawl,*) *n.* [Du.] In S. Africa, a hut, or collection of huts; as, a Hottentot *kraal*.

Kra'ken, *n.* A fabulous sea-monster of enormous size.

Kra'una, *n.* In Hindostan, a wooden-sandal.

Krameria'ceæ, *n. pl.* (*Bot.*) See POLYGALACEÆ.

Kramer'ic Acid, *n.* (*Chem.*) An acid obtained from the roots of the *Krameria triandria*, or rhatany. See POLYGALACEÆ.

Krang, Kreng, *n.* The fleshy substance of a whale's carcass, after extraction of the blubber.

Kras'noyarsk, Kras'noiarsk, Kras'nojarsk, a town of Asiatic Russia, in Siberia, government Yeniseisk, on the river Yenisei; Lat. 56° N., Lon. 92° 57′ E. *Manuf.* Leather; and is the emporium of the extensive region between Irkutsk and Tobolsk. *Pop.* (1897) 7,500.

Krat'zerville, in *Penna.*, a post-village of Snyder co.

Kran'rite, *n.* (*Min.*) Green iron-stone. See DUFRENITE.

Kraw, a town of Siam, from whence a ship-canal to Shorten the route to China and the East, is projected, piercing the Siam peninsula and connecting the Bay of Bengal with the Gulf of Siam.

Kre'atine, *n.* (*Chem.*) See CREATINE.

Kreat'inine, *n.* (*Chem.*) See CREATININE.

Krei'dersville, in *Pa.*, a P. O. of Northampton co

Kremenetz, Kremenets, (*krem'e-nez,*) a town of Russian Poland, govt. of Volhynia, 36 miles W.S.W. of Ostrog; *pop.* 6,300.

Krem'entchoog, KREMENTCHOUG, KREMENTCHUG, or KREMENTSCHUG, a town of Russia, govt., and 64 m. S.W. of Pultowa, on the river Dnieper. *Manuf.* Hats, sugar, nitre, and soap. *Pop.* 19,800.

Krem'lin, *n.* [Russ. *kreml.*] A term applied in Russia to the citadel of a fortified town. See MOSCOW.

Kremnitz, CREMNITZ, (*krem'nits,*) a town of Austria in Hungary, co. Bars, 8 m. W. of Neusohl. *K.* is noted for its extensive gold and silver mines, which, however, are less productive than formerly. *Manuf.* Vitriol, paper, earthenware, and vermilion. It is supplied with water by an aqueduct 50 m. long. *Pop.* 7,000.

Krems, *n.* [From *Krems*, in Austria.] (*Min.*) A white carbonate of lead: Vienna-white.

Kreng, *n.* Same as KRANG, *q. v.*

Kre'osote, *n.* (*Chem.*) See CREOSOTE.

Kres'geville, in *Pennsylvania*, a P. O. of Monroe co.

Kreutzer, (*kroit'ser,*) *n.* A German coin, worth about one cent.

Krick's Mills, in *Pennsylvania*, a P. O. of Berks co.

Krie'gia, *n.* [Dedicated to Dr. Daniel *Krieg*, a German botanist.] (*Bot.*) A genus of plants, sub-order *Ligulifloræ*. They are small, acaulescent herbs, having solitary heads, with from 25 to 30 yellow flowers. *K. Virginica*, the Dwarf-dandelion, is found on sandy hills and roadsides, from Canada to Louisiana.

Kris, *n.* Same as CREESE, *q. v.*

Krish'na, *n.* (*Hindoo Myth.*) The eighth incarnation of *Vishnu*, (q. v.) He was remarkable for beauty, valor, and wisdom; and is said to have caused 16,800 women to become enamored of him. He was accidentally killed by the hunter Angada; whereupon all his female admirers voluntarily sacrificed themselves upon his funeral pile. His career is strikingly like that of Apollo and some other Greek divinities. The adventures of *K.* have given rise to a celebrated poem among the Hindoos, called the *Bhagavata Purana*, which is said to have been composed during the 13th century.

Krist'nah. See KISTNA.

Krokid'olite, *n.* (*Min.*) See CROCIDOLITE.

Kroo'man, *n.*; *pl.* KROOMEN. A negro of a race inhabiting a small section of W. Africa, who serve much on shipboard.

Krotoszyn, Krotoschin, (*kro'to-shin,*) a town of Russian Poland, 54 m. S.S.E. of Posen. *Manuf.* Woollens, linens, leather; and there is a large trade in wool. *Pop.* 7,425.

Kroya, Croya, (*kro'ya,*) a town of European Turkey, in Albania, 45 miles S.S.E. of Scutari. *Manuf.* Arms. *Pop.* estimated at 16,000.

Kru'dener, JULIANA WITTINGHOFF, BARONESS VON, a religious enthusiast, was the daughter of the governor of Riga, where she was B. in 1766. For some years she resided in France, and at the age of fourteen married Baron Krudener, appointed ambassador by Catharine II. to Berlin, and subsequently to Venice. Here the secretary of legation fell in love with her, and committed suicide; on which event she wrote a romance, entitled *Valérie*. Returning to Berlin, she enjoyed the friendship of the queen of Prussia, and on her death fell into a profound melancholy, which was succeeded by a religious enthusiasm. She became a follower of Jung Stilling, and wandered from state to state, preaching and prophesying. In 1814 she became acquainted with Alexander, emperor of Russia, who had already for some time shown a disposition to religious contemplations, and on whom her conversation had a great influence. In Paris, she had prayer-meetings, attended by distinguished personages, where she was seen in the background of a suite of rooms, in the dress of a priestess, kneeling in prayer. Her predictions excited much attention; and when the allied sovereigns quitted Paris, she retired into Switzerland, where she preached the coming of the millennium, and drew around her multitudes of the credulous mountaineers, who listened to, and believed in, her mission. At length the states interfered, and she removed to Germany; but wherever she arrived, she was under the surveillance of the police, who ultimately transported her to the Russian frontier. She was, however, ordered not to go to St. Petersburg or Moscow; she visited the Crimea, where she died in 1824.

Kru'ka, *n.* (*Zoöl.*) A bird of Russia, resembling the hedge-sparrow.

Krul'ler, *n.* [O. Eng. *crull.*] A crispy cake boiled in fat.

Krumm'horn, Krum'horn, *n.* [Ger.] (*Mus.*) A musical instrument of the cornet kind, now in disuse.

Krupp, and **Krupp Works.** See SECTION II.

Kryolyte. See CRYOLITE.

Krys'talline, *n.* [Gr. *krystallos*, clear ice.] (*Chem.*) A salifiable base which forms crystalline compounds with the acids, obtained from empyreumatic oil.

Ksar, (*zär,*) *n.* Same as CZAR, *q. v.* [Knight Templar.

K. T. Abbreviation of Knight of the Thistle and of

Ktistol'atræ, *n. pl.* (*Eccl. Hist.*) A branch of the Monophysites, which maintains that the body of Christ, before his resurrection, was corruptible.

Ku'ba, Kooba, or **Konba,** a town of Russia, in the Caucasus, prov. of Daghistan, on the river Kuban, 55 m. S.S.E. of Derbend. *Pop.* 4,600.

Ku'ban, Koobau, or **Kouban,** a river of S. Russia, rising near Mount Elbrooz, and after a W. course of 380 m. falls into the Bay of Kooban, on the Black Sea, 20 m. N. of Anapa.

Kubla-Khan', [Chin. *Chi-Tsou.*] The founder of the 20th Chinese dynasty, that of the Mongols or Yen. He was the grandson of Jenghis-Khan, and was proclaimed emperor of the Mongols in 1260, in succession to his brother Mangou-Khan. He reigned, at first, only in Mongolia and the countries conquered by Jenghis-Khan; but he invaded China in 1267, captured the Chinese emperor in 1279, and thus overthrew the Song dynasty, which had ruled for 319 years. He extended his conquests over Thibet, Pegu, Cochin-China, and formed the greatest empire known in history, embracing the whole of Asia and part of Europe, from the Dnieper to Japan. He patronized letters, and encouraged agriculture, industry, and commerce. Marco Polo passed seventeen years at his court. D. 1294.

Ku'fic, *a.* Relating or pertaining to ancient Arabic; as, *Kufic* characters.

Kuil'enburg, Kul'emborgh, or **Cul'enborg,** a town of Netherlands, province Gelderland, on the Leck, 10 m. N.W. of Thiel. *Manuf.* Arms, silks and twist. *Pop.* (1897) 6,100.

Ku-Klux-Klan', *n.* A name assumed by a secret organization, whose first purpose was to scare the superstitious colored people, but which soon became a political society, designed to intimidate the "carpet-baggers" and freedmen. Some of the members, or pretended members, went on to the commission of outrages and even murders. The operations became so extensive that Congress passed severe laws to suppress the order. In the end the law-abiding citizens of all parties united against it. Its chief fields of action were in North Carolina, South Carolina, Louisiana and Arkansas.

Ku'kupa, *n.* (*Zoöl.*) A beautiful species of wood-pigeon, known by this name in New Zealand, where it is very plentiful.

Kul'lispelm Lake, or LAKE PEND OREILLES, in *Idaho*, an expansion of Clark's river, about 100 m. above Columbia river. It covers an area of about 650 sq. m.

Kulps'ville, in *Pennsylvania*, a post-village of Montgomery co., about 12 m. N. of Norristown.

Kuma'on, or **Kemaon,** a prov. of N. Hindostan, presidency of Bengal; Lat. between 29° and 31° N., Lon. 78° and 81° E. It includes a portion of the S. slope of the Himalayas. *Area*, estimated 11,000 sq. m. Some of its mountains rise to an elevation of 25,000 feet. *Cap.* Almora. *Min.* Gold, copper, and lead. *Manuf.* Coarse woollen, hemp, and cotton fabrics. *Pop.* 184,800.

Ku'miss, *n.* See KOUMISS.

Kum'quat, *n.* (*Bot.*) See CITRUS.

Kun'ckle, or **Knukle,** in *Pennsylvania*, a post-office of Luzerne co.

Kung-fu-tse, or **Confucius,** a celebrated Chinese philosopher, the Moses and the Plato of the Celestial Empire, B. in the prov. of Shantung, dept. of Yin-chau, B. C. 551. His family name was Kung, and his most commonly used nomenclature, Chong-ni. He was generally called by his disciples *Kung-fu-tse*, or "The Teacher Kung." This title was Latinized by the Jesuit missionaries, giving us the word *Confucius*, which has now become current among the W. nations. His parents were respectable, though poor. He manifested a taste for study when very young, and became a teacher at 22. His character as a learned man soon drew towards him a large number of admiring and devoted disciples. He was repeatedly applied to by the petty princes who ruled the small kingdoms, into which China was at that time divided, to take office and assist in the administration of government, and remarkable accounts are given of the salutary measures he introduced, and the beneficial results which followed. He was, however, so little a courtier, and his morality and theories of government and political economy were of so severe a type, that he generally remained but a short time in one place, his presence either becoming distasteful to his employers, or his sense of justice and propriety being shocked by constantly beholding what he could neither approve nor reform. Much of his long life was spent in journeying from province to province, vainly endeavoring to reform the abuses of the times, giving instruction to his followers, and prosecuting his studies. Greatly neglected, and imperfectly appreciated during his life, his people have, since his death, gone to the opposite extreme of exaggerating his merits and exalting him "above all that is called God or is worshipped," almost ascribing to him perfection of virtue and omniscience, in opposition to his clear and repeated acknowledgments of imperfections and ignorance. As is frankly stated by himself in many parts of his works, he was not the originator of any new doctrine or system of doctrines, but simply the expounder and perpetuator of the teachings of the sages who preceded him. At that early period he was already looking back into antiquity, and endeavoring to save its works from oblivion. The fact that Confucius made no marked advance on the knowledge of his predecessors, but was always referring to the golden age of the past, is calculated to produce a profound impression as to the moral and intellectual culture of those who laid the foundation of the Chinese civilization more than 3,000 years ago. Confucius, then, was rather the exponent and embodiment of the Chinese culture than the originator of it. The Chinese classics, in which the Confucian system is found, comprise what are called the *Wu-king* and the *S-shu* — "The five Classics and the Four Books." The former, with one exception, existed before the time of Confucius, and are frequently referred to in his teachings. They are the *Shu-king*, the most ancient historical work in China; the *S-king*, or "Book of Odes;" the *Yih-king*, or "Book of Changes" (an abstruse and incomprehensible system of philosophy, ontology, &c.); the *Li-kyë*, or "Book of Rites and Ceremonies," and the *Chuen-tsew*, "Spring and Autumn," — the last being an historical work written by Confucius himself, and covering a period of a few hundred years before his time. It is called "Spring and Autumn" because the commendations and examples presented in it for imitation are supposed to be life-giving like spring, and the criticisms and rebukes withering like autumn. Of the Four Books, the first and most important is that which contains the sayings and teachings of Confucius himself, as recorded by his disciples after his death. The 2d contains the teachings of Mencius, a celebrated philosopher who lived about 200 years after the time of Confucius. The other two works, called the "Great Learning" and the "Doctrine of the Mean," are considerably smaller than the preceding, with which they are associated as a part of the Four Books, though they really originated before the time of Confucius, and are found in the "Book of Rites." The books are emphatically and almost exclusively the text-books in all the schools of China, and are regarded as the *summum bonum* of knowledge and literary excellence. They have moulded the minds and characters of the Chinese race, and are the ultimate standard to which all moral, governmental, historical, and religious questions are referred. The contents of these books may be represented in general as made up of ethics, history, political economy, biography, and poetry. The religious element is almost entirely wanting. It is distinctly stated by the disciples of Confucius that he did not discourse on the gods. Silence on this subject was probably not owing to any contempt or disregard for it, but to ignorance. Confucius professed to teach positive truth, in opposition to what is vague, uncertain, and inferential; and when he could not speak clearly and authoritatively, he chose not to speak at all. When asked by one of his disciples about death, his sad answer was, — "Imperfectly acquainted with life, how can I know of death?" A correct general idea of his system may be obtained from the Five Relations, which form the basis of it, and the Five Virtues, which were the subject of his most frequent conversations. The Five Relations are those subsisting between emperor and officer, father and son, husband and wife, older and younger brothers, and friends. The principles and duties connected with the first relation present, as they are developed and explained, the Chinese system of government and political economy, which forms a large part of Confucius's teachings. The next three relations belong to the family, which is justly regarded as the true foundation of the State. Here are to be inculcated lessons of respect, obedience, and regard for law. Here habits of subjection to lawful authority are formed which fit the individual for being a good citizen. Filial piety stands first in the category of human duties, and is an important part of the religion of the Chinese. Disrespect or disobedience to parents is sometimes punished with death. No stigma which could be attached to the character of a Chinaman is more dreaded than that of *Puh-hiao* — "undutiful." Children in their earlier years are required to be respectful, dutiful, and retiring; when their parents are advanced in life, they are expected to reverence and cherish them, to anticipate all their wants, and strive in every way to please them; and when their parents are dead, to worship and sacrifice to them. Men are exhorted to avoid intemperance and vice, lest they injure and debase the bodies derived from their parents. It is regarded as one of the strongest motives to a virtuous and honorable life to avoid disgracing and offending departed ancestors, and to live in such a manner as to reflect honor upon them. Respect for parents is also regarded as naturally connected with and leading to reverence for the Emperor, who is the Great Father of his people, as well as the Son of Heaven. The relation between husband and wife is not largely dwelt upon. Woman has an inferior position allotted to her, and is the servant rather than the companion of her husband. The duties of brethren are expressed in the oft-repeated maxim — "Huing ai, ti kin" — "The elder is to love, the younger to respect." There remains the wider relation subsisting between friends; which it is not necessary to dwell upon. The Five Relations cover the whole sphere of human duties. The relation between God and man is neglected and unknown, while almost divine honors are awarded to the Emperor and to ancestors. The Five Virtues of the Confucian system are *Jen*, *Yi*, *Li*, *Chi*, and *Sin* — "Benevolence," "Righteousness," "Propriety," "Knowledge," and "Faith." It is worthy of remark that in this system, as in the Christian, *Jen*, or Benevolence, stands first and foremost. Of this virtue and excellence Confucius seems to have had so high a conception or ideal, that he did not regard any contemporaries, and but few of the ancient worthies, to have fully attained to it. The following is his definition of it. When asked by one of his disciples, "Is there any word which may serve as a rule of practice for all one's life?" his answer was, "What you do not want done to yourself, do not do to others." The one word for the government of the whole life is, "all the law" of the Confucian system, and is, to say the least, the nearest approximation to the Golden Rule of our Saviour which has ever been reached by any ancient sage. The next virtue, Propriety — outward forms and ceremonies — brings to view a characteristic feature of this system. Every inward state of feeling is supposed to have a proper outward expression. While the inner feeling naturally gives rise to its external manifestation, so the habitual cultivation of the outward forms of propriety tends to foster and develop the inner virtue. There are also certain forms or rules of propriety and conduct which should regulate the intercourse between men in different ranks and positions in society, and which naturally and necessarily belong to certain times, circumstances, and occasions. These rules of propriety are regarded as the great balance-wheel which gives harmony and unity to society, or as one of the chief corner-stones on which society and government rest, and without which mutual understanding and respect would give place to confusion, lawlessness, and anarchy. Confucius devoted much of his attention to the study of the rites and ceremonies of different kingdoms and states, and the importance which he attached to this matter has had much to do in developing and stereotyping those inflexible formalities and minute conventionalities which are everywhere seen in social and public life. *Knowledge* relates to general learning and intelligence, but especially to a knowledge of men, a knowledge of one's self, and practical wisdom in dealing with others. While Confucius refers to the sages of the past as the authors of his system, he rests its authority upon the verdict of conscience, and it was to this that he constantly appealed. He sought to interpret rightly and to follow carefully the suggestions and intimations of man's moral nature. The ultimate object of Confucius's teachings is the promotion of good government; and the instruction of his disciples relates principally to their preparation for successfully influencing and controlling others. It is to be regretted that, in adopting the views and following the examples of those who preceded him, he sanctioned and encouraged the worship of gods and ancestors, the pride and self-conceit of his nation, and the doctrine of revenge, as allowable and obligatory in the case of a son whose father has been murdered. To reproach Confucius, however, for these defects, and because his system, though excellent in many respects, is manifestly imperfect, is to find fault with him for being human. Would it not be unreasonable to expect him to approach nearer to the Christian standard of truth and worship than he has? While he was not, and did not, aspire to be great as a metaphysician or logician, he was rather the practical philosopher, thoroughly versed in the knowledge of his times; a close observer of men, earnest, sincere, and retiring in his spirit, and desiring to benefit his race, and to teach the truth. It is, perhaps, not too much to say of him that the system of ethics and morality which he taught is the purest which has ever originated in the history of the world independent of the divine revelation in the Bible, and that he has exerted a greater influence for good upon our race than any other uninspired sage of antiquity. — In our treatment of this article, we are much indebted to the excellent work on *China and the Chinese*, which records the missionary experiences of the Rev. John L. Nevius.

Fig. 1488. — KUNG-FU-TSE, (*Confucius.*) (Traditional likeness.)

Kun'kletown, in *Penna.*, a post-vill. of Monroe co.

Kup'fernickel, *n.* [Ger.] (*Min.*) See COPPER-NICKEL.

Kur, Kour, or **Koor,** (anc. CYRUS,) a river of Asiatic Russia, in Georgia, rising in the pashalic of Akhalzikh, flows E.S.E., and after a course of 500 m. falls into the Caspian Sea, 100 m. S.W. of Baku.

Kurd, *n.* (*Geog.*) A native or inhabitant of Kurdistan. (Sometimes written *Koord.*)

Kurd'ish, Koord'ish, *a.* Relating or pertaining to the Kurds.

Kurdistan', or **Koordistan',** ("Country of the Kurds,") a region of W. Asia, divided between Turkey and Persia; Lat. between 32° and 38° N., Lon. 42° 47′ E. *Area*, estimated 52,000 sq. m. *Surface*, mountainous, hence cattle-raising forms the chief occupation of the inhabitants. *Rivers.* Euphrates, Tigris, Zab-Ald, Zab-Asfal, and Dryalah. *Prod.* Rice, cotton, and tobacco. The Kurds are robust, hardy, temperate, and long-lived, are of a swarthy complexion, with dark hair, a large mouth, small eyes, and a ferocious and savage look. They are averse to a settled life, and war and rapine are their delight; they go constantly armed with a pistol, dagger, and falchion. In religion they are partly Christian and partly Mohammedan. *Pop.* estimated at 1,000,000.

Kur'il, *n.* (*Zoöl.*) The black petrel.

Kurile, Kourile, or **Koorile, Islands,** a group of 25 islands at the E. extremity of Asia, in the N. Pacific Ocean, extending from Kamtschatka to Japan, to which latter the three most S. belong; the others belong to Russia. Lat. between 43° 40′ and 57° N., Lon. between 145° and 156° E. *Area* of the whole estimated at 3,000 sq. m. The surface is very irregular, and there are many volcanic mountains, some rising to an elevation of 6,000 feet. The inhabitants, who live mostly by hunting and fishing, pay a tribute of furs and sea-calves to Russia. *Pop.* Unknown.

Kuril'ian, *n.* (*Geog.*) A native or inhabitant of the Kurile Islands. (Also written *Koorilian.*)

—*a.* (*Geog.*) Relating or belonging to the Kurile, or Koorile, Islands.

Kuruool, Curnoul, or **Carnoul** (*koor'nool*), a district of Hindostan, presidency of Madras; Lat. between 14° 50′ and 16° 15′ N., Lon. between 77° 47′ and 79° 15′ E. *Area*, 2,640 sq. m. *Pop.* (1897) 300,000.

Kurrach'ee, or **Karachee,** the principal seaport town of Scinde, on an inlet of the Indian Ocean, 20 m. from the W. branch of the Indus; Lat. 24° N., Lon. 67° E. *K.* is of considerable military importance. *Pop.* (1897) 108,900.

Kurshee (*koor-shēē'*), a town of Central Asia, in Bokhara, in a fertile oasis, 100 m. S. E. of Bokhara. On account of its location it is seldom visited by travellers and no very recent reports are accessible. *Pop.* (1891) 9,500.

Kursk, or **Koursk,** a govt. of European Russia, bounded on the S. by Kharkov, on the E. by Voronetz, on the N. by Orel, and on the W. by Tchernigov. *Area*, 17,380 sq. m. *Description.* Fertile, and extensively under the operations of agriculture. *Manuf.* Woollens, soap, saltpeter, leather and pottery. *Pop.* (1897) 2,550,450.— The capital is of the same name, and is 290 m. from Moscow. It is the see of a Greek eparchy, and has a gymnasium, a theological seminary and several schools. *Manuf.* Leather, wax and tallow. *Pop.* (1897) 52,560.

Kus'koviue, in *Alaska.* See KOOSKOVIME.

Kus'sier, *n.* (*Mus.*) A Turkish musical instrument somewhat resembling the ancient lyre. It consists of five strings, stretched over a skin that covers a kind of basin.

Kut'usoff-Smolen'skoi, MICHAEL, PRINCE, a celebrated Russian field-marshal, born 1745, and educated at Strasburg. He entered the army in 1759; served in

Poland from 1764 till 1769; and afterwards against the Turks, under Romanzoff. He behaved with great gallantry at the siege of Oczakoff, where he was dangerously wounded; and on his recovery he rejoined Suwarrow at the storming and capture of Ismail, when he was advanced to the rank of lieutenant-general. In the subsequent Polish war, he was particularly conspicuous during the memorable day of Praga. In 1805 the Emperor Alexander gave him the chief command of the first Russian corps against the French, and he headed the allied army at Austerlitz, where he was wounded. In 1810 and 1811 he obtained several advantages over the Turks; and, in 1812, when 70 years of age, the chief command of the Russian army, destined to oppose Napoleon, was bestowed upon him. To commemorate his victories, he received the surname of *Smolenskoi*. He D. in 1813.

Kutz'town, in *Pennsylvania*, a post-borough of Berks co., about 60 m. E.N.E. of Harrisburg. *Pop.* (1891) 1,690.

Kwei-choo, (*kwi-choo'*,) a prov. in the S.W. of China. See CHINA.

Kyan', *n.* A pungent pepper;—more commonly written CAYENNE, *q. v.*

Ky'anite, *n.* See CYANITE.

Ky'anizing, *n.* [From the inventor, Mr. *Kyan.*] (*Applied Chem.*) A simple process by means of which timber, canvas, cordage, cotton, and woollens may be preserved from the effects of dry-rot, and seasoned in a very short time. The timber is prepared as follows: A wooden tank is put together so that no metal of any kind can come in contact with the solution when the tank is charged. The solution consists of corrosive sublimate and water, in the proportion of 1 lb. of corrosive sublimate to 10 gallons of water as a maximum strength, and 1 lb. to 15 gallons as a minimum, according to the porosity or absorption of the timber subjected to the process. Oak and fir timber absorb nearly alike, but the beech, pine, elm, &c., are more porous. An hydrometer will mark accurately the strength of the solution, water being 0 (*vide* diagram); then, when the hydrometer sinks to 6°, it denotes that the solution contains 1 lb. of sublimate to 15 gallons of water; when it rises to 17°, 1 lb. of sublimate to 5 gallons. As a general rule, when it stands midway between 5° and 10°, the solution will be the proper strength. The corrosive sublimate will dissolve best in tepid water. The period required for saturating timber depends on its thickness; 24 hours are required for each inch in thickness, for boards and small timbers. The timbers, after saturation, should be placed under a shed or cover from the sun and rain, to dry gradually. In about 14 days, deals and timber not exceeding 3 inches in thickness will be perfectly dry and seasoned, and fit for use. Large timbers will require a proportionate time, according to their thickness. The solution may be used *ad infinitum*, as its strength is not diminished; but it will be advisable to ascertain occasionally by the hydrometer that it contains the required proportions of corrosive sublimate and water.—*Burnettizing* (from the inventor, Sir W. *Burnett*) is another process, which consists in immersing the substance to be preserved in a solution of chloride of zinc and water in a wooden tank, in the proportion of 1 lb. of chloride of zinc to 4 gallons of water for wood, and 1 lb. of the chloride to 5 gallons of water for the remainder of the articles. Three-inch deals require to remain in the tank or cistern 6 days, and all other woods in the same proportion, or two days by inch. They are then taken out and put under a shed, on their ends, to dry, and require for this purpose from 14 days to 3 months, according to the thickness of the wood, when they are fit for use. The timber should be reduced to the scantling required for use before it is subjected to this process. Canvas, yarn for cordage, cottons, and woollens, require to be suspended in the solution for 48 hours. The process, however, with regard to timber, is much more expeditiously and effectually done by hydraulic pressure. There is a large wrought-iron tank, 52 feet in length and 6 feet in diameter, with a door 2 feet 6 inches × 2 feet at each end for loading. Timber of all sizes and descriptions is put into this cylinder, which contains about twenty loads. As soon as it is filled, and the doors well secured both against external and internal pressure, the air is exhausted in the cylinder, and also in the timber, by means of an air-pump worked by a small rotatory engine of 10-horse power, until the barometer stands at 27°: the valve leading to the air-pump is then shut, and the cock of a pipe leading from the tank, filled with the solution, to the cylinder, is turned; the solution rushes into the cylinder to fill up the partial vacuum, and about half fills it, when the cock is turned, and the air-pump again set to work until the barometer stands at 27½°, when the same process is repeated, and the cylinder nearly filled with the solution. A pressure of 150 lbs. per square inch is then obtained by means of a Bramah forcing-pump, connected with an iron or copper reservoir, filled with the solution, and communicating with the cylinder by means of a pipe. This is worked by hand until a valve placed on the top of the cylinder, and loaded to the required gauge, begins to lift. The timber is then left in the cylinder, subject to this pressure, for eight hours, which is considered sufficient for the largest logs, even in a rough state. The solution being then drawn off into the tank, and the timber taken out of the cylinder, it is re-loaded, and the process repeated; the same solution is used for two months, when fresh is prepared. Canvas, felt, yarn, &c., are not subjected to pressure. The felt is used as a lining to the magazines of men-of-war, between two thicknesses of wood; also to cover over the steam-boilers of steamships; it is said to be rendered much less liable to combustion by the process. It is stated that in tropical climates, more especially in Africa, the saturated canvas has stood the climate, while the unprepared, under similar circumstances, has rapidly decayed.—Both Burnettizing and Kyanizing offer great advantages to the engineer: 1st. Wood of every kind is rendered more durable, and is rapidly seasoned. 2dly. It brings into general use the pine and a variety of other indigenous woods, which, without the process, from being liable to rapid decay, are seldom used in public buildings.

Kyles of Bute, a narrow arm of the Frith of Clyde in Scotland, between the N.W. part of the Isle of Bute and the co. of Argyle. Its shores are very picturesque.

Ky'ley, *n.* Same as BOOMERANG, *q. v.*

Ky'loes, *n. pl.* Hebridean cattle.

Ky'rie Elei'son. [Gr. *kyrie eleëson*, "O Lord, have mercy upon us."] (*Eccl.*) An invocation used in the beginning of all masses in the Roman Catholic Church, and which, forming a part of the service of the mass, is chanted or intoned alternately by the *celebrant* and choir. The *K. E.* follows immediately after the Introit, and forms the introduction to the hymn of praise, "Gloria in excelsis Deo" (Glory to God on high).

Kyriolog'ic, Kyriolog'ical, *a.* [Gr. *kyriologikos.*] Designating objects by conventional signs or alphabetical characters.

Ky'serike, in *New York*, a post-office of Ulster co.

Kyte River, (*kīt,*) in *Illinois*, a post-village of Ogle co., about 90 m. W. by N. of Chicago.

Kythe, *v. a.* To find out; to present to view. (Scot.)—To declare; to show; to exhibit.

—*v. n.* To put in an appearance; to present one's self to view. (Used in Scotland.)

Ky'thul, the chief town of a district of British India, about 1,000 m. to the N.W. of Calcutta; Lat. 29° 49′ N., Lon. 76° 28′ E. The town is substantially built of brick; and the district comprises more than 500 villages.

K.—SECTION II.

Kadam'ba, *n.* (*Bot.*) A large ornamental tree (*Nauclea cadamba*), of the *Rubiaceæ*, or madder family, growing in British India and Burma. The yellow flowers are offered in temples, and the wood yields a yellow timber.

Ka'diak, or **Ko'diak,** in *Alaska*, a post-village on the N. part of the island of Kadiak. *Pop.* (1890) 495.

Kaf'fa. (*Geog.*) A district in Gallaland, East Africa, N. of Lakes Rudolph and Stephanie; under Abyssinian control.

Kaffra'ria. See CAFFRARIA.

Kagu (*kä'goo*), *n.* (*Ornith.*) A long-legged fowl (*Rhinochetus jubatus*) of the island of New Caledonia, allied to the sun-bitterns, and now nearly extinct. It is handsomely crested, and is remarkable for its extraordinary gesticulations and antics in momeuts of excitement, when its extended wings display a series of white and rust-colored spots and bars, which are invisible when the bird is at rest.

Kahau (*kä-hou'*), *n.* (*Zoöl.*) The Bornean long-nosed or proboscis monkey (*Semnopithecus nasalis*).

Kaho'ka, in *Missouri*, a city, cap. of Clark co., 15 m. N.W. of Alexandria, on K. & W. R.R.; has plow and wagon works and a cannery. *Pop.* (1897) 1,560.

Kai'ak, Kajak, or **Kayak,** *n.* The boat of the Esquimaux, used by the men only. It is made about 16 feet long, and 18 inches broad in the middle, tapering to both ends, and about a foot deep. It is decked over with seal-skins, except a hole (or sometimes two, in Alaska) which the boatman fills, sitting on the floor of the boat and propelling it with a paddle.

Kai'nite, *n.* A mineral deposit found at the salt-mines of Strassfurt, Germany. It contains nearly 29 per cent. of potash, 14 of sulphate of magnesia, 12 per cent. of chloride of magnesia, and 32 per cent. of salt, and in its impure form is largely used as a fertilizer.

Ka'kapo, *n.* (*Ornith.*) The owl or ground parrot (*Strigops habroptilus*); a true parrot, but one having a very owl-like face, and terrestrial and nocturnal habits. It is about the size of a raven, greenish in color, freckled and dashed with light and dark brown, and has a powerful beak. Its wings are short and never used for flight, but only to assist in running and jumping. It spends the day hidden under the roots of trees or in holes of rocks, in which places it makes its nest; and at twilight comes out to seek its food, which is wholly vegetable, but highly diversified. It scrambles over the rocks and climbs trees in almost a four-handed fashion by the aid of its wings and strong feet. It is easily tamed, and makes an interesting and affectionate pet, but is not long-lived. The species is nearly extinct.

Fig. 2943.—KAKAPO.

Kakaral'li, *n.* [S. Am.] (*Bot.*) A tree (*Lecythis Ollaria*), said to be the largest in the Brazilian forests. See LECYTHIS.

Kalakau'a, DAVID. On the death of Kamehameha V., King of the Hawaiian Islands, in 1872, without issue, the line of the Kamehamehas became extinct, and Lunalilo, a high chief, was, upon the unanimous nomination of the people, elected king by the legislature. He reigned but one year, when the legislature, on February 12, 1874, chose, as his successor, David Kalakaua, another high chief, who was born at Honolulu, November 16, 1836, and educated at the Royal School of Honolulu. His election was violently opposed by Queen Emma, the widow of Kamehameha IV. At the election of Kalakaua her supporters raised a riot, to put down which required armed forces from British and United States warships in the harbor of Honolulu. In 1881 he made a tour of the world, when he was incited to ape the state and splendor of the European sovereigns he visited. Upon his return home, he spent such large sums in a formal and pompous coronation, on a palace for himself, on the funeral of a relative, and in celebrating his fiftieth birthday, that his little kingdom was almost forced into bankruptcy. He was obliged, in 1887, to assent to a new Constitution, limiting his own powers. He made several visits to the U. S., the first one being fourteen years before he was elected king. During his last visit he died at San Francisco, January 20, 1891, and was succeeded by his sister, Liliuokalani.

Kal'auds, *n. pl.* [Ety. doubtful.] A benevolent and devotional fraternity originating in Germany in the 13th century. It cared for the sick, for burials, &c. The members, of both sexes, assembled the first of each month to pray for their deceased friends and to feast together. These ceremonies degenerated into excesses, and the society was abolished.

Kalapoo'ian, *n.* A North American language-stock spoken by the Indians of the Willamette Valley, Oregon, the few survivors of whom are associated at the Grande Ronde Agency.

Kalei'dographn, *n.* [Gr. *kalos*, beautiful; *eidos*, form, and *graphō*.] A contrivance for displaying on a screen or a glass disk the colored patterns shown in a kaleidoscope.

Kaleva'la. See EPIC.

Kalisch', DAVID, journalist, was born in Breslau, Germany, February 23, 1820, and died at Berlin, August 21, 1872. He was Paris correspondent of German newspapers, and after his return to Germany founded, in Berlin, *Kladderadatsch*, the German *Punch*. He also had some success as a writer of popular plays.

Kalkas'ka, in *Michigan*, a N. co.; *area*, 580 sq. m.; intersected by the Manistee river, and is also drained by the Bear river. *Surface*, largely covered with forests. *Products*, wheat, corn and hay, lumber and shingles. *Cap.* Kalkaska. *Pop.* (1894) 5,637.

—A post-village, cap. of Kalkaska co., 24 m. E. of Traverse City, on G. R. & I. R. R.; has manuf. of farming implements, lumber and wooden ware. *Pop.* (1894) 1,247.

Kalol'ogy, *n.* [Gr. *kalos*, and *logos*.] The science of beauty, or the beautiful.

Kalong', or **Kluang',** *n.* (*Zoöl.*) A fruit-eating bat (*Pteropus edulis*) or "flying fox" of Java, which measures 5 feet across the extended wings, and is the largest known bat. It is extremely numerous, nocturnal in habits, and does great damage to unprotected orchards. See BAT.

Ka'ma, or **Kamadeva',** *n.* [Sansk.] (*Hindu Myth.*) The god of love. In some Purânas he is made the son of Brahma. He is represented as riding on a sparrow, having in his hand a bow of sugar-cane and five arrows.

Kamaloka', *n.* [Sansk.] In Buddhism, the lowest of the worlds of sentient beings—the world of sense, where sensual pleasure prevails—and extending from Avîchi to the lowest of the hells.

Kamaruna', *n.* [Sansk.] "The body of desire"—that is, the animal soul in the constitution of man.

Kamehame'ha I. When Capt. Cook landed, in 1778, on one of the Hawaiian Islands, which had been discovered in 1542 by Gaetano, a Spanish navigator, and visited by another Spanish explorer, Mendana, in 1567, each of the islands had its own chief. After a short stay, Cook sailed from the island of Nühau for the American coast, returning in the autumn of the same year, when he went ashore at Maui, the second in size of the islands. Here he met Kamehameha, then a young man of 25, who, at the same time, made the acquaintance of Vancouver, who accompanied Cook and whose name is perpetuated in Vancouver Island. Kamehameha had already shown quick perceptions and force of character, and before 1790 became chief of a portion of the island of Hawaii, much the largest of the islands, the remaining portion being subject to a chief named Keoua. In the year named the latter was defeated and captured by Kamehameha, who thus obtained possession of the whole island. Vancouver visited Hawaii again in 1792, and the two following years, when he found Kamehameha desirous of possessing a vessel on the European model, and a keel was laid down for him. Ten or twelve years later he had 20 vessels of from 25 to 50 tons each, and he afterwards purchased others from foreigners. These boats traded among the islands. With their aid and by introducing firearms among his people, and inciting in them a warlike spirit, he attacked the chiefs of the other islands, until he became undisputed master of the whole group. His sagacity was shown by encouraging trade with foreigners, from the profits of which he derived a large revenue and the means of consolidating his power. Kamehameha died in 1819, and was succeeded by his eldest son, Liholiho, who took the title of Kamehameha II.

Kameroous'. See CAMEROONS.

Ka'nab, in *Utah*, a post-town in Kane co., on Kanab river; has steam saw mills, flour mills, and a tannery. *Pop.* (1897) 820.

Kan'chil, *n.* (*Zoöl.*) The smallest of the Oriental chevrotains (family *Tragulidæ*), often called "pygmy musk deer," though having only a casual resemblance to the true musk-deer. This species never exceeds 18 inches in length; is brown, with a dark stripe on the back, and two white bands down the throat and belly; and lives in the islands of the Malay Archipelago, where it is noted for its agility and fleetness.

Kane, in *Pennsylvania*, a post-borough of McKean co., 95 m. S. E. of Erie, on Phil. & Erie R. R.; in an oil-producing district, with abundance of natural gas. Has extensive and varied industries, including large glass works, and a shipping trade in lumber. *Pop.* (1897) 3,010.

Kang'ley, in *Illinois*, a post-village of La Salle co., on C., B. & Q. R. R., about 15 m. south of Ottawa. *Pop.* (1897) 1,090.

Kanizsa Nagy, a town of Hungary, and an important fortress in the Turkish period, 120 m. S. of Vienna, with which it is connected by railway. It has a considerable trade in cattle. *Pop.* (1897) 20,000.

Kan'sas, in *Illinois*, a post-village of Edgar co., 32 m. W. of Terre Haute, Ind., on the C., C., C. & St. L. and P., D. & E. R.Rs.; has railroad shops, 2 tile factories, and a large canning factory. *Pop.* (1890) 1,037.

Kansas City, in *Kansas*, a city, cap. of Wyandotte co., at the junction of Missouri and Kansas rivers, adjacent to Kansas City, Mo., of which it virtually forms part. Numerous railroads center here, including the Mo. Pac., Union Pacific, and various others. Here are stock yards of great capacity, and immense beef and pork packing establishments. Has numerous manufactures, including flour and planing mills, wagon factories, oil-tank, box and basket, cement, and many other works, and the car and repair shops of 7 railroads. Here is the Kansas State Institution for the Blind. *Pop.* (1895) 40,676.

Kapnog'raphy, *n.* [Gr. *kapnos*, smoke, and *grapho*.] A drawing by means of a fine point, on a smoked surface, which, being shaded with fresh smoke, is fixed with a coat of varnish.

Ka'ra, Sea of. That portion of the Arctic Ocean between Russia and Nova Zembla. It is entered on its S. W. side by the strait of Kara, 30 miles across, between the islands of Vaigatz and Nova Zemhla, called the "Iron Gates." On the S.E. side is the Gulf of Kara, and on the S. it is entered by the river Kara, which rises in the Ural mountains and forms a part of the boundary between European and Asiatic Russia. This sea is usually quite free from ice in summer, admitting vessels to the Siberian port of Gnetin, and facilitating hunting and fishing. It was hence that Dr. Nansen took his departure in 1893.

Karaukawan', *n.* A North American language-stock, spoken by the Indians of the shore of Matagorda Bay, Texas.

Kar'luk, in *Alaska*, a post-village on the W. coast of the island of Kadiak. *Pop.* (1890) 1,123.

Kar'ma, *n.* A Sanskrit word meaning an act as a cause, especially in a religious sense, adopted by Brahminism as an expression of the total of the actions, good and bad, which determine a man's lot after death; character, in its influence upon fate. Buddhism borrowed and developed the idea under the same name into an elaborate ethical speculation. Buddhism regards Karma as the origin or seed of existence and the supreme or first cause, which has influenced and continues to influence every action and event. It is the sum of all merits and demerits; but as each one's demerits are believed to be greater than his merits, Karma, regenerate in each new being, is practically "original sin." It is believed to arise from ignorance; and it may be destroyed by right thinking and right living; but the blessed alternative is Nirvana. In Theosophy, Karma signifies the doctrine of the certainty of cause and

effect; more concretely, the outcome of one's actions—any result following any act open to choice.

Karn, *n.* A pile of rocks, or a rock resembling a heap of rocks.

Karnac (*kähr'näk*), or **Karnak,** a village of Egypt, on the E. bank of the Nile, and the site proper of the ancient city of Thebes. It contains the ruins of a celebrated temple, the sanctuary of which was built by Osertesen I., of the 12th dynasty, and added to by the monarchs of the 18th dynasty. It stands within a circuit wall of brick 1,800 feet long and somewhat less broad. The most remarkable part of this wonderful mass of courts, propylæa, and obelisks, built by Seti I. and Rameses II. is the great hall, 170 feet by 329 feet, having a central avenue of 134 massive columns and two obelisks, one of which is 180 feet high—the tallest in Egypt. In one of the chambers are the sculptures which compose the *K. Tablet*, one of the most important records of Egyptian chronology, telling the history of the two kings—how they fought against the Hittites, Arabs, Syrians, and Armenians, and captured their cities. The portico of the Bubastites, built by Shishak I., depicting his expedition against Jerusalem, 971 B. C., is also standing.

Fig. 2944.—KARNAC TABLET.

Ka'rok, or **Cah'roc,** *n.* (*Ethnol.*) A small extinct tribe of California Indians, formerly living about the confluence of the Klamath and Trinity rivers, some of whose legends have gone into recent literature.

Kassa'la. (*Geog.*) A town of the Soudan, on a tributary of the Athara river, 260 miles S. of Suakim. Formerly the capital of the Nubian district of Taka; was the most important commercial center between the Nile and Abyssinia, and previous to the rise of the Mahdi it had a population estimated at from 8,000 to 20,000. Captured by Italians from the Mahdists, July 17, 1894. *Pop.*, est. about 3,000.

Kas'son, JOHN ADAMS, statesman, was born at Charlotte, Vt., January 11, 1822; graduated at the University of Vermont (1842); studied law, practicing at St. Louis until 1857, when he removed to Iowa; appointed assistant postmaster-general (1861); elected to Congress (1862); commissioner to the International Postal Congress at Paris (1863); re-elected to Congress (1864, 1872, and 1874); subsequently minister to Austria, and again a member of Congress (1880-1882); resigned in 1884, and the same year was appointed U. S. minister to Germany. In 1887 was chairman of the committee on the centennial celebration of the adoption of the Constitution, in Philadelphia.

Kasson, in *Minnesota*, a post-village of Dodge co., 65 m. W. of Winona, on C. & N. W. R. R.; has a foundry, plow and wagon factories, creamery and 3 elevators. *Pop.* (1895) 1,125.

Katah'din Iron Works, in *Maine*, a small village in Piscataquis co., a few miles S. of Moosehead lake, having extensive iron-smelting furnaces, and coming into prominence as a summer resort; it is reached by the Maine Central R. R.

Kath'ion, *n.* (*Elec.*) Same as CATHION.

Kathode', *n.* (*Elec.*) Same as CATHODE.

Kauf'mann, CONSTANTINE, VON, a Russian general of German descent, was born in Russian Poland, May 3, 1818. A successful expedition into Central Asia made him famous. From 1843 to 1856 he fought in the Caucasus, was governor-general of Turkestan (1867); conquered Samarcand (1868), and captured Khiva (1873). His victories established the unconditional authority of Russia in Central Asia. In 1885 he was placed at the head of an expedition against Merv, meeting as before with complete success. Died May 16, 1882.

Kautz, AUGUST VALENTIN, soldier, was born near Potzheim, Bavaria, Jan. 5, 1828. In the same year his parents emigrated to America and settled near Ripley, O. He served in the Mexican war, and afterward entered West Point; graduated 1852 and became a lieutenant in the 4th U. S. Infantry, serving in campaigns against the Indians. At the outbreak of the Civil War he was made captain, and through successive promotions attained the position of lieutenant-colonel, U. S. A. (July, 1866). He took part in the pursuit and capture of General Morgan in Ohio (1863), and served in Burnside's campaign in East Tennessee, also in the armies of the James and the Potomac. He was stationed in California from 1878 to 1886, and later in Nebraska. Died Sept. 5, 1895.

Kav'anagh, JULIA, novelist, was born at Thurles, county Tipperary, Ireland, January 7, 1824; part of her youth was spent in Normandy, and her later life in Paris, Rouen, and Nice. Most of the scenes of her stories are laid in France, and her studies of French life and character are very realistic. Died at Nice, France, October 28, 1877.

Kavass', *n.* In Turkey, an armed constable; a government servant or courier.

Kay, in *Oklahoma*, a N. co.; intersected by Shakaska river, and Mule Fork of Arkansas river. *Surface*, rolling; rich black soil. *Min.*, lead and zinc. *Products*, wheat, corn, flax, sugar cane. *Cap.* Newkirk. *Pop.* (1897) 17,000.

Kazoo', *n.* A toy or burlesque musical instrument, consisting of a wooden tube having a vibration within that receives and gives forth the sound of the human voice in a peculiar manner.

Kear'ney, in *Kansas*, a S. W. co.; *area*, 864 sq. m.; intersected by the Arkansas river. *Soil*, very fertile. *Products*, corn, oats, millet, sorghum, potatoes, alfalfa. *Cap.* Hartland. *Pop.* (1895) 1,159.

Kearney, in *Missouri*, a post-village of Clay co.; 24 m. N. N. E. of Kansas City, on Hann. & St. J. R. R.; has manufactures of plows and carriages. *Pop.* (1897) 650.

Keble (*kē'bl*), JOHN, an eminent English divine and sacred poet, born at Fairford, 1792. He became one of the leaders of the Tractarian Movement in the Anglican Church, and in 1833 professor of Poetry at the Oxford University. His *Christian Year*, published in 1827, has passed through upward of 50 editions in England and the U. S., and the *Lyra Innocentium* (1846) has also obtained a wide popularity. So great was the love and veneration felt in England for this eminent man that upwards of $200,000 were subscribed after his death for the erection of a college at Oxford to bear his name, persons of all ranks, classes, and creeds joining in this act of posthumous honor to the author of *The Christian Year*. Died in 1866.

Kee'ley, LESLIE, physician, was born in St. Lawrence co., N. Y., in 1836; graduated at Rush Medical College, Chicago, Ill. (1863). In the Civil War he served as surgeon, and afterward settled in Dwight, Ill., opening an institute there (1880) for the cure of the alcohol and opium habits, for which he claimed to have discovered a cure "in gold as a chloride." Branch institutes, known as Keeley Institutes, were established in various parts of the U. S., and it is claimed that over 200,000 inebriates have been cured, of whom only 5 per cent. have relapsed. He published *The Morphine Eater: or from Bondage to Freedom*, &c., and a number of articles on his cure.

Keen, WILLIAM WILLIAMS, surgeon, was born in Philadelphia, Jan. 19, 1837; graduate of Brown University (1859), and of Jefferson Medical College (1862). In the Civil War was assistant surgeon of 5th Massachusetts Volunteers (1861), and from 1862 to 1864 acted as assistant surgeon, U. S. A.; studied in Europe from 1864 to 1866. He has held professional positions in the Woman's Medical College and Jefferson Medical College, and received from Brown University the degree of LL.D. (1892); has given special attention to the surgical diseases of the nervous system, and was one of the pioneers in cerebral surgery; has published many articles in the various medical journals of the U. S.; edited Heath's *Practical Anatomy* and Flower's *Diagrams of the Nerves of the Human Body* (1870–72), and the series of American Health Primers (1879); editor of the American edition of *Gray's Anatomy*, and one of the editors of *The American Text Book of Surgery*. Resides in Philadelphia.

Keene, CHARLES SAMUEL, wood engraver and illustrator, was born at Hornsey, near London, August 10, 1823, and died January 4, 1891. He is known as one of the artists long identified with *Punch*. For his work in black and white he received a gold medal at the Paris Exhibition in 1889.

Keene, LAURA (a stage name given by Charles Reade to MISS MARY MOSS), was born in Chelsea, London, in 1820; made her first appearance at Madame Vestris' theater in London (1845); became the wife of Henry Wallington Taylor (1847); subsequently made successful tours in the U. S. and Australia, and in 1857 married John Lutz. Her most successful play was *Our American Cousin*. Died November 4, 1873.

Keewa'tin, (*Geog.*) That part of Canada between Manitoba and Ontario, from the international boundary north to Hudson Bay. It has a somewhat indeterminate area (about 750,000 square miles), and almost no inhabitants, except wandering Indians, as the whole region is a stretch of rocky forests, interspersed with turbulent rivers, lakes, and swamps. It is administered as a judicial district by the lieutenant-governor of Manitoba, and its principal products are furs, fish, and lumber, all to a small amount.

Keith, in *Nebraska*, a W. co.; *area*, 1,254 sq. m.; intersected by the North and the South Platte rivers. *Surface*, undulating; *soil*, rich; no timber. *Cap.* Ogalalla. *Pop.* (1890) 2,556.

Keitlo'a, *n.* (*Zoöl.*) The common African rhinoceros (*R. biconis*).

Kel'ler, GOTTFRIED, poet and novelist, born at Glattfelden, Germany, July 19, 1819; studied landscape painting at Vienna, a pursuit which he abandoned for literature; was state secretary of his native canton (1861–76). He excelled in the delineation of the Swiss character. Died July 15, 1870.

Kel'ley, WILLIAM DARRAH, statesman, was born in Philadelphia, April 12, 1814; received a common-school education; was apprenticed to a jeweller, and for five years worked at his trade in Boston; studied law, and was admitted to the bar in Philadelphia (1841); was attorney-general of Pennsylvania (1845–46); judge of the Court of Common Pleas (1846–1856), having in the meantime left the Democratic and joined the Republican party. In 1860 he was elected to Congress, and by successive elections remained there until his death. During the Civil War he was an ardent supporter of the Union, and throughout his Congressional career an earnest advocate of a protective tariff, earning the sobriquet of "Pig-iron Kelley." His public speeches were able, and a volume of them has been published. Died Jan. 9, 1890.

Kel'logg, CLARA LOUISE, a popular opera singer, was born at Sumterville, S. C., in 1842. At an early age she gave evidence of the possession of musical talent, and after some years of careful study, made her first appearance at the Academy of Music, New York, in 1861. Her first attempts were unsuccessful, but after further study and practice, she gave evidence of extraordinary vocal powers and capabilities. As *Marguerita*, in Gounod's *Faust*, in the season of 1864-5, she vindicated her title to be regarded as one of the best artists. Her success was not less complete in *Crispino*, *Linda di Chamounix*, *Il Barbiere di Siviglia*, *La Sonnambula*, *Lucia di Lammermoor*, and other operas, which followed within the next two years. On November 2, 1867, she made her *début* in London as *Marguerita*, in *Faust*, a part in which she had been preceded by Patti, Nilsson, Lucca, and other *prime donne* of the highest reputation, but her triumph was complete. After a protracted tour in Europe she returned to the U. S., where she met with an enthusiastic reception. She has been for some years the wife of Carl Strakosch.

Kel'ly's Island. (*Geog.*) An island in the western part of Lake Erie, U. S., and the largest of the Put-in-Bay group. It is rugged, abounds in caves excavated deeply in the prevailing limestone, is a favorite summer resort, and produces great quantities of grapes.

Ken'dal, MARGARET (*née* Robertson), actress, was born at Great Grimsby, Eng., March 15, 1848. At the age of four she appeared as the blind child in *The Seven Poor Travellers*, at Marylebone Theater, London, and made her professional *début* as *Ophelia*, at the Haymarket Theater, in 1865. She subsequently acted in the provinces, and, besides other *rôles*, took the part of *Lady Clara Vere de Vere* in Robertson's play of *Dreams*: was married to William Hunter Kendal in 1874; joined the company of the Prince of Wales' Theater in 1878; achieved success as *Dora*, in Sardou's play of *Diplomacy*.

Kendal, WILLIAM HUNTER, actor, was born in London, Dec. 16, 1843, his family name being Grinston. He made his first appearance in London at the Soho (1861). In 1862 he joined the company of the Theatre Royal, Glasgow, remaining until 1866. He made a successful appearance at the Haymarket Theater in London, in *A Dangerous Friend*, playing at that house for some time in such parts as *Captain Absolute*, *Charles Surface*, &c. In 1875 he married Margaret Roberston, and they have since acted in the same companies. One of his most successful impersonations is that of *Captain Beauclerc*, in Sardou's play of *Diplomacy*. In the years of 1889, 1891, 1893 and 1896, Mr. and Mrs. Kendal made successful professional tours in the U. S.

Ken'dall, in *Pennsylvania*, a borough of McKean co., whose post-office is KENDALL CREEK. *Pop.* (1890) 1,937.

Kendall, in *Texas*, a central co.; *area*, 620 sq. m. It is drained by the Guadalupe river. *Surface* is undulating; *soil*, good. *Products*, wheat, rye, oats, corn, cotton, wool, live stock. *Cap.* Boerne. *Pop.* (1890) 3,826.

Ke'nia, Mount. See KILIMA-NJARO.

Ken'nan, GEORGE, traveller, was born at Norwalk, O., Feb. 16, 1845; engaged as a telegraph operator for several years, and during 1865–68 located telegraph routes for the Russian government through Siberia; explored the mountains of the Eastern Caucasus, also Daghestan (1870–71). In company with George A. Frost, he made a journey of 15,000 miles through Russia and Siberia, in the interest of the *Century Magazine*, to investigate the Russian exile system (1885–86). The results of this journey were embodied in a series of articles published in the *Century* (1889–90), and were later gathered into a volume under the title of *Siberia and the Exile System*. *K.* is also the author of *Tent Life in Siberia*.

Ken'nedy, BENJAMIN HALL, educator and author, was born near Birmingham, Eng., in 1804. His college course at St. John's, Cambridge, was unusually distinguished. In 1827 he graduated as senior classic, senior chancellor's medallist, and senior optime, and the following year was made fellow and classical lecturer of his college. He became assistant-master at Harrow in 1830, and succeeded Dr. Butler at Shrewsbury in 1836. This position he filled for 30 years. Died April 6, 1889.

Ken'nesaw Mountain, Battle of. (*Am. Hist.*) During the Civil War in America, General Sherman, who was leading the Union troops upon Atlanta in 1864, found his way blocked by a new and strong position which Joseph E. Johnston, the Confederate commander, had taken upon the slopes of Kennesaw, Pine, and Lost Mountains, Georgia. This position, though it had the advantage of a height from which the Confederates could watch every movement of the enemy, was extended, and so arranged that one portion could not easily reinforce another; and Johnston gradually retreated, abandoning first Pine and then Lost Mountain, until he was firmly entrenched on the top of Kennesaw. On June 21 determined assaults were made to dislodge them, but failed. On the 27th another attempt was made, but the Unionists were repulsed with loss of about 3,000 men, the Confederates losing only a little over 800. Realizing that any further attempt of that kind would be useless, Sherman determined to move southward, and seizing the road below Marietta, compel Johnston to fall back toward Atlanta, or to come out and fight. As Sherman's force was so strongly entrenched that an attack would mean defeat, Johnston was forced to fall back to Chattahoochee, and

on July 23 the summit of Kennesaw was occupied by Union troops.

Ken'ney, in *Illinois*, a post-village of Dewitt co., 36 m. E.N.E. of Springfield, on I. C. and T. H. & I. R.Rs.; has 2 elevators and manufactures of tiles and brick. *Pop.* (1897) 540.

Ke'no, *n.* [Fr. *quine*, five winners.] A game of chance in which numbers on cards, arranged in rows of five, are covered with buttons according to numbered balls drawn from a wheel. The player who first has a row covered wins the game.

Kenogen'esis. *n.* [Gr. *kainos*, new, and *genesis.*] (*Biol.*) Vitiated or modified evolution; distinguished from *palingenesis.*

Keno'sis, *n.* [Gr., emptying.] (*Theol.*) The self-emptying of the Son of God in the incarnation.

Ken'rick, PETER RICHARD, prelate and theologian, was born at Dublin, Ireland, 1806. He was ordained a priest of the R. C. Church in Ireland, and, emigrating to the U. S., settled in Philadelphia, where he edited the *Catholic Herald* for several years, and was made vicar-general of the diocese. In 1843 he was appointed bishop, and in 1847 first archbishop of St. Louis. He was very successful in promoting the interests of the see, having established a large hospital, an orphanage, two fine convents, numerous schools and charitable institutions, and one of the most extensive and beautiful cemeteries in the U. S. Died March 4, 1896.

Ken'sett, JOHN FREDERICK, landscape painter, was born in Cheshire, Conn., in 1818. Going to England to study his art, he there exhibited at the Royal Academy Exhibition, Windsor Castle, a picture which brought him at once into note. The next two years he passed in Rome, whence he sent home a number of views of Italian scenery which gave him a high reputation. Early in 1848 he returned to the U. S., and settled in the city of New York, where he afterward resided. In 1849 he was elected a member of the National Academy of Design. Among his best landscapes may be noticed different views of the White Mountains scenery, of which he painted some eight or ten: *Sunset in the Adirondacks; Hudson River from Fort Putnam; Falls of Bashbish; Sunset on the Coast; Eagle Cliff;* and views on the Geneseo and Lake George. Many of these have been engraved. *K.* was for some years a member of the National Art Commission having the direction of the decorations of the Capitol, Washington. Died in 1872.

Kent, in *Texas*, a N.W. co., 840 sq. m. It is drained by the Brazos river and its tributaries. *Cap.* Clairemont. *Pop.* (1890) 324.

Kent, in *Washington*, a post-village of King co., 16 m. S.E. of Seattle, on the Northern Pacific R. R. *Pop.* (1897) 1,560.

Ken'yon Col'lege. (*Educ.*) This institution owes its existence to Philander Chase, who, born at Cornish, N. H., in 1775, graduated at Dartmouth College in 1795. In 1819 he became bishop of the Protestant Episcopal Church in Ohio, and bishop of the same Church in Illinois in 1835. Considering the establishment of a college an important aid in planting the Church in Ohio, he went to England to solicit contributions for that purpose. Here he made the acquaintance of Lord Kenyon, whose father had been lord chief justice of England, and Lord Gambier, an admiral, who, in his youth had served in the navy at the capture of Charleston, S. C., and other places, and was one of the commissioners who negotiated a treaty of peace between England and the United States, at Ghent, in 1814. Both of these gentlemen were very liberal in aiding Bishop Chase, who named the college Kenyon, after one of them, and the town in which it is located Gambier, after the other. The college, founded in 1824, had, in 1897, 17 instructors and 150 students, with about 30,000 volumes in its library. At the same time its income from productive funds and other sources was declared to be in excess of $22,000. The institution is and always has been under the control of the Protestant Episcopal Church.

Keo'ta, in *Iowa*, a post-town of Keokuk co., 15 m. W. of Washington, on C., R. I. & P. R. R.; has flour mill, creamery, large tile factory, and manufactory of organs; is the shipping point for an important stock-raising region. *Pop.* (1895) 759.

Keraul'ophon, *n.* [Gr. *keras*, a horn, *aulos*, a flute, and *phonē*, sound.] (*Mus.*) An organ-stop invented by Gray and Davison. Its pipes are of small scale, are surmounted by a movable ring of metal, and give a thin, reedy tone.

Kerau'nograph, *n.* [Gr. *keraunos*, thunderbolt, and *graphō.*] A picture supposed to be photographed or impressed by lightning, as on a person's body.

Ker'esan, *n.* A North American language-stock, spoken by the Indians of the Pueblo villages of the upper Rio Grande, New Mexico, of which the principal are Acoma, Cochiti, Laguna, Santo Domingo, and Sia. Some neighboring pueblos speak a different language.

Ker'mess, *n.* This word, also written KIRMESS and KERMIS, is a corruption of the Dutch and Flemish words *kermis* and *kirmis*, signifying a church festival, held originally throughout Europe on the feast-day of the patron saint of a place or its principal church, with religious observances, whence the name *kerk*, church, and *mis*, mass. This festival took usually the form of an annual fair, and was celebrated by feasting, dancing, target shooting, grotesque processions, and other forms of amusement, sometimes accompanied by licentious extravagance. The Flemish name of these festivals become more generally adopted, because the kermesses of Flanders are more extensively known, and because attention to them was called by the paintings of the two Teniers and other famous Flemish artists. The word has become partly naturalized in the U. S. by being used occasionally for entertainments conducted for charitable purposes.

Kershaw', JOSEPH BREVARD, soldier, was born at Camden, S. C., Jan. 5, 1822; entered the Civil War as a Confederate soldier, and commanded a regiment of South Carolina volunteers at the first battle of Bull Run, July 21, 1861; commanded a brigade throughout the Peninsula campaign (1862); engaged in the capture of Harper's Ferry, Sept. 15, 1862, and in the battles of Antietam, Fredericksburg, Chancellorsville, Gettysburg, and Chickamauga, and held the rank of major-general during the final campaign which terminated at Appomattox; was elected judge of the Fifth Circuit of South Carolina, in 1877. Died April 13, 1894.

Kew Gar'dens. (*Bot.*) The most important botanical establishment in the world, not only in its conservatories and collections of living plants, but in respect to its museums of vegetable products and its immense herbarium and botanical library. The gardens are in the village and parish of Kew, in the county of Surrey, England, and 8 miles from London. In the first year of the reign of George III. an old brick house of moderate size was bought for the crown and christened Kew Palace, the king having taken a fancy to have a quiet out-of-the-way place where he could play the part of farmer. In the grounds, which now comprise 345 acres, the king's mother, the widow of Frederick, Prince of Wales, having a fondness for plants and flowers, established large and extensive collections of living plants in a garden of 11 acres. These collections were maintained for about eighty years as the private property of the sovereign, under the administration of two Aitons—father and son. In 1840, however, the grounds became national property, under the control of the commissioners of woods and forests. Sir William Jackson Hooker was appointed director, and Parliament made liberal appropriations. The result of these and Hooker's able management was that the botanic garden was extended to 75 acres, and 270 acres were acquired for an arboretum and pleasure grounds. The palm house and temperate house have no rivals in point of dimensions combined with successful culture. Hooker, one of the greatest botanists that ever lived, besides attending to his official duties, produced either as author or editor 100 volumes devoted to systematic and economic botany. Charles Darwin in a letter speaks of Hooker's "remarkably cordial, courteous, and frank bearing." Sir William died in 1865, and was succeeded by his son, Sir Joseph Dalton Hooker, also a botanist of the first rank. He has written several botanical works. He resigned in 1885. Born in 1817, he is still living. Sir Joseph was succeeded by Dr. William Turner Thistleton-Dyer, the present director, who married daughter of Sir Joseph, and has proved a worthy successor of the two Hookers. Attached to the gardens are laboratories, and museums containing extensive libraries and herbaria representing all the floras of the world.

Kewan'na, in *Indiana*, a post-town of Fulton co., 20 m. N. of Logansport, on T. H. & I. R.R. *Pop.* (1897) 850.

Key, FRANCIS SCOTT, jurist, was born in Frederick co., Md., Aug. 9, 1780; author of the popular national song, "The Star Spangled Banner," and son of John Ross Key, a Revolutionary officer. He graduated from St. John's College, studied law with his uncle, and began to practice in Frederick City, Md., but soon removed to Washington, where he became district attorney for the District of Columbia. During the British invasion of 1814, Ross and Cockburn made their headquarters in Upper Marlborough, Md., at the residence of a Dr. William Beanes, whom they took prisoner. When Key heard of his friend's capture, he resolved to release him; and, having obtained the aid of President Madison, he set out with John S. Skinner, an agent for the exchange of prisoners. Gen. Ross consented to the release of Dr. Beanes, but commanded that the party should not return until after the attack on Baltimore. They were transferred to the frigate *Surprise*, and it was on her deck that Mr. Key wrote his famous song, when, in the morning, the anxious watchers saw that the Stars and Stripes still floated over the fort. A collection of Key's poems was published in New York in 1857, and a monument, executed by William W. Story, has been erected to his memory in San Francisco. Died Jan. 11, 1843

Keyapa'ha, in *Nebraska*, a N. co.; *area*, 660 sq. m.; bounded on the S. by Niobrara river, and intersected by the Keyapaha river; a new county, formed from that part of Brown co. N. of Niobrara river. *Cap.* Springview. *Pop.* (1890) 3,920.

Key'board, *n.* (*Mus.*) That portion of a pianoforte, organ, harmonium, &c., upon which are placed the finger-keys. The number of keys in a piano keyboard varies according to the compass of the instrument to which it belongs; thus, one containing six octaves presents forty-three white keys and thirty black; the black keys representing the sharps and flats, and the white the natural notes.—The group of keys on a typewriting-machine, typesetting-machine, linotype, or the like, representing letters or characters used in writing and printing.—*A pedal keyboard* is a set of levers in a pipe-organ, placed like pedals, so that they can be operated with the feet of the player.

Key'ser, in *West Virginia*, a post-town, cap. of Mineral co., 5 m. E. of Piedmont, on B. & O. and W. V. C. & P. R. Rs.; has railroad shops and mills. *Pop.* (1897) 2,710.

Khabaroo'ka. A modern city of Eastern Siberia, at the junction of the Ussuri and Amoor. It is the residence of the governor-general of Eastern Siberia, whose authority extends over the Maritime, Yakutsk, and Transbaikal provinces. It has present and prospective importance as the terminus on the Amoor river of the railroad from Vladivostok, where all traffic is transferred to the steamboats that form the river-link in the line of trans-Siberian steam transportation. It has a large business, but as yet few buildings or institutions of importance.

Kha'ma and **Khama's Country.** (*Geog.*) Bechuanaland, in South Africa, is a narrow strip of territory 1,000 miles long, with an average breadth of 300 miles, all of it in the interior. The southern portion, adjoining Cape Colony, has been incorporated therewith. The northern and larger portion is divided among three tribes, under the protection of Great Britain. Of one of these tribes, the Bamangwato, the chief is Khama, who has been paramount ruler since 1875. Previous to this date he had some troubled years, the result of his having been converted to Christianity in 1860, greatly to the disgust of his father, Sekhomé, then chief of the Bamangwato, who tried to kill his son. Khama has adhered resolutely to his new faith, renouncing all the heathenish customs, and having but one wife. He is now about 60 years of age. With the chiefs of the other two tribes, he visited England in 1895, where he and his companions were hospitably entertained. The lives of the three chiefs have been written by the Rev. Edwin Lloyd, of the London Missionary Society, who spells the name Khâmé.

Khartoum', in Africa, the chief town of the Soudan, and center of the ivory and slave trades, deriving this importance from its situation near the junction of the Blue and White Niles. It was captured in January, 1885, by the troops of the Mahdi, after the gallant defence of Gordon in 1884–85, and has remained the capital of the Mahdist kingdom. *Pop.* (1897) estimated at 70,000.

Khorasan (*ko-rās-sān'*), or KHORASSAN, a province of Northeastern Persia. It is bounded N. by Khiva, and E. by Afghanistan, and has suffered from invasions at all periods of history. Its S. part is a sandy waste; the rest of its surface consists of mountain ranges and fertile valleys. Principal towns, Meshed and Nishapoor; *area*, about 120,000 sq. m. *Pop.* 800,000 to 900,000.

Kiang', *n.* (*Zoöl.*) The wild ass, or dzeggetai (*Equus hemionus*) of high Thibet, rarely met with at an altitude of less than 15,000 feet. It resembles the domestic ass, but is larger, and lacks the transverse shoulder-stripe. See ONAGER.

Kid'der, in *North Dakota*, a S. central co.; *area*, 1,440 sq. m. Contains numerous lakes. *Surface*, undulating prairie; *soil*, fertile, dark loam; no timber. *Industries*, cattle and sheep raising. *Cap.* Steele. *Pop.* (1890) 1,211.

Kid'jang, or **Ki'jang,** *n.* (*Zoöl.*) A muntjak.

Ki'do, TAKAYOSHI, statesman, born in the province of Choshiu, Japan, about 1833. His was one of the first of the provinces to revolt against the Tokugawa Shogunate. He was one of the chief organizers of the imperialist army, and after the restoration of peace became a privy councilor; member of the embassy which visited the United States and Europe in 1872; appointed minister of state on his return to Japan; his next position was in the imperial household, and in 1875 he again entered the cabinet. Died in June, 1881.

Kikuʹyu, *n.* (*Geog.*) A region of open highlands in British East Africa, about the S. base of Mt. Kenia; also the inhabitants of the same, a branch of the Masai race.

Kilauea (*kil-ō-ā'ū*), *n.* (*Geog.*) One of the great volcanoes of the island of Hawaii, and still in active operation. At the top of it is a vast pit about 9 m. in circumference, which, some fifty years ago, was 1,000 feet deep, with vertical sides. This pit, however, has been gradually filled up lava, until at present the level of the liquid lava is only about 500 feet below the highest point of the rim. At the bottom of the pit is a lake of liquid lava, at one end red and boiling. This pit is usually called a "crater," but has so little in common with the usual orifices of volcanic eruption that the word is a misnomer. The same sort of pit is found at the top of Mauna Loa and other volcanic mountains in Hawaii; and for these cavities Capt. Clarence Dutton, of the U. S. Geological Survey, suggests the name *caldera*, a Spanish word, signifying a huge caldron. At the top of Kilauea is seen the phenomenon termed by the natives Pele's hair, Pele having been, in idolatrous times, the dreaded goddess of the volcano. This is composed of delicate glossy fibers or filaments, like cobwebs, and is usually explained as the result of the action of the wind upon minute threads of lava drawn out by the spurting up of boiling lava. Nothing of the sort was seen by Captain Dutton at a time when Pele's hair was observed forming in great abundance. He gives a totally different explanation of the formation of the hair. Kilauea, as well as Mauna Loa (*q. v.*), is abnormal among volcanoes in the quiet character of its eruptions. Rarely is one of these events attended by any of the extremely explosive action that is characteristic of nearly all other volcanoes. The lava at Kilauea wells forth like water from a hot bubbling spring, but so mild are the explosive forces that the observer may stand, without danger, to windward of the grandest eruption, and so near the source that the heat will make the face tingle. See HAWAII.

Kildare', in *Oklahoma*, a post-village of Kay co., about 7 m. S. of Newkirk, on the A., T. & S. Fé R. R. *Pop.* (1897) 350.

Kilima-njaro and **Kinea.** These lofty mountains, the highest points in all Africa, are summits of the coast range, which, starting from the Abyssinian uplands—10,000 to 15,000 feet high—runs through Gallaland and along the eastern side of Lake Myassa to the southern extremity of Africa. In fact, the greater

part of Africa is an elevated plateau, higher on the eastern side of the continent than on the western. Kilima-njaro is 20,100 feet high. Snow-topped, it stands completely apart from all the neighboring summits, on the eastern edge of the range. It is in 3° 5′ S. Lat., and has in reality two summits. One of these, Kibo or Bareni, the higher of the two, is a magnificent dome, with smooth and regular outline. The other, Kimawenzi, 17,500 feet high, is a dark and rugged peak. The two summits are connected by a saddle-like ridge, several miles in extent. The lower part of the sides of the mountain is covered with a dense forest, the trees high and close together, under which is a thick undergrowth of thorny bushes and creepers, filling up the space between the trunks. In the heart of this forest is the town of Taveta, in a partial clearing made by its people, which is so completely hidden that it had existed a number of years before it was discovered by the traders from the coast. The inhabitants on the sides of Kilima-njaro, and in the surrounding country, are the Masài (*q. v.*). Kenia, 18,400 feet high, is about a hundred miles distant from Kilima-njaro, and, of course, much nearer to the equator. It was discovered in 1849 by Dr. Krapf, a missionary of the Church Missionary Society, and his account of the huge mountain directly beneath the equator, and yet constantly snow-clad, awakened a great interest in England in the region where Kenia and Kilima-njaro stand. Kenia's cap of snow has caused it to be called Doenyo Ebor, or White Mountain. Count Teleki partly ascended it in 1887, and Dr. Gregory got to beyond 17,000 feet in 1893.

Kill'deer, *n.* (*Ornith.*) A plover (*Ægialitis vociferus*), common throughout the eastern U. S., and well known by its loud and often repeated cry of *killdee, killdee.* The bird is more often found inland than other plovers, and breeds in corn-fields, pastures, &c., laying darkly spotted conical eggs. Its flesh is not as appetizing as that of some other species. See PLOVER.

Kilogram'meter, *n.* (*Mech.*) A unit used in estimating the mechanical work done by a machine. It represents the work performed in raising a kilogramme through a meter of space, and corresponds to 7·233 foot-pounds.

Kim'ball, in *Nebraska,* a W. co.; *area,* 923 sq. m.; intersected by Lodge Pole creek. *Surface,* rolling; *soil,* a dark loam; no timber. *Products,* corn, wheat, oats, flax, sugar beets; stock raising. *Cap.* Kimball. *Pop.* (1897) 1,280.

Kimball, in *South Dakota,* a post-village of Brule co. 48 m. W. of Mitchell, on C., M. & St. P. R. R. *Pop.* (1895) 486.

Kim'berley, in Africa, the most important inland town of the Cape Colony, 540 m. N. E. of Cape Town, which is reached by a railway journey of 30 hours. The town owes its existence to the diamond mines. (See DIAMOND FIELDS.) Formerly, the town suffered much from want of water, but that defect has been remedied by bringing water from the Vaal river, some 20 miles distant, at a cost of half a million sterling. The city has a handsome town hall, post-office, high court, public library and botanic gardens. *Pop.* (1897) about 40,000.

Kim'berly, JOHN WODEHOUSE, EARL OF, was born in England on January 7, 1826; graduated from Christ Church, Oxford, in 1847; succeeded his grandfather as Baron Wodehouse in 1846; was under secretary for foreign affairs from 1852 to 1856, and from 1859 to 1861. He was Ambassador to Russia in 1856; lord-lieutenant of Ireland, 1864–66; was raised to the earldom of Kimberly in 1866; became lord of the privy seal in 1868; secretary of state for the colonies in 1870–74, and again in 1882, during which year he was also made chancellor for the Duchy of Lancaster and secretary of state for India; this last-named position he again held, as well as that of Lord President of the Council, on Gladstone's return to the Premiership in 1892. He held other important posts in public affairs, notably that of Secretary of state for foreign affairs in Lord Rosebery's cabinet, in 1894. Died May 8, 1902.

Kim'ble, in *Texas,* a S. Cen. co.; *area,* 1,360 sq. m.; drained by Llano river and its North and South Forks. *Surface,* diversified, partly mountainous, with numerous well-watered valleys. *Cap.* Junction City. *Pop.* (1890) 2,243.

Kin'dergarten, *n.* [Ger. children's garden.] (*Educ.*) An educational system for little children, instituted by Friedrich Froebel (*q. v.*), in Germany, in 1840. It was Froebel's theory that the teaching of children should be begun systematically at a much earlier age than had been customary, but that this training should be directed in such a way as to lead rather than force the child toward learning. In his own words, "to remove, at least from the earliest child-culture, all indefiniteness and arbitrariness, all hindering and destroying influences, and to found it upon conscious obedience to the eternal laws revealed to us in nature and in the history of man, as well as in the Word of God." Believing women to be more fitted for the work than men, he gathered around him a number of women who were in sympathy with his motive, and founded the first kindergarten. This was at Blankenburg; and after a struggling existence of eight years, it died for lack of funds. The minister of public instruction in Prussia, mistaking Froebel for a Socialist who bore the same name, immediately prohibited kindergartens in Prussia; but this movement, instead of injuring his cause, drew attention to the work, until little by little it became recognized and endorsed by the leading educators and philanthropists of Germany. The system was introduced into America in 1864 through the enthusiasm of Miss Elizabeth Peabody, of Cambridge, and her sister, Mrs. Horace Mann. St. Louis, Mo., was the first city to make the kindergarten a part of the public school system (1873). From that time extensive Free Kindergarten systems have been introduced into the principal cities of the U. S., all more or less adapted from the original plan to fit the exigencies of space and the necessity of admitting many more children into each class than the number approved by Froebel. At the close of the year 1896 there were in the city of New York 15 kindergarten classes connected with the public schools, with a registration of 420 pupils. On Oct. 26 these classes first came under the control of a supervisor of kindergarten instruction, the board of education having created this office. The ideal kindergarten, as designed by Froebel, should consist of not more than twenty children, from three to seven years of age. There should be a garden where each child may cultivate a plot of ground. Games and songs should form an important portion of the day's exercises, keeping feet, hands, and mind in tune, while giving balance and sequence to what is really play, and leading the natural ingenuity and constructive ability of the child toward creative work by means of well-selected play materials. These materials are either in parts or so constructed as to be practically raw material, and are called "gifts." The gifts, divided into classes, are as follows:

A.—GIFTS.

I. SOLIDS: (1) THINGS, OBJECTS: (*color*) six colored worsted balls—(*first gift*). (2) SHAPE: Wooden ball, cylinder, and cube; beads, ½-inch in diameter, stained in six colors—(*second gift*). (3) DIVISIBILITY: (2 x 2 x 2) Eight wooden cubes, forming together one 2-inch cube—(*third gift*). (4) DIMENSION: Eight wooden, brick-shaped blocks, forming together one 2-inch cube—(*fourth gift*). (5) DIRECTION (oblíquity): Twenty-seven wooden 1-inch cubes, of which three are diagonally bisected and three diagonally quadrisected—(*fifth gift*). (6) PROPORTIONALITY: Twenty-seven wooden brick-shaped blocks, three of which are bisected lengthwise and six crosswise—(*sixth gift*).

II. SURFACES: Wooden tablets—(*seventh gift*).

III. LINES: (1) STRAIGHT: Sticks or splints, 1 to 5 inches long—(*eighth gift*). (2) CURVED: Wire rings, half rings, and quarter rings of various sizes—(*ninth gift*).

IV. POINTS: Lentil seeds, pebbles, &c.—(*tenth gift*).

V. RECONSTRUCTION: Softened peas or wax pellets, and sticks with sharpened ends—(*eleventh gift*).

B.—OCCUPATIONS.

I. SOLID MATERIAL: Plastic clay, sand, cardboard, wax, &c.

II. SURFACE MATERIAL: Folding papers, colored crayons, water-colors.

III. LINEAR MATERIAL: Interlacing slats; intertwining strips; material for weaving and embroidery; drawing material.

IV. MATERIAL EMPHASIZING POINTS: Beads, buttons, papers, &c., for stringing; perforating material.

There are many books upon this subject, the principal ones being Froebel's *Menschen Erziehung, Pedagogik des Kindergartens,* and translations by Mrs. Horace Mann (*Reminiscences of Froebel*), *The Kindergarten,* by Emily Lord; *Kindergarten and Childhood,* by Dr. Henry Barnard and Froebel, and *Education by Self-activity,* by Dr. Courthope Bowen.

Ki'ne, *n.* [Gr., *kineo,* to move.] A proposed unit of velocity—one centimeter a second.

Kinema'tograph. See CINEMATOGRAPH.

Kinesthe'sia, *n.* [Gr., *kineo,* to move, *aisthesis,* perception.] Perception of muscular movement.

Kine'tograph, *n.* A machine devised by Thos. A. Edison, for exhibiting kinetoscopic pictures on a screen. It consists of a kinetoscope combined with a magic lantern by which pictures are enlarged and thrown on a screen for public exhibitions. One of the first exhibitions of this mechanism was made at the Brooklyn Institute, May 9, 1893, but it has not come into general use as much as have several other machines for the same purpose, invented by other persons. The best known of these machines are the *amitograph, biograph, cinematograph, eidoloscope, mutascope, veriscope,* and *vitascope.* Each has peculiarities of mechanical construction, yet is essentially the same as the kinetograph.

Kine'to-pho'nograph, *n.* The aggregate of mechanism devised by Thos. A. Edison for obtaining and reproducing both the scenes and sounds of a theatrical or other exhibition has received from him this name. It is not at this date (1897) in actual use, but is said to be practically perfected. It consists in the combination of the kinetoscope and phonograph to receive at the same time impressions of a play or the like, which may be reproduced synchronously before an audience. The principal difficulty encountered in its construction was the operation of the sound-receiving and reproducing mechanism in exact accord with the photographic representation. It is stated that this has been satisfactorily accomplished, and that it will be possible by it to preserve and reproduce by this machine the action and utterances of public speakers and great actors for coming generations. See PHONO-KINETOSCOPE and PHONO-KINETOGRAPH.

Kine'toscope, *n.* From 1887 to 1893 Thomas A. Edison and a numerous corps of skilled assistants worked to develop the mechanism of the kinetoscope, in which a series of rapidly moving panoramic photographs are arranged to be viewed so that they impress the eye with a reproduction of moving scenes. The kinetoscope is simply a highly perfected and improved form of the zeotrope and the phenakistoscope. The former is an old toy, in which a series of pictures are mounted on a cylinder, and jerked along so as to be presented successively at an opening so rapidly as to give some impression of continuity of action, though the whole affair is clumsy. The phenakistoscope is a philosophical toy, having a disk, bearing a series of representations of some moving object, and pivoted to a larger disk having slots corresponding in size to the individual pictures. The disks are then revolved before

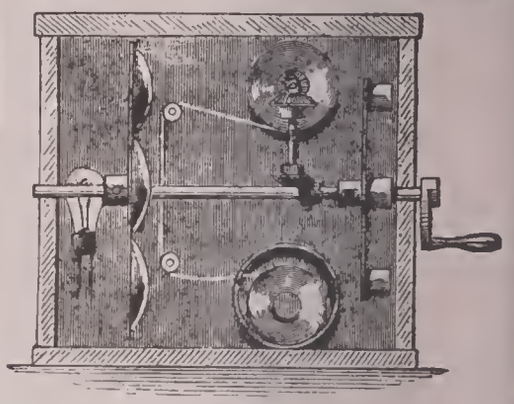


Fig. 2945.
THE JENKINS' KINETOSCOPE CAMERA—INTERIOR.

a mirror in such fashion that an observer sees but one picture at a time, but the rapid succession of pictures of continuous phases of motion gives the impression, in some degree, of a moving object viewed. In studying these mechanisms, Mr. Edison was impressed with the idea that by making use of instantaneous photography, which had at that time been brought to a high degree of perfection by Muybridge, Anschnetz, and others, he could produce an almost perfect representation of moving scenes. The first serious difficulty with the old toys was their slowness of action, which only partially de-

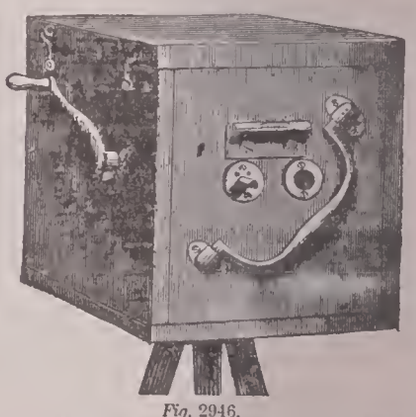


Fig. 2946.
THE JENKINS' KINETOSCOPE CAMERA—EXTERIOR.

ceived the eye. By a series of experiments, he determined that it was necessary to present at least 46 pictures per second in order to take advantage of what is called the persistence of human vision. The eye does not appreciate small objects passing with great rapidity, as is familiarly observed in the loss to sight of the spokes of a rotating wheel. By allowing the picture to remain stationary the greater part of the $\frac{1}{46}$ of a second, drawing the film forward rapidly in the remaining portion of the $\frac{1}{46}$, the eye retains an impression only of the picture as seen stationary, and the transfers are wholly unnoted.

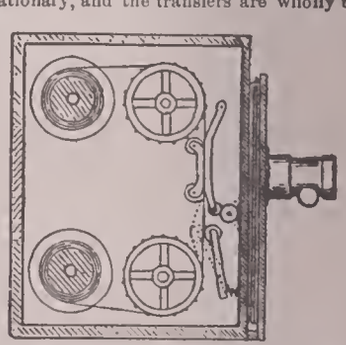


Fig. 2947.—ACRES' PROJECTION DEVICE.

As each succeeding picture represents the figures as very slightly moved, the resultant effect of a series of pictures on the eye is the same as if actually moving figures are observed. Mr. Edison decided to expose each picture for $\frac{1}{10}$ of this $\frac{1}{46}$ of a second, and to move it along to make way for the next picture in the remaining $\frac{1}{460}$ part of a second. In order to exhibit these continuous pictures with the required sudden stops and starts it was obviously requisite that the photographs should be taken at

the same speed, and with exactly the same intervals. A highly sensitized strip of celluloid, 1½ inches wide, was used as a film on which to produce the negatives, and two rows of holes punched in the edges of the film served as a means of applying toothed wheels to draw the film along with the requisite positive alternate stops and starts. When it is borne in mind that this film has to travel at a speed of about 26 miles an hour, yet be subject to absolute stops 46 times each second, and that the film must be accurately centered at each stop, and rest without vibration, the exceeding difficulty of the task undertaken by Mr. Edison will be somewhat apparent. After some years of patient experimenting, he succeeded in obtaining satisfactory negatives, and of reproducing them on a continuous film as positive pictures. In

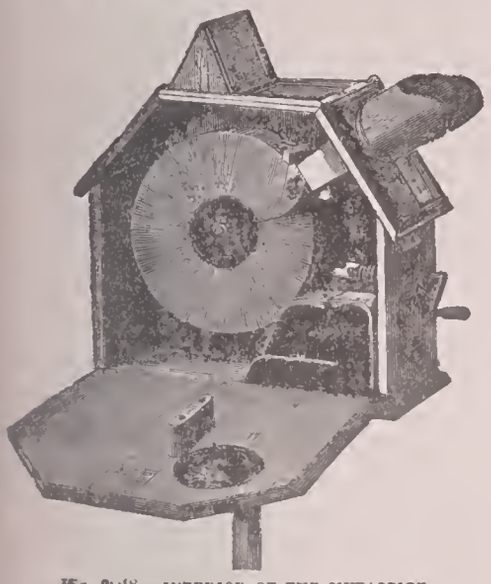


Fig. 2948.—INTERIOR OF THE MUTASCOPE.

taking the negatives the film is mounted on the periphery of a disk, and an electric light turned on each ¹⁄₂₅ of a second for the exposure. The positives are suitable for exhibition in the kinetoscope, which name particularly refers to the machine used for exhibiting the pictures through a peep-hole.

The principal piece of mechanism in the kinetoscope is a flat metal ring, having a slot. This ring is revolved at a speed of about 2,500 times a minute, the film bearing the continuous photographic pictures passing around a ring and beneath a light. A lens is provided through which the spectator views the travelling film. A miniature electric motor is commonly used to provide the power for unrolling and rolling up the film.

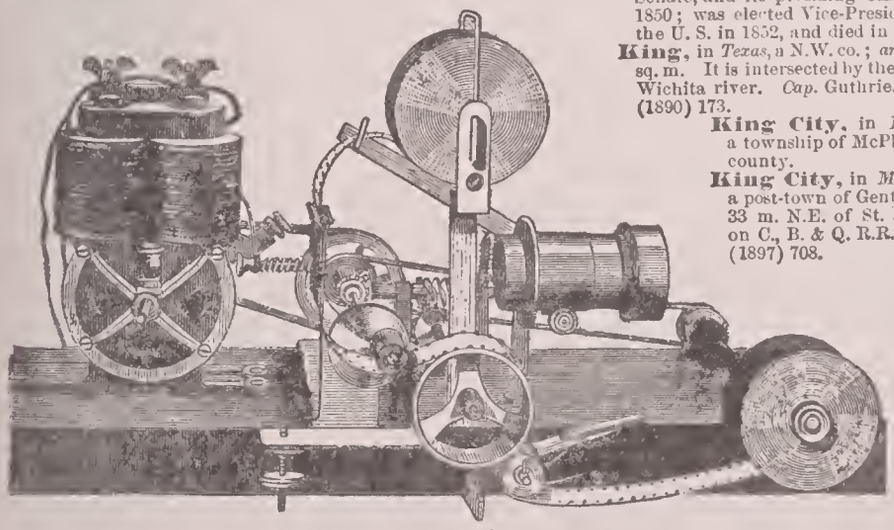


Fig. 2949.—THE JENKINS' PLANTASCOPE.

Each kinetoscope is usually provided with a film-bearing picture of one object only, as a serpentine dance, blacksmiths at the forge, boxers, cock-fight, cavalry drill, an express train, &c. The celluloid photographic films are frequently colored by hand, so as to increase the reality of the representations. This is expensive, and the films themselves are also costly, and subject to wear in the holes that are used to move them, so that after a time the representations become blurred and shaky, and the film must be renewed. A remarkable effect is obtained in the kinetoscope by running the photographic films backward through the machine. Take for instance a series of views representing a man eating a plate of chicken. When presented wrong-end first, the spectator sees a man picking his teeth, and then wiping his mouth, after which he proceeds to masticate, and to remove mouthfuls of chicken with his fork from his mouth to his plate, which at first contains only chicken bones. On these bones he builds up gradually the breast of a fowl, with accompanying side dishes. The effect on the spectator is astonishing The kinetoscope is in common use at pleasure resorts, and on busy streets in cities all over the world, and it is frequently arranged for exhibition as a "nickel-in-the-slot" machine. See KINETOGRAPH.

King, CHARLES, U. S. A., author, son of Gen. Rufus King, was born at Albany, N. Y., Oct. 12, 1844; educated at Columbia College Grammar School, and at West Point, graduating June 18, 1866; transferred to Fifth Cavalry Jan. 1, 1871; became captain in 1879; served in garrison and on recruiting duty, at the Military Academy in department of tactics, on garrison and frontier duty, and in Indian campaigns. He retired from active service June 14, 1879, on account of disability from wounds; was appointed inspector-general Wisconsin National Guard (1882-89); colonel of the 4th Regiment of the same; commander of cadets of the Michigan Military Academy (1892). He has published a number of novels, nearly all of them illustrating army life. They include: *The Colonel's Daughter; Marion's Faith; Captain Blake,* &c. Also wrote *Famous and Decisive Battles.* Col. King is a constant contributor to current periodicals.

King, CLARENCE, geologist, was born in Newport, R. I., Jan. 6, 1842; graduated at the Sheffield Scientific School of Yale (1862). He went to California (1863) and joined the geological survey of that State, and was the first to make detailed surveys of the Yosemite valley; was placed in command of the U. S. geological exploration of the fortieth parallel (1867), and made a topographical and geological survey across the widest part of the Cordillera extending from the Sierras of California to eastern Wyoming. The scientific results of this expedition appear among the *Professional Papers of the Engineer Department of the United States Survey,* Vol. I., entitled *Systematic Geology,* written by *K.* He was made the first director of the survey after the organization of the bureau of surveys; resigned in 1881; was elected a member of the National Academy of Science in 1876. He has contributed numerous articles to various scientific journals, and is the author of *Mountaineering in the Sierras.*

King, THOMAS STARR, Unitarian clergyman, was born in New York city, December 17, 1824. He held pastorates in Charlestown, Boston and San Francisco. During the Civil War he was active as a writer and speaker for the Union cause. The money which enabled the U. S. sanitary commission to carry on its work during the critical period of the war was raised largely through his exertions. He was a frequent contributor to the *Universalist Quarterly,* and the author of *White Hills, Their Legends, Landscapes, and Poetry.* After his death a few of his papers were collected under the title of *Patriotism and Other Papers.* He received the honorary degree of A. M. from Harvard College. Died March 4, 1864.

King, WILLIAM RUFUS, statesman, was born in North Carolina in 1786; was U. S. senator from that State (1819–1844); minister to France (1844); again in the Senate, and its presiding officer, in 1850; was elected Vice-President of the U. S. in 1852, and died in 1853.

King, in *Texas,* a N.W. co.; *area,* 900 sq. m. It is intersected by the South Wichita river. *Cap.* Guthrie. *Pop.* (1890) 173.

King City, in *Kansas,* a township of McPherson county.

King City, in *Missouri,* a post-town of Gentry co., 33 m. N.E. of St. Joseph on C., B. & Q. R.R. *Pop.* (1897) 708.

King's Daughters, Order of. A non-sectarian Christian society, composed of women of various churches, whose purpose is to minister to the sick and needy in a physical as well as in a moral way. It had its origin in New York city about 1890, and now numbers about 200,000 members, covering nearly every State in the Union, and having branches in several foreign countries. Its badge is a small Maltese cross of silver, often worn with a knot of purple ribbon.

King's Moun'tain, Bat'tle of. (*Am. Hist.*) King's Mountain, a small village and railroad station in South Carolina, is famous as the scene of a decisive battle of the Revolutionary War. Lord Cornwallis, the British commander in the South, who had been ravaging North Carolina, intended to march with his main force through Charlotte, Salisbury and Hillsboro, and crush out the Whigs, who were treating the Tories with great severity there. Major Tarleton was sent up the Catawba river, and Major Ferguson went off westward along the foot of the mountains, crossing the Broad river with a ruffianly command of some 1,500 men, consisting largely of Tories. Here the hastily collected patriot militia fell upon his encampment among the gravel hills, killed Ferguson, captured many prisoners and arms, and utterly dissipated the remainder. Cornwallis, hearing of this disaster to his chief supporter, turned back through a country of hostile patriots, meeting with defeat upon defeat, until the terrible battle at Guilford Court House (March 1, 1781) determined Lord Fox to move, in the English Parliament, that the ministers conclude the American war.

King'fisher, in *Oklahoma,* a N. cen. co.; *area,* 1,600 sq. m., intersected by Cimarron river. *Surface,* undulating; *soil,* sandy loam and red clay, fertile; plenty of timber. *Products,* wheat, corn, potatoes, &c. *Cap.* Kingfisher. *Pop.* (1897) 15,400.

—A post-town, capital of Kingfisher co., about 160 m. S. of Wichita, Kansas, on the C., R. I. & P. R.R. *Pop.* (1897) 1,750.

King-Ki-Tao. (*Geog.*) A Chinese name for Seoul, the capital of Corea.

King'lake, ALEXANDER WILLIAM, historian, was born at Taunton, England, in 1811; educated at Eton and at Trinity College, Cambridge, graduating in 1832; admitted to the bar at Lincoln's Inn (1837), but retired from the practice of law in 1856. He is the author of *Eothen,* a very popular account of an extensive Eastern tour which he made, though his fame rests mainly on his very able *History of the Crimean War.* To the writing of this history he devoted the greater part of thirty-four years, and for literary merit it should rank with the histories of Macaulay and Carlyle. He entered Parliament in 1857, and was prominent for his anti-Napoleonic attitude upon the Conspiracy Bill (1858), and the annexations of Savoy and Nice in 1860. Died Jan. 2, 1891.

King'man, in *Kansas,* a S. co.; *area,* 864 sq. m.; drained by the Chikaskia river and the S. Fork of the Ninnescah river. *Surface,* generally rolling prairie; very little timber. *Products,* wheat and corn. *Cap.* Kingman. *Pop.* (1895) 9,400.

—A city, cap. of Kingman co., 45 m. W. of Wichita, on H. & S.; M. P. and W. & U. R.Rs.; has a large planing and lath mill, agricultural implement works and other manufactures. *Pop.* (1897) 2,250.

Kings'bury, in *South Dakota,* an E. co.; *area,* 870 sq. m. Has numerous lakes and some small streams. *Surface,* rolling; *soil,* fertile; a fine dairy country, several creameries. Stock raising is carried on extensively. *Cap.* De Smet. *Pop.* (1895) 8,374.

Kings'ley, HENRY, author (brother of Charles Kingsley), was born at Holne, Devonshire, England, in 1830; educated at King's College, London, and Worcester College, Oxford. After leaving college he went to Australia, remaining five years. Returned to England (1858) and published a work descriptive of Australian life, entitled *Recollections of Geoffrey Hamlyn.* In 1861 the novel of *Ravenshoe* was published; then *Austin Elliot; The Hillyars and the Burtons,* &c. He was editor of the *Daily Review* (1870–71), and in the Franco-German war was his own war correspondent; was present at the battle of Sedan. Died May 24, 1876.

Kingsley, in *Iowa,* a post-town of Plymouth co., 27 m. N. E. of Sioux City, on C. & N. W. R. R. *Pop.* (1895) 819.

Kings'ton, WILLIAM HENRY GILES, author, was born in London, February 28, 1814. He wrote numerous books for youth, full of daring adventure, hair-breadth escapes &c. Among his best were: *The Three Midshipmen; The Three Lieutenants,* and *The Three Admirals.* He was an active philanthropist, and received knighthood from the Queen of Portugal for services in aiding to bring about a commercial treaty between that country and England. Died August 5, 1880.

Kin'it, *n.* [Gr., *kineo,* to move.] A proposed unit of force—what will impart to a pound a velocity of one foot a second.

Kins'ley, in *Kansas,* a post-village in Edwards co., 26 m. S.W. of Larned, on the A., T. & S. Fé R. R. *Pop.* (1895) 703.

Kins'ton, in *New Mexico,* a post-village of Sierra co., about 8 m. W. of Hillsboro. *Pop.,* (1897) 760.

Ki'owa, in *Colorado,* a S. E. co.; *area,* 1,800 sq. m.; drained by Big Sandy, Rush, and Adobe creeks. *Surface,* rolling prairie; *soil,* rich sandy loam, timbered only along streams. *Cap.* Sheridan Lake. *Pop.* (1890) 1,243.

Ki'owa, in *Kansas,* a S. S. W. co.; *area,* 720 sq. m.; watered by Medicine Lodge river and Cavalry creek. *Surface,* gently undulating; *soil,* a fertile dark, sandy loam; timber only along streams. *Cap.,* Greensburg. *Pop.* (1895) 2,200.

—A post-village of Barber co., 21 m. S.E. of Medicine Lodge, on the A., T. & S. Fé and Mo. Pac. R. Rs. *Pop.* (1895) 373.

Ki'owan, *n.* A North American language-stock, spoken by the Indians of the Kiowa tribe, formerly residing in the valley of the upper Arkansas. They now number about 1,100 souls, and dwell upon a reservation in the Indian Territory.

Kip'ling, RUNYARD, author and journalist, was born in Bombay, Dec. 30, 1865; nephew of Sir Edward Burne-Jones. Resided at Southport in youth; went to India, and entered journalism; wrote sketches for the Indian press, depicting with striking fidelity the military side of Anglo-Indian life. *Soldiers Three,* and *Black and White,* established his reputation in England,

his graphic and original style winning him great popularity. Subsequently he resided in England, and for some years in the United States, his later works including *Barrack Room Ballads*, *The Jungle Book*, *The Days' Work*, and others, with the *Recessional* and other striking and timely poems. In 1900 he went, for literary observation, to the scene of the Boer war. Mr. K.'s phenomenal popularity seems rapidly declining.

Kirchhoff (*keerk'hŏf*), GUSTAV ROBEAT, physicist, was born at Königsberg, Germany, in 1824; studied mathematics and natural sciences at the University of that city, and later (1848–50) lectured on these topics at Berlin and Breslau; was appointed professor of Natural Philosophy in the University of Heidelberg in 1854, in which position he acquired great fame as an original investigator and experimenter. His researches on the tension of vapors, heat and electricity attracted wide attention; but his chief accomplishment was the discovery of spectrum analysis (in connection with Bunsen, about 1860), and his application of the spectroscope. His works on this subject are of the greatest value. Died in 1887.

Kirk'bride, THOMAS STORY, alienist, was born near Morrisville, Bucks co., Pa., July 31, 1809; graduated M.D. at the University of Pennsylvania in 1832; became resident physician at the Friends' Lunatic Asylum, Frankford, Philadelphia, and held a similar position for two years at the Pennsylvania Hospital, Philadelphia. In 1840 he was appointed superintendent of the Pennsylvania Hospital for the Insane, which was opened in 1841, in which position he remained until his death. He published *Rules and Regulations, Hospitals for the Insane*, and annual reports, all of which have been of great assistance to others engaged in the care of the insane. Died Dec. 16, 1883.

Kirk'ville, in *Iowa*, a post-town of Wapello co., about 8 m. N.E. of Ottumwa. *Pop.* (1897) 950.

Kirk'wood, in *Illinois*, a post-village of Warren co., 7 m. S.W. of Monmouth on C., B. & Q. R. R. *Pop.* (1897) 1,150.

Kir'win, in *Kansas*, a post-village of Phillips co., about 15 m. S.E. of Phillipsburg on Mo. Pac. R. R.; has mills and elevators. *Pop.* (1895) 502.

Kisma'yu. (*Geog.*) A port in British East Africa, at the mouth of the Juh river.

Kis'met, *n.* An Eastern name for fate or destiny.

Kis'simmee, in *Florida*, a city, cap. of Osceola co., 75 m. E. by N. of Tampa, on Fla. Midland and S., F. & W. R. Rs. *Pop.* (1895) 1,172.

Kit Car'son, in *Colorado*, an E. co.; *area*, 2,150 sq. m.; drained by the South Fork of Republican river and its tributaries. *Surface*, rolling; *soil*, rich sandy loam; has timber. *Products*, wheat, rye, oats, corn, potatoes; stock raising. *Cap.* Burlington. *Pop.* (1890) 2,472.

Kitch'en-mid'dens, *n. pl.* (*Archæol.*) Heaps of shells, bones, and rude implements, found along the coast of Northern Europe, and in some other parts of the world, the kitchen refuse of ancient dwellings, referable to the early part of the Neolithic period.

Kites, *n. pl.* (*Aëron.* and *Meteorol.*) A long time has passed between the experiments of Benjamin Franklin with a kite in a thunder-storm and the active study of the kite for scientific and useful purposes. The world's present knowledge of desirable forms of kites, and the best methods of flying them, has come through the efforts and patient study of such workers as Lawrence Hargrave, S. P. Langley, Octave Chanute, Capt. Baden-Powell, J. B. Millett, W. A. Eddy, J. W. Davis, A. L. Rotch, H. H. Clayton, H. D. Wise, C. F. Lamson, S. A. Potter, and G. T. Woglom. The great drawback to the toy kites was the tail, which loaded them down so that high flights were impossible. When experimenters learned how to make tailless kites, a new field was at once opened up for investigation. The closest approach to the old forms is found in the Malay kite, which has been perfected by William A. Eddy, of Bayonne, N. J.

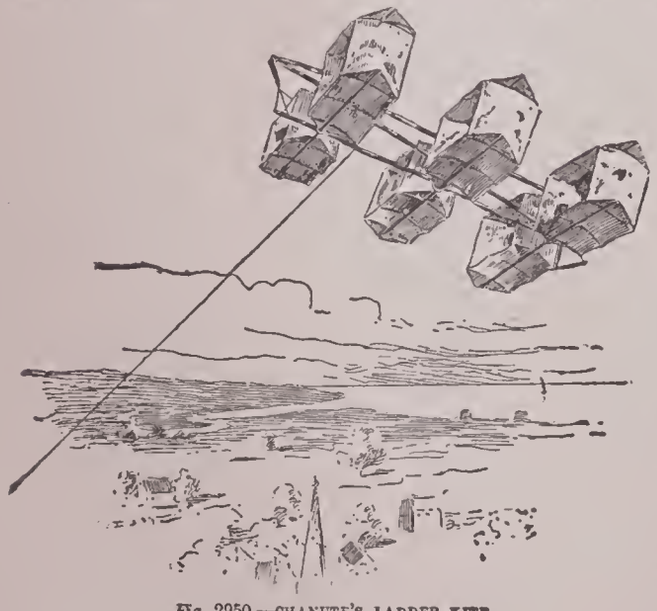


Fig. 2950.—CHANUTE'S LADDER KITE.

This is a cross-stick, tailless kite, having the crossed sticks bowed, and set very close to the top. Mr. Eddy, after a vast number of trials, settled on the following proportions as the best: For a six-foot kite he takes two sticks of that length, preferably of clear spruce, and attaches the cross-stick 18 per cent. of the distance from the top of the longitudinal stick. The cross-stick is then bowed so as to present a convex or bulging surface to the wind, the amount of curve being about one-tenth of its length, or slightly more if designed for use in high winds. In case the cross-stick inclines to bend out of center, a small strut or brace is used to stiffen it into shape. Stout manilla paper is used for a covering, strengthened with cloth pasted on the corners. Only two strings are attached, one at the crossing of the sticks, the other at the extreme lower end. The upper string is made about one-third as long as the lower, so when knotted to the main string the kite will be suspended with its plane at an angle of about twenty degress, a much more horizontal position than was possible with the toy tail kite. For storm use Mr. Eddy cuts quadrilateral holes in the center of his kites, so that the wind may pass through.

The cellular kite, or box-kite as it is also called, was developed principally by Lawrence Hargrave, though a

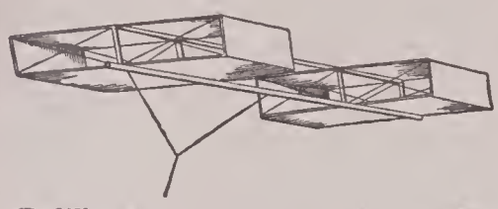


Fig. 2951.—A FORM OF THE HARGRAVE KITE, USED BY THE U. S. WEATHER BUREAU.

number of others have experimented with various box-like forms. The kite which Mr. Hargrave finally settled on as the best form has become known as the Hargrave kite, and has a great deal more lifting power than any of the cross-stick kites. The single-cell box kite comes to us from Japan, and is a four-sided paper box, with sides only, the ends being open. A kite two feet long has four sides, each one by two feet, the two strings being attached at corners two feet apart, so as to give the kite an inclination of about 20 degrees. The air passes through the kite, and exerts a lifting action on the lower side of the top as well as the lower side of the bottom. As the kite is hung with the lower sides presenting a V form to the wind, it is not as efficient as if the planes were presented at a better angle. In order to increase this efficiency Mr. Hargrave built two cells or boxes on one frame, easily braced, and giving a number of planes on which the wind might act. He built the cells in all sorts of forms, and tried various numbers of cells in one kite, but finally decided on a form of cell shaped about like a common brick, with the 2x8 inch sides open, and the cells mounted with open sides opposite about four inches apart. In flying, one of the open ends points upward at an angle of twenty or more degrees. Very light wood, as bamboo, and very fine wire may be used in building these kites, even when of large size, as the truss construction permits of the material being braced to advantage. The cloth (which is commonly used for the planes) does not have to be stretched on the bias, hence when once drawn taut it is not likely to get out of shape. Greater lifting power is acquired by curving the planes fore and aft, so as to present a slightly convex surface to the wind. The two cells must be set far enough apart to allow a clearance between for the wind, just as is found desirable in the jibs of a yacht. The explanation of this form of kite's remaining balanced in the breeze is that the side planes act as fins to keep it upright, and the rear cell acts as a rudder, while actually lifting about one-third as much as the front cell. Octave Chanute has designed a six-celled ladder kite, the cells of which are arranged two abreast, on a central frame, built on the lazy tongs principle. This frame changes its shape according to the angle, so that various transformations may be produced. The ladder kite of J. B. Millet has three planes to each cell, and three cells set well apart. The planes are all curved fore and aft and set at an angle of about ten degrees, though the angle may be changed at will. Mr. Millet has also designed an observation kite, having upper and lower planes, and open sides, but with a central upright fin for balancing. C. F. Lamson has built a somewhat similar kite, with the central upright fin and triple planes. Mr. Lamson is also the inventor of the multiplane folding kite, having triangular sails with jointed frames, all hung from a stick which constitutes the central backbone or keel of the kite. The sails are adjustable at any angle, and are also arranged to fold back against the keel. A central joint in the keel may be loosened so that it doubles up, and the sails being folded, the whole may be placed in a bag or a case and conveniently carried. H. H. Clayton, of the Blue Hill Observatory, Massachusetts, has invented a keel kite, shaped much like the Malay, but having an extra stick run parallel with the longitudinal stick, and pressed against the paper or cloth so as to form a ridge or keel. This is found to be a steady flyer. Mr. Clayton has also constructed a modification of the Hargrave two-celled kite, designed for efficiency in violent, uncertain winds. The change consists in leaving part of the box without covering. J. Woodbridge Davis has invented a dirigible kite of hexagon form, with three strings, those at the right and left being used to alter

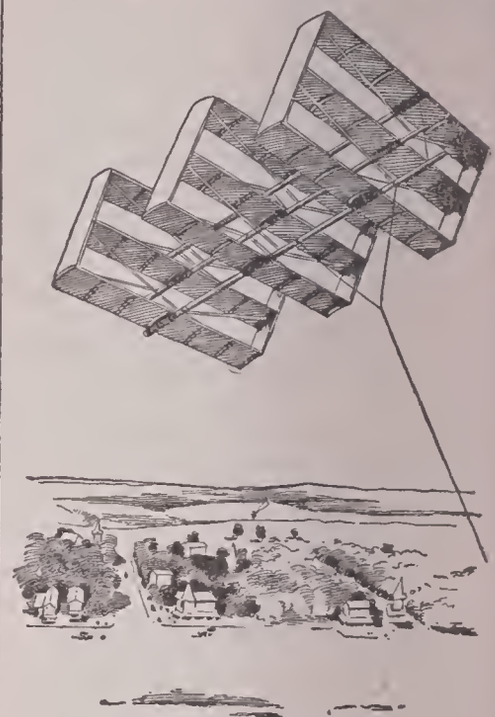


Fig. 2952.—MILLET'S LADDER KITE.

the angle of the kite, so that it may be steered like a sailboat. He has been successful in using this kite to drag a buoy, to which a line may be attached, as for assisting a wrecked ship.

Tandem flying, or the use of several kites on a string, the combination being called a *parakite*, is much favored by experts, who are seeking to render kite-flying useful in the study of meteorology, in gaining intelligence of an enemy in war, and in other serious purposes. The method is to put out the small kites first, with light cord, and to add larger kites, with heavier cord or wire as the length of the line is increased. Several styles of kites, as Malays, Hargraves, and sometimes ornamental forms, are frequently run out on one line. For lifting purposes the Hargrave, or some form of cellular kite, is

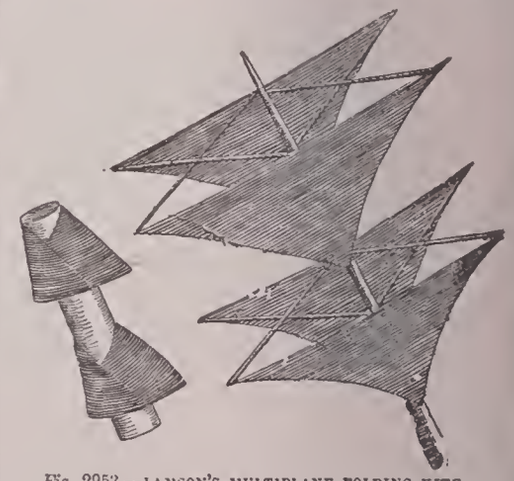


Fig. 2953.—LAMSON'S MULTIPLANE FOLDING KITE.

preferred. It has been demonstrated in several instances that the tandems can be made to lift a man, and even greater weights. Sept. 18, 1895, Captain Baden-Powell, of England, succeeded in hoisting himself about 100 feet in the air by means of a tandem of five kites although he weighed 150 pounds, and carried a parachute for use in case of accident. Mr. Hargrave had previously accomplished a similar feat in raising himself, with a seat and fixtures to the weight of 208 pounds, with a tandem of three large two-celled kites. He was satisfied with an elevation of 16 feet, however, not caring to take chances on going higher. Jan 21, 1897, Lieut. Hugh D. Wise took an aerial journey, near New

York city, to a height of 42 feet, supported by four Hargrave kites. One of these kites was very large, presenting a surface area of 160 feet. The total lifting area of the four was 312½ feet, and the weight of the kites was 59 pounds, while 20 pounds of rope were used to hold them. Mr. Wise and his chair added 150 pounds more, making a total of 229 pounds suspended. With a stronger wind, the lift would have been much greater, as a strain of 500 pounds was noted at the windlass during the experiments.

Mr. Eddy was among the first to develop tandem-flying. At last accounts (1897) his record was 9 Eddy-Malay kites on a cord two miles long, with an elevation of 5,595 feet, the tandem being kept up for 15 hours. At the Blue Hill Observatory, near Boston, this height has been much surpassed, largely through the use of piano wire instead of cord. This wire has great tensile strength, probably twice to three times as much for its weight as the best cord. No 14 is the gauge principally used, and two and one-eighth miles of it weigh but 12 pounds. The wire has a further advantage in presenting less surface to the wind. A two-thousand-foot cord of the customary size actually presented 60 feet of surface, which caused the line to sag more from wind-pressure than from weight. The longest high flight made from Blue Hill was 8,740 feet, or 9,375 feet above sea-level, seven Malay and two Hargrave kites being used, with an area of 170 feet. Three miles of piano wire were run out, and 12 hours of time was required by three men to accomplish the feat. The work of unwinding and winding the wire under such a strain was so laborious that a two-horse kerosene engine is now employed to turn the reel or spool on which the wire is wound. An endless screw secures a back-and-forth motion of the reel, so that the wire may be drawn off in front of the adjusting guide, which is a grooved wheel so pivoted as to turn in the direction which the kite-string pulls. Connected with this grooved wheel is a recording device for noting the length of wire run out.

The U. S. Weather Bureau value parakites as affording an opportunity of exposing the meteorograph at high

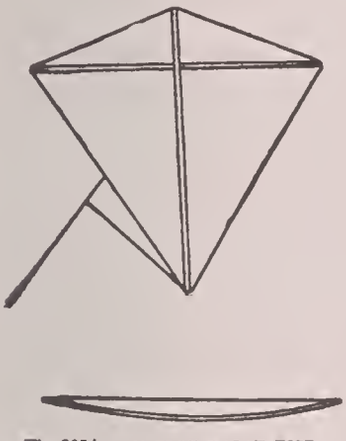


Fig. 2954.—AN EDDY MALAY KITE.

altitudes. As cold and warm waves are felt from 6 to 12 hours sooner in the upper atmosphere, the records of the instrument are of much value, the wind-velocity at different elevations, the humidity, and the temperature being obtained are at a single observation. Hence the experts of that institution look upon the possible improvements in their work as likely to come principally through their increased knowledge of the higher strata in the atmosphere, as obtained by the aid of parakites. Lieut. Wise, J. B. Millett, and others have shown the value of the kite for signalling, the latter having built triple-celled kites with electric lamps of different colors in each cell. When piano wire is used a strong current of electricity is always available—so strong, in fact, that it sometimes has to be grounded from a long line for the safety of the operators. Lieut. Wise rigged an arrangement of lanterns, which he operated from the ground by pulling cords, and was able to shift red, white, and green lanterns in such manner as to send signals by the regular army code. He has also suspended flags, and unfurled them in mid-air. From this it is apparent that the kite may be important in future warfare as a signalling apparatus. It might also be used to carry explosives, as dynamite, and drop them in an enemy's territory. The future of the kite as a means of procuring photographs from high altitudes is well assured. Mr. Eddy has done much to develop this field, being the first one to take such photographs in the Western hemisphere. His method is to connect a cord with the camera, which is sent up on the kite-string, and to open the shutter of the camera by a gradually increasing pull, which tends to steady the camera at the instant of exposure. Mr. Eddy thinks that it is practicable to use the electric current on the wire to operate the films, and change the shutters of the camera in mid-air. For obtaining a complete view of the horizon Mr. Eddy has an arrangement of eight cameras, strapped together, so that all the shutters may be operated at once.

Enthusiasts and scientists fly kites in all weathers and temperatures. For use in snow or rain an oilskin or parsffin paper is used to form the plane of the kites. They may be kept up in the rain for hours, though snow tends to accumulate on their upper surfaces and bring them down. While the modern scientific kite serves many useful purposes, as here outlined, it is also of value to the student of aërial navigation, and has furnished many valuable points to inventors of so-called flying-machines and soaring apparatus.

Kit'titas, in *Washington*, a cen. co.; *area*, 3,344 sq. m.; drained by Yakima river and smaller streams. *Surface*, four-fifths mountainous, western half covered with timber. Large deposits of iron, coal, gold, silver, galena, and copper, but undeveloped; *soil*, rich and productive. *Cap.* Ellensburg. *Pop.* (1890) 8,777.

Kitunuahan, *n.* A North American language-stock, spoken by the Indians of the Kooteuai Valley, B. C. (See KOOTENAI.)

Kleene'boc, or CAPE GUEVEI, *n.* (*Zoöl.*) A very small South Africau antelope (*Cephalophus pygmæa*)—one of the bushbucks or gueveis. It is not larger than

Fig. 2955.—KLEENEBOC.

a rabbit, and has very short horns; the color is slaty brown. It lives singly or in pairs, in bushy districts, and is very nimble and active.

Klip'dachs, *n.* (*Zoöl.*) The South African cony or daman (*Hyrax capensis.*) See HYRAX.

Klip'springer, *n.* (*Zoöl.*) A pygmy antelope (*Nanotragus oreotragus*), common in rocky places throughout South Africa, haunting the "kopjes" that everywhere rise above the plains. It is almost 2 feet high at the shoulders, olive in color, and has horns, curved slightly forward and about 4 inches long.

Klon'dike, *n.* (*Geog.*) The small region drained by the Klondike river, a tributary entering the Yukon from the east about 75 miles east of the Alaskan boundary; it is about 40 miles in length, and on earlier maps is called *Deer*, *Reindeer*, or *Ton-dac* river. The discovery of rich gold deposits brought this region into sudden prominence in 1897, when the steamer *Excelsior* arrived at San Francisco on July 14, bringing 40 miners and about $500,000 worth of coarse gold dust and nuggets, and a report of vast riches remaining in the bed of the stream. Intense excitement was aroused all over the country, and during the next two months by many special steamers as well as the regular lines, some 4,000 gold-seekers sailed for the Klondike, and hundreds more were turned back for lack of transportation. The excitement over it was comparable only to that which followed the discovery of gold in California, in 1849. The first discovery of gold on the Klondike river, is said to have been made by an old hunter who came up the Yukon to the mouth of the Klondike in the autumn of 1896, to fish for salmon. The Indians told him of placers near at hand where gold was so plentiful that it could be washed out in a frying-pan, and he began prospecting with such overwhelming success that nearly all the miners on the Yukon abandoned their claims, and Dawson City sprang into existence at the mouth of the Klondike, becoming a town of some 3,000 inhabitants before the spring of 1897. The absence of intoxicating liquors, and the presence of the Canadian mounted police, made the town far more orderly and quiet than is usually the case in mining camps. Bonanza creek and its branch, Eldorado creek, were the southern affluents of the Klondike which have produced the most gold; but other small streams, such as Hunker, Bear, and Dominion creeks, were prospected with success during the first year. The great difficulties attendant on placer-mining on the Kloudike were, first, its great distance from the sea and the inadequate means of transportion down the Yukon to St. Michael, where sea-going steamers could be taken, or up the Yukon, across the portages and through the lakes and over the mountain passes down to Juneau and the coast; second, the extreme shortness of the season when it is possible to pan out gold. The Klondike miners spend the winter in breaking ont, by the help of fire, and piling up the frozen "pay dirt" which covered "bed rock" beneath several feet of gravel, to be thawed and washed when the streams break in the spring. It was soon apparent that this river valley would prove one of the richest placer districts of the world, since the gold occurred in coarse flakes and nuggets, with here and there exceedingly valuable pockets. This belief has been borne out by results, the gold product rapidly increasing year by year. In 1901 the yield aggregated $24,000,000. As a consequence the population has became considerable and Dawson City is a flourishing place. See YUKON RIVER.

Knapp, in *Wisconsin*, a post-village of Dunn co., 15 m. N. W. of Menomonie, on the C., St. P., M. & O. R. R. *Pop.* (1897) 570.

Knead'ing-machine, *n.* (*Manuf.*) Every person who has witnessed the making of bread by the ordinary process must have felt the necessity of some means for avoiding the contact of hands, often not too clean, with the dough, and the very laborious exertions requisite for kneading it thoroughly. In France, and also in some parts of this country, every operation in bread-making is now conducted on a large scale by the aid of admirable machinery: and the form of kneading-machines are very various—the general principle being, however, the same in all. In France, where they are called *Pétrisseurs;* that shown in Fig. 2956 is preferred.

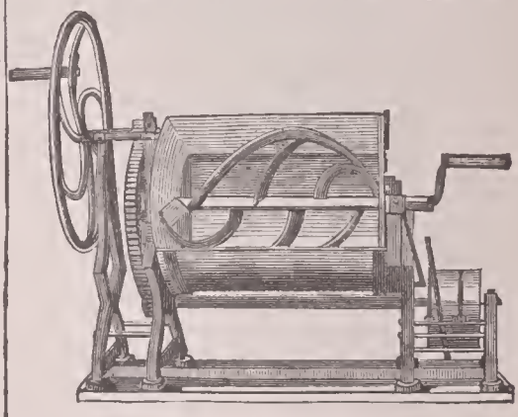


Fig. 2956.—KNEADING-MACHINE.

It consists of an iron cylinder, in which an axle works, and around which are set a number of curved, blunt metal blades. The upper half of the cylinder opens (as seen in the figure), for the supply and removal of the dough. In the large bakeries they are worked by steam-power; in the smaller by hand.

Knee'-breech'es, *n.* Trousers extending only just below the knees, now little worn except by young boys, and by athletes, cyclists, &c.

Knee'-cap, *n.* The patella, or knee-cap. See KNEE. (*Harness.*) A covering for the knee, worn as a protection by carpenters, carpet-layers, &c.—A padded leather cap, secured by straps over the knees of racing, hunting, and other valuable horses, to protect against abrasion in case of an accidental fall.

Knights'ville, in *Indiana*, a post-town of Clay co., 18 m. E. N. E. of Terre Haute, on T. H. & I. R. R.; has large rolling mills, blast furnaces, and the works of the Indiana Coal and Iron Co. *Pop.* (1897) 1,540.

Knit'ting, *n.* (*Manuf.*) An art allied to weaving, but of comparatively recent date, the time and place of its invention being disputed. Knitting consists in using a single thread, and with it forming a continued

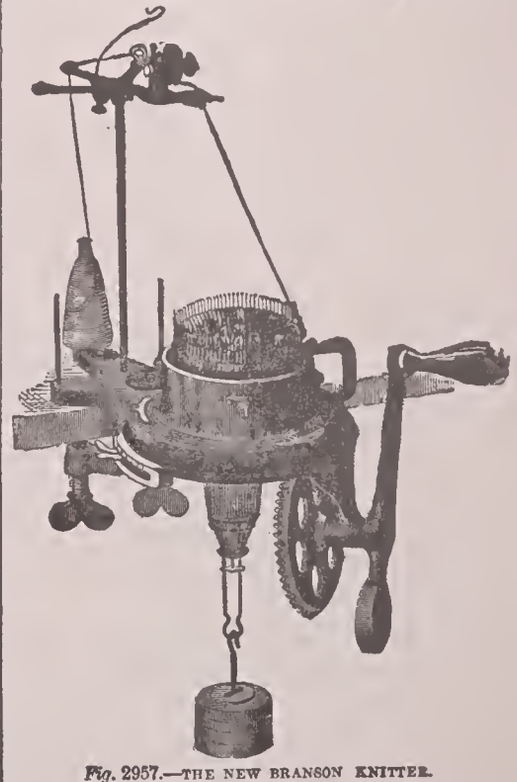


Fig. 2957.—THE NEW BRANSON KNITTER.

series of loops across the whole fabric. The next row passes through these, and they in their turn receive another set, until the whole is completed. Knitting by machinery is principally employed in the manufacture of stockings, mittens, and stockinet for undergarments. Knitting by hand furnishes an easy and amusing employment for the hands, without engaging the atten-

tion very much, and is still practiced to a considerable extent by those who do not value their time highly, or who desire to make small fancy articles not readily produced by machinery. The improved Lamb knitting machine was one of the first manufactured. It produces a tubular web which may be shaped into stockings or the legs or sleeves of undergarments. It operates with two straight rows of needles, running parallel and

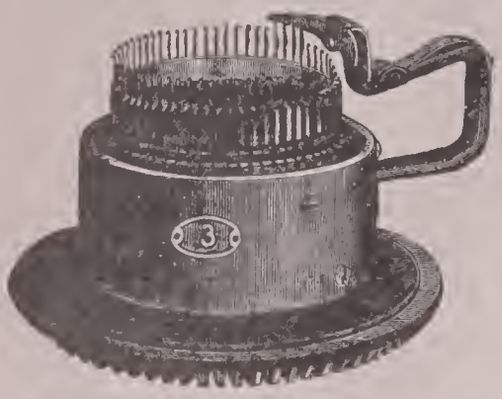


Fig. 2958.—CHANGEABLE HEAD OF BRANSON KNITTER.

near to each other, the needles being operated by cams which can be shifted by simply moving a lever, so as to make each row of needles operate separately, or both at the same time, and either way, from left to right, or from right to left. When a needle is moved up within range of the cam, it is self-acting, and continues to knit until moved down; and as any number of needles can thus be moved up or down, at either end of the rows of

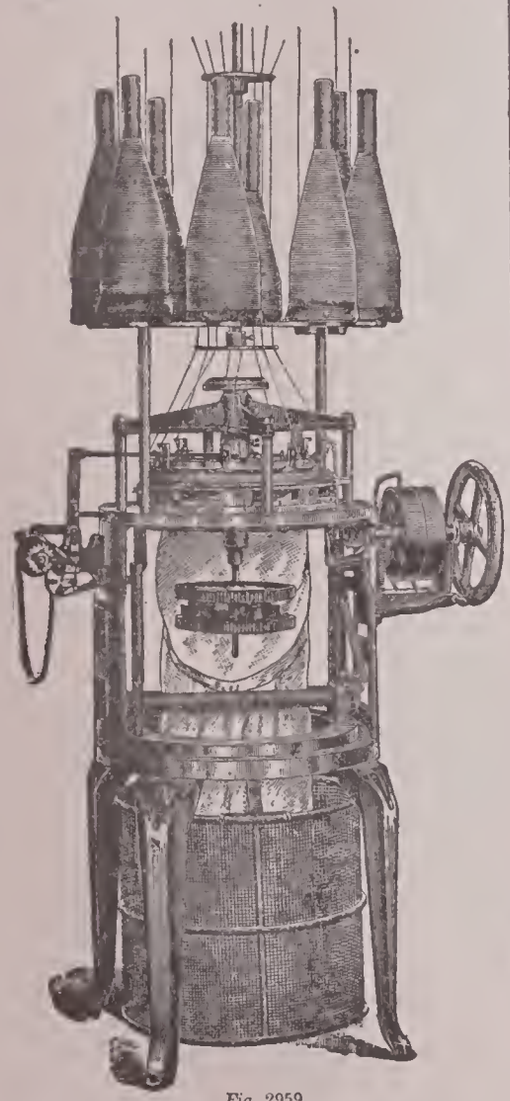


Fig. 2959.
AFFORD MACHINE FOR MAKING KNITTED UNDERWEAR.

needles, so any number of loops can be added to or taken from the web, and its size can be regulated at will. The loops can be adjusted to any desired length by turning a thumb-screw, so as to knit all kinds and sizes of yarn, rendering the fabric tight or loose as desired. The Bickford knitting machine has a central cylinder, around which is a row of hooked needles. The fabric is tubularly formed, and descends through the center of the machine. The yarn is supplied from a bobbin through guides, and as the cylinder is revolved by bevel gears, a yarn-carrier leads the strand to the hooked needles. These needles receive an up-and-down motion from an internal cam, and draw the yarn into loops. A ring of loops is thus formed about the mouth of the cylinder, and held in place while a second ring of loops is formed through them, when the first row is dropped and descends. To narrow the circle, or to form the heel of a stocking, various needles are thrown out of operation. In order to keep the yarn down in place, sinkers are employed, and these are often called "jack-sinkers," to distinguish them from the dividing or bar-sinkers that form the loops.

Knorhaan (*nôr'hän*), *n.* The local name, derived from the Dutch colonists, of several species of South African bustard, especially *Eupodotis afra*.

Knott, in *Kentucky*, an E.S.E. co.; *area*, 365 sq. m.; bounded on the S. W. by Kentucky river and drained by several small streams. *Surface*, hilly, with table lands, well timbered; *soil*, part sand, part clay. *Min.*, coal and iron ore. Lumbering is a prominent industry. *Cap.* Hindman. *Pop.* (1890) 5,438.

Knox, in *Nebraska*, a N.E. co.; *area*, 1,100 sq. m.; bounded on the N. by the Missouri river, which separates it from South Dakota, and partly drained by the Niobrara river. *Surface*, diversified; *soil*, fertile. *Cap.* Niobrara. *Pop.* (1890) 8,582.

Knox, in *Texas*, a N.N.W. co.; *area*, 900 sq. m.; drained by Brazos and South Wichita rivers. *Surface*, rolling prairie; *soil*, rich black loam; very little timber; cattle raising. *Cap.* Benjamin. *Pop.* (1897) 1,750.

Knox-Little, WILLIAM JOHN, ecclesiastic, was born in Stewartstown, co., Tyrone, Ireland; educated at Trinity College, Cambridge, graduating in 1862; became assistant head-master of grammar schools of Lancaster and Sherburne; curate of Christ Church, Lancaster, of Turweston, Bucks, and St. Thomas's, Regent street; rector of St. Alban's, Cheetwood, in 1875; canon of Worcester, in 1881. He is a high churchman; has published, besides sermons, *Characteristics of the Christian Life, Meditations on the Three Days' Agony of Our Blessed Redeemer*, and *Motives of the Christian Life*. He has also published several novels, including *The Child of Stafferton*, and during 1891 published a book entitled *The Christian Home*.

Koch, ROBERT, bacteriologist, was born in the Harz, Germany, Dec. 11, 1843; graduated in medicine at Göttingen, and devoted special attention to microscopy. The fame he acquired in connection with a notable poisoning case in which he was employed as an expert led to his being summoned from Wollstein to Berlin, where he became a member of the Sanitary Commission, and later a professor in the Royal School of Medicine. His fame rests chiefly upon his discovery (1882) of the *bacillus tuberculosis*, and of the *comma bacillus*, or cholera germ, which he found in 1883 while investigating the cholera epidemic in India, at the head of a scientific commission sent out for that purpose by the German government. In 1890 *K.* announced the discovery of a lymph treatment for tuberculosis, but its efficiency still remains unproven.

Ko'dak, *n.* (*Photog.*) A form of photographic camera adapted to taking instantaneous negatives by the "snap-shot" method. Specifically, the name applies only to the portable form of camera first introduced under that name, which is copyrighted by the makers. Common usage, however, has made the word apply to all cameras of this class, and it has also passed into use as a verb, as: "They *kodaked* the farmhouse from the car-window." Cameras of this sort are made in the form of a small box, having a lens and shutter in one side, and a reflector on top, to aid the operator in focusing the lens for the snap-shot. When the user sees in the reflector the view he desires, he presses a button, and an instantaneous negative is taken automatically. When the plates or films furnished with the kodak have been used they may be sent to the manufacturer for printing, and a new set purchased.

Ko'el, *n.* (*Ornith.*) The Hindu name for any of several well-known East Indian parasitic cuckoos of the genus *Eudynamis*, especially *E. honorata*. These birds are peculiar in that the males are uniform glossy black, while the females are of dull plumage.

Kolu'schan, *n.* A North American language-stock, spoken by the Indians of the coast of Alaska between Portland Canal and the Atna river; also by the Tagish Indians on the headwaters of the Lewes river. The best-known tribes are the Auk, Chilcat, Sitka, Stickeen, Tongas, and Yakutat.

Kon'go. See CONGO.

Koniol'ogy, *n.* [*Gr. konis*, dust, and *logos*.] The science or study of atmospheric dust and germs.

Ko'niscope, *n.* [*Gr. konis*, dust, and *skopeo*.] An instrument for observing and testing the quantity of dust in the atmosphere.

Koo'tenai, or **Koo'tenay**, *n.* (*Geog.*) A large district in southern British Columbia and adjacent borders of the U. S., comprising the valley of the Kootenai river and lakes—the largest northern tributary of the Columbia. This and other local names are derived from the language of the Kootenai (or Kootenuha) Indians, a tribe of Kitunnahan stock, resembling in manners and customs the Flatheads (*Kalispelm*), and having many fine and stalwart characteristics; they are especially noted as daring navigators of these rushing rivers in their bark canoes, which have the peculiarity of projecting, ram like, along the bottom, under water, far beyond the limits of the gunwales, giving them a much better hold in swift water than have the canoes of the ordinary shape. The Kootenai Valley includes extensive plains and hillsides of grass, affording pasturage to great herds of cattle, and agriculture is spreading throughout all the lower lands, where the climate and soil are favorable to the cultivation of all the hardier crops. Mining, however, is the principal resource of the region. Placers have been washed for gold there since about 1870, and over $12,000,000 have been thus taken out. Wild Horse and Perry creeks, among the head waters of the river, are the most noted placer-streams. About 1890 the development of quartz-mining from Kootenai Lake upward began to attract attention, and thousands of persons flocked thither, where several flourishing villages have been founded, among which Nelson takes the lead. These are along the southern spurs of the Selkirk range, and are accessible by way of steamboats and railway along the Columbian and Kootenai rivers, from Revelstoke, B. C. Most of the ores are of silver, mainly galena decomposed to a great depth, and valuable because so easily worked. Veins of copper quartz and various other ores occur, carrying free-mining gold, so that the continued prosperity of the region may be looked for. The Canadian Pacific Railway is now building a direct line eastward from the Kootenai Valley over Crow's Nest Pass of the Rocky Mountains, and the region is also directly reached from the U. S. by a branch of the Great Northern Railway.

Koo'tenai, in *Idaho*, an ex. N. co.; *area*, 5,600 sq. m.; intersected by Clarke's Fork of Columbia river, and also drained by the Kootenai river. *Surface*, mountainous. Gold mining is the chief occupation. *Cap.* Rathdrum. *Pop.* (1897) 6,650.

Kop'-kops, *n.* [Am. Ind.] An ornament or money consisting of small, inferior tusk-shells, formerly used by the Indians of Northwestern America.

Kop'pa, *n.* A letter of the ancient Greek alphabet, resembling the Latin Q, replaced by *kappa*, and retained only as a numeral, with the value of 90.

Ko'riak, *n.* One of a race of people of northeast Siberia, or their language.

Kos'se, in *Texas*, a post-town of Limestone co., 110 m. S. of Dallas on Hons. & Tex. Cen. R. R.; has a broom factory, foundry, machine shop, and pottery. *Pop.* (1897) 860.

Ko'to, *n.* [Jap.] (*Mus.*) A musical instrument made and used in Japan. It is an oblong box some 6 feet in length, having a convex top, tapering slightly toward one end, and open at the base of the larger end. Thirteen strings of silk stretch lengthwise over the top, fastened permanently at both ends, so that the instrument can only be tuned by changing the position of the series of bridges (one under each string) which runs diagonally across the box.

Kou'miss, *n.* A fermented or fermenting beverage, originating with the nomadic tribes of the southeastern parts of Russia, and prepared from mare's milk. It may be made, however, from the milk of any animal, and a variety in use among the mountaineers of the Caucasus is from cow's milk, in which kefir fungi are used to produce the fermentation. The article manufactured and sold under this name in civilized countries is usually prepared from cow's milk by means of yeast, or even from condensed milk. The fermentation is produced in from 12 to 24 hours, frequent stirring being essential to success. It will keep from one to three weeks, and is highly esteemed as a nutritious beverage, and an aid to digestion. Also spelled *koomiss*, *koumiss*, *kumiss*, and *kumyss*.

Krakato'a, or **Krakata'u**, *n.* (*Geog.*) An island and volcano in the Straits of Sunda, between Sumatra and Java. An eruption of the volcano took place in 1680, and it was then quiescent until the summer of 1883, when it became eruptive for a period of about three months, culminating on Sunday, August 27, with the most violent seismic convulsions known to history. The four most serious explosions took place at 5·30, 6·44, 10·02 and 10·52 in the morning, the convulsion at 10·02 being the most terrific. A considerable portion of the island was totally destroyed, and 163 villages were annihilated, with a loss of life estimated by the subsequent census at 36,380. So tremendous was the outburst that people within a circuit of a few hundred miles thought that the end of the world was coming. At Mascassar, in the Celebes, 969 miles distant, the explosions were so loud that they were taken for the reports of guns, and two vessels actually put out to sea, expecting to find large war vessels near by in battle or in distress. The extreme distance to which the sound was carried was 2,247 miles, as determined by the investigation of a committee of the Royal Society of London. The sea for hundreds of miles about was strewn with pumice dust, dead bodies, and *débris*. The dust from the explosion was carried so high that it remained in the upper currents of the air for weeks, actually making the entire circuit of the globe, and producing a peculiar red glow at twilight within the belt which was thus made, and which overspread the whole tropical and north temperate zones. The committee of the Royal Society calculated that the resultant air waves started at a speed of 700 hundred miles an hour, and passed about the globe four and a half times. The tidal wave caused by the disturbance rose to a height of over 50 feet in the vicinity, and minor waves were observed at distances of more than 10,000 miles. No other volcanic explosion within the memory of man at all approaches this in severity and volume.

Krapot'kin, PRINCE PETER ALEXIOVITCH, Nihilist, was born at Moscow in 1842; entered the corps of pages at St. Petersburg; subsequently spent five years in service and exploration in Siberia; returned to St. Petersburg (1867) and devoted four years to the study

of mathematics at the University; explored the glacial deposits of Finland and Sweden (1871); visited Belgium and Switzerland (1872), and associated himself with the extremist section of the International (*q. v.*). After his return to Russia he was arrested (1874), but escaped to England in July, 1876. He was expelled from Switzerland (1881), and was condemned to five years' imprisonment in France (1883). In 1886 he obtained his release and returned to England. Author of *Paroles d'un Révolté*; *In Russian and French Prisons*, and numerous magazine articles.

Krauth, CHARLES PORTERFIELD, divine and scholar, was born at Martinsburg, Va., in 1823, graduated at Pennsylvania College in 1839; was ordained in 1842; was called to the pastoral charge of St. Mark's Lutheran Church, Philadelphia, and was elected (1868) to the chair of Moral and Intellectual Philosophy in the University of Pennsylvania. In 1861 he became editor of *The Lutheran and Missionary*, issued in Philadelphia, and was besides the author of several publications, among which were *Commentary on Saint John* and *The Conservative Reformation and its Theology*. Died 1883.

Kriss Krin'gle, *n.* [Perhaps a cor. of Ger. *Christkindlein*, Christ-child.] Another name for Santa Claus, or St. Nicholas, the good genius of Christmas, who fills the children's stockings at night.

Kro'nia, *n.* [Gr.] Among the Greeks a festival in honor of Kronos, corresponding nearly to the Saturnalia of the Romans

Kro'nos, *n.* The Greek name of the deity called by the Romans Saturnus or Saturn (*q. v.*).

Krn'ger, S. J. PAUL, President of the South African Republic, was born in Bastenburg, in 1825. He entered upon the more active part of his public career when chosen a member of the Executive Council of the Transvaal (1872), during President Burgers' administration. In 1882 he was elected President; reelected in 1883 for five years, and again in 1888, 1893, and 1898. In 1899 he declared war against Great Britain, and ably conducted the succeeding war. He afterwards went to Europe, where he died July 14, 1904. See TRANSVAAL.

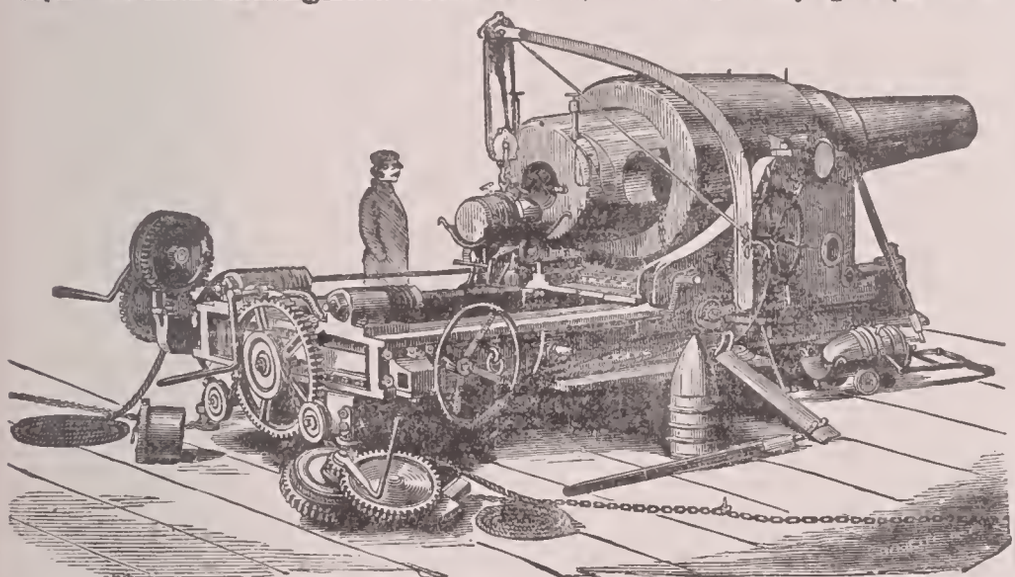


Fig. 2962.—AN EARLY FORM OF THE KRUPP BREECH-LOADING CANNON.

Krupp, ALFRED, a German iron-worker and inventor, born April 26, 1812, at Essen, in Westphalia. His father died when he was 14 years of age, leaving to his widow and two sons a small iron-forge shop and a method of making cast-steel which he had discovered, and which Alfred was destined to immensely develop. Taking the shop on his own hands in 1848, with two workmen only, he began to experiment in the casting of steel in large masses. His progress in this direction led to the rapid development of his works. In 1851 he sent to the London International Exhibition a block of steel weighing 4,500 pounds, together with a 6-lb. steel gun, an important innovation in the art of gun-making which brought the works many orders. The size of steel blocks cast and of guns produced rapidly increased, until in 1890 a 135-ton gun was made for the Russian government. In addition, the works produced rails, tires, wheels, and cast-steel articles of all descriptions. For an account of the dimensions and production of the immense establishment into which it has grown, see KRUPP WORKS. The large Krupp guns are "built up" by shrinking steel hoops over a central steel tube. For guns below 9-inch calibre a single layer of these hoops is shrunk on, while guns above this size have a double layer in the after part. In 1864, Krupp was tendered letters of nobility by the King of Prussia, but declined the proposed honor, feeling that a title could yield him no dignity or importance beyond what he had gained by aid of his own intellect and industry. He was at that time one of the wealthiest men in Germany, and did much for the comfort and well-being of his employees and their families. His process he kept strictly secret, and refused admission to his works of the members of a commission sent by the U. S. government to study his system of making large castings for steel guns, only workmen in his employment being permitted to enter his works. He died July 14, 1887.

Krupp Works. In 1810 Friedrich Krupp established a small iron foundry at Essen, in Rhenish Prussia, and was the first in that part of the world to manufacture steel by a process similar to the Bessemer, the secrets of steel-making being jealously guarded by the English manufacturers. His son, Alfred Krupp, born April 26, 1812, succeeded to the works in 1848, and went largely into the manufacture of cast steel, building up the business until it is the largest of the kind in the world. The concern is widely known for the large guns which it has manufactured, having always led in this developement, and built ordnance for almost all the nations of the globe. The works at Essen cover about 1,000 acres, and there are numerous tributary establishments, including several hundred iron mines, the whole giving employment to more than 25,000 workmen. Including the families of the workmen, a total of some 88,000 persons are dependent on the industry of the Krupp works. They constitute almost the entire population of the town of Essen, and have been provided for liberally by the Krupps, who have built about 4,000 dwelling houses, which are let at moderate rentals. They have also established a system of coöperative stores, manufactories for staple goods (as shoes and clothing), a hospital, bathing establishment, primary, advanced, and technical schools, and numerous other enterprises for the good of the workmen, on the principal that they improve the quality of their work by assisting their employes to share in their prosperity. A further idea of the vastness of the works may be gathered from the fact that 421 steam engines are employed to furnish power, and 1,500 furnaces, which consume annually 1,250,000 tons of coal, together with 3,000 machine-tools, to which must be added 111 steam-hammers. There are 53 miles of railway tracks within the works, on which about 30 trains are regularly run, and employment furnished for 33 locomotives. The Krupps were the first to make very large steel castings, producing ingots of 20 tons weight as early as 1862, while in 1867 they were successful in making a steel casting of 50 tons, and in 1880 a gun of 100 tons. In 1890 they eclipsed all previous efforts by casting a 135-ton gun. When it is borne in mind that in order to make a large casting it is necessary to have all the metal heated to a pouring point at one time, and to be able to pour the whole quantity into the one mold before any of it can cool sufficiently to impair the quality of the casting, it will be understood what vast difficulties are overcome in producing a casting of 100 or more tons of steel. The exhibit of the Krupps at the Columbian Exposition in Chicago in 1893 served to acquaint many Americans with their work. Among other interesting features was shown a crank-shaft, shaft, rudder-frame, and propeller-screws for a triple-expansion engine for the North German Lloyd Steamship Company, the whole weighing 144 tons. Castings of the stem and stern of a war-ship were also exhibited, besides a 62-ton armor-plate. The ordnance exhibit, however, was most attractive to the average visitor. This included one of the largest guns ever made, weighing 122 tons, and being 18 feet in circumference at the breach, 47 feet long, and 16½ inches bore. This gun is designed for coast defense, and would probably throw a projectile 12 or 14 miles. A 12-inch gun of 62 tons, for use on a war-vessel, was equally interesting. All sorts of heavy guns, as well as rapid-fire guns and field pieces, are made by the Krupps. Also large forgings of all kinds, and a great deal of railway, steamboat, and mining machinery.

Krush'ite, *n.* A new abrasive material, consisting of chilled cast metal shot, made in very small sizes down to a fine powder. It is excessively hard and tough, and is sold as a substitute for sand for use in the sand-blast, and in tumbling-barrels, &c., where its efficiency is said to be double that of ordinary sharp sand. It is valued also for sawing and polishing granite and other hard stone, and is said to inflict less wear upon the saws and rubbers, while it cuts and abrades the stone to better advantage. It is also used in the manufacture of diamond drills.

Kry'lor, IVAN ANDREWICH, the most popular of Russian authors in his own country, was born at Moscow, Feb. 14, 1768. He was the son of a poor army officer. His boyhood was passed in Orenburg and Iver until the death of his father, when his mother sought St. Petersburg with the hope of obtaining employment for her son. Here he spent 23 years in vain search for lucrative employment, part of this time being spent in a government clerkship, and part of it as secretary to Prince S. Golitsy, nor as tutor of the prince's children. During this period he produced two tragedies, *Cleopatra* and *Philomela*, worthless and unsuccessful, a burlesque drama named *Trumf* (Trumps), with some lighter pieces, and published in succession three journals, clever but short-lived. He entered upon his true career in 1805, when, being in Moscow, he published three fables, translations from La Fontaine. The success of this effort was so great that *K.* from that time forward abandoned all other fields of literature and devoted himself solely to the fable, each new production being received with the greatest favor by the people. In 1812 the government offered him the post of assistant in the Imperial Library of St. Petersburg, a sinecure which exactly suited his disposition, which was inclined to indolence. He held it for nearly 30 years, retiring in 1841, and dying Nov. 9, 1844. *K.* produced in all 198 fables, of which 56 were translations or imitations, while the remainder were original alike in conception and execution. They display much wit, and trenchant but good-humored satire, which no class or abuse escapes. They display, however, a conservative dislike to new ideas or customs. While they lack the grace and delicacy of La Fontaine's inimitable productions, they have a style so natural, simple, and easy that any peasant can understand them. They have been translated into many languages, English among these, there being partial renditions in English prose and verse. Two editions of *K.*'s complete works have appeared in Russia, and many editions of his fables alone.

Kryp'ton, *n.* A new chemical element discovered in 1898 by Professors Ramsay and Travis, as a gas rising from liquid air. Its spectrum yields three very brilliant lines in the red, yellow and green. It is monatomic, density 22.5. It belongs in the helium series. Is a rare atmospheric gas, several of which were discovered in the final years of the century.

Kuan'za, *n.* (*Geog.*) A large river of Angola, emptying into the Atlantic somewhat south of St. Paul de Loando, and having the Livingston Falls near the middle of its course.

Kuroki, TAMESADA, Japanese general, was born in Kogoshima, Japan, in 1844. Entering the military service, he took an active part in the revolution in favor of the Mikado, and rose in rank till he was made a general in 1894. In the war with China he distinguished himself by his brilliant service in the capture of Weihaiwei, Jan. 30, 1895. In the war with Russia of 1904, he performed brilliant exploits, especially in the battle of the Yalu and in his flanking movements against the Russian army at Liaoyang, and at Mukden, etc.

Kuropatkin, ALEXEI NICHOLAVITCH, Russian general, was born in the district of Pskoff, March 17, 1848, of noble descent. He became a sub-lieutenant in the army at eighteen; took part (1864–65) in the campaign of conquest in Turkestan; in 1876 was chief of staff to Skobeleff in the conquest of Khokand; in 1877, in the Turkish war, took active part in the siege of Plevna; for eight years was governor of Trauscaspia; was made commander-in-chief in 1897, and in 1898 became minister of war. In 1904 he took command of the army in Manchuria, but after suffering signal defeats by the Japanese army under Oyama at Liao-Yang, Mukden and Tie Pass, was dismissed from his command March 16, 1905. He therefore patriotically accepted a subordinate command under his successor, General Linevitch.

Kustrin, or **Custrin,** a fortified town of Prussia, formerly the capital of Neumark, and the covering point for Berlin against Russian invasion. *Pop.* 15,000.

Kutahica, Kutaieh or **Kutaya,** a town of Turkey in Asia, 170 m. N.E. of Smyrna, the centre of the Turkish carpet manufacture. *Pop.* est. 50,000.

L. The twelfth letter of the English alphabet, and the first, in this and most other languages, called *liquids* or *semi-vowels*, is sounded by placing the tip of the tongue against the upper incisor-teeth, while the breath issues at its sides, and the larynx vibrates; whence it is called a *liqui-dental* letter. It is the same as the Greek *lambda*, and the Hebrew or Phœnician *lamed*, and is found in the languages of almost all nations, excepting those of some Brazilian and Japanese tribes. *L* bears the closest affinity to *r*; hence the numerous substitutions of the one sound for the other in languages derived from the Aryan stock: thus, Eng. *pilgrim*, Lat. *peregrinus*; Gr. *epistola*, Fr. *épître*. And the Latin termination *alis* becomes, after *l*, *uris*; as, materi*alis*, famili*aris*. In certain cases, the Latin *l* becomes *i* in Italian; as, *Florentia* — *Firenze*. In English, it is often mute before consonants, as in *could, calm, psalm*, &c. At the end of a monosyllable it is often doubled, as in *full, fall, shall, still, till, bill*, etc.; but not after a diphthong or digraph, as *fowl, fool, prowl, growl, foul*, etc. In English words, the terminating syllable *le* is unaccented, the *e* being silent, and the *l* only feebly sounded, as in *able, eagle*, — pronounced *abl, eagl*. In the Scottish dialect, *l* is mostly mute when it occurs as a terminant letter; as, *a', fa'*, for *all, fall*. Analogous to this elision is the frequent absorption of *l* into *u* in modern French; as, *chevals, chevaux*. In the ancient Greek, Hebrew, Phœnician, Celtic, and Latin languages, and in those derived from them, the letter *l* consists invariably of two strokes, though in every possible shape and combination. Thus, in the most ancient Greek alphabets, it is written ΛVΛ; in the Celtic, ∢ Λ: in Hebrew, ל; and in Latin, L. *L*, as an abbreviation, stands for *Lucius, Lepidus, Libertas, Libra, Ludos*, &c.; *LL.D., Doctor of Laws*; and *LL.S.*, for a sestertium. The English £ (so written) stands for *libra*, a pound. *L* also signifies *liber*, a book. As a numeral, *L* represented, among the ancients, as at the present day, the number 50.

La. (*Mus.*) The syllable by which Guido denoted the last sound in the hexachord. It is now used by the French as synonymous with our note A.

La, *interj.* [A. S.] Lo; look; see; behold.

Laaland, (*la'land*,) or LOL'LAND, an island of Denmark, in the Baltic Sea; Lat. 54° 38′ N., Lon. 11° 50′ E.; *area*, 462 sq. m. *Prod.* Corn, hops, hemp. It also yields excellent timber. *Cap.* Nykioping. *Pop.* 61,600.

Labad'die, or LABAD'IE, in *Missouri*, a post-village of Franklin co., about 45 m. W. of St. Louis.

Lab'adists, *n. pl.* (*Eccl. Hist.*) A sect of religionists, named after their founder, Jean de Labadie, a French mystic; B. 1610; D. 1674. He was originally a Jesuit, but joined the Reformed Church, and labored with acceptance in France, Switzerland, and Holland. Afterwards, he propounded a species of mysticism, laying great stress upon the internal light by which alone the outer revelation can be made intelligible, and maintaining that the contemplative life is a state of grace and union with God, and the very height of perfection. He likewise advocated a community of goods. His party assembled first at Middleburg, in Zealand, then at Amsterdam, and then at Hervarden, in Westphalia. They afterwards removed to Altona, where Labadie died. They do not now exist.

La Baie du Fe'bore, or ST. ANTOINE DE LA BAIE, a village of prov. Quebec, county of Yamaska, on Lake St. Peter, about 70 m. N. N. E. of Montreal. *Pop.* 900.

La'ban. (*Script.*) A rich herdsman of Mesopotamia, son of Bethuel and grandson of Nahor, Abraham's brother. (*Gen.* xxiv. 28–31.) His character is shown in the gladness with which he gave his sister Rebekah in marriage to the only son of his rich uncle Abraham, and in his deceitful and exacting treatment of Jacob, his nephew and son-in-law. When the prosperity of the one family and the jealousy of the other rendered peace impossible, Jacob secretly departed to go to Canaan. *L.* pursued him, but returned home after making a treaty of peace.

Laban, in *Virginia*, a post-office of Matthews co.

Laban'a, in *South Carolina*, a post-office of Horry co.

Labarge', in *Michigan*, a post-village of Kent co.

Labarge', in *Wyoming*, a post-office of Uinta co.

Labarum, (*lăb'ă-rum*,) *n.* [Etymol. unknown.] (*Eccl. Hist.*) The name given to the standard of Constantine, which he adopted in commemoration of the vision of the cross which he had seen in the heavens. It is described by Eusebius as a long gilt spear, with a cross-beam towards the top, and a golden crown on the summit inclosing the two first letters of the Greek name of Christ, intersecting each other and representing the form of a cross. From the cross-beam was suspended a silken banner, with images of the emperor and his children inwrought into it. It was preserved for a considerable time, and brought forward at the head of the imperial armies on important occasions, as the palladium or safeguard of the empire.

Labashee'da, a village of Ireland, in Munster, co. Clare, about 10 m. E. by S. of Kilrush.

Lab'danum, *n.* (*Bot.*) See LADANUM.

Labefaction, (*-fak'shun*,) *n.* Act or process of labefying or making weak; state of being weakened; deterioration; decay; as, "*labefaction* of principles."
Boswell's "Life of Johnson."

La'bel, *n.* [A. S. *læppa*, a hem, a border; D. and Ger. *lappen*, a shred, a patch; Sansk. *lup*, to cut or break. See LAP.] A narrow shred or slip of paper, parchment, &c., containing a name or title, and affixed to anything, denoting its contents, ownership, address, &c.; as, the *label* of a bottle of medicine. — Any paper attached to a will by way of appendix, as a codicil. — A riband of silk, or slip of paper or vellum, attached to a diploma or legal instrument to secure the seal appending thereto.

(*Her.*) A figure, consisting of a fillet, with three or more pendants attached (see 1, Fig. 464), used chiefly to distinguish the arms of an eldest son during the life of his father; also employed to distinguish them from those of the younger son. The label is considered the most honorable of all differences, and is formed by a fillet generally placed in the middle and along the chief of the coat, without touching its extremities. Its proper width is a ninth part of the chief; when more than three pendants are employed, the number is specified in blazoning.

(*Arch.*) Same as DRIP-STONE, *q. v.*

—*v. a.* To affix or attach a label to; as, to *label* a package of goods.

La Belle Riviere. See OHIO RIVER.

Label'lum, *n.* [Dim. of Lat. *labium*, lip.] (*Bot.*) The odd petal in the *Orchidaceæ*.

La'bent, *a.* [From Lat. *labi*, to slide.] Sliding; gliding; slipping. (R.)

La'beo, QUINTUS, and ANTISTIUS, the name of two celebrated Roman jurists, father and son; the first, after the battle of Philippi, in which he fought for Brutus and Cassius, imitated his leader, and despairing of their cause, fell on his sword, and was buried under his tent. The second left behind him 400 treatises on forensic subjects; but being slighted by Augustus Cæsar, he only rose to the rank of prætor, and died with the reputation of a sound lawyer, A. D. 20.

(*Zoöl.*) A genus of fishes, family *Cyprinidæ*, distinguished by their thick and fleshy lips.

Laberius, DECIMUS JUNIUS, (*lai-beer'e-us*,) a Roman knight, and celebrated as an author of dramatic *mimes*, of which he is represented as having composed not less than forty-three, many of them embodying the follies and vices of the time. Julius Cæsar, to degrade the knightly order, of which Laberius was a worthy member, compelled him to appear on the stage and act in one of his own satirical pieces; and though he revenged himself by a cutting lampoon on the Dictator, who was present, this and some other indignities had such an effect upon his health, that he died soon after, outliving the fall of Cæsar ten months.

La'bial, *a.* [Fr., from Lat. *labium*, a lip. See LIP.] Pertaining to the lips; as, *labial* veins. — Formed or pronounced by the lips; as, *labial* sounds, *labial* vowels.

—*n.* (*Gram.*) An elementary sound of speech, in which the voice is modified by the lips, as the sounds represented by the letters *b, p*, and *m*. — Also, a letter of the alphabet adopted to express such sounds. They are *b, p, v, f, m*, and *w*.

La'bially, *adv.* In a labial manner; by means of the lips.

Labi'atæ, *n. pl.* (*Bot.*) Same as LAMIACEÆ, *q. v.*

La'biate, La'biated, *a.* [Fr. *labié*, from Lat. *labium*.] (*Bot.*) Resembling, or having lips.

Labiatifloræ, (*lăb'be-ăt-e-flo're*,) *n. pl.* (*Bot.*) A suborder of *Asteraceæ*, characterized by the division of the hermaphrodite florets, or at least the unisexual ones, into two lips. No important plants belong to this suborder. A few have aromatic and mucilaginous properties, and one, *Printzia aromatica*, a native of the Cape of Good Hope, is said to furnish a substitute for tea.

Labio-den'tal, *a.* [Lat. *labium*, and *dens, dentis*, a tooth.] Formed or pronounced by the co-operation of the lips and teeth, as the letters *f* and *v*.

La'bium, *n.* [Lat.] (*Zoöl.*) In insects, a movable organ, often biarticulate, which, terminating the face anteriorly, covers the mouth from beneath, and represents the under lip.

(*Conch.*) The outer lip of a shell; or the edge of the aperture at the greatest distance from the axis.

Lablache, LUIGI, (*la-blăsh'*,) a celebrated Italian singer, B. at Naples, 1794. At 12 years of age he commenced studying for his profession at the Conservatoire of Naples. About the age of 16 he made his first appearance on the Neapolitan stage as a bass singer. His reputation as a vocalist dated from his engagement at La Scala Theatre, Milan, in 1817. For a quarter of a cent. he was an established favorite at the Italian operas of Paris and London. He retired from professional life abt. 1855, and took up his residence at a villa near Naples D. 1858.

La Boetie, (*bo'ai-te*,) a French author of the 16th century, chiefly noted as the friend of the celebrated essayist Montaigne. Born at Sarlat, 1530; died in 1563.

La'bor. See LABOR; LABOR ORGANIZATIONS, SEC. II.

Lab'oratory, *n.* [Fr. *laboratoire*, from Lat. *labor*.] A place where labor, work, or exertion is carried on; as, the brain is called the *laboratory* of the mind. — A house or place where operations and experiments in chemistry, pharmacy, pyrotechny, &c., are performed; also, a place where arms are manufactured or repaired.

La'bor Creek, in *Georgia*, enters Apalachee River from Morgan co.

Labored, Laboured, (*lā'berd*,) *a.* Bearing marks of scrupulosity or constrained execution; — opposed to *free, flowing*, or *easy*.

"Such *labour'd* nothings, in so strange a style." — *Pope.*

La'borer, La'bourer, *n.* One who labors in a toilsome occupation; one accustomed to, or adapted for, severe physical exertion; a man who performs work requiring little skill or intelligence as distinguished from an *artisan*. (Often called a *laboring man*.)

"The stone . . . mocking the *lab'rer's* toil." — *Granville*

Labo'rious, *a.* [Fr. *laborieux*; Lat. *laboriosus*, from *labor*.] Full of labor; toilsome; wearisome; requiring labor, exertion, or continued effort; arduous; employing labor or diligence in any occupation; as, "*laborious* virtues." (*Addison.*) — Given to labor; using exertion; hence, diligent; industrious; assiduous; active; as, a *laborious* man.

"A cave . . . hew'd and fashion'd by *laborious* toil." — *Dryden.*

Laborious labor. (*Obstetrics.*) Delivery attended with more difficulty and suffering than usual. — *Dunglison.*

Labo'riously, *adv.* With labor, toil, continued exertion, or difficulty.

Labo'riousness, *n.* State or quality of being laborious, or accompanied with toil, labor, or difficulty; toilsomeness; as, the *laboriousness* of the work. — Assiduity; diligence; industrious activity.

La'borless, *a.* Easy of execution; facile; not attended with labor.

La'bor-sav'ing, *a.* Adapted or calculated to lessen or supersede human labor: as, *labor-saving* machinery.

La'borsome, La'boursome, *a.* (*Naut.*) Having a tendency to roll, pitch or become cranky; as, a *laborsome* vessel in a cross sea.

Lab'rador. See SECTION II.

Lab'radorite, LABRADOR FELSPAR, *n.* (*Min.*) A variety of felspar originally brought from the coast of Labrador. When viewed in certain directions, it exhibits a beautiful play of colors; and the mutable opalescent tints of blue, red, green, and yellow, which are reflected from the surface, vary according to the position in which the stone is viewed, so that the same spot exhibits various tints if held in different positions, violet and red being the most rare. It takes a fine polish, and when cut into thin slabs, it is employed in jewelry and for other ornamental purposes.

La'brax, *n.* [Gr.] (*Zoöl.*) See BASS.

Labrose', *a.* [Lat. *labrosus*, from *labrum*, lip.] Thick-lipped.

La'brum, *n.* [Lat.] A lip, edge, or rim, as of a cup.
(*Zoöl.* and *Conch.*) Same as LABIUM, *q. v.*

La'brus, *n.*; *pl.* **Lab'ridæ.** (*Zoöl.*) A genus and family of Acanthopterygious fishes, the species of which are very numerous in tropical seas; and even on our own shores they are abundant. The *Labridæ* family (Wrasses, or Rock-fish, as they are also called) are chiefly remarkable for their thick fleshy lips, their large and strong conical teeth, their oblong scaly body, and their brilliant colors. They are further generically distinguished by a single dorsal fin, extending nearly the whole length of the back, part of the rays spinous, and behind the point of each spinous ray a short membranous filament. To this family belongs the Black-fish, or Tautog, *Labrus Americanus* (Fig. 1022), 6 to 18 inches long, common on the coast of New England, and highly prized as food.

Labruyère, JEAN DE, a French novelist, B. in Normandy, 1644. After having been royal treasurer at Caen, he was appointed, on the recommendation of Bossuet, to give instruction in history to the duke of Burgundy, the grandson of Louis XIV. He remained attached to the court, and died in 1696. In regard to the details of his life very little has been recorded; but a prudent and unobtrusive reserve seems to have accompanied those habits of keen observation, on which mainly his literary fame was built. His *Characters*, published in 1687, but much augmented in following editions, placed him immediately in the highest rank as a master of French style; and they still entitle him to be named with Rochefoucauld and Montaigne, among those writers whom the French regard as most thoroughly acquainted with human nature.

Labur'num, *n.* (*Bot.*) A gen. of plants, order *Fabaceæ*. The common L., or Golden Chain, (*Laburnum vulgaris*,) is a beautiful ornamental shrub common in gardens; only medicinally worthy of notice from yielding seeds of an acrid and extremely drastic nature, producing, when eaten, excessive vomiting, relaxation, cramps, and the characters of an irritant poison. The treatment, when they are accidentally eaten, is

Fig. 1489. — THE GOLDEN CHAIN, (*L. vulgaris.*)

to give an emetic of white vitriol, and afterwards support the body by ammonia, brandy, and cordials.

Lab'yrinth, *n.* [Fr. *labyrinthe;* Lat. *labyrinthus;* Gr. *labyrinthos.*] A building or place full of intricate ways, or winding passages, which occasion difficulty of egress from the interior; as, the Cretan *labyrinths.* — A maze; a series of hedges, mounds, or walls, forming an involved inclosure in a garden.

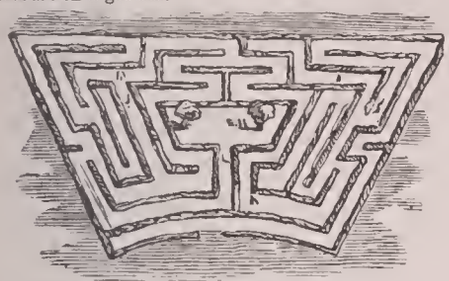


Fig. 1490. — GARDEN LABYRINTH.

—An inexplicable or bewildering difficulty. — Any contrivance, arrangement, or object of an intricate nature, or involved form.

(*Anat.*) That portion of the internal ear behind the tympanum.

"The tender *labyrinth* of a maid's soft ear." — *Donne.*

(*Metallurgy.*) A series of troughs attached to a stamping mill, through which a current of water passes for the purpose of washing away the suspended pulverized ore, and subsequently depositing it at different distances, depending upon its state of comminution.

(*Hist.*) Three famous labyrinths are mentioned in ancient history. The earliest and most renowned was that of Egypt, situated at Arsinoë, near Lake Mœris. Herodotus visited and described it. It had 3,000 apartments, 1,500 underground and the same number above it, the whole being surrounded by a wall. It was divided into courts, each of which was surrounded by colonnades of white marble. It was extant in the time of Pliny. Ruins at the modern village of Howara, in Faïoom, have recently been identified with those of the labyrinth. The second labyrinth was that of Crete, in the neighborhood of Cnassus, said to have been built by Dædalus, at the command of king Minos, as a place of confinement for the monster Minotaurus. It was built on the model of that of Egypt, but on a much smaller scale. None of the ancient authors who have left accounts of it seem to have seen it, and no traces of it are now to be found; hence modern writers generally deny its existence. A third labyrinth was that in Lemnos, commenced by Smilis, an Æginetan architect, and completed by Rhœcus and Diodorus of Samos, about the time of the first Olympiad. It was similar in structure to the Egyptian, from which it was distinguished only by a greater number of columns. Remains of it were still extant in the time of Pliny. A similar structure was said to exist on the island of Samos, but no particulars of it are known.

Labyrin'thal, *a.* Relating to, or having the form of, a labyrinth.

Labyrin'thian, *a.* Involved; winding; intricate; bewildering.

Labyrin'thic, Labyrin'thical, *a.* [Fr. *labyrinthique.*] Resembling a labyrinth.

Labyrin'thiform, *a.* [From Lat. *labyrinthus,* and *forma,* form.] Possessing the form of a labyrinth; mazy; intricate.

Labyrin'thine, *a.* Belonging to, or partaking of the characteristic of, a labyrinth.

Labyrin'thodon, *n.* [Gr. *labyrinthos,* and *odous,* tooth.] (*Pal.*) A genus of gigantic Sauroid Batrachians, in which the head was defended, as in the *Ganocephala,* by a continuous casque of externally sculptured and unusually hard and polished osseous plates, including the supplementary *postorbital* and *supratemporal* bones, but leaving a *foramen parietale.* Two occipital condyles; vomer divided and dentigerous; two nostrils,

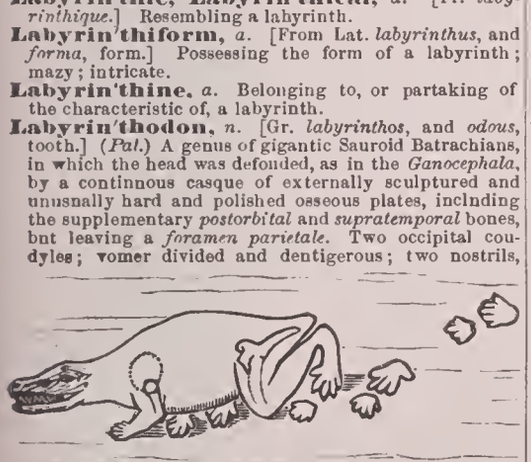


Fig. 1491.—LABYRINTHODON PACHYGNATUS.

vertebral bodies, as well as arches, ossified, biconcave; pleuropophyses of the trunk, long and bent; teeth rendered conflex by undulation and side branches of the converging folds of cement, whence the name of the order. This group, which first appears in the Carboniferous strata, attained its highest development in the Triassic.

Labyrin'thodont, *n.* A reptile of the labyrinthodon genus.

Lac, (*lăk,*) *n.* [Sp. *laca;* Ger. *lack;* Pers. *lac;* Sansk. *lag,* to stick.] (*Com.*) The computation of money in the East Indies. Thus, a *lac of rupees* is equal to 100,000, and, supposing them to be standard (*Sicca*), equivalent to $62,500.

(*Chem.*) *L.* is a resin which exudes from the branches of several trees in tropical climates, particularly from the *Ficus religiosa, Ficus Indica,* and *Rhamnus jujuba.* The resin is formed in consequence of the punctures made in the bark of the tree by the female of a small insect of the cochineal tribe, the *Coccus ficus.* The resinous juice which exudes hardens over the insects, fastening them to the twigs, which, when cut off, constitute the *stick-lac* of commerce. The crude *stick-lac* is bruised, the fragments of the twigs removed, and the resin digested in a weak solution of carbonate of soda. The alkaline solution dissolves out a red coloring-matter, known as *lac-dye.* The residue, which is insoluble in the alkaline lye, forms the *seed-lac* of commerce. *Lac-dye* is now extensively used in lieu of cochineal for dyeing scarlet. The pinks produced by it are, however, inferior. *Seed-lac,* when melted, forms *shell-lac,* which is used for various varnishes, as a stiffening for hats, and as the principal ingredient in sealing-wax. Mixed with half its weight of sandarac and a small quantity of Venice turpentine, and dissolved in alcohol, it forms lacquer, a varnish much employed to heighten the color of brass and bronze, and protects these alloys from tarnishing.

L'Acadie', in Canada, a post-village of St. Johns co., Quebec. *Pop.* (1897) 1,120.

La Caille, NICOLAS LOUIS DE, an eminent French mathematician and astronomer, was b. at Rumigny, 1713, and became assistant to Cassini at the Observatory of Paris, and afterwards professor of mathematics at the College Mazarin. In 1750 he visited the Cape of Good Hope for the purpose of studying the stars of the S. hemisphere, and he determined the position of 9,000 previously unknown. The tables of eclipses for 1800 years, inserted in the *Art de Vérifier les Dates,* was calculated by La Caille. His principal works are, *Astronomiæ Fundamenta; Cours de Mathématiques pures; Cœlum Australe stelliferum,* &c. D. 1762.

Lac Ammoni'acum. [Lat., milk of ammoniacum, from its resembling that fluid in appearance.] (*Med.*) A mixture prepared by rubbing, slowly and perfectly, down a certain quantity of the ammoniacum with water, till the whole, by steady and careful trituration, is suspended in the water. This makes one of the best expectorant mixtures in the pharmacopœia for coughs, colds, and hoarseness.

Lacan'tun, a river of Central America, rises abt. Lat. 15° 25′ N., Lon. 92° W., and enters the Gulf of Mexico at Lake Terminos. *Length,* about 430 miles.

Lac'cadives, an archipelago of low islands, lying abt. 150 miles off the Malabar or W. coast of India. There are 19 of considerable size, and of coral formation. The largest is about 7 m. in length and 2½ in breadth. *Prod.* Rice, sweet potatoes, cocoa- and betel-nuts. There are also some small cattle. *Pop.* In the whole, about 7,000. Lat. between 10° and 12° N., Lon. bet. 72° and 74° E.

Lac de la Pluie. See RAINY LAKE.

Lac de l'Esclave, in British North America. See GREAT SLAVE LAKE.

Lac des Bois, in British N. America. See LAKE OF THE WOODS.

Lac des Mille Isles, (*lak da mill eel.*) [Fr., Lake of the Thousand Islands.] An expansion in the SAINT LAWRENCE RIVER, *q. v.*

Lac des Montagnes. [Fr., Lake of the Mountains.] See ATHABASCA.

Lac du Buffle. See BUFFALO LAKE.

Lac du Grand Ours. See BEAR LAKE, (GREAT.)

Lace, *n.* [Fr. *lacet,* lace, braid, *lacer,* to lace; Sp. *lazo,* a lasso, a bow, a snare, from Lat. *laqueus,* a noose, a snare; perhaps from the same root as *lacio,* to entice.] That which catches, binds, or fastens; a string or cord, often plaited, or otherwise interwoven, in an ornate manner; a plaited string used as a fastening for women's clothes; as, a *stay-lace.*

"O cut my *lace,* lest my heart, cracking, it break too." — *Shaks.*

—Spirituous liquor used as a *soupçon* in tea, coffee, or other beverage. (Cant.)

"He drinks his coffee without *lace.*" — *Prior.*

(*Manuf.*) Properly signifying a network of gold, silver, flax, or cotton threads, forming a transparent texture. The origin of this delicate fabric is not known, but it appears to have been worn by the Grecian and Roman ladies. At Venice it was early in use, and it is said that Marie de Medici was the first to introduce it into France from Italy. In England, from a prohibition, in 1483, of the importation of foreign lace, the manufacture would seem to have been established there prior to that date. But as pins, which are required in lace-making, were not used till the 16th century, the lace produced must have been of a coarse kind. The original manufacture was called *pillow* or *bobbin lace,* and was usually made of thread or silk, woven into netting with hexagonal, octagonal, &c., meshes. Afterwards it was ornamented with a thicker thread, called *gimp,* so interwoven with the meshes as to form flowers, or curved designs. Lace of this kind was made on a hard-stuffed pillow or cushion, covered with parchment, on which the pattern was drawn. Each thread was wound upon a bobbin, and, to form the meshes, pins were stuck in the cushion, and the threads woven or twisted round them, (Fig. 1492.) The spots for the insertion of the pins were indicated by the pattern, and also showed the place for the insertion of the gimp. As many as from 50 to 60 bobbins are required for every inch of breadth, and only one mesh can be made at a time. A piece of lace, 1 inch wide, with 50 threads per inch, will have 25 meshes in the breadth, or 625 meshes in each square inch of length, or 22,000 meshes in the yard. The most celebrated laces are: — 1. *Brussels lace,* a hexagon mesh, the most valuable, which is divided into two classes, — *Brussels ground,* which is made of flax threads, and *Brussels wire ground,* which is made of silk. The pattern is worked separately in both these cases, and set on by the needle. 2. *Mechlin lace,* a hexagon mesh of three flax threads twisted and plaited to a perpendicular line or pillar, with the pattern worked in the net. 3. *Valenciennes lace,* an irregular hexagon, formed of two threads, partly twisted, and plaited at the top of the mesh, with the pattern worked in the net. 4. *Lisle*

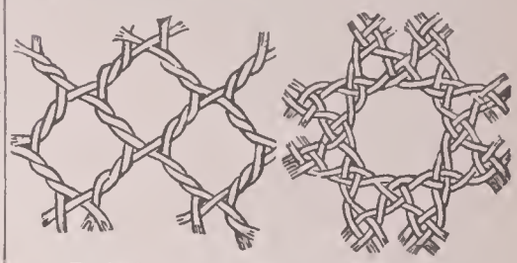


Fig. 1492. — PILLOW, CUSHION, OR BOBBIN-LACE.

lace, a diamond mesh, formed of two threads plaited to a pillar. 5. *Alençon lace,* also called *blond,* a hexagon mesh of two threads twisted similarly to Buckingham lace, and considered the most inferior of any cushion-made lace. 6. *Alençon point-lace,* formed of two threads to a pillar, with octagon and square meshes alternately. In the portraits painted by Vandyke during the reign of Charles I. (Fig. 438), and also in those painted afterwards by Sir Peter Lely and Sir Godfrey Kneller, and others, the lace represented is *Brussels point,* in which the network is made on the cushion with bobbins, and the pattern worked into the net with the needle. About 1777, a new ground was attempted by the lace-makers of Buckingham, which quickly superseded all others; this was the point-ground, which had, it is believed, been imported from the Netherlands. From the first appearance of this ground the origin of the modern pillow-lace trade may be dated. It was not, however, till the beginning of the present century that the most striking improvements were made. After 1812, at Honiton, the manufacture had arrived at that perfection, was so tasteful in design and delicate in workmanship, that the best specimens of Brussels lace did not excel it. During the war between France and England, veils of Honiton lace were sold in Loudon at from 20 to 100 guineas. After that time, however, the effects of the competition of machinery began to be felt; and gradually the pillow-lace trade sank into insignificance. Lace is said to have been manufactured by machinery as early as 1768, by a stocking-weaver of Nottingham, named Hammond. Various other attempts in the same direction were made about the same time, and a few years afterwards the *warp-frame* for making *warp-lace* was invented. The invention of this machine has been ascribed to four persons, — Vandyke, a Dutchman; Mr. Clare, of Edmonton, near London; Mr. Marsh, Moorfields, London; and Mr. Morris, of Nottingham. By these machines, lace of an inferior kind was produced in large quantities, and Nottingham became the centre of the new trade. In importance, however, it was soon far eclipsed by the bobbin-net manufacture. In 1809, Mr. Heathcote, of Tiverton, took out a patent for a machine for making bobbin-net lace. This invention caused a complete revolution in the manufacture of the fabric. From that time, the machine became the subject of frequent improvement, and was worked by steam-power in 1816. Lace became a general article of consumption, and that which had been sold at $5 a yard fell to 40 cts. The quality of bobbin-net lace depends upon the smallness of the meshes, their equality in size, and the regularity with which their hexagonal shape is displayed. At the present time its manufacture is largely carried on in France. Bobbin-net lace may be said to surpass every other branch of human industry in the complex ingenuity of its machinery.

—*v. a.* To fasten with a cord or string through eyelet-holes: as, to *lace* a pair of boots. — To adorn or decorate with lace or figured network; as, "a coat *laced* with silver." (*L'Estrange.*) — To embellish with variegated stripes.

"Four slices of pilaster . . . *lac'd* with bits of rustic." — *Pope.*

—To lash; to flagellate; to lay on or administer stripes.

"Go you, and find me out a woman that has no curiosity at all, or I'll *lace* your coat for you." — *L'Estrange.*

—To add a modicum of ardent liquor to coffee, or other beverage; as, the ladies *laced* their tea with rum. (Cant.)

—*v. n.* To be fastened, tied, or ornamented with a lace, cord, or string.

Lace'-bark, *n.* (*Bot.*) See LAGETTA.

Lace'-boot, *n.* A boot which is fastened with laces up the front, or at the side.

Laced, (*lāst',*) *a.* Fastened by a lace or laces; embellished with lace; as, a *laced* hat, a coat *laced* with silver, &c.

Laced tea, coffee, &c. Beverages medicated with a *soupçon* of brandy or other spirit.

Laced mutton. An old term for a prostitute. — *Shaks.*

Lacedæmon. (*Anc. Geog.*) See SPARTA.

Lace'man, *n.; pl.* LACEMEN. A man who vends lace; a dealer in lace.

Lacepède, BERNARD GERMAIN STEPHEN DE LA VILLE, COUNT DE, (*las'e-paid,*) a celebrated French naturalist, b. at Agen, 1756; was pupil of Buffon and Daubenton, and is the author of *Histoire naturelle des Quadrupèdes, Ovipares, et des Serpents; Histoire naturelle des Oiseaux; Histoire naturelle des Cétacés,* &c. D. 1825.

Lacerable, (*lăs'er-a-bl,*) *a.* That may be lacerated or torn; as, *lacerable* skin.

Lac'erate, *v. a.* [Lat. *lacero, laceratus,* from *lacer,* mangled, torn to pieces; probably allied to Gr. *rhakos,* a tattered garment, and to Sansk. *rich,* to separate.] To tear; to rend; to separate by violence or tearing; as, to *lacerate* the flesh; — hence, by implication, to wound; to injure; as, to *lacerate* the feelings of another.

Lac'erate, Lac'erated, *a.* Rent; torn; mangled; as, *lacerated* flesh.

(*Bot.*) Having the edge notched or cut into jagged segments; as, a *lacerated* leaf.

Lacera'tion, *n.* [Lat. *laceratio.*] Act of lacerating, tearing, rending, or mangling. — The breach or rent made by lacerating.

Lac'erative, *a.* Having the power to tear or lacerate; as, "*lacerative* humors."

Lacer'ta, *n.* [Lat., a lizard.] (*Zoöl.*) See LACERTIDÆ.

(*Astron.*) A constellation in the northern hemisphere, named by Helvetius. It is situated between the constellations Andromeda, Perseus, Cygnus, and Cepheus, and contains no star above the fourth magnitude.

Lacer'tian, Lacertil'ian, *a.* [From Lat. *lacerta,* a lizard.] Belonging to, or resembling, a lizard.

Lacer'tidæ, *n. pl.* (*Zoöl.*) The Lizard family. Under this title is included a family of reptiles belonging to the order *Saura,* and characterized by having a round and very elongated body, the tail especially long, being sometimes four times the length of the trunk; four strong feet, with four or five unequal toes, armed with hooked claws; a quadrangular flat head covered with horny plates, and eyes furnished with a membranous expansion, resembling a third eyelid; a wide mouth, and a long, flat, forked tongue. They are world wide in distribution, with the exception that they are absent from very cold countries. The *Lacertidæ* correspond with the genus *Lacerta* of Linnæus. They are very nimble in their movements, springing from one spot to another with great alacrity, and cling to and creep along rocks or walls with facility by means of their

Fig 1493.—SIX-LINED LIZARD (*L. six-lineata*).

hooked claws. In their habits they are gentle and timid, and they live in holes in the sand. They are not sociable in their habits, but live in pairs. Great heat or great cold renders them torpid; and their general food consists of insects, worms, small mollusca, &c. The females lay between five and seven eggs, which they leave to be hatched by the warmth of the air. Some of the species are, however, vivlparous, and the whole family is long-lived. The scaly lizard, *Zoötica vivipara,* a native of England, is said to hatch its eggs within its own body if it be kept in a dry place, but to deposit eggs if retained in a damp one. Lizards feed usually on insects, &c., as above stated, though some feed on larger animals, and some eat vegetable food. The large monitors, which attain a length of six feet, prey upon birds, frogs, small mammals, and fishes. A noteworthy characteristic of the lizards is their brittleness in the caudal region, and their power of reproducing lost tails, and even lost legs. Lizards are classified in 21 families, which include over 1,600 species. They include various striking forms, such as the chameleons, with their variation in color, the flying dragons (*Draco*), the large American iguanas, the Australian frilled forms, the spiny "horned toads," the poisonous Mexican lizard (*Helloderma horridum*), &c.

Lacer'tiloid, Lacer'tine, *a.* After the form or manner of a lizard.

La'cey, in *Arkansas,* a post-village of Drew co.

La'cey, in *Georgia,* a post-office of McIntosh co.

Lacey, in *Iowa,* a post-village of Mahaska co.

La'ceyville, in *Ohio,* a post-office of Harrison co.

Laceyville, in *Pennsylvania,* a post-village of Wyoming co., on the N. branch of the Susquehanna River, abt. 18 m. above Tunkhannock.

La'chalse, FRANCIS D'AIX DE, a French Jesuit, B. at Aix, was a provincial of his order when Louis XIV. selected him for his confessor on the death of Father Ferrier in 1675. His position was one of great difficulty, owing to the different parties at the court, and the strife between Jansenists and Jesuits. In the most important questions of his time, Father L. avoided extreme courses. A zealous Jesuit, and of moderate abilities, he yet sustained among his contemporaries the reputation of a man of mild, simple, honorable character. Madame de Maintenon could never forgive him the little zeal with which he opposed the reasons urged against the publication of her marriage with the king; but during the 34 years that he filled his office of confessor, he never lost the favor of the king. He was a man of some learning, and fond of antiquarian pursuits. He died January 20th, 1709. Louis XIV. built him a country-house to the E. of Paris, the large garden of which was, in 1804, converted into a burial-place, and is known as the *Père-la-Chaise.*

Lachâtre, a town of France, dep. Indre, on the Indre, 22 m. S.E. of Chateauroux. *Manuf.* Leather, serge, and coarse woollens are largely fabricated.

Lache, Laches, *n.* [From Fr. *lache,* lax, supine, indolent.] (*Law*) Negligence; laxity of performance; remissness; non-observance or non-performance.

Lachena'lia, *n.* [After *De la Chenal.*] (*Bot.*) A genus of plants, order *Liliaceæ,* from the Cape of Good Hope, consisting of bulbous plants, with spotted orchis-like leaves, and spikes of pendulous tubular flowers, often yellow. They are ornamental spring-flowers for the green-house, but have no useful properties.

Lach'esness, *n.* Negligence; carelessness; — hence, culpable remissness.

Lachine, (*la-sheen',*) a village of Lower Canada, about 9 m. S. of Montreal, on the same island.

Lachlan, (*lak'lan,*) a river of E. Australia, rising in cos. King and Bathurst, in N. S. Wales, flows W. a course of 400 m., joining the Murrumbidgee to form the Murray River, near Lat. 34° 30′ S., Lon. 144° 10′ E.

Lach'mi, or **Lakchmi,** (*lak-mi.*) (*Hindoo Myth.*) A goddess, the favorite wife of Vishnu. The mangrove and the lotus are held sacred to her. She is generally represented with breasts charged with milk, bearing in her hand a lotus-flower, or scattering the riches of the soil over the earth.

Lachry'mæ Chris'ti. [Lat., tears of Christ.] The name of one of the best of the wines grown in Italy. It is of a dark red color, and, some critics say, of exquisite flavor. It is grown at Galitta, in Naples, although an inferior quality is grown around Vesuvius, which is exported as the genuine wine. The Lachrymæ Christi is said to be identical with the old Falernian wine frequently mentioned by Horace.

Lach'rymal, Lac'rymal, *n.* Same as LACHRYMATORY, *q. v.*

Lach'rymal, *a.* [Fr.; Lat. *lachryma;* allied to Gr. *dăkryma,* a tear.] (*Anat.*) Applied to various organs in the neighborhood of the eye, and connected with the tears; as the lachrymal glands by which they are secreted, and the lachrymal duct by which they are conveyed away. See EYE.

Lach'rymary, *a.* Containing tears; as, "*lachrymary* vessels." — *Addison.*

Lachryma'tion, *n.* The act of weeping, or shedding tears.

Lach'rymatory, LACH'RYMAL, LACRYMAL, *n.* [L. Lat. *lacrymatorium.*] (*Antiq.*) A small vessel of glass or earthenware, generally having a long neck, and found in the tombs of the ancients. It was long the opinion of antiquaries, that these were intended to hold the tears of the relatives and friends of the deceased; but there is no ground for such an opinion; and it is more generally held now, that they were used for the purpose of containing perfumes.

Lach'rymose, *a.* [Lat. *lacrimosus.*] Educing tears; generating or having a tendency to shed tears; as, a *lachrymose* complaint.

Lach'rymosely, *adv.* In a lachrymose manner.

Lachute', a village of prov. Quebec, co. of Argentuil. *Pop.* (1897) 1,820.

Lacing, (*lās'ing,*) *n.* A fastening with a string, cord, or thong through eyelet-holes. — Also, the cord or string which so fastens.

(*Ship-building.*) A piece of compass or knee-timber, fayed to the back of the figure and the knee of the head of a ship, and bolted to each.

Lacin'ia, *n.* (*Zoöl.*) The blade of the maxillæ, being the fourth or apical portion.

Lacin'iate, Lacin'iated, *a.* [From Lat. *lacinia.*] Adorned with fringes or borders.

(*Bot.*) Slashed; indented with deep, narrow, jagged lobes.

Lacistema'ceæ, *n. pl.* (*Bot.*) The Lacistema family, an order of plants, alliance *Violales.* — DIAG. Amentaceous scaly apetalous polygamous flowers, and unilateral stamens.—They are shrubby plants, with single alternate stipule; 3-leaved flowers in axillary catkins. They are natives of woody places in tropical America. Nothing is known of their properties and uses.

Lack, *v. a.* [D. *leegen,* to empty; Dan. *lak;* Swed., Goth. *lack,* fault, defect.] To want; to be destitute of; to need; not to have or possess; as, to *lack* courage.

—*v. n.* To be in want. — To be wanting.

"That which was *lacking* on your part, they have supplied." 1 *Cor.* xvi. 17.

—*n.* Want; deficiency; destitution; need; failure.

"They have a plentiful *lack* of wit."—*Shaks.*

Lack, in *Pennsylvania,* a township of Juniata co.

Lack-a-day', *interj.* [From *a-lack-a-day,* q. v.] Alas; — an exclamation denoting sorrow or disappointment.

Lackadai'sical, Lackadai'sy, *a.* Finical; affectedly nice or fastidious; prudishly sentimental; as, a *lackadaisical* young lady.

Lac'kawack, in *N. Y.,* a P.-V. of Uister co.

Lackawan'na, in *Penn.,* a river rising in Susquehanna co., and flowing into the N. Branch of the Susquehanna River in Luzerne co. — A N.E. co. of *Penn., area,* about 460 sq. m., created in 1878 from a part of Luzerne co. Immense quantities of anthracite coal are mined in this co. *Cap.* Scranton. *Pop.* (1897) about 175,000.

Lackawan'nock Mountains, in *Pennsylvania,* a mountainous ridge, abt. 30 m. in length, extending N.E. from the Susquehanna River along the N.W. side of the Lackawanna River; average height abt. 800 ft.

Lackawax'en, in *Pennsylvania,* a small river, flowing into the Delaware River in Pike co.

—A post-village and township of Pike co., abt. 121 m. N.W. of New York city.

Lack'brain, *n.* One who is deficient in brains; one who lacks wit or intelligence.

"What a *lackbrain* is this? Our plot is as good a plot as ever was laid." — *Shaks.*

Lacker, *n.* and *v.* See LACQUER.

Lackey, Lacquey, (*lăk'e,*) *n; pl.* LACKEYS, LACQUEYS. [Fr. *laquais;* Sp. *lacáyo;* It. *lacche;* Swed. Goth. *lackere,* from *lacka,* to run.] A footboy or footman; a male domestic attendant.

"A fellow-counsellor 'mong boys, and grooms, and *lackeys.*" *Shaks.*

—A sort of caterpillar.

—*v. a.* To attend servilely, or as a lackey.

"A thousand liveried angels *lackey* her." — *Milton.*

—*v. n.* To act as a footman or footboy; to pay servile attendance.

"Our Italian translator of the Æneis is a foot-poet; he *lackeys* by the side of Virgil." — *Dryden.*

Lack'-linen, *a.* Wanting shirts.

Lack'-lustre, (*-lus-ter,*) *a.* Deficient in lustre or brightness; as, a "*lack-lustre* eye." — *Shaks.*

Lack'-lustre, *n.* A thing without brightness or lustre.

La Clair, in *Illinois,* a post-office of Lee co.

Laclair', in *Indiana,* a post-office of Hendricks co.

Lac'-lake, *n.* (*Painting.*) A pigment prepared from lac, of a rich, deep, transparent color, less brilliant and more durable than those extracted from cochineal and kermes, but inferior in both these respects to the color obtained from madder.

La Clede, in *Illinois,* a post-township of Fayette co., about 12 m. S.E. of Vandalia.

La Clede, in *Missouri,* a S. central co.; *area,* about 740 sq. m. *Rivers.* Gasconade, Niangua, and Anglaize rivers. *Surface,* uneven; *soil,* generally fertile. *Cap.* Lebanon.—The former name of this county was Kinderhook. *Pop.* (1890) 14,705.

—A post-town of Linn co., about 98 m. E. of St. Joseph., on the Hann. & St. J. R.R. *Pop.* (1897) 740.

Laclede Junction, in *Missouri,* a village of St. Louis county.

Lac Maskinonge (*lak mas-kee-nong-zha'*), a village of Berthier co., Quebec, about 66 m. N. of Montreal.

Lacolle (*la-koll'*), a post-village of St. Johns co., prov. of Quebec.

La'con, in *Illinois,* a city, cap. of Marshall co., on the Illinois river, and the Ch. & Alton R.R., 30 m. above Peoria. *Pop.* (1897) about 1,850.

La'con, in *Missouri,* a village of Maries co., about 28 m. S. by E. of Jefferson City.

La Con'damine, CHARLES MARIE DE, a French traveller, B. in Paris, 1701. Actuated by an indefatigable desire for knowledge, he travelled over almost the whole world, and studied nearly every science. In 1736 he was selected, with Bouguer, to make a voyage to the equator, for the purpose of determining the dimensions and the figure of the earth. In this expedition, he travelled over nearly the whole of South America, and was absent from France for ten years, during which he experienced the utmost fatigue and hardship. On his return he published his *Travels in South America; The Figure of the Earth, as determined by the Observations of Messieurs De la Condamine and Bouguer.* He also produced several works in English and Spanish; contributed to the scientific memoirs of Paris and Berlin; and maintained a correspondence upon scientific subjects with distinguished men in every European city. He was an amiable, learned, and witty man; and while his celebrity as a traveller made him many friends, his refined humor was usually successful in warding off the attacks of his enemies. He was a member of the Paris Academy of Sciences, of the Académie Française, and of the Royal Society of London. D. 1774.

Laco'nia. (*Anc. Geog.*) The country of the Lacedæmonians or Spartans. See SPARTA.

Laco'nia, in *Indiana,* a post-village of Harrison co., abt. 13 m. S. of Corydon.

Laco'nia, in *New Hampshire,* a post-town and township, cap. of Belknap co., 20 m. N. of Concord. *Pop.* (1897) about 6,260.

Lacon'ic, Lacon'ical, *a.* [Lat. *laconicus;* Gr. *lakōnikos;* from *Laconia.*] Relating or pertaining to the Lacones, or inhabitants of Lacedæmonia. — Expressing much in few words, after the manner of the ancient Spartans; brief; terse; concise; sententious; pointed; pithy; as, a *laconic* reply.

—*n.* LACONISM; a terse, sententious, concise method of speaking. — A pithy phrase or sentence; anything expressed in a terse and compact style.

Lacon'ically, *adv.* Briefly; concisely; pithily; in a laconic manner.

Laconicism, (*la-kŏn'i-sizm,*) *n.* Same as LACONISM, *q.v.*

Lacon'ics, *n. sing.* (*Lit.*) A book written by Pausanias, treating of Lacedæmonia.

Lacon'icum, *n.* (*Antiq.*) Among the ancients, the semicircular end of a bath. Also a circular stove, for the purpose of heating the sudatories, or sweating-rooms, of a bath. The use of the dry bath is said to have been prevalent among the Lacedæmonians.

Lac'onism, *n.* (*Lit.*) A short, pithy, and pointed saying, for which the ancient Lacedæmonians were remarkable; whence the name, from *Laconia.* One of the most remarkable of the ancient laconisms was that of the Spartan mother to her son, on presenting him with his shield — "With it, or on it," — either bring it back, or be carried back upon it.

Lac'onize, *v. n.* To copy the manner of the ancient Spartans; — hence, to speak in a pointed, terse, concise style.

Lacordaire, JEAN BAPTISTE HENRI, (FATHER LACORDAIRE,) (*la'kor-dair',*) a distinguished French preacher, B. at Recey-sur-Ource, dep. Côte-d'Or, 1802. He studied at Dijon, and became an advocate, settling at Paris in 1821. He was at that time a believer in Voltaire, but neither the profession of the law nor the negations of Voltairism could satisfy his ardent passionate nature, and he soon renounced both, began to study theology at the seminary of St. Sulpice, and was ordained priest in 1827. He attributed his conversion to the influence of his friend Lamennais, which gave rise to the saying that

he was one of the finest works of Lamennais. After holding the office of almoner to the college of Henrl IV., he became joint editor, with M. de Montalembert and Lamennais, of a new journal entitled "L'Avenlr," organ of the curiously combined opposites,—ultramontanism and extreme liberalism. "L'Avenir" first appeared in 1830, and in 1832 the pope, Gregory XVI., published an encyclical condemning it. The editors submitted and discontinued the publication, Lacordaire having gone several times to Rome to defend his opinions. Hls association with Lamennais ceased from that time. Lacordaire soon after began to distinguish himself as a preacher, and the pulpit of Notre-Dame was opened to him. In 1839 he entered the Dominicau order at Rome, aubitious of founding or reviving a monastic ordor; and immense excitement was produced by his reappearance at Notre-Dame in 1841, in the white dress of his order, and with tho shaven head. Hls discourses were rathor historical aud political than theological, and his eloquence attracted and charmed crowds at Paris, Lyons, Bordeaux, and othor great towns, where he was called to preach. He was chosen member of the Constituent Assembly of March, 1848, and appeared there in his Dominican habit, but he soon retired. He preached his last great sermon in Paris, in 1853, and was soon after appointed director of the college of Sorrèze. His reception at the French Academy took place in 1860. He was introducod by M. Guizot, and the ceremony attracted much attention as a political demónstration. The writings of Father Lacordaire consist chiefly of a *Vie de Saint Dominique*, and his numerous *Conférences* and *Éloges Funèbres*. D. at Sorrèze, 22d November, 1861. Memoirs of the Abbé Lacordaire have been written hy the Count de Montalembert.

Lacquer, Lacker, (*lăk'er,*) *n.* [Fr. *laque*, a kind of rose or ruhy color, a red-colored resin, lac.] A varnish, consisting of a solution of shell-lac in alcohol.

—*v. a.* To varnish or smear over with lacquer, for the pnrposo of helghtening color, or preserving from tarnish or decay.

Lac'quering, Lack'ering, *n.* Act or process of applying lacquer.—The coating of lacquer or varnish smeared over a thing. See JAPANNING.

Lacquey, (*lăk'e,*) *v.* and *n.* See LACKEY.

Lac-qui-Parle, (*lak'kee-parl,*) in *Minnesota*, an expansion of tho Minnesota River, between Lac-qui-Parle and Chippewa cos., about 140 m. W. of St. Paul.

—A W. by S. central co.; *area*, about 650 sq. m. *Rivers.* Minuesota, Lac-qui-Parle, and Yellow Bank rivers. *Surface*, fiuely diversified; *soil*, very fertile. *Cap.* Madison. *Pop.* (1895) 12,687.

—A post-village of Lac-qui-Parle co., on a lake of the same name, about 140 m. W. of St. Paul.

Lacrimo'so, *a.* [It.] (*Mus.*) As if weeping;—indicating a plaintive movement.

La Cres'cent, in *Minnesota*, a post-town and township of Houston co., ou the Mississippi river, about 2 miles above La Crosse.

La Cross, in *Indiana*, a post-village in Laporte co., about 55 m. S.E. of Chicago.

La Crosse, in *Kansas*, a post-village, cap. of Rnsh co., on Mo. Pacific R. R., 25 m. S. of Hays City.

La Crosse, *n.* (*Games.*) A game played with a ball and racket; popular in Canada.

La Crosse, in *Illinois*, a post-village of Hancock co.

La Crosse, in *Wisconsin*, a small river flowing into the Mississippi river from La Crosse co.

—A S.W. co., adjoining Minnesota; *area*, about 450 sq. m. *Rivers.* Mississippi, La Crosse, and Black rivers. *Surface*, generally level; *soil*, fertile. *Cap.* La Crosse. *Pop.* (1895) 43,610.

—A thriving city, cap. of La Crosse co., on the Mississippi river, about 125 m. N.W. of Madison. It contains many fine public and private edifices, has important manufactnres and a fine local trade. *Pop.* (1895) 28,769.

Lacs d'Amour, *n.* (*Her.*) A cord of running knots used as an external decoration to surround the arms of widows and unmarried women; the *cordelier*, which differs but slightly from it, being used similarly with the shields of married women.

Lactage, (*lak'taj,*) *n.* [Fr. *litage*, from Lat. *lac, lactis*, milk.] Milk, and the lacteal products thereof.

Lactan'tius, LUCIUS CŒLIUS, or CŒCILIANUS FIRMIANUS, an eminent father of the Church, was by some esteemed an African, and by others a native of Fremo, in Ancona. He studiod rhetoric under Arnobius, and by his *Symposium* he obtained such renown, that Diocletian appointed him to teach rhetoric in Nicomedia. Subseqnently he was appointed tutor to Crispus, tho son of Constantine, who dying not long after, *L.* was neglected. He wrote many works in vindication of Christianity, from the style of which he has been honored with the name of the "Christian Cicero." His principal work is the *Institutiones Divinæ*, in 7 books. D. about 325.

Lactarene', *n.* A preparation of curded milk, used in calico-printing.

Lac'tary, *n.* A dairy-house.

Lac'tate, *n.* [From Lat. *lactare*, to suckle.] (*Chem.*) A salt formed of lactic acid and a base.

Lactation, (*-ta'shun,*) *n.* The act of glving suck; also, the time of suckling.

Lac'teal, Lac'teous, Lac'tean, *a.* [From Lat. *lac, lactis* = Gr. *gala, galaktos*, milk; probably allied to Ar. *halib*, Heb. *halab*, milk. The *ga*, in Gr. *gala*, is from Sansk. *go*, an ox or cow.] Belonging to, or partaking of, the properties of milk: milky.

(*Anat.*) Conveying chyle; as, a *lacteal* vessel.

—*n.* (*Anat.*) The name given to certain vessels of the human body, on account of their containing a milk-like fluid, the chyle. They serve to convey the chyle, or nntritious part of the food, from the intestines to the thoracic duct. They are very tender and transparent vessels, and are furnished with an lnfinite numher of valves. They have their origin in the internal vellous coat of the small intestines, perforate the other coats, and then proceed throngh numberless converging branchcs, between the layers of the mesentery, to the thoracic duct, the main branch of the absorbent system, which, at the part where the chief lacteal branches joln it, is dilated into what is called the *receptaculum chyli*, In their passage through the mesentory, the lacteals traverse numerous mesenteric absorbent glands, where they communicate with velns, and the finid contained in them is exposed to the in luenco of tho blood, from which it acquires coloring-matter and fibrin.—See DIGESTION.

Lac'teally, *adv.* Milkily; in the manuer of milk.

Lac'tean, *a.* See LACTEAL.

Lac'teous, *a.* Of a whito less intense than niveous; the color of chalk.

Lac'teously, *adv.* In a lacteons manner.

Lactes'cence, *n.* [Fr., from Lat. *lactescens*—*lactesco*, to turn to milk.] Milkiness, or milky color.—Tendency to milk.

Lactes'cent, *a.* [Fr., from Lat. *lactescens.*] Producing milk, or a whito juice; as, a *lactescent* plant.—Supplying a viscid, colored juice.

(*Bot.* and *Zoöl.*) Producing or abounding with milk or white julce.

Lac'tic Acid, *n.* (*Chem.*) An acid produced by natural or artificial fermentation from milk and other animal matters containing lactose, or sugar of milk. Starch, cane-sugar, dextrin, and gum, also pass into lactic acid under certain circumstances. Thus, it is formed in *sauer-kraut*, in malt vinegar, and during the manufacture of wheaten starch. It is easily made by dissolving 8 parts of cane-sugar in 50 of water; to this solution are added one part of casein, or pure cheese, and three parts of chalk. The mixture is set aside in a warm place for two or three weeks, during which time the mass becomes gradnally filled with crystals of lactate of lime. Theso crystals are purified by recrystallization, and treated with their exact equivalent of snlphuric acid. The residue is digested in alcohol, wbich dissolves the lactic acid and leaves the snlphate of lime. The lactic acid is obtained from the solution by evaporating the alcohol. In its pure state it forms a transparent, inodorous, uncrystallizable, syrnpy liquid, with a sharp acid taste. It is solnble in water, alcohol, and ether, and may be distilled unchanged if air be excluded. Exposed to a heat of 266° it loses water, and is converted into a yellow, bitter, fusihlo substance, nearly insoluble in water. Heated to 500° Fahr. it changes to a volatlle acid, the citraconic, and *lactide* distils over. Lactide dissolves in alcohol, crystallizing from it in brilliant rhombic prisms. At 255° it fnses, and may be sublimed unchanged. Dissolved in water it assnmes four equivalents of that substance, and becomes converted into hydrated lactic acid. Lactido absorbs ammonia with great greediness, forming *lactamide*. The lactates are mostly soluble in water; a few of them may be crystallized. Lactic acid enters into the composition of the gastric juice, the perspiration, and, in cases of diabetes, of the saliva and the urine.

Lactiferous, *a.* [Lat. *lac, lactis*, and *ferre*, to bear.] Yielding or conveying milk or white juice; as, a *lactiferous* duct.

—Producing a viscid, colored juice, as certain plants.

Lactific, Lactifical, *a.* [Lat. *lac, lactis*, and *facere*, to make.] Breeding milk.

Lac'tifuge, (*-fūj,*) *n.* [Lat. *lac, lactis*, and *fugare*, to drive out.] (*Med.*) A medicine which dispels milk.

Lac'tin, Lac'tose, *n.* [Fr.] (*Chem.*) Sugar of milk. See SUGAR.

Lactom'eter, GALACTOMETER, *n.* [Lat. *lac, lactis*, and Gr. *metron*, measnre.] (*Chem.*) An instrument used for the purpose of ascertaining the proportion of cream contained in the milk of any particular cow, or of the general produce of a dairy. It is generally in the form of a glass tube set perpendicularly in a stand. The tube is abont a foot high and half an inch in diameter, with a graduated scale marked on the outside. Milk fresh from the cow is ponred into it, and allowed to remain in it till the cream separates and floats on the surface, when, by observing the marks on the scale, the proportions of milk and cream can easily be ascertained.

Lac'tone, *n.* (*Chem.*) A volatile liquid, with a strong pungent odor, boiling at about 198° F., found among the products of distillations of sugar of milk.

Lac'toscope, *n.* [Lat. *lactis*, and Gr. *skopein*, to view.] An instrument f r ascertaining the opacity of milk, and thus estimating the richness of the fluid ln cream; a kind of eye-glass.

Lactuca'rium, *n.* The Lettnce-opinm. See LACTUCA.

Lactu'ca, *n.* [Lat. *lac*, milk; from its milky juice.] (*Bot.*) The Lettuce, a gen. of the ord. *Asteracea*. The species *L. sativa* is the common or garden lettuco, so largely cultivated as a salad. *L. virosa* ls the wlld or strong-scented lettuce. If tho stem of the commou lettuce, when it is coming into flower, be wounded wlth a knife, a milky juice exudes, which dries in the open air into a friable mass of a brown color. This inspissated julce is called *lactucarium*, or *lettuce-opium*, and is sometimes employed in medicine for its narcotic properties. *L. virosa* yields the best and the largest quantity of lactucarium. Professor Johnston says,—"The lactucarium is one of those narcotics in which many of ns unconsciously indulge. The eater of green lettuce as a salad takes a portion of it ln the juice of the leaves he swallows; and many, after thls is pointed out to them, will discover that their heads are not unaffected after indnlging copiously in a lettnce salad. Eaten at night, the lettuce causes sleep; eaten dnring the day, it soothes and calms, and allays the tendency to nervous lrritability. And yet the lover of lettnce wonld probably take it very mnch amiss if he were told that he ate his green leaves, partly, at least, for the same reason as the Turk or Chinaman takes his whiff from the tiny opinm pipe."

Lactu'cic Acid, *n.* (*Chem.*) A peculiar acid, discovered by Pfaff in the juice of *Lactuca virosa*. It bears some resemblance to oxalic acid, but differs from it in giving a green precipitate with the protosalts of iron, and a brown precipitate with sulphate of copper.

Lacu'na, *n.*; *pl.* LACUNÆ. [Lat., a pit, or anything concave; Gr. *lakkos*, a tank.] A small gap, pit, or hiatus; a concave depression.

(*Anat.*) A small cavity in a mucous membrane;—sometimes used for *cryptæ*.

(*Bot.*) A term applied in dcscribing lichens, to denote one of the small hollows or pits on the upper surface of the thallus.—Also a name given occasionally to the internal organ, commonly called an air-cell, lying in the midst of the cellular tissue of plants.

Lacu'nal, Lacu'nar, *a.* Pertaining to, or characterized by, lacunæ.

Lacu'nar, *n.* (*Arch.*) A panel or coffer in the ceiling of an apartment, and sometimes employed in the soffits of tho corona of the Ionic, Corinthian, and Composite orders.

Lacu'nose, Lacu'nous, *a.* [Lat. *lacunosus.*] (*Bot.*) Presenting a pitted surface; comprising cavities; as, a *lacunose* leaf.

Lacus'tral, Lacus'trine, *a.* [From Lat. *lacus*, lake.] Belonging to lakes or swamps. See LAKE DWELL.

La'cy, in *Illinois*, a vill. of De Kalb co. [INGS.

Lad, *n.* [W. *llawd*, probably from A. S. *lad*, to be boyish, to speak or act as a boy; Ar. *walad*, a youth. Akin to A. S. *leod*, a countryman.] A stripling; a young man, or boy; a growing youth;—opposed to *lass*.

"A Corinthian, a *lad* of mettle, a good boy."—*Shaks.*

Ladakh', or **Middle Thibet,** a country of Central Asia, bounded N. by Chinese Turkestan, E. by Gr. Thibet, S. Cashmere, W. by Little Thibet; Lat. between 32° and 36° N., Lon. 76° and 79° E. *Area*, 30,000 sq. m. The country lies chiefly within the basin of the Upper Indus, being little better than a mass of mountains with narrow valleys between them. Notwithstanding its great elevation, which is equally unfavorable to soil and climate, the temperature is sometimes singularly high—a phenomenon attributed partly to the tenuity of the atmosphere, and partly to tho absence of moisture. Pretty good crops of wheat, barley, and buckwheat are raised; while the mineral products are sulphur, iron, lead, copper, and gold. The transit-trade is extensive, being carried on mostly by mules and sheep. The inhabitants are very peaceful and industrious; they are excellent farmers, and their woollen manufacturcs are said to be important. The women are fresh and fair, but rather lax in their morals; among the lower classes, polyandry is common. The pop. is Mongolian, the language Thibetan, and the religion Lamaism. *Cap.* Leh. *L.* was conquered in 1835 by Gholab Singh, the ruler of Cashmere. *Pop.* about 150,000.

Lad'anum, Lab'danum, *n.* [Gr. *ladanon.*] (*Bot.*) See CISTACEÆ.

Lad'der, *n.* [A. S. *hlædder*; Dn. *ladder*; Ger. *leiter.*] That which leads or conducts from a lower to a higher situation; hencc, specifically, a frame of wood, or iron, consisting of two side-pieces, connected by rungs, and thus forming steps by which persons may ascend a building, &c.—That by which a person ascends or rises;—hence, means of advancing in rank or position; gradual rise; elevation.

"Lowliness is young Ambition's *ladder*."—*Shaks.*

Accommodation-ladder. (*Naut.*) A wooden staircase by which persons reach tho gangway in a ship's side.

Side-ladder; Stern-ladder. A rope-ladder attached to the side or stern of a vessel.—*Ladder-work*, mechanical labor in which the use of a ladder is necessary, as in house-painting.

Lad'die, *n.* In Scotland a lad; a youth; as, a Highland *laddie*.

Lade, *v. a.* (*imp.* LADED; *pp.* LADED, LADEN.) [A.S. *ladan*, to load; Ger. *laden*. See LOAD.] To load; to place on or ln, as a freight or burden;—generally preceding the direct object which receives the load.

"The heavy-*laden* vessels put to sea."—*Dryden.*

—To dip; to throw in or out, as a finid, with a dipper or ladle; as, to *lade* water out of a bucket.

—*v. n.* To take in water throngh a leak or leaks, as a ship.

Lade, *n.* The embouchure or mouth of a river.

—A passage for water.

Lad'ed, Lad'en, (*pp.* of LADE, q. v.) Loaded; charged with a burden or freight.

—*a.* Oppressed; burdened; as, a *laden* camel.

La'diesburg, in *Maryland*, a post-village of Frederick co., abt. 80 m. N.W. of Annapolis.

La'dies'-traces, *n.* (*Bot.*) See SPIRANTHES.

Ladi'ga, in *Alabama*, a post-village of Calhoun co., abt. 140 m. N. by E. of Montgomery.

Lad'ing, *n.* That which constitutes a load, freight, or cargo; burden; as, the *lading* of a ship.

Lading, (Bill of.) See BILL OF LADING.

Ladislas, or **Ladislaus I.,** king of Hungary, b. 1041, snceeeded 1079, d. 1095, and was canonized for his piety by Celestin III., 1198.—LADISLAS II., called the Infant, succeeded and d. the same year, 1200.—LADISLAS III. succeeded 1272, assassinated, after a life of debauchery and a disgraceful reign, 1290.—LADISLAS IV.,

the same as Uladislas V., king of Poland, succeeded his father in the latter dignity, 1435, and was elected by the Hungarians, 1440, killed in battle by the Sultan Amurath, 1444. — LADISLAS V. succeeded in the fifth year of his age, 1444, and D. suddenly 1458. — LADISLAS VI., son of Casimir IV., king of Poland, and called, according to the Polish form of his name. Uladislas II., became king of Bohemia 1471, and king of Hungary 1490, D. 1516.

Lad'islas, Ladislaus, or **Lancelot,** king of Naples, called the Liberal and Victorious, B. 1376, succeeded his father, Charles Duras, in 1386. He was previously count of Provence and king of Hungary. He obtained the latter crown in 1403, during the imprisonment of Sigismund, who compelled him to return to Italy. On the death of his father, he was opposed by Louis II., duke of Anjou, which occasioned some bloody wars. Pope John XXIII. at first espoused the cause of Louis, but afterwards took the part of Ladislaus, who, however, marched against Rome, and having taken it, turned his arms on the Florentines, whom he compelled to sue for peace. in 1413. D. at Naples, it is suspected of poison, 1414.

Ladislas, Uladislas, or **Vladislas,** kings of Poland. See ULADISLAS.

Lad'kin, *n.* A little lad; a boy. (R.)

La'dle, *n.* [A. S. *hlædle*, from *hladan*, to lade.] A utensil somewhat like a dish, with a long handle, used for lading, throwing, or dipping out liquor from a vessel; as, a soup-*ladle*. — The float of a mill-wheel; a ladle-board.

(*Gun.*) An instrument by which the charge of a heavy gun is drawn out.

(*Metall.*) A vessel in which molten metal is carried from the furnace to the mould.

—*v. a.* To use a ladle for dipping or serving out; as, to *ladle* out molten metal, or soup.

La'dle-board, *n.* The float of a mill-wheel; a ladle.

La'dleful, *n.*; *pl.* LADLEFULS. The quantity which a ladle contains.

Lado'ga, or **Lados'ka,** a lake in the N. of European Russia, lying between the Baltic and Lake Onega, and inclosed by govts. St. Petersburg, Vihnrg, and Olonetz; Lat. between 59° 81′ and 61° 46′ N., Lon. 30° and 33° E. *Ext.* 130 m. long and 75 broad; depth, from 12 to 1,000 feet. Forty rivers flow into it, and its surplus waters are discharged by the Neva into the Gulf of Finland. The shores are low, and it contains several islands.

Lado'ga, in *Indiana*, a post-town of Montgomery co., 11 m. S. S. E. of Crawfordsville. *Pop.* (1897) about 1,050.

Lado'ga, in *Wisconsin*, a post-village of Fond du Lac co.

Ladrone', *n.* [Sp.; from Lat. *latro*, a robber.] A pirate; a robber; — hence, by analogy, a scamp; a loafer; a rogue; a rascal.

Ladrones, or MARIANA ISLANDS, (*la-drones'*,) a group of islands belonging to Spain, in the N. Pacific Ocean, stretching 45 m. from N. to S.; Lat. bet. 13° and 21° N., Lon. 144° and 146° E. They consist of 20 islands, of which 5 are inhabited. *Soil*, densely wooded and fertile. *Climate*, temperate. The principal islands are, Guam, Rota, and Linian. *Pop.* 11,000. Discovered by Magellan in 1521, and called *Ladrones*, from the extraordinary thievish propensities exhibited by the original inhabitants. Guam was ceded by Spain to the United States in 1898.

Ladrones', 3 small islands in the Pacific Ocean, on the coast of Veragua, 8 m. S.E. of Cape Boruca; Lat. 8° 20′ N., Lon. 82° 16′ W.

Ladrones Isles, (*la-dronz'*,) a cluster of small islands off the S. extremity of China, opposite the entrance of the Canton River, 20 m. S.E. from Macao; Lat 21° 52′ N., Lon. 113° 44′ E.

La'dy, *n.*; *pl.* LADIES. [Goth. *hlaif*, loaf, and *dian*, to serve or distribute, — from the practice of the wives of the rich distributing bread to the poor or to their domestics. Tooke derives it from *hlifian*, to lift, *i. e.*, one raised to the rank of her husband.] (*Eng. Her.*) A title of honor, the correlative of *lord*. It belongs, of right to the daughters of all peers above the rank of viscount, and is extended by courtesy to the wives of baronets and knights. In common usage, the term is employed in speaking of the women of the upper classes generally, — then correlative to *gentleman*.

—A wife or spouse.

"I your *lady*, Sir John? alas, I should be a pitiful *lady*."—*Shaks.*

Our Lady, the Madonna; the Virgin Mary.

La'dy-bird, LADY-BUG, LADY-FLY, BARNABEE, &c., *n.* (*Zoöl.*) See COCCINELLA.

La'dy-chapel, *n.* A chapel dedicated to the Virgin Mary.

La'dy-court, *n.* The court holden by a lady of the manor.

La'dy-day, *n.* The day of the ANNUNCIATION, *q. v.*

La'dy-fly, *n.* Same as *Lady-bird*. See COCCINELLA.

La'dy-killer, *n.* A male flirt; a man who is successful with the fair sex; — and, in a bad sense, a libertine: as, he is a professed *lady-killer*. (Cant.)

La'dykin, *n.* A little lady. (R.)

La'dy-like, *a.* Having the manner of a gentlewoman; genteel; well-bred; as, an exceedingly *lady-like* woman.

—Soft; tender; delicate.

"Her tender constitution did declare
Too *lady-like* a long fatigue to bear."—*Dryden.*

La'dy-love, *n.* A sweetheart; a mistress; a betrothed woman; a fiancée.

"I sing the praises of my *lady-love*."—*Lord Dorset.*

La'dy's-bedstraw, *n.* (*Bot.*) See HANSACEUM.

La'dy's-bower, or VIRGIN'S BOWER, *n.* (*Bot.*) See CLEMATIS.

La'dy's-comb, *n.* (*Bot.*) See SCANDIX.

La'dy's-cushion, *n.* (*Bot.*) See SAXIFRAGA.

La'dy's-finger, *n.* A variety of potato.

(*Confectionery.*) A kind of small sweet cake, about the length of a lady's finger.

(*Zoöl.*) One of the branchiæ of a lobster.

La'dy's-hair, *n.* (*Bot.*) See BRIZA.

La'dyship, *n.* The rank or social position of a lady; — used in a titular sense.

"Madam, he sends your *ladyship* this ring."—*Shaks.*

La'dy's-mantle, *n.* (*Bot.*) The common name of *Alchemilla*, a genus of alpine plants belonging to the order *Sanguisorbaceæ*.

La'dy's-seal, *n.* (*Bot.*) See TAMNUS.

La'dy's-slipper, *n.* (*Bot.*) See CYPRIPEDIUM.

La'dy's-smock, *n.* (*Bot.*) See CARDAMINE.

La'dy's-traces, La'dy's-tresses, *n.* (*Bot.*) See SPIRANTHES.

Læ'ken, in Belgium, the palace of the kings of Belgium situated in the suburb of Brussels, was erected in 1782. Leopold I. died here Dec. 10, and was buried here Dec. 16, 1865.

Lælia'nus, a Roman emperor, proclaimed and killed A. D. 266.

Læ'lius, CAIUS, a Roman commander, companion-in-arms of Scipio Africanus, consul B. C. 190. — His son, of the same name, surnamed "THE WISE," distinguished as an orator and man of letters, was consul B. C. 140.

Læmodip'oda, *n. pl.* [Gr. *laimos*, throat, *pous*, a foot.] (*Zoöl.*) In the classification of *Latreille*, an order of Crustaceans placed between the *Amphipoda* and the *Isopoda*.—In this work the *L.* are included in the AMPHIPODA, *q. v.*

Laennec, RÉNÉ THÉOPHILE HYACINTHE, (*lan'nek*,) a French anatomist and pathologist, a. at Quimper, 1781, inventor of the stethoscope and of the art of "mediate auscultation," obtained the degree of doctor of medicine in 1814. His literary acquirements were extensive, and he rapidly grew into fame as a lecturer and writer on medicine. In 1816 he became chief physician at the Hôpital Necker, and soon afterwards made known his important discovery in his *Treatise on Mediate Auscultation*. His health, which had been always delicate, now grew so infirm that he was compelled to resign his large private practice and his official appointments, to repair into Brittany. In 1821 he returned, with restored health, to Paris, and was appointed professor of medicine in the College of France. Five years later his health again gave way; and it was found, by means of the system he had himself invented, that he was attacked with consumption. He retired to Brittany, and there D. in 1827. His great invention of the stethoscope, as well as his valuable works, elucidated the pathology of diseases of the chest, which till his time had been involved in the greatest obscurity. His most invaluable work, the *Mediate Auscultation*, has been translated into English by Dr. Forbes. Besides this, he also produced a number of excellent treatises on medicine, and was altogether, in his time, one of the greatest advancers of medical science.

Laer'tes, according to Homer, a king of Ithaca, and the supposed father of Ulysses, whose real progenitor was Sisyphus. *L.*, however, resigned his crown to Ulysses when old enough to bear the responsibilities of office, and, retiring to a farm, enjoyed himself in the innocent pleasures of a rural life. After the absence of his son for ten years at the siege of Troy, and ten more expended in his return journey, Ulysses found his old and infirm father still employed in his fields and garden; and, having cautiously made himself known to the old king, they repaired together to the palace of the faithful Penelope, where, expelling the host of visitors, they discovered themselves to the delighted queen. *L.* in his youth had been one of the Argonauts.

Lætaré Sunday. (*Eccl.*) In the Roman Catholic Church, the fourth Sunday in Lent, called also *Mid-Lent*. It is so named from the first word of the Introit of the mass, which is from *Isaiah* lxvi. 10. From this name the characteristic of the services of the day is joyousness, and the music of the organ, which throughout the rest of Lent is suspended, is on this day resumed.

Lævinus, MARCUS VALERIUS, a naval commander of Rome, opposed to Philip of Macedon, whom he defeated B. C. 214; consul 210: D. 205.

Lævoracem'ic Acid, LÆVOTARTARIC ACID, *n.* (*Chem.*) Racemic acid is a compound of two acids of the same composition, but having opposite effects on a ray of polarized light. One of these acids twists the ray to the right, and is hence called *dextroracemic acid*; the ordinary tartaric acid of commerce is this substance. The other twists it to the left, and is therefore termed *lævoracemic* or *tartaric acid*.

La Farge, in *Wisconsin*, a post-office of Vernon co.

La Fargeville, (*la farj'vil*,) in *New York*, a post-village of Jefferson co., about 16 m. N. of Watertown.

La Fayette, MARIE JEAN PAUL ROCH YVES GILBERT MOTIER, MARQUIS DE, a general in the American war of independence, was also a French commander and statesman, and is one of the most illustrious names in the annals of modern history. He represented one of the oldest houses of the French noblesse, and was B. at the Chateau du Chavagnac, in Auvergne, Sept. 6, 1757. Left an orphan at a very early age, *L.* was educated at the College de Plessis, Paris, and, at 16, married, and entered the French Guards. Becoming acquainted with Franklin, Deane, and Lee, agents in Paris for the American revolutionists, *L.* imbibed their spirit, and resolved to draw his sword for the cause of their country. He accordingly fitted out a vessel at Bordeaux, and narrowly escaping arrest, sailed from a Spanish port, accompanied by several officers, among them Baron de Kalb, (*q. v.*) On the 25th of April, 1777, the Marquis arrived at Charleston, and proceeding to Philadelphia, where Congress was then sitting, made an offer to that body to serve as a volunteer in their army. This offer meeting acceptance, *L.* was, out of respect to his high rank, commissioned major-general, July 31st. He soon acquired the favor of Gen. Washington, and rendered distinguished services to the revolutionary cause at the battles of Brandywine and Monmouth. At the end of 1778, war having broken out between his own country and England, the Marquis (who still retained his commission in the French army) obtained leave of absence, and sailed for home in Jan., 1779. He was enthusiastically received by the French people (then full of revolutionary ideas themselves), and succeeded in obtaining from the govt. assistance both in men and money, for the American cause. Thereupon *L.* recrossed the Atlantic, and re-joined Washing-

Fig. 1494. — LA FAYETTE.

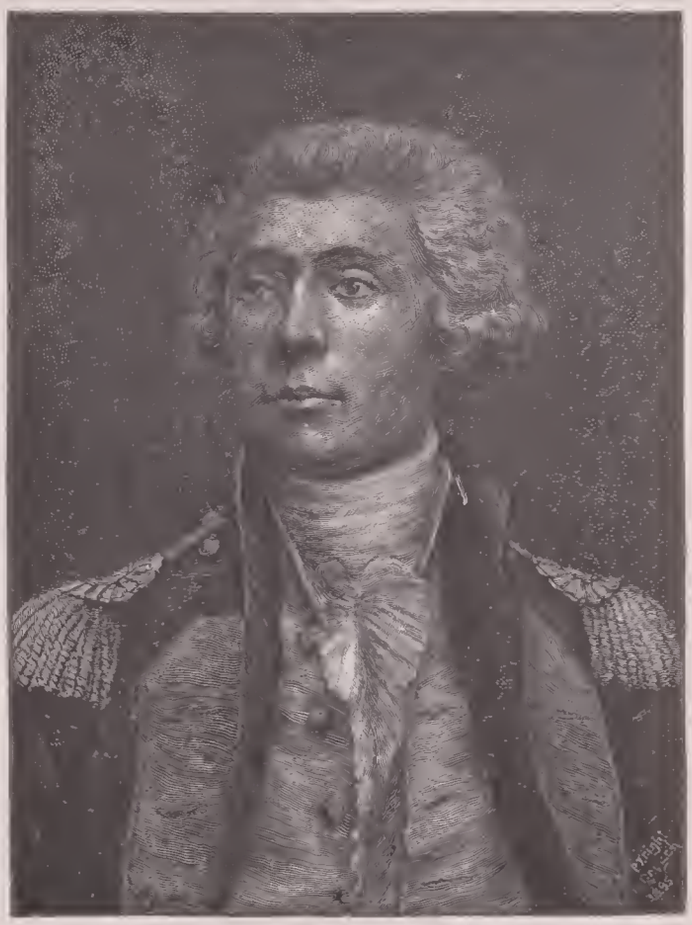
ton in May, 1780. Shortly after his arrival, the French auxiliary force, commanded by Rochambeau, arrived. After obliging the army of Lord Cornwallis to surrender at Yorktown, *L.* again returned to France, and, in 1784, after the independence of the U. States had been recognized, he again revisited this country as the guest of Washington. Returning to Europe after a brief stay, *L.* assumed his public duties as a member of the Assembly of Notables, and stepped prominently forth as the champion of liberal, if not radical, ideas. After bringing about the convocation of the States-general in May, 1789, the Marquis was appointed commander-in-chief of the National Guard of Paris, in which capacity he saved the lives of Louis XVI. and his queen from a vile canaille who had taken possession of the palace of Versailles, on October 5–6. Upon the National Assembly passing a decree for the abolition of hereditary titles of nobility, *L.* was the first to lay down his rank of marquis. In March, 1792, war being declared against Austria, *L.* was appointed to the command of an army on the frontier, and won the battles of Philippeville, Maubeuge, and Florennes. On August 8th, he was denounced by the Jacobins as a traitor to his country; and, after escaping arrest at the hands of their emissaries, *L.*, whose immense hereditary fortune had been confiscated, fled into Germany, only to be captured there by the Austrians and imprisoned in the castle of Olmütz. After an unsuccessful attempt at escape, and after the fntile intercession of the U. States, and also of Great Britain, the Marquis, after an imprisonment of 5 years, was liberated in 1797, on the special demand of Gen. Bonaparte, then victorious in Italy. Returning to France two years afterwards, he retired to his estate, and remained in privacy until 1818, when he was elected to the Chamber of Deputies, where he manifested vigorous sympathy with the advanced liberal party. In 1824, Congress passed a resolution requesting President Monroe to extend an invitation to *L.* to visit the U. States once more. He complied, and landed at New York on the 15th of August. His tour throughout the country partook of the character of a triumphal progress, and Congress, in Dec., voted him a grant of $200,000 and a township, in recognition of his eminent services during the Revolution. In Sept., 1825, he returned to France. The unconstitutional ordinances of Charles X. in June, 1830, which caused his own expulsion, brought *L.* on the stage again. It was to him, idolized by the Parisians and intrusted with the power of a dictator, in his original character of commander of the National Guard, that Louis Philippe owed his elevation to the throne. Ever actuated by patriotic and disinterested motives, the qualities of the heart, in *L.*, were perhaps superior to those of the head. In raising Louis Philippe to the throne, *L.* believed to endow his country with "a monarchy surrounded by republican institutions" — an error which, as evidenced by the first acts of the new king, embittered the last days of the noble and ardent lover of liberty. *L.* died in 1834, and received the greatest public and most popular funeral of which French annals possess any record. He left behind him his *Memoirs*, which were pub. by his family in 1837–40.

La Fayette', in *Alabama*. See CHAMBERS COURT-HOUSE

La Fayette', in *Arkansas*, a S.W. co., adjoining Louisiana; *area*, about 497 sq. m. *Rivers*. Red river, the Bayou Bodeau, and some other small streams. *Surface*, level; *soil*, fertile. *Products*. Cotton, corn, sweet potatoes, and live stock. *Cap.* New Lewisville. *Pop.* (1897) 8,250.

La Fayette', in *California*, a post-village of Contra Costa co., about 22 m. E. N. E. of San Francisco.

La Fayette', in *Florida*, a co. in the N. W. part of the peninsula, bordering on the Gulf of Mexico; *area*, about



Marquis de Lafayette

1757–1834

1,008 sq. m. *Rivers.* Suwanee river, and numerous smaller streams. *Surface,* level; *soil,* fertile. *Cap.* Mayo. *Pop.* (1895) 3,783.

La Fayette', in *Georgia,* a post-village, cap. of Walker co., about 210 m. N.W. of Milledgeville. Its former name was Chattooga.

La Fayette, in *Illinois,* a thriving township of Coles county.

—A village of Coles co.

—A township of Ogle co.

—A post-village of Stark co., about 100 m. N. by W. of Springfield.

La Fayette, in *Indiana,* a township of Allen co.

—A township of Floyd co.

—A township of Madison co.

—An important city and R.R. center, cap. of Tippecanoe co., on the Wabash & Erie canal and 4 railroad lines, 63 m. N.W. of Indianapolis. Has extensive manufactures of machinery, agricultural implements, railroad cars, paper, &c., several large pork-packing houses, and other industries; does a large shipping trade in grain and other farm products. Seat of Purdue University, a State agricultural college. *Pop.* (1897) about 20,500.

La Fayette, in *Iowa,* a township of Allamakee co.

—A township of Bremer co.

—A township of Keokuk co.

—A post-village of Linn co., about 35 m. N. by W. of Iowa City.

—A township of Story co.

La Fayette, in *Kansas,* a post-township of Stevens co.

—A township of Chautauqua co.

La Fayette, in *Kentucky,* a post-town of Christian co., about 218 m. W.S.W. of Frankfort.

La Fayette, in *Louisiana,* a S. central parish; *area,* about 264 sq. m. *Rivers.* Vermilion river, and several smaller streams. *Surface,* level; *soil,* fertile. *Cap.* Lafayette. *Pop.* (1890) 15,966.

—A suburban village, now incorporated with New Orleans.

La Fayette, in *Michigan,* a post-township of Gatriot county.

—A village of Van Buren co.

La Fayette, in *Minnesota,* a village and township of Nicollet co., about 26 m. W. of St. Peter.

La Fayette, in *Mississippi,* a N. co., formerly called Lillard; *area,* about 720 sq. m. *Rivers.* Tallahatchie and Yocknapatalfa rivers. *Surface,* gently undulating; *soil,* very fertile. *Cap.* Oxford. *Pop.* (1890) 20,553.

La Fayette, in *Missauri,* a W. co.; *area,* about 622 sq. m. *Rivers.* Missouri river, Snybar, Terre Beau, and other creeks. *Surface,* diversified; *soil,* fertile. *Min.* Limestone, sandstone, and coal in great abundance. *Cap.* Lexington. *Pop.* (1890) 30,184.

—A village of Clinton co., about 12 m. N.W. of Plattsburg.

La Fayette, in *New Jersey,* a post-town and township of Sussex co., about 70 m. N. of the city of Trenton.

La Fayette, in *New York,* a post-town and township of Onondaga co., about 12 m. S. by E. of Syracuse. *Pop.* (1897) 1,925.

La Fayette, in *Ohia,* a village of Allen co., about 8 m. E. of Lima.

—A village of Ashland co., about 10 m. E.N.E. of Ashland.

—A township of Coshocton co.

—A post-village of Madison co., about 22 m. W. of Columbus.

—A township of Medina co.

—A village of Richland co., about 13 m. N. by E. of Mansfield.

La Fayette, in *Oregon,* a post-village, the former cap. of Yam Hill co., 28 m. N.N.W. of Salem.

La Fayette, in *Pennsylvania,* a post-village and township of McKean co., about 208 m. N.W. of Harrisburg.

La Fayette, in *Rhode Island,* a post-village of Washington co. *Pop.* (1897) 462.

La Fayette, in *Tennessee,* a post-village, cap. of Macon co., about 55 m. N.E. of Nashville.

La Fayette, in *Texas,* a post-village of Upshur co., about 54 m. N. of Henderson.

La Fayette, in *Virginia,* a post-village of Montgomery co., about 190 m. W. by S. of Richmond.

La Fayette, in *Wisconsin,* a S.S.W. co., adjoining Illinois; *area,* about 630 sq. m. *Rivers.* Fevre, and the two branches of the Pekatonica river. *Surface,* broken; *soil,* mostly fertile. *Min.* Lead and copper. *Products,* oats, corn, wheat, barley, flaxseed, butter, cheese, wool, &c. *Cap.* Darlington. *Pop.* (1895) 21,488.

—A township of Chippewa co.

—A township of Monroe co.

—A township of Walworth co.

La Fère, (*fair,*) a fortified town of France, dep. Aisne, on an island in the Oise, 14 m. N.W. of Laon. An arsenal and a school of artillery are located here. *Pop.* 5,000.

Lafitte, (*la-feet',*) Jacques, a celebrated French banker and financier, b. at Bayonne, 1767. He was the son of a poor carpenter, and in 1787 walked to Paris, where he obtained the situation of assistant clerk in the banking-house of Perregaux, at a salary of $250 per annum. He became successively book-keeper, cashier, chief clerk, manager, junior partner, and in 1809 succeeded to the business, and thenceforth carried it on in his name. His eminently profound and practical talents for finance procured for him the posts of regent of the bank of France, and president of the Paris Chamber of Commerce. During a monetary crisis, in 1815, Lafitte lent the government the sum of 2,000,000 francs. In the same year, Louis XVIII., on his departure for Ghent, deposited with the banker a very considerable sum, which Napoleon I respected. Four months afterwards, the emperor himself, when leaving Paris for the last time, lodged in the same hands the sum of 5,000,000 francs. Lafitte wished to give Napoleon a receipt; but the latter replied: "It is unnecessary. I know you, M. Lafitte. You never liked my government; but you are an honest man." After the second restoration, he became one of the opposition in the Chamber of Deputies, and enjoyed the highest popularity in Paris. When the revolution broke out in 1830, he wrote to the Duke of Orleans, saying, "You have to make your choice between a crown and a passport." He freely supplied the money requisite on that occasion. He became one of the first ministry of the new king; and in November, 1830, was intrusted with the formation of a cabinet, the conservative character of which caused the loss of his popularity. In 1830, he was said to be possessed of a private fortune of upwards of $10,000,000; but in the following year the great European monetary panic took place, and the house of Lafitte fell, along with those whose creditor it was. At this juncture, Lafitte sold off the whole of his private property, amounting to 10,000,000 francs; and subsequently, after the full discharge of his liabilities, he was ascertained to have a surplus of 8,000,000 francs. At his death, his remains were attended to the cemetery of Père-la-Chaise by the most eminent personages of Paris, and his funeral oration was pronounced by Arago. D. 1844.

Lafitte', Jean, an American buccaneer and privateersman, b. in France, 1780. The events of his early life are involved in doubt and obscurity. He is believed, however, to have commanded a privateer in the French service, but is first authentically known as the chief of an organized and formidable body of desperadoes, having their head-quarters on an island in Barataria Bay, about 40 m. W. of the delta of the Mississippi, in the Gulf of Mexico. Committing various piratical acts, the U. S. government sent out an expedition against them in 1814, which captured their stronghold and all vessels lying there at the time, but failed in making prisoners. *L.* and his companions escaping to the swamps and bayous of the main-land. At the commencement of the war with the U. States in 1814, *L.* was offered by the British government $30,000, and a naval commission, to co-operate in their expedition against New Orleans. This offer he spurned, and communicating its nature to Gov. Claiborne of La., he offered the services of himself and men against the enemy, on the sole condition of pardon for their past offences. His offer was accepted, and *L.* kept his word by rendering efficient aid to the Americans in the battle of January 8, 1815. *L.*'s after-career, and the time of his death, remain an unsolved mystery. *L.* is the hero of a romance by the American novelist, J. H. Ingraham.

La Flèche, (*flaish,*) a town of France, dep. Sarthe, on the Loire, 24 m. S.W. of Le Mans. It is the seat of an Imperial military college. *Pop.* 7,784.

La Fontaine, Jean de, (*la-fŏn-tān',*) one of the classics of French literature, was b. in 1621, at Chateau-Thierry in Champagne. His characteristic indolence showed itself from childhood; and his education was very imperfect. He was about 22 years old when his

Fig. 1495. — Jean de la Fontaine.

literary ambition was awakened by the odes of Malherbe, from whose seriousness and dignity, however, he was soon diverted by the more congenial writings of Rabelais, Ariosto, Boccaccio, Horace, and Terence. One of Cardinal Mazarin's nieces, being banished to Chateau-Thierry, admired his verses, and carried him to Paris; and there, speedily welcomed into the best literary and aristocratic circles, he spent the last 35 years of his life. The first volume of his *Contes* appeared in 1664; a second was added in 1671. Notwithstanding their somewhat licentious turn, these tales, full of the finest touches of his genius, were eagerly read even by the most respectable ladies, the standard of morality being then far different from what it is now. The twelve books of his *Fables* were published in equal parts in 1668 and 1678. It is through them that La Fontaine is universally known. With no originality of invention, very little depth of reflection, and a total incapacity of consecutive thinking, he is yet one of the most interesting and attractive of writers. He is an inimitable teller of small stories. His short flights of fancy, his minute strokes of observation, his transitions from brief moods of pathetic seriousness to flashes of the gayest wit, are all set off by a diction the most gracefully and delicately refined, and breaking out incessantly into felicitous turns of novel expression. La Fontaine's personal character, strange mixture of childish simplicity and finesse which is perceptible in his poems, made him at once the pet and the laughing-stock of his friends and patrons. To him might be applied, with little injustice, the epithet wrongly thrown on Goldsmith, of "an inspired idiot." His freedom from all restraint, and his dreamy disposition, have given birth to innumerable anecdotes of his absence of mind. During the last two years of his life the religious sentiments of his early youth revived, and he performed severe penances for such of his works as strict morality could not approve of. The duchess of Bouillon styled him *mon fablier,* his friends *le bon homme,* and posterity has proclaimed him *l'inimitable.* He was admitted to the French Academy in 1684, conjointly with his friend Boileau. D.1695.

Laforme's Store, in *West Virginia,* a village of Braxton co.

La Fourche, in *Louisiana,* a S.E. parish, bordering on the Gulf of Mexico; *area,* about 1,020 sq. m. *Rivers.* Bayou La Fourche, and several smaller streams. *Surface,* mostly low and level, in some places marshy; *soil,* fertile. *Cap.* Thibodeaux. *Pop.* (1890) 22,093.

La Fourche', Bayou, in *Louisiana,* an outlet of the Mississippi river, commencing at Donaldsonville, in Iberville parish, and flows S.E. through the parish of La Fourche into the Gulf of Mexico.

Lag, *a.* [W. *llag,* weak, slack, languid; *llegn,* to flag, to be sluggish. Allied to Lat. *langueo,* to be weary; Gr. *langgazō,* to slacken.] Coming behind; falling short; sluggish; slow; tardy; as, "*lag* souls." (*Dryden.*) — Last; long delayed; as, "the *lag* end of their lewdness." *Shaks.*

—*n.* That which is slack, loose, or sluggish. — One who lags, or that which comes in at the last.

"What makes my ram the *lag* of all the flock?"—*Pope.*

—The rump; the fag-end; the tail; — hence, the lowest order or class; as, "the common *lag* of people." (*Shaks.*) —In England, a convict. (Cant.)

—The amount of retardation of anything, as a valve in a steam-engine.

—*v. n.* To walk with a slackened pace; to walk or move slowly; to stay behind; to loiter; to linger; to delay; to tarry.

"Superfluous *lags* the veteran on the stage."—*Dr. Johnson.*

—*v. a.* To slacken. — To cause to be convicted to penal servitude for a crime. (Eng. cant.)

(*Mach.*) To clothe, as a steam-boiler, to prevent the radiation of heat.

La'gan, *n.* (*Mar. Law.*) Goods found at such a distance from shore that it is uncertain what coast they would be carried to, and therefore belonging to the finder.

Lagar'to, a town of Brazil, about 70 m. W.S.W. of São Christovão.

Lagena'ria, *n.* [Lat. *lagena,* a bottle.] (*Bot.*) The Bottle- or Club-shaped Gourd, a genus of plants, order *Cucurbitaceæ,* and consists of annual pubescent herbs, with heart-shaped leaves, white monœcious flowers, and flask-shaped fruit, which when mature become woody pepos. They are found in the warm parts of Asia and Africa.

La'ger-beer, *n.* [Ger. *lager,* a store-room, a frame, and *bier,* beer.] A German beer, so called from being, before use, kept for some months in casks on a frame placed for the purpose in a cellar.

La'ger-wine, *n.* Wine which has been stored for some time in a cellar.

Lages, (*la'zhes,*) a town of Brazil, about 140 m. W. of Desterro.

Laget'ta, *n.* (*Bot.*) A genus of plants, order *Thymelaceæ.* The species *L. lintearia* is the celebrated lace-bark tree. The bark, when macerated, may be separated into laminæ, the number of which depends upon the age of the specimen; these have a beautiful lace-like appearance, and possess great strength. It may be used for making ropes, and was at one time in great demand in the West Indies for making slave-whips. Sloane says that caps, ruffles, and complete dresses for ladies, have been made from the lace-bark. *L.* cloth is known in the trade under the name of *guana.*

Lag'gard, *a.* Lagging; slow; sluggish; backward; behindhand; as, a *laggard* lover.

—*n.* One who lags or loiters; an idler; one who moves slowly and falls behind; one who dilly-dallies.

Lag'ger, *n.* A laggard; a loiterer.

Lag'ging, *n.* (*Mach.*) The covering put round a cylinder of a steam-boiler, in order to prevent the radiation, and the consequent waste of heat.

Lag'gingly, *adv.* Idly; loiteringly; in a dilly-dallyish manner.

Lagides, (*laj'e-dēz,*) an Egyptian dynasty, the chief of which was Ptolemy, son of Lagus, a general of Alexander. It ruled in Egypt from the death of Alexander until the reduction of the country into a Roman province, 30 B. C., a period of 293 years.

Lag'omys, *n.* [Gr. *lagos,* hare, and *mys,* mouse.] (*Zoöl.*) The Rat-hare, or Pika (Fig. 1496), a genus of rodent animals, of the *Leporidæ* or Hare family. They differ from the hare proper in having moderate-sized ears, legs nearly equal, and no tail.

Fig. 1496. — The little chief hare. (*Lagomys princeps.*)

The species are peculiar to Siberia and other northern countries. The Little Chief Hare, *L. princeps*, found in the N. of the Rocky Mountains, is the only species met with in North America.

Lago'a, a town of Brazil, on the E. coast of the island of SANTA CATHARINA, *q. v.*; *pop.* about 3,600.

La'go Maggio're. See MAGGIORE (LAGO).

Lagon'da, or **BUCK CREEK,** in *Ohio*, enters the Mad River at Springfield.

La'go Ne'gro, or **Lagone'ro,** a town of S. Italy, prov. Potenza, 12 m. N.E. of Policastro; *pop.* 5,924.

Lagoon', Lagune', *n.* [Fr. *lagune*; It. *laguna*; Lat. *lacuna*, a ditch.] The name given particularly to those creeks along the coast of the Adriatic, which are formed by water running up into the land. In some places they are deep; but generally they are so shallow as to emit noxious exhalations. They contain many islands; on 60 of which the city of Venice is built.

Lagophthal'mia, *n.* [Gr. *lagos*, a hare, and *ophthalmos*, an eye.] (*Med.*) A disease in which the eye cannot be closed. Sometimes it is a paralytic affection; but sometimes it depends upon enlargement of the eye; it is also occasionally connate. The term has reference to the notion that hares sleep with their eyes open.

Lago'pus, *n.* [Gr. *lagos*, and *pous*, a foot.] (*Zoöl.*) The generic name of those birds of the Goose family (*Anserinæ*), which have a round or square tail, and whose toes are feathered, as well as the legs.

La'gos, a town of Guinea, in an inlet of the Bight of Benin, 160 m. W. of Benin, and S.E. of Abomey. It was formerly the principal station of the slave-trade on the W. coast of Africa, which traffic was abolished in 1851. *Pop.* 5,500.

Lagos, (*la-gose'*,) a seaport-town of Portugal, prov. Algarve, on a wide bay, 23 m. E.N.E. from the extremity of Cape St. Vincent, 100 m. S. from Lisbon; *pop.* 7,500.

La'gos, a river and bay of W. Africa; Lat. 6° 20′ N., Lon. 3° 30′ E.

Lagos, (*la-gose'*,) a town of Mexico, about 100 m. E.N.E. of Guadalajara. In the vicinity are rich silver mines.

Lagos'tomus, Lagos'tomys, *n.* (*Zoöl.*) A genus of rodent mammalia, in which the forefeet are furnished with four toes, the hinder with three only, as in the Cavies, all of them armed with stout claws adapted for digging. The ears are of moderate size, and the tail comparatively short. Their three anterior molars of the upper jaw consist each of two double layers, and the last of three. The only known species, *Lagostomus trichodactylus*, is about the size of a hare, and inhabits Chili and Brazil; its general color is grayish; the fur of two sorts, one entirely white, and the other, which is coarser, black, except at the base; the underparts white. Its motions are quick, and resemble those of a rabbit; and it seeks its food by night, subsisting wholly on vegetables; it inhabits the level country, and is not esteemed as food. It has very generally obtained the name of *Viscacha*; and it has also been figured in Griffith's edition of Cuvier's "Regne Animal" under the name of the *Diana Marmot*.

Fig. 1497.—LAGOSTOMUS TRICHODACTYLUS.

Lag'othrix, *n.* [Gr. *lagos*, and *thrix*, hair.] (*Zoöl.*) A genus of S. American monkeys, characterized by their round head, a thumb on the anterior hand, (a characteristic which distinguishes them from the *Ateles*,) and the tail partly naked. The Grison, or Silver-haired Monkey, is a species of this genus.

La Grande, in *Oregon*, a city of Union co., on the O. R. & N. R.R., 50 m. W. of Pendleton. Has railroad repair shops and other industries; in a rich wheat-growing section. *Pop.* (1897) about 3,500.

Lagrange, JOSEPH LOUIS, (*la-granj'*,) a celebrated mathematician, B. at Turin, 1736; a man prevented only by the rivalship of *Laplace* from being held, by general consent, the most illustrious geometer of modern times. At the age of 16 he became a professor in the royal school of artillery, where he formed an association, which afterwards rose to the rank of an academy of sciences. Here he made many important discoveries, particularly in reference to the motion of fluids and of vibrations. He communicated to the society a number of papers, and some to the Academy of Paris, of which he was chosen a foreign member. While on a visit at Paris he wrote his celebrated work, *Mécanique Analytique*. In 1766 he removed to Berlin, where he was appointed director of the Academy: and in 1787 he settled at Paris, and became successively professor at the Normal and Polytechnic Schools. He pursued his labors till, his health giving way under this incessant fatigue, he died in 1813. The most important discovery of Lagrange is that of the calculus of variations. His works, besides the one above named, are the *Théorie des Fonctions Analytiques*; *Leçons sur le Calcul des Fonctions*; *Résolution des Équations Numeraires*; and very numerous memoirs in the transactions of the academies of Turin, Berlin, and Paris.

La Grange, in *California*, a post-vill. of Stanislaus co.

La Grange, in *Georgia*, a city, cap. of Troup co., 15 m. N. E. of West Point. *Pop.* (1897) 3,340.

La Grange, in *Indiana*, a N. E. co., adjoining Michigan; *area*, about 384 sq. m. *Rivers*, Pigeon river, and some smaller streams. *Surface*, generally level; *soil*, moderately fertile. *Cap.* La Grange. *Pop.* (1890) 15,615.
—A post-town, cap. of La Grange co., on G. R. & Ind. R.R., 46 m. N. by W. of Ft. Wayne. *Pop.* (1897) 2,050.

La Grange, in *Illinois*, a post-village of Cook co.

La Grange, in *Iowa*, a village of Lucas co.
—A township of Harrison co.

La Grange, in *Kentucky*, a post-town, cap. of Oldham co., about 46 m. N.W. of Frankfort. *Pop.* (1897) 710.

La Grange, in *Maine*, a post-town and township of Penobscot co. *Pop.* (1897) 745.

La Grange, in *Michigan*, a post-village and township of Cass co., about 130 m. S.W. of Lansing.

La Grange, in *Missouri*, a city of Lewis co., on the Mississippi river, 11 m. above Quincy, Ill. *Pop.* (1897) 1,425.

La Grange, in *North Carolina*, a post-town of Lenoir co., on A. & N. C. R. R., 12 m. N.W. of Kinston. *Pop.* (1897) 848.

La Grange, in *New York*, a township of Dutchess co.
—A post-village of Wyoming co.

La Grange, in *Ohio*, a post-village and township of Lorain co.

La Grange, in *Pennsylvania*, a village of Wyoming co.

La Grange, in *Tennessee*, a post-town of Fayette co., about 50 m. E. of Memphis. *Pop.* (1897) 580.

La Grange, in *Texas*, a city, cap. of Fayette co., on So. Pac. and M., K. & T. R. Rs., 87 m. S. E. of Austin. *Pop.* (1897) about 1,85.

La Grange, in *Vermont*, a post-office of Grand Isle co.

La Grange, in *Wisconsin*, a post-township of Walworth co.

La Grange Bluff, in *Illinois*, a village of Adams co. Its post-office is LA GRANGE, Mo.

La Grange Furnace, in *Tennessee*, a village of Stewart co.

Lagrim'so. [It.] (*Mus.*) Same as LACRIMSO (*q. v.*).

La Gro, in *Indiana*, a post-village and township of Wabash co., on the Wabash river, about 6 m. above Wabash. *Pop.* (1897) 595.

La Guayra, (*la gwī'ra*,) the principal sea-port town of Venezuela, on the Caribbean Sea, abt. 10 m. N. of Caracas; Lat. 10° 36′ 42″ N., Lon. 66° 56′ 30″ W. The town, surrounded by a natural wall of rock on all sides save towards the sea, is very compact, but irregular, and badly built. Except for abt. three months in the year, the heat is excessive, fevers of a malignant and putrid character prevail, and residence here is very dangerous to strangers. *Exp.* Coffee, cocoa, indigo, and hides. *La G.* was nearly destroyed by an earthquake in 1812. A costly breakwater is now being built.

La Guéronnière, LOUIS ÉTIENNE ARTHUR, (VICOMTE DE,) (*ger-ron'e-air'*,) a French senator, chiefly noted as being the reputed literary "collaborateur" of Napoleon III. A scion of one of the most distinguished Legitimist families of France, and B. in 1816, *L.* entered life just at that period when France, impatient of the rule of Louis Philippe, was intent on reviving the glories of the first empire. Debarred by the traditions of his family from seeking a career under the Orleanist *régime*, he found in the columns of the *Avenir National*, a weekly paper of Limoges, a medium for the exposition of his somewhat mystic political views. While thus engaged, he attracted the attention of M. de Lamartine, and laid the foundation of a friendship which conduced to his literary success. After the revolution of Feb., 1848, M. de Lamartine gave him a post in the Ministry of Foreign Affairs, and having retired with his chief, he assisted in the direction of the *Bien Public*, and on its extinction, joined the staff of the *Presse*. The socialistic tendencies of its proprietor, M. Emile de Girardin, having caused differences which led to a separation, M. de la Guéronnière became editor of the *Pays*, where he was again associated with M. de Lamartine, its political director. This connection, however, was severed by a difference of opinion respecting the character and tendencies of Louis Napoleon, then president of the republic, of whom M. de la Guéronnière was an enthusiastic admirer; and during the dictatorship which followed the *coup d'état*, he was selected as the literary advocate and exponent of *Les Idées Napoléoniennes*. In addition to the official distinction which he enjoys as a member of the Senate and a Commander of the Legion of Honor, he is a member of the Council of State, and President of the Council-General of the Department of the Haute-Vienne. It is generally believed that the three pamphlets, *Napoléon III. et l'Angleterre*, *Napoléon III. et l'Italie*, and *Le Pape et le Congrès*, were the joint production of the Vicomte de la Guéronnière and his imperial master. He was decorated with the Legion of Honor in Aug., 1852, was promoted Grand Officer soon after, and took direction of the journal "La France" Aug. 1, 1862. D. 1875.

Lagnna, (*la-goo'na*,) a town of Brazil, about 60 m. S.W. of Nossa Senhora do Desterro; *pop.* 1,500.

Laguna, a town of Peru, cap. of the prov. of Maynas, on the Huallaga; Lat. 5° 10′ N., Lon. 75° 40′ W.

Laguna, a town of Yucatan, on the island of Carmen, at the mouth of Lake Terminos.

Laguna, or **ST. CHRISTOBAL DE LA LAGUNA,** cap. of Teneriffe, the principal of the Canary Islands, situated on a basaltic hill, 2,000 feet above sea-level; Lat. 28° 28′ N., Lon. 16° 20′ W.; *pop.* 7,500.

Laguna del Madre, (*mad're*,) in *Texas*, a large lagoon or shallow bayou in Nueces and Cameron cos., extending from Corpus Christi almost to the mouth of the Rio Grande.

La'gus, one of the heroes of classic history, a Macedonian by birth, who, having been married to Arsinoë, the mistress of Philip, and anxious to hide the consequences of his wife's former weakness, exposed her child, when born, in the woods. Having noticed an eagle feeding the infant, Lagus, struck with remorse, took back the child and reared him as his own, giving him the name of Ptolemy. The child thus preserved became, on the death of Alexander, king of Egypt, under the name of Ptolemy Lagus, and was the founder of the dynasty of the LAGIDES, *q. v.*

La Habana. See HAVANA.

La Hacha, (Rio,) a river of South America. See RIO HACHA.

Laharpe, JEAN FRANÇOIS DE, (*la-arp'*,) a French critic and dramatic author, B. at Paris, 1739. In early manhood he became an author by profession. His strength lay in literary criticism, which at length became his chief employment. He was a useful and judicious critic, though not a profound one; and his analyses of celebrated works are especially instructive. Much may be learned as to modern literature, and a little as to that of Greece and Rome, from his voluminous *Lycée, ou Cours de la Littérature*, which contains lectures he delivered in Paris from 1786. D. 1803.

La Harpe, in *Illinois*, a city of Hancock co., on T., P. & W. R.R., 70 m. W. by S. of Peoria. *Pop.* (1897) 1,480.

Lahas'ka, in *Pennsylvania*, a post-village of Bucks co.

Lahn, a river of Central Germany, which, after a W. course of 100 m. empties into the Rhine near Lower Lahnstein.

La Hogue. See CAPE LA HOGUE.

Lahore', the capital of the Punjab, in British India, situate on an affluent of the Ravee, Lat. 31° 34′ N., Lon. 74° 20′ E. It was formerly a great city, the occasional residence of the Great Moguls, all of whom expended

Fig. 1498.—THE CITY OF LAHORE.

considerable sums on palaces, gardens, &c. It is surrounded by a brick wall, formerly 25 feet high, and by fortifications 7 m. in circuit (Fig. 1498). Of all its grandeur little now remains, except some handsome tombs, among which is that of the emperor Jehangir. This place has an educational establishment, in which European knowledge is taught through the vernacular language. After the defeat of the Sikhs, in 1849, *L.* was taken possession of by the British.

La Ho'ya, a village of Mexico, about 100 m N.W. of Vera Cruz.

Lahr, (*lar*,) a town of Baden, on the Shutter, an affluent of the Rhine, 53 m. S.S.W. of Carlsruhe. *Manuf.* Linens, woollens, cottons, silks, tobacco, and leather.

Laibach, or **Laybach,** (*lī'bak*,) a city of Austria, Illyria, duchy of Carniola, on a river of same name, a tributary of the Save, 54 m. N.E. of Trieste; Lat. 46° 2′ 27″ N., Lon. 14° 30′ 49″ E. It carries on an extensive trade with Trieste, Croatia, and S. Germany. *Manuf.* Woollens, silks, linens, cottons, oil, and leather; it has also several large sugar refineries. — *L.* is noted for the Congress of Monarchs held in 1821 to consult about the peace of Europe.

La'ic, *a.* [Fr. *laïque*; Lat. *laicus*; Gr. *laïkos*, from *laos*, people.] Belonging to the laity or lay people; — used in contradistinction to *cleric*.
—*n.* A layman; one of the laity.

La'ical, *a.* Same as LAIC, *q. v.*

Laid, *imp.* and *pp.* of LAY, *q. v.*
Laid paper, writing-paper which has a ribbed surface, as if inlaid with lines.

Laid, *a.* [Fr.] An English provincialism for ugly; unsightly; hideous.

Laid'ly, *a.* Repulsive in appearance; loathsome. (Prov. Eng.)

Laigle. (*lai'gl*,) a town of France, dep. of Orne, on the Rille, 18 m. N.E. of Montagne. *Manuf.* Needles, pins, and steel goods. *Pop.* 6,500.

Lain, *pp.* of LIE, *q. v.*

Laines, *n. pl.* (*Arch.*) Courses laid in the building of walls.

Laings'burg, in *Michigan*, a post-vill. of Shiawassee co.

Lair, (*lār*,) *n.* [Ger. *lager*, from *legen*, to lay. See LAY.] The bed or couch of a boar or wild beast; the place where any wild animal rests or lies. —Any resting-place.
"Mossy caverns for your noontide *lair*." — *Dryden.*

Laird. [A. S. *hlaford*.] In Scotland, properly the lord of a manor, a proprietor holding his lands immediately of the crown. In the common language it is used in a much wider sense, and applied to any proprietor of lands or houses.
"If you've *lairds* in the South, we have chiefs in the North." *Scott.*

Lairds'ville, in *New York*, a post-office of Oneida co., about 100 m. W. by N. of Albany.

Lairds'ville, in *Pennsylvania*. See FUNSTONVILLE.
—A post-village of Lycoming co. *Pop.* (1897) 820.

La'is, *n.* The name of one or more, probably two, Greek ladies, more celebrated for the matchless beauty of their persons than for the rectitude of their morals. The elder is believed to have been born at Corinth, and

flourished during the Peloponnesian War. She was reckoned to possess the most graceful figure of any woman of her time in Greece; but she was capricious, greedy of money, and in her old age became a tippler. — The younger appears to have been born in Sicily, but came to Corinth when still a child. She sat as a model to the painter Apelles, who is said to have recommended her to adopt the profession of a courtesan, in which she obtained a "bad eminence." She was stoned to death by some Thessalian women whom she had made jealous. Both of these women had temples erected to their memory.

La'ism, *n.* Same as LAMAISM, *q. v.*

La'ity, *n.* [From Fr. *lai*, lay; Gr. *laos*, people.] The body of people, as distinguished from the *clergy*.

La'ius, the son of Labdacus, succeeded his grandfather Myeteus on the throne of Thebes, when he married Jocasta, the daughter of Creon, king of Corinth. The oracle having declared that he would be killed by the hand of his own son, he had his first child Œdipus exposed, but the man intrusted with this deed repented, and he was privately reared by a peasant. Many years afterwards, when the boy had grown to man's estate, he met his father in a narrow lane; Laius haughtily ordering the youth to make room, the latter refused, and, being ignorant of the dignity or relationship of the person he addressed, drew his sword, and in the scuffle that ensued, killed his father. — See JOCASTA and ŒDIPUS.

Lake, *v. a.* To make pastime; to play; to sport. (Used as an English provinclalism.)

—*n.* [Fr. *lac*; Lat. *lacus*; Gr. *lakkos*, a hole, a pit, a pond.] A sheet of water occupying depressions on that part of the surface of the earth not covered by the waters of the ocean. Lakes differ from inland seas in not communicating with the ocean except by a river. They differ from pools and ponds not only in being larger, but in having definite banks and permanent limits. Lakes occur at all levels, from that of the Dead Sea, nearly 1,400 feet below the ocean, to that of Titicaca, 1,300 feet above it. They are for the most part only moderately deep, but there are important exceptions. They vary in dimensions from the small lake of St. George to Lake Superior with its area of upwards of 40,000 sq. m.

Lake, *n.* [From *lac;* O. Fr. *lacque*, a rose or ruby color.] (*Paint.*) The cognomen of a variety of transparent red and other pigments of great beauty, prepared for the most part by precipitating colored tinctures of dyeing-drugs upon alumina and other earths. The lakes are hence a numerous class of pigments, both with respect to the variety of their appellations and the substances from which they are prepared. The coloring-matter of common lake is Brazil wood, which, however, affords a very fugitive color. Superior red lakes are prepared from lac, cochineal, and kermes; but the best of all are those prepared from the root of the *rubia tinctoria*, or madder. — See LAC-LAKE.

Lake, in *California*, a N. W. co.; *area*, about 1,125 sq. m. *Rivers.* Putah creek, and some smaller streams, besides Clear Lake, which covers an area of about 100 sq. m. *Surface*, mountainous; *soil*, in some places fertile. *Min.* Gold, silver, and copper. *Cap.* Lakeport. *Pop.* (1890) 7,101.

Lake, in *Colorado*, a W. central co.; *area*, about 450 sq. m. *Rivers.* Arkansas, Gunnison, and Bunkara (or Blue). *Surface*, diversified; *soil*, parts fertile. *Min.* Gold. *Cap.* Leadville. *Pop.* (1890) 14,663.

Lake, in *Illinois*, an extreme N. E. co.; adjoining Wisconsin on the N., and washed by Lake Michigan on the E. *Area*, about 490 sq. m. *Rivers.* Des Plaines and Fox rivers, besides about 50 small lakes, the average extent of which is about 1 sq. m. *Surface*, finely diversified; *soil*, exceedingly fertile. *Cap.* Waukegan. *Pop.* (1890) 24,235.

—A township of Clinton co.

Lake, in *Indiana*, an extreme N. W. co., adjoining Illinois on the W., and washed by Lake Michigan on the N. *Area*, about 500 sq. m. *Rivers.* Kankakee, Calumet, and Deep rivers. *Surface*, mostly level; *soil*, not very fertile. *Products*, wheat, corn, oats, hay, wool, pork, &c. *Cap.* Crown Point. *Pop.* (1890) 23,886.

—A township of Allen co.

—A township of Newton co.

—A post-office of Spencer co.

Lake, in *Iowa*, a township of Cerro Gordo co.

—A township of Monoua co.

—A township of Muscatine co.

Lake, in *Michigan*, a township of Benzie co.

—A township of Berrien co.

Lake, in *Minnesota*, an extreme N.E. co., adjoining British North America on the N. and washed by Lake Superior on the S.E. *Area*, about 2,380 sq. m. *Rivers.* Baptism and Manitou rivers, and many smaller streams, besides about 40 lakes. *Surface*, broken; *soil*, generally fertile. *Min.* Copper and iron. *County-seat*, Beaver Bay. *Pop.* (1895) 2,211.

Lake, in *Mississippi*, a post-village of Scott co.

Lake, in *Missouri*, a township of Buchanan co.

Lake, in *Nevada*. See ROOP.

Lake, in *New York*, a village of Washington co.

Lake, in *Ohio*, a N.N.E. co., bordering on Lake Erie; *area*, about 240 sq. m. *Rivers.* Grand and Chagrin rives. *Surface*, slightly undulating; *soil*, fertile. *Min.* Iron ore. *Cap.* Painesville. *Pop.* (1890) 18,235.

—A township of Ashland co.

—A township of Logan co.

—A post-township of Stark co.

—A township of Wood co.

Lake, in *Pennsylvania*, a post-township of Luzerne co.

—A township of Mercer co.

Lake, in *Wisconsin*, a township of Milwaukee co.

Lake Big'ler, a considerable lake on the boundary-line between Nevada and California. It covers an area of about 200 sq. m., and the adjacent scenery is said to be of the grandest and most picturesque description. It is sometimes called LAKE TAHOE.

Lake Charles, in *Louisiana*, a post-village, cap. of Calcasieu parish, about 140 m. W. of Baton Rouge. *Pop.* (1897) 8,500.

Lake City, formerly ALLIGATOR, in *Florida*, a post-town, cap. of Columbia co., about 60 m. W. by S. of Jacksonville. *Pop.* (1897) 2,120.

Lake City, in *Michigan*, a post-village, cap. of Missaukee co., on G. R. & I. R. R. *Pop.* (1894) 1,073.

Lake City, in *Minnesota*, a city of Wabasha co., about 72 miles S.E. of St. Paul, on C., M. & St. P. R. R. *Pop.* (1895) 2,616.

Lake City in *Indiana*, a post-village of Stark co.

Lake City, in *Iowa*, a post-town, former cap. of Calhoun co., about 80 m. N.W. of Des Moines.

Lake Como, in *Pennsylvania*, a P. O. of Wayne co.

Lake Creek, in *Illinois*, a post-village of Williamson co.

Lake Creek, in *Texas*, enters the San Jacinto from Montgomery co.

Lake Dwellers. See SECTION II.

Lake Forest, in *Illinois*, a city of Lake co., on C. & N. W. R. R., 28 m. N.N.W. of Chicago.

Lake Fork, in *Illinois*, a post-township of Logan co.

Lake Fork, in *Ohio*, a post-village of Ashland co.

Lake George, in *New York*. See GEORGE, LAKE.

Lake Kattakit'tekon, or VIEUX DESERT, a lake on the boundary line between Michigan and Wisconsin, at the head of the Wisconsin river. It covers an area of about 30 sq. m.

Lake Kla'math, in *Oregon*. See KLAMATH.

Lake'land, in *Minnesota*, a post-village of Washington co., about 17 m. E. of St. Paul.

Lakeland, in *New York*, a village of Suffolk co., about 50 m. E. of Brooklyn.

Lakeland, in *Nebraska*, a post-office of Brown co.

Lake Landing, in *North Carolina*, a post-village of Hyde co., about 170 m. E. of Raleigh.

Lake'let, *n.* A small lake (principally used in poetry.)

Lake Maria, in *Wisconsin*, a village of Green Lake co., about 65 m. N.N.E. of Madison.

Lake Mills, in *Iowa*, a post-town of Winnebago co.

Lake Mills, in *Wisconsin*, a post-village and township of Jefferson co., on Rock Lake, about 25 m. E. of Madison. *Pop.* of village (1895) 1,175.

Lake of the Thousand Islands. See St. LAWRENCE RIVER.

Lake of the Woods. [Fr. *Lac des Bois.*] A lake of British North America, Lat. 49° N., Lon. 95° W. It is about 300 m. in circuit, and studded with wooded islands. The shores are indented with bays and inlets, along which wild rice grows in abundance. It receives the Rainy river, and gives rise to Winnepeg river.

Lake Odes'sa, in *Michigan*, a post-village of Ionia co. *Pop.* (1894) 807.

Lake-ore Iron. (*Chem.*) Hydrated peroxide of iron is deposited in large quantities by certain lakes in Sweden and Norway. It is similar in composition to the bog iron-ore found in other parts of Europe.

Lake Pleasant, in *New York*, a small lake of Hamilton co.

—A post-village, the cap. of Hamilton co., on the above lake, about 7 m. N.N.W. of Albany. *Pop.* of township (1897) 510.

Lake Pleasant, in *Penna.*, a post-village of Erie co.

Lake'port, in *California*, a post-town, cap. of Lake co., about 50 m. N. by W. of San Francisco.

Lakeport, in *Michigan*, a post-village of St. Clair co., about 12 m. N. of Port Huron.

Lakeport, in *New York*, a post-village of Madison co., about 120 m. W. by N. of Albany.

Lake Prairie, in *Iowa*, a township of Marion co., about 80 miles W.S.W. of Iowa city.

Lake Prairie, in *Minnesota*, a township of Nickollet co.

Lake Providence, in *Louisiana*. See PROVIDENCE.

Lake Ridge, in *Michigan*, a post-vill. of Lenawee co.

Lake Ridge, in *New York*, a post-village of Tomkins co., about 16 m. N. by W. of Ithaca.

Lake River, in *Washington*, a village of Clarke co., about 12 m. N.W. of Vancouver.

Lake Road, in *New York*, a post-office of Niagara co.

Lake Ta'hoe. See LAKE BIGLER.

Lake'ton, in *Indiana*, a post-town of Wabash co., about 95 m. N.N.E. of Indianapolis. *Pop.* (1897) 620.

Laketon, in *Michigan*, a village of Berrien co.

Lake'town, in *Minnesota*, a township of Carver co.

Lake Valley, in *California*, a village of El Dorado co., about 60 m. E. by N of Placerville.

Lake View, in *Iowa*, a post-town of Sac co.

Lakeview, in *Michigan*, a post-village of Montcalm co. *Pop.* (1894) 1,111.

Lake View, in *New York*, a post-village of Erie co. *Pop.* (1897) 290.

Lake Village, in *Arkansas*, a post-village, cap. of Chicot co., about 125 m. S.S.E. of Little Rock.

Lake Village, in *New Hampshire*, a village of Belknap co., about 25 m. N. by E. of Concord.

Lake'ville, in *California*, a post-village of Sonora co., about 35 m. N. by W. of San Francisco.

Lakeville, in *Connecticut*, a post-village of Litchfield co., about 50 m. N.W. by W. of Hartford. *Pop.* (1897) 940.

Lakeville, in *Indiana*, a post-village of St. Joseph co., about 14 m. S. by W. of South Bend. *Pop.* (1897) 510.

Lakeville, in *Massachusetts*, a post-town of Plymouth co. *Pop.* (1897) 460.

Lake'ville, in *Michigan*, a post-village of Oakland co., abt. 27 m. N. of Detroit.

Lake'ville, in *Minnesota*, a post-village and township of Dakota county, about 22 miles S. by W. of St. Paul.

Lake'ville, in *Missouri*, a post-office of Stoddart co.

Lake'ville, in *New York*, a post-village of Livingston co., on Conesus Lake, abt. 24 m. S. by W. of Rochester.

Lake'-wake, *n.* Same as LICHE-WAKE, *q. v.*

Lake Zurich, (*zur'ik,*) in *Illinois*, a post-village of Lake co., about 35 m N.N.W. of Chicago.

La'kin, *n.* An abbreviated form of LADYKIN, *q. v.*

Lak'y, *a.* Belonging to a lake; having the characteristics of a lake.

Lalande, JOSEPH JÉROME LE FRANÇOIS DE, a celebrated French astronomer, b. at Bourg, 1732. He showed an early preference for mathematical studies, but he was educated for the law. His intimacy, however, with astronomers and other men of science led him to pursue the only bias of his disposition, and it was not long before the Academy of Sciences deputed him to go to Berlin, to make observations for determining the parallax of the moon, and its distance from the earth. On his return home he was admitted to the Academy of Sciences, and turned his attention to gnomonics. In 1760, on the resignation of Maraldi, Lalande undertook the editorship and publication of the *Connaissance des Temps.* Shortly after, he succeeded Delisle as professor of astronomy at the College de France; when successive treatises, able and voluminous, proceeded from his pen, contributing to the advancement of astronomical science. Among these, mention must be made of the very valuable *Traité de l'Astronomie.* D. 1807.

Lal'lation, (*-la'shun,*) *n.* [Lat. *lallatio.*] A corrupt pronunciation of the letter *r* like *l*. It prevails among the Chinese.

Lal'ly, THOMAS ARTHUR, COUNT DE, Baron of Tullendaily, or Tollendal, in Ireland, was descended from one of those devoted adherents of the Stuarts who became naturalized in France, and who there acquired distinction in the service of the crown. He was born in Dauphiné, 1702, and began his military career in an Irish regiment, commanded by his uncle, General Dillon. After greatly distinguishing himself at the sieges of Kehl, Menin, Ypes, and Furnes, and particularly at the battle of Fontenoy (dating from 1733 to 1749), he was appointed (1756) commandant-general of the French possessions in the East Indies. On his arrival there, at the end of April, 1758, war was declared with the English, over whom he obtained a series of successes, but was at length defeated before Madras, and then besieged in Pondicherry, upon which he had been compelled to fall back. Here, with less than a thousand men, he resisted the whole English army for several months, and only surrendered when reduced to the last extremity, January 16, 1761. He now became the prisoner of the English, but was soon liberated, and, returning to France, was arrested on a charge of treason. All the perils and toils he had undergone were rewarded by the corrupt administration of that expiring monarchy by his judicial murder, in the vain effort to hide from the public eye their own factious dishonesty. He was dragged to the scaffold with a gag in his mouth to prevent him from addressing the people, and was executed May 9, 1766. — His son, the MARQUIS DE LALLY-TOLLENDAL, obtained a reversal of the sentence, and a grant of his father's estates in 1783.

La'ma, *n.* See LAMAISM.

(*Zoöl.*) See LLAMA.

La'maism, *n.* [Thibetian *lama*, a priest.] The prevailing religion of Thibet and other parts of Asia. It

Fig. 1499.— THE GRAND LAMA, OR DALAI-LAMA.

is an offshoot of Buddhism, which it very much resembles. The Dalai-Lama, or chief of this religion, is the successor, or rather a pretended incarnation, of Buddha. He is looked upon as an omniscient and eternal divinity, and hence his death occasions no visible grief or mourning, as it is only regarded as his disappearance, and his reappearance is patiently waited for in his successor. The Dalai sometimes points out his successor; at other times the books are consulted for that purpose. When

officiating, the Dalai sits cross-legged and statue-like upon magnificent cushions over the altar, dressed in splendid robes, noticing nobody, and moving only his hands to bless the people. Sometimes he distributes balls made of paste, clay, or other materials, which are regarded of infinite efficacy. The title of lama is given to the head of every monastery, and every lama is considered a vicar to the Deity, and requires implicit obedience to all his commands, like the Dalai-Lama himself. Their temples are in the Indo-Chinese form, square, fronting the east in Thibet, and the south in Mongolia. They have three gates and three interior divisions; viz.: the entrance-hall; the body of the edifice, with two parallel rows of columns; and the sanctuary, with the throne of the high lama. There are numerous statues, paintings of the gods, ornaments, and implements of all sorts. The walls and columns are inscribed with prayers, and there are also poles bearing flags with prayers. Prayer-wheels, the turning of which is supposed to be equally efficacious with vocal supplication, are to be seen everywhere. Festival days, ceremonies, and pageants of all kinds, varied with the performances of magicians, as well as fasts, sacraments, and noisy music, animate the zeal of the faithful. Dead lamas are commonly embalmed and preserved in pyramids. The bodies of rich laymen are burned, and their ashes preserved; while those of the common people are either exposed to be devoured by birds, or eaten by sacred dogs kept for the purpose. Rich persons about to die are assisted by lamas, who open a passage for the soul through the skull. The principal holy place in Thibet is Lassa, in and around which are an immense number of monasteries. The most renowned of the Lamaic schools is that of the Lhabrang, or cathedral of Lassa. In many of the monasteries are also schools of magic. The lamas also act as physicians, effecting their cures by prayers and some innocent medicaments.

La'maist, La'maite, *n.* One who worships the Grand Lama.

La Man'cha, in Spain. See MANCHA, (LA.)

La Manche', in France. See MANCHE, (LA.)

Laman'tin, *n.* [Fr.] (*Zoöl.*) The Manatee. See MANATUS.

Lamar', in *Mississippi*, a post-village of Marshall co., about 220 m. N. of Jackson.

Lamar', in *Missouri*, a post-town, cap. of Barton co., about 150 m. S.W. of Jefferson City. *Pop.* (1897) 3,060.

Lamar', in *Pennsylvania*, a post-township of Clinton co., about 4 m. S. of Lock Haven.

Lamar', in *Texas*, a N.N.E. co., adjoining Indian Territory; *area*, about 900 sq. m. *Rivers.* Red river and Sulphur Fork. *Surface*, generally level; *soil*, very fertile. *Cap.* Paris. *Pop.* (1890) 37,302.

—A post-village of Aransas co., on the E. shore of Aransas Bay.

Lamar', MIRABEAU, second president of the republic of Texas, B. in Louisville, Ga., 1798. After some years experience in mercantile pursuits and farming, *L.* founded a newspaper, devoted to State rights, called the *Columbus Inquirer*, and, in 1835, removed to Texas, then on the verge of revolution. He at once threw himself into the cause of independence, and highly distinguished himself at the battle of San Jacinto. He afterwards became, successively, attorney-general and secretary-at-war to the new republic. In 1836 he was elected vice-president, and, in 1838, president, holding the latter office till 1841. On the outbreak of the Mexican war, *L.* (with the rank of major-general) served at the battle of Monterey under Gen. Scott. He was afterwards employed in operations against the Comanches, and eventually appointed United States envoy to Nicaragua and Costa Rica. D. at Richmond, Texas, 1859.

La Marche, in France. See MARCHE, (LA.)

Lamarck, JEAN BAPTISTE PIERRE ANTOINE DE MONET, CHEVALIER DE, (*la-mark'*,) a French naturalist, B. at Bazantin, in Picardy, 1744. A soldier in his youth, he had already begun to distinguish himself, when an accident compelled him to relinquish the army. Like many other naturalists, *L.*'s first study was botany. The first work he published was the *Flore Française*, which, appearing at a time when Rousseau had made botany fashionable, met with an astonishing degree of success. Other botanical works soon followed, and for some time *L.* seemed completely occupied with these, and works of a more speculative kind, which do not now add much to his reputation. In 1793 he was appointed to a chair attached to the museum of natural history at the Garden of Plants, which had for its object the history of insects and the lower animals, which Linnæus had arranged under the general name of Worms. At this time he was fifty years of age, and the study of zoölogy was nearly new to him. Such, however, were his zeal and assiduity in preparing himself for the duties of his chair, that in a few years he had made himself thoroughly master of the subject; and his great and excellent work, the *Histoire des Animaux sans Vertèbres*, will ever entitle him to take his place in the very first rank of zoölogists. As a conchologist, *L.*'s name stands pre-eminent, and the Lamarckian arrangement of shells is still that of the present day. A sad affliction overtook him in his latter days. He gradually lost his sight, and for some years before his death he was totally blind, while an injudicious investment of his money in some swindling schemes reduced him in his old age to comparative poverty. Died 1829. See NEO-LAMARCKISM.

Lamartine (*lä-mär-teen'*), ALPHONSE DE, an illustrious French poet, who, as a diplomatist, historian and statesman, filled in his time no inconsiderable part in the pages of history, was born at Maçon, 1792. His father, the Chevalier de Lamartine de Prat, narrowly escaped with his life during the Reign of Terror; the death of Robespierre occurring most opportunely for his safety. The youthful *L.*, having received the rudiments of his education at home, was sent to complete his studies at Belley with the *Pères de la Foi*; on quitting that establishment, he proceeded for some time to Italy, from whence he returned to France and took up his residence at Paris, devoting himself to literature. Upon the restoration of the Bourbons, he embraced the military profession, and, for the few months between the first and second abdication of Napoleon, devoted his time with avidity to his martial duties, but after the return of Louis XVIII. he relinquished his new functions, and again assumed the pen; and, soon after, he once more repaired to Italy. In 1820 he published his first literary venture, a volume of poems entitled *Méditations Poétiques*,—an unpretending little work, that had an extraordinary sale, and the effect of immediately establishing the author's reputation. So highly was his fame advanced by this production, that the French government appointed him to a post in the embassy at Florence, which eventually led to the office of Secretary to the Legation at Naples, and finally at London. While attached to the embassy in London, the death of his uncle, who had bequeathed him his estate upon the condition of his assuming the name of Lamartine, led to the adoption of that title; about the same period, he married an English lady of fortune, and was transferred as *chargé d'affaires* to the ducal court of Tuscany. During *L.*'s residence in Italy, he wrote and published several new works, among the rest *Nouvelles Méditations*, *Mort de Socrate*, *Harmonies Poétiques et Religieuses*, and some others of minor note, all breathing a strong religious sentiment and a spirit of loyalty for the Bourbons, as well as a bitter feeling towards the empire and the revolution. A misconception, taken by an Italian patriot to an expression in one of his poems, led to a duel with Colonel Pepe—since rendered celebrated for the part he has taken in the struggle for Italian liberty. In this duel, *L.* was very seriously wounded. He was recalled to Paris in 1829, elected a member of the French Academy, and appointed special envoy from the court of France to King Otho. The sudden breaking out of the Revolution of 1830, however, abruptly put a stop to his diplomatic functions, for, though the new government of the Orleans branch offered to continue his services in that capacity, he declined, and for a time retired from active occupation. Adopting a new field for the exercise of his talents, he once more assumed the pen, but rather as a prose and historical writer than as a poet; and, by devoting himself to the cause of the people, endeavored to link his name with that of his country. Having failed to obtain a seat in the Chamber of Deputies, he set out for the East with his wife and family, and had already reached Jerusalem when the news that he had been elected for the Bergues by the Legitimist party induced him to return; thereupon, in 1833–4, he took his seat in the Chamber of Deputies, and became actively engaged in all the important discussions, especially in affairs connected with the East, and questions of education and literature. His pen, too, was busily employed at this time in works of size and importance, as well as smaller publications on special themes; his most important and popular works, however, were *Pictures of the East*—its translated English title—and a *History of the Girondins*. This latter work had not only a marked effect on the government of the day, which it was greatly instrumental in overthrowing, but largely enhanced the author's political influence; and, in the Revolution that drove the House of Orleans from the throne, *L.* rose to the highest eminence as chief and directing genius of the political storm. It was owing to his eloquence that the Chamber of Deputies refused a compromise between the revolutionists and the Orleans family. He risked his life in withstanding the demands of the leaders of the insurgents and their followers, that the red flag should be the colors of the new republic. "For myself," he said, "I will never consent to adopt it. The tricolored flag has

Fig. 1500.—ALPHONSE DE LAMARTINE.

waved all over the world. It is identified with your liberties and your glory. The red flag has never waved but over the Champ de Mars, and has only been imbued with the blood of the people." He became a member of the provisional government, and the foreign minister of the Republic. He did good service to his country in that capacity, by preventing a general war of revolutionary interference, which the more violent revolutionists desired. His popularity during several months was immense; he was the particular idol of the middle classes, who beheld in him a bulwark between themselves and anarchy. A revulsion of popular feeling afterward took place, upon the people discovering that the great poet was neither an energetic nor a practical statesman, but, in fact, a puppet in the hands of men of stronger will and more advanced views. So entirely had he become an object of public indifference, that it was with difficulty he was elected to the Chamber of Deputies. When his name was announced with that of Louis Napoleon and Cavaignac for the office of president, he obtained by far the fewest votes of the trio. After the *coup d'état* of December, 1851, he retired from politics, and devoted himself exclusively to literature. Indeed his means had become so straitened that a most strenuous effort had to be made by him to ward off total pecuniary ruin. A French critic observes of this circumstance: "Notwithstanding the illusory wealth bestowed upon him by the Sultan in the shape of territorial grants, notwithstanding the enormous sales of his works, notwithstanding the vast subscriptions started for his benefit in France and abroad, the ruin of his fortune by public disturbances, and by his own life of princely munificence, have condemned him to a species of literary drudgery to which he has nobly submitted, but in which he has consumed, in a number of ephemeral productions, more force and power of intellect than would have been required to produce three or four great and immortal works." In obedience to the call of pressing necessity, he became, after his retirement from political life, one of the most industrious authors in France. To particularize a few of his most important productions, there are *The History of the Revolution of 1848*; *Raphael*; *Les Confidences*; *Nouvelles Confidences*—these three being autobiographical; *History of the Restoration*; *History of Turkey*; *History of Russia*; and *Later Travels in the East*. Most of these have been translated into English, and other European languages. He was also the proprietor and director of two newspapers, the *Bien Public*, published at Maçon, and the *Pays*, published at Paris. His poetical and prose works have been collected and republished in several forms; but, in addition to these, he produced quite a crowd of pamphlets and political effusions. M. de Lamartine's life presented a remarkable instance of the instability both of riches and fame. After stirring to its centre the heart of his native country by his impassioned lyrics, and attaining, while yet a young man, to the pinnacle of popularity; after rendering incalculable services to the country that gave him birth, and preserving it from anarchy during the revolutionary crisis of 1848, and during which he was the cynosure of all eyes; after prodigious industry and talent, producing a vast number of excellent books, historical and political; after inheriting from his relative, and acquiring with his wife, a considerable fortune,—he was found, in his old age, poor and neglected, his means embarrassed, and his countrymen forgetful of the works they once hailed with enthusiasm. D. 1869.

La Marmo'ra, ALFONSO, MARQUIS DE, an Italian general, B. 1804. He early entered the military service of Piedmont, and attained the rank of major. His firmness in the midst of a popular agitation, which threatened to imperil the person of King Charles Albert, at Milan, caused *La M.* to be appointed gen. of brigade in 1848. On the accession of Victor Emmanuel, in the following year, he was made lieut.-gen., and appointed minister of war, and undertook the reorganization of the Sardinian army. In 1855, he commanded the Italian element of the allied armies in the Crimea, aided in the defeat of the Russians on the Tchernaya, and at the close of the war received the English Order of the Bath and the Grand Cross of the French Legion of Honor. He again entered Count Cavour's ministry as war-minister, and in 1861, succeeded Gen. Cialdini as commander-in-chief of the Italian army. In 1864, he was chosen prime-minister, and again in 1865. In 1866, *La M.* held an important command in the campaign against Austria for the liberation of Venetia. D. 1877.

Lam'artine, in *Ohio*, a post-office of Carroll co.

Lam'artine, in *Penna.*, a post-village of Clarion co.

Lam'artine, in *Wisconsin*, a post-village and township of Fond du Lac co., about 7 m. S.W. of Fond du Lac.

Lamas'co, in *Kentucky*, a post-village of Lyon co.

Lamas'co, in *Texas*, a post-office of Fannin co.

Lamas'co City, in *Indiana*, a former village of Vanderburg co., now incorporated with Evansville. *q. v.*

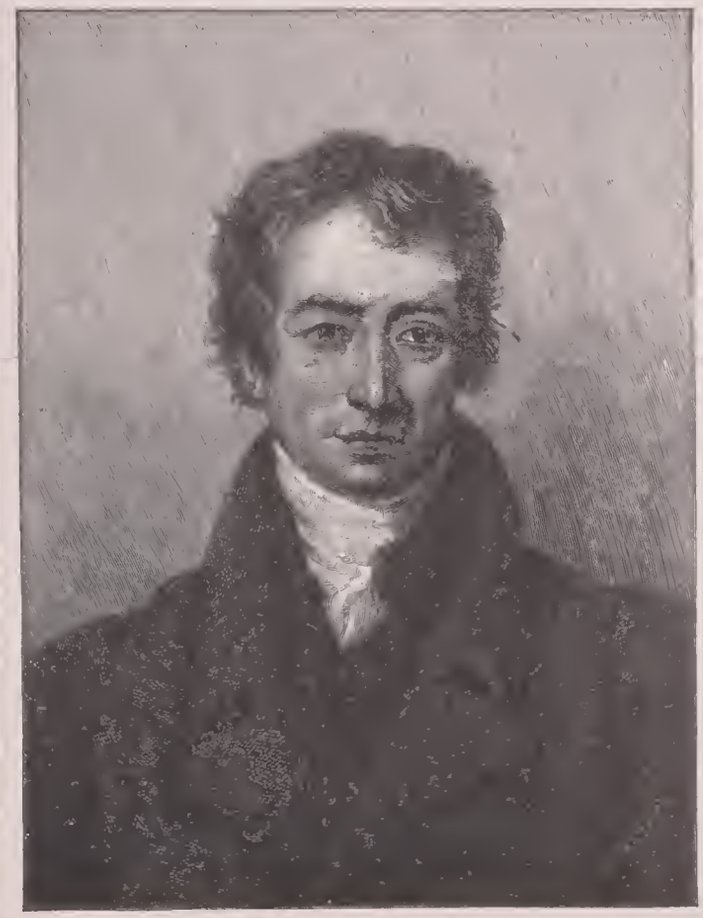
La'masery, *n.* A convent of Buddhic priests in Thibet.

Lamb, (*lăm,*) *n.* [A.S.; W. *llam*, a frisk; Ger. *lamm*; D. and Dan. *lam*, *lamm*, a lamb.] The young of the ovine kind of animals.—Any one resembling in meekness or innocence, a lamb.

(*Script.*) Typically, Jesus the Saviour, as being the accepted sacrifice for human sin.

—*v. n.* To bring forth young, as sheep; as, the *lambing* season.

Lamb, CHARLES, an English author, and the most charming essayist in the language, B. in London, 1775. He was educated at Christ's Hospital, where the poet Coleridge (*q. v.*) was his schoolfellow. Debarred from entering the clerical profession, owing to an impediment of speech, he obtained an appointment in the South-Sea House, in 1789, which he quitted in 1792, to take a situation in the accountant's office of the East India Company, from which he retired in 1825, on a pension of $2,250 per annum. *L.*'s life was even, and comparatively uneventful. A confirmed bachelor, he resided



Charles Lamb

1775–1834

for the great part of his life with an accomplished sister, to whom he was devotedly attached. Their pleasant house at Islington was the resort of the most brilliant literary coterie of the first half of the 19th century, excepting only, perhaps, the famous Hollaud House clique. *L.*'s genial wit and hospitality drew around his tea-table the poets Coleridge, Lloyd, Southey, Wordsworth, Dyer, Barton, Leigh Hunt, Cary (the translator of Dante), Procter, and Hood; Godwin the novelist; Hazlitt the critic; Talfourd the accomplished judge and dramatist; De Quincey, the philosopher; Manning the theologian (now Archbishop of Westminster), and —*id genus omne*. Charles *L.* D. at Edmonton, near London, in 1834. Of his works the most eminent is undoubtedly the *Essays of Elia* (1823), which ranks as an English classic in its own peculiar style; our literature, indeed, contains few things so exquisite. This work was supplemented by the *Last Essays of Elia*, in 1833. *L.* was also the author of innumerable essays, poems, &c., contributed to the magazine literature of his day, among which desultory pieces we must not forget his famous *Farewell to Tobacco*.

Lamb-ale, (*lăm'āl,*) *n.* A feast held during the shearing-time of lambs.

Lamballe, Marie Thérèse Louise de Savoie-Carignan, Princess de, whose fate forms one of the most piteous episodes of the French revolution, was b. at Turin, 1749. In 1767 she married the Prince de Lamballe, son of the Duc de Penthièvre, and the year following was left a widow at the age of 18. Her subsequent history is closely connected with that of Marie Antoinette, who made her the superintendent of her household, and the agent of her bounty. The queen and the princess were passionately attached to each other; and the latter, who had escaped to England at the commencement of the horrors of 1792, hastened back again when she heard that the queen was in prison, and with heroic fortitude asked, and obtained permission, to share her misfortunes in the Temple. This indulgence was thought too merciful by the commune of Paris, who ordered her, at the end of August, to be imprisoned separately in La Force. Immense sums of money, and many agents among the dangerous party, were set in motion to save her, but even Hébert and Lhuilier could not conduct her in safety through the ranks of the assassins at the outside of the prison, on the fatal 3d Sept., 1792. The circumstances of her murder are too horrible to repeat. Her head was afterwards paraded at the top of a pike before the windows of the Temple, as a ghastly warning of what the masters of such faithful servants might expect from the hands of a brutal and insensate people.

Lam'bative, *a.* [From Lat. *lambere*, to lick.] Received by licking; as, a *lambative* medicine.

—*n.* A medicine taken by the process of licking with the tongue.

Lambayeque, (*lam-be-ā'kā,*) a town of Peru, cap. of the prov. of its own name, on the Lambayeque River, near its mouth, abt. 120 m. N.W. of Trujillo.

Lambdacism, (*lăm'da-sizm,*) *n.* [Lat. *lambdacismus.*] A corrupt or improper use of the letter *l*, in speech or composition. — A faulty pronunciation of the letter *l*, when used in a doubled form, by giving it a sound as if followed by a *y*, as *lli* in *million*. — Lallation; substitution of the sound of *l* for that of *r*, in speaking; a foolish fashion which prevailed in France under the Directory among the *incroyables*, or "lions," of the time, and which, from France, extended to other countries.

Lambdoid'al, Lamdoid'al, *a.* [Gr. *lambdoeitēs.*] Having the form of the Greek letter *lambda* (Λ).

M. suture. (*Anat.*) A suture that unites the occipital to the two parietal bones of the skull, and is so named from its resemblance to the *lambda*.

Lam'bent, *a.* [Lat. *lambens*, from *lambo*, to lick. Allied to *labial*, q. v.] Touching lightly, as with the lips or tongue; gliding over; playing about.

"From young Iulus' head a *lambent* flame arose." —*Dryden.*

—Flickering; glancing about; twinkling.

"*Lambent* dullness played around his face." —*Dryden.*

Lam'bert, John, a general of the Parliamentary forces during the English civil war, b. about 1620, and chiefly remarkable for his opposition to the Protectorate, especially to that of Richard Cromwell. In the year of the counter-revolution he was preparing for a contest with Monk, as the chief of the extreme republicans, but was arrested, and after the restoration banished to Guernsey, where he became a Roman Catholic, and n. 1692.

Lam'berton, in *New Jersey*, a former village of Mercer co., now incorporated with the bor. of S. Trenton.

Lam'berton, in *Wisconsin*, a post-village of Racine co.

Lam'bertville, in *Michigan*, a post-vill. of Monroe co.

Lambertville, in *New Jersey*, a thriving city of Hunterdon co., on the Delaware river, about 15 miles above Trenton. It contains numerous manufactories and commands a considerable trade. *Pop.* (1895) 4,620.

Lam'beth, a suburb of London, England, forming the W. portion of the metropolis which lies on the S. bank of the Thames; *pop.* 277,000.

Lam'beth Ar'ticles. (*Eccl. Hist.*) The name given to certain articles drawn up by the archbishop of Canterbury and the bishop of London, at Lambeth, in 1595. They are decidedly Calvinistic in their form, but they were never imposed by authority. They are to the effect that God hath, out of his good pleasure, from all eternity, predestinated certain persons to life, others to inevitable condemnation; a true believer is one who is endowed with justifying faith, which faith doth not utterly fail nor vanish away in the elect; no man is able to come to Christ unless the Father draw him; and all men are not drawn by the Father, that they may come to the Son.

Lambkin, (*lăm'kin,*) *n.* A young lamb.

Lamblike, (*lăm'līk,*) *a.* Like a lamb; — hence, gentle; meek; mild; innocent.

Lambrequin, (*lăm'ber-kin,*) *n.* A veil or covering attached to a helmet as a protection.

Lamb's, in *Pennsylvania*, a village of Venango. co.

Lamb's Corners, in *New York*, a vill. of Broome co.

Lamb's Creek, in *Pennsylvania*, a post-village of Tioga co.

Lamb's-fry, *n.* The heart, liver, &c. of a lamb, prepared for frying as food.

Lamb'skinnet, *n.* (*Games.*) A corrupted form of Lansquenet, *q. v.*

Lamb's-lettuce, (*-lĕt'tis,*) *n.* (*Bot.*) See Valerianella.

Lamb's-quarters, *n.* (*Bot.*) A species of plants, genus *Chenopodium*.

Lamb's-wool, *n.* Wool obtained from lambs by shearing.

—Ale mixed with the pulp of roasted apples.

Lamb'ton, a W. co. of prov. of Ontario, bordering on Lake Huron.

Lambton, a village of York co., prov. of Ontario.

Lamdoid'al, *a.* See Lambdoidal.

Lame, *a.* [A. S., Fris., Dan., and Swed. *lam*; Icel. *lama*, to break; Ger. *lahm.*] Crippled or disabled in a limb: injured so as to be unsound and reduced in strength; as, *lame* in one leg.

—Hobbling; not smooth; halting; — said of verses.

"The prose is fustian, and the numbers *lame*." —*Dryden.*

—Imperfect; unsatisfactory; impotent in efficacy; as, a *lame* excuse.

Lame duck, in Stock-Exchange parlance, a defaulter.

—*v. a.* [Ger. *lahmen.*] To make lame; to cripple or disable; to render unsound or incapacitated; as, to *lame* one's arm.

La'mech. (*Script.*) A descendant of Cain, in the fifth generation, and ancestor of a numerous posterity distinguished for skill in agriculture, music, and several mechanical arts. He is the first polygamist on record. His address to his two wives is the oldest specimen of poetry extant, and is a good illustration of Hebrew parallelism:

"Adah and Zillah,	And [or even] a young man
Hear my voice;	To my hurt
Ye wives of Lamech,	If Cain shall be avenged
Hearken unto my speech.	Seven-fold,
I have slain a man	Truly Lamech
To my wounding.	Seventy and seven fold."

Many explanations of this abrupt fragment have been suggested. The most satisfactory, perhaps, is that Lamech had accidentally, or in self-defence, killed a man, and was exposed to the vengeance of "the avenger of blood;" but quiets the fears of his wives by saying, that as God had prohibited the slaying of Cain under heavy penalties, much more would he guard the life of Lamech, who was comparatively innocent. — Another Lamech, son of Methuselah, and father of Noah, lived 777 years, and died only 5 years before the flood (*Gen.* v. 25–31).

Lamego, (*la-mai'go,*) a town of Portugal, prov. Beira, near the Douro, 46 m. E. of Oporto. It has many interesting Roman and Moorish remains.

Lam'el, Lamel'la, *n.*; *pl.* Lamels, or Lamellæ. [Lat. dim. of *lamina*, a thin plate.] A thin plate, scale, or film of anything.

(*Bot.*) One of the foliaceous erect scales appended to the corolla of many plants, as in *Silene*; also, the gills forming the hymenion of an agaric and the plate, or thin part found at the end of many styles.

(*Conch.*) One of the little plates of which the shells borne by crustaceous fishes are composed.

Lam'ellar, *a.* Consisting of thin or extended plates, layers, or scales; distributed or disposed in thin, filmy processes.

Lam'ellarly, *adv.* In thin plates, layers, or scales.

Lam'ellate, Lam'ellated, *a.* Composed of thin plates, or scales; disposed in thin layers or films; as, the *lamellated* antennæ of some insects.

Lamellibran'chiata, or **Lamellibran'chiates,** *n. pl.* [Lat. *lamella*, a small plate, and *branchiæ*, gills.] (*Zoöl.*) An order of acephalous molluscs, comprehending those which have the gills in the form of large semicircular layers disposed symmetrically on the

Fig. 1501. — Shell of a Lamellibranchiate. (*Genus Caracum.*)

sides, and protected by a shell (Fig. 1501) composed of two valves occupying similar positions, namely, right and left. There are more than 20 families.

Lamellicor'nis, *n. pl.* [Lat. *lamella*, and *cornu*, horn.] (*Zoöl.*) One of the sections into which the order *Coleoptera* is divided, in the system of Latreille. They have five joints to all the tarsi. The antennæ are inserted in a small hollow in front of the eyes, always short, and usually composed of 9 or 10 joints, the last of which are large and flat, and open out like a fan. The clypeus is generally very large, and the latrum small and hidden beneath it. The mandibles of several are membranous, a character observed in no other coleopterous insects. The family is numerous, and is noted for the brilliancy of the metallic colors which ornament those species which feed on living vegetables. The larva is soft, somewhat cylindrical in form, with a large vertical head. Six small legs are attached to the thoracic segments, and the body is always bent. Some of them require three or four years to become pupæ. When about to assume the pupa form, the larvæ inclose themselves in an oval case, or one resembling an elongated ball, composed of earth, rotten wood, or other surrounding substances, which they have gnawed and cemented together with a glutinous matter. Their food consists of the dung of various animals, mould, and the roots of vegetables. Some of them live in decayed vegetable and animal substances, upon which they feed. They sometimes destroy immense quantities of vegetables which are useful to man

Fig. 1502. — A lamellicorn. The Stag-Beetle. (*Lucanus cervus.*)

Lamelliferous, *a.* [Lat. *lamella*, and *ferre*, to bear.] Possessing a foliated structure.

Lamel'liform, *a.* [Lat. *lamella*, and *forma*, form.] Presenting the form of a scale or layer

Lamelliros'trals, *n. pl.* [Lat. *lamella*, and *rostrum*, a beak.] (*Zoöl.*) In the system of Cuvier, a tribe of swimming-birds, comprehending those in which the margin of the beak is furnished with numerous lamellæ or dental plates, arranged in a regular series, as in the swan, goose, and duck. This tribe corresponds to the Anatidæ, *q. v.*

Lamel'lose, *a.* Consisting of, or resembling, plates.

Lame'ly, *adv.* With impaired strength; in a crippled or halting manner; imperfectly; without a complete exhibition of parts; as, to walk *lamely*, a story *lamely* narrated. — Weakly; feebly; poorly; unsteadily; as, a cause *lamely* maintained.

Lame'ness, *n.* State of being lame or disabled: an impaired state of the body or limbs; loss of natural soundness or strength, by a wound or by disease. — Weakness; feebleness; imperfection; as, the *lameness* of an argument.

Lamennais, Robert Felicité, Abbé de, (*lam'en-nai'*) a French theologian and political writer, born at St. Malo, 1782. Having from his earliest childhood shown a strong predilection for the Roman Catholic Church, he was allowed to follow his inclination; and his fiery spirit soon displayed itself in supporting the most extreme ultramontane views. Soon after Napoleon had concluded the "Concordat" with the Pope, *L.* published his *Reflections on the State of the Church*, which gave great offence to the Imperial govt., and was suppressed. In 1817 appeared the first volume of his *Essai sur l'Indifference en Matière de Religion*, which, to use the words of one of his disciples, "in one day invested an humble priest with all the authority once enjoyed by Bossuet." Soon afterwards he became connected with the *Conservateur*, a royalist journal; but his independent spirit rebelled against the party intrigues which everywhere prevailed; and after his return from a journey to Rome, where he was received with distinction by Leo XII., he published, in 1825, his *Religion considérée dans ses Rapports avec l'Ordre civil et politique*, in which he contended that the Pope should be placed, as in the Middle Ages, at the head of all temporal and spiritual matters. A change now came over him. Without abandoning his ultramontane views, he became a strenuous advocate of the separation of Church and State. These opinions were set forth with great power in his *Progrès de la Révolution*, published in 1829, which distinctly foretold the revolution that placed Louis Philippe on the throne in 1830; and, in conjunction with M. Montalembert and the Abbé Lacordaire, he then started the *Avenir*, with the view of effecting a Holy Alliance between the Papacy and Democracy. But these revolutionary sentiments found no echo at Rome; and after a short period passed in negotiation, and in a visit to the Pope, the *Avenir* was discontinued. *L.* then quitted Paris for some time; and in 1834 he sent forth the *Paroles d'un Croyant*, in which he boldly threw off his allegiance to the Pope, who, in return, issued an Encyclical Letter, in which the work was formally condemned. This work, written in the most sublime style that has ever illustrated the French language, produced an immense sensation (more than 100,000 copies having been sold in one year), and placed *L.* at the head of the republican party. We pass over various works of a similar tendency, which emu

nated from his fertile pen, till 1840, when he was condemned to a year's imprisonment, and a fine of 2,000 francs, for a publication, entitled *Le Pays et le Gouvernement*, in which king Louis Philippe, his ministers, and the parliament were assailed with great vehemence. The next few years were occupied with the preparation of his *Esquisse d'une Philosophie*, of which 4 vols. have appeared. After the revolution of 1848, he was elected a member of the Constituent and legislative assemblies; and on the *coup d'état* he retired into private life. Towards the close of 1853, he was attacked by a fatal disorder; and strong efforts were made by his friends to induce him to be reconciled to the Church: but in vain. He died on Jan. 27, 1854, and in compliance with his will, his remains were cast into the common grave of the poor, no funeral ceremonies being performed over them. It cannot be denied that *L.* was guilty of many grave errors; but these errors are palliated, if not justified, by his ardent love of truth, and by the heavy sacrifices which the pursuit of it entailed upon him.

Lament', *v. n.* [Lat. *lamentor*, from *lamentum*, a wailing—*mentum*, a termin.=Fr. and Eng. *ment*, and Sansk. *glai*, to affect with sorrow, *g* disappearing before the liquid *l*.] To express grief or sorrow; to mourn; to grieve; to weep; to wail; to complain.—To regret deeply; to feel poignant sorrow.

"Where joy most revels, grief doth most *lament*."—*Shaks.*

—*v. a.* To bewail; to mourn for; to deplore; to bemoan; to regret.

"One laughed at follies, one *lamented* crimes."—*Dryden.*

—*n.* Grief or sorrow audibly expressed; lamentation; grief uttered in complaints or cries.—A mournful or elegiac ballad.

Lament'able, *a.* [Fr.; Lat. *lamentabilis*.] Deserving sorrow; mournful; doleful; to be lamented; as, a *lamentable* change.—Adapted to awaken grief; expressing sorrow; pitiful.

"The victors . . . hear loud groans and *lamentable* cries." *Dryden.*

—Miserable; despicable; mean; pitiful; low;—used in the sense of ridicule or contempt; as, a *lamentable* refuge.

Lament'ably, *adv.* Mournfully; with expressions or tokens of sorrow; so as to cause sorrow.—Miserably; pitifully; despicably.

Lamenta'tion, *n.* [Fr., from Lat. *lamentatio*.] Act of lamenting or bewailing; expression of sorrow; cries of grief; mourning; complaint; wailing.

"All Israel made great *lamentation* for him."—*1. Macc.* ii. 10.

Lamenta'tions of Jeremiah, (Book of). *Script.*) The name of one of the canonical books of the Old Testament. That this book is the work of the prophet whose name it bears, is attested by the most ancient and uniform tradition, and is confirmed by the subject of the book, and by its language and style. This book was evidently written in metre, and consists of a number of plaintive effusions, composed after the manner of funeral dirges. It is in our Bible divided into 5 chapters, and consists of 5 distinct elegies. According to Jahn, the book does not relate to a single subject; but in each of the poems a different calamity is bewailed. These are: 1, the carrying away of King Jehoiakim, with 10,000 of the principal Hebrews, (i.); 2, the assault of Jerusalem, (ii.); 3, the calamities undergone by the prophet, (iii.); 4, the overthrow of Jerusalem, the carrying away of King Zedekiah, and the slaughter of the Hebrews, (iv.); 5, the wretched condition of the people and of Jerusalem after the destruction of the city, (v.) Each elegy consists of 22 periods, according to the number of letters in the Hebrew alphabet; and in the first 4 chapters, the initial letters of each period follow the order of the alphabet, after the manner of an acrostic. In the third chapter, each period contains 3 verses, all having the same initial letter. The fifth chapter, likewise, has 22 verses; but the order of the initial letters is neglected. The style, as the poetic character of the composition required, is somewhat more elevated than that of the prophecies. The tropes correspond with the sorrowful nature of the subject. "Never, perhaps, was there a greater variety of beautiful, tender, and pathetic images, all expressive of the deepest distress and sorrow, more happily chosen and applied, than in the lamentations of this prophet; nor can we too much admire the full and graceful flow of that pathetic eloquence, in which the author pours forth the effusions of a patriot heart, and piously weeps over the ruin of his venerable country."

Lament'er, *n.* One who laments or audibly expresses sorrow.

Lamen'tin, *n.* Same as LAMANTIN, *q. v.*

Lament'ingly, *adv.* With lamentation.

La'mia, *n.* [Gr.] (*Superstitions.*) A monster said to inhabit the centre of Africa, with the face and upper part of the body like a woman, and the extremities like a serpent. The first *L.*, according to classic mythology, was the daughter of Neptune, who, having become insane through the jealousy of Juno, caught and devoured all new-born children she came across. The *L.*, however, of the ancients, were sometimes represented as a species of monstrous animal, or again as a vampire. This latter character is seized upon and carried out by Goethe, in his *Bride of Corinth*, where a young man is represented as marrying a *L.*, who sucks his life-blood at night. A tale, somewhat similar in construction, occurs also in Philastratus' *Life of Apollonius of Tyana.*

Lamia'ceæ, or **Labia'tæ**, *n. pl.* (*Bot.*) An order of plants, alliance *Echiales*.—DIAG. Irregular, unsymmetrical flowers, and 6 distinct nuts or shrubby plants, usually with square stems; leaves opposite and exstipulate, commonly strong-scented; flowers irregular, generally in axillary cymes, which are arranged in a somewhat whorled manner, so as to form what are called verticillasters; calyx persistent; corolla more or less bilabiate; stamens didynamous, or, rarely, 2 by abortion; ovary deeply 4-lobed; style 1, basilar; stigma bifid; fruit containing from 1 to 4 achinæ, inclosed by the persistent calyx; seeds erect with little or no albumen. The order is a very large one, comprising 129 genera, or 2,350 species, mostly natives of temperate climates. The plants are altogether free from any deleterious qualities; they abound in volatile oil, and are

Fig. 1503.—CHARACTERS OF THE LAMIACEÆ.
1, Marrubium vulgare; 2, flower; 3, an open corolla; 4, pistils; 5, achænium; 6, the same, vertically cut to show the embryo.

commonly aromatic, carminative, and stimulant. Several are used in perfumery on account of their sweet odors, as the species of *Lavandula* (lavender), and *Pogostemon* (patchouli); while many are employed in the culinary art for flavoring, as *Thymus vulgaris* (common or garden thyme), *Thymus citriodorus* (lemon thyme), *Salvia officinalis* (sage), *Origanum vulgare* (common marjoram), *Marjorana hortensis* (sweet marjoram), the species of *Mentha* (mint), *Satureja* (savory), and *Melissa* (balm).

Lam'ian War. (*Anc. Hist.*) Athens, in alliance with other Greek states, made war upon Antipater, governor of Macedon, B. C. 323. He fled to the city of Lamia, in Thessaly, where he was besieged by the allies, whom he finally defeated at the battle of Crannon, Aug. 7, 322 B. C.

Lam'ina, *n.*; *pl.* LAMINÆ. [Lat. See LAMEL.] A thin slice; a flake; an attenuated plate or scale; a layer or coat lying over another.

(*Anat.*) The two plates or tables of the skull.

(*Bot.*) The broad and spreading part of the petal of a polypetallous corolla.

Laminabil'ity, *n.* Susceptibility of being formed into laminæ.

Lam'inable, *a.* (*Metall.*) A term applied to metal which may be extended by passing it between steel or hardened (chilled) rollers.

Lam'inar, *a.* [Fr. *laminaire*.] Forming, or consisting of, thin plates or layers.

Lamina'ria, *n.* [Lat. *lamina*, a plate or layer.] (*Bot.*) A genus of sea-weeds, order *Fricaceæ*. *L. saccharina* is remarkable for containing upward of 12 per cent. of the sugary matter called *mannite*. The young parts mixed with those of *L. digitata*, are eaten in Scotland, under the name of *tangle*. In China, *L. saccharina* is called *sea-tape*, and is a common article of food along the coast. *L. potatorum* is another edible species, used as a table vegetable in Australia.

Lam'inary, *a.* Laminated; composed of thin plates or layers.

Lam'inate, Lam'inated, *a.* (*Metall.*) Disposed in layers or plates. When metal can be readily extended in all directions, under the hammer, it is said to be *malleable*; and when in fillets under the rolling-press, it is said to be *laminable*.

Lam'inating, *a.* Separating into thin flakes, scales, or layers.

Lamina'tion, *n.* State or condition of being laminated.

La Mine, (*lah meen,*) in *Missouri*, a small river flowing into the Missouri from Cooper co.

—A post-village of Cooper co., on the above river, about 50 m. N.W. by W. of Jefferson City.

Lam'ington, in *New Jersey*, a small river flowing into the N. branch of the Raritan, about 6 m. N.W. of Somerville.

—A village of Somerset co., on the above river, about 10 m. N.W. of Somerville.

Laminif'erous, *a.* [Lat. *lamina*, and *ferre*, to bear.] Characterized by laminæ or layers.

Lam'ish, *a.* Somewhat lame; hobbling.

La'mium, *n.* (*Bot.*) A genus of plants, order *Lamiaceæ*. The Henbit, *L. amplexicaule*, is a small, slender herb, found in cultivated grounds; several stems of the same root ascending 6–10 high; flowers in dense verticils; calyx hairy; corolla, purple, downy, the lower lips spotted with white.

Lamm, *v. a.* To beat; to belabor; to bruise, as with a cudgel. (Vulgar.)

Lam'mas, *n.* [A.S. *hlammæsse; hlafmaesse*, loaf-mass or feast.] The first day of August is thus denominated, but the origin of the term is involved in obscurity. It is the day of the feast of St. Peter ad Vincula, or St. Peter in bonds, which was instituted in 317, and, according to some authorities, received its title from the Divine commission to Peter, "Feed my lambs." Others state that it is a corruption of the Saxon *Loaf-mass*, because an annual feast was then celebrated to return thanks for the first-fruits of corn. Lammas-day is one of the four cross quarter-days of the year, Whitsuntide being the first, Lammas the second, Martinmas the third, and Candlemas the fourth.

Lam'mergeier, Lam'mergeyer, *n.* (*Zoöl.*) A large European species of vulture. See VULTURE.

Lam'mermuir, or **Lam'mermoor**, a range of mountains in Scotland, running in an E.N.E. direction, from the S.E. extremity of co. Edinburgh, through cos. Haddington and Berwick, to the North Sea in the parish of Coldingham. The principal summits have an elevation of 1,600 feet.

Lamoille, (*la-moil'*,) in *Illinois*, a post-village of Bureau co., about 154 m. N. by E. of Springfield.

Lamoille, in *Minnesota*, a post-village of Winona co., on the Mississippi River, about 10 m. below Winona.

Lamoille, in *Vermont*, a river rising in Orleans co., and flowing a general W. course through Caledonia, Lamoille, Franklin, and Chittenden cos., into Lake Champlain.

—A N. co.; *area*, about 450 sq. m. *Rivers.* Lamoille, and several of its tributaries. *Surface*, much diversified, the Green Mountains traversing the centre of the co. *Soil*, not very fertile. *Cap.* Hyde Park. *Pop.* (1897) 12,910

Lamoine', in *Maine*, a township of Hancock co. *Pop* (1897) about 740.

Lamont', in *Michigan*, a post-village of Ottawa county about 14 m. W. by N. of Grand Rapids.

La'monte, in *Missouri*, a post-village of Pettis co., about 75 m. W. of Jefferson City.

La Motte, (*mott'*,) in *Iowa*, a post-village of Jackson co about 76 m. N.E. of Iowa City.

La Motte, ISLE LA MOTTE, or VINEYARD, in *Vermont*, an island of Grand Isle co., in Lake Champlain. It is about 6 m. in length, and constitutes the township of Isle La Motte.

La Motte-Fouqué, FRIEDRICH, BARON DE, a German poet, historian, and novelist, was B. at Brandenburg 1777. Entering the army, he served in the campaigns of the Rhine, and had a share in the numerous engagements that were fought with the French for the liberty of Germany in the beginning of this century. His first works appeared under the name of *Pellegrin;* and the numerous productions of his pen contributed not a little to fan the flame of patriotic ardor which led his countrymen to final victory. On quitting the army, he retired to Nennhausen, the property of his second wife Caroline, and on her death, in 1831, he removed to Halle, where he delivered lectures upon poetry and history. His beautiful fairy tale, *Undine*, has gained him a European reputation. Among his other works are *Sintram*, a fairy tale, and the poems *Sigurd*, *Coronan*, *Bertrand du Guesclin*, &c. D. 1843.

Lamp, *n.* [Fr. *lampe*; Gr. *lampas*, from *lampō*, to shine; akin to Heb. *lāpid*, a lamp, from *lāpad*, to shine.] A vessel used for the combustion of liquid inflammable bodies, for the purpose of producing artificial light. The invention of the lamp is ascribed to the Egyptians. Its use

Fig. 1504.—EGYPTIAN LAMPS.

was known in the days of Moses and Job. The application of lamps passed from Egypt into Greece, where they were consecrated to Minerva, the goddess of learning, as indicative of the scholar's nocturnal study. From Greece the use of lamps passed to Rome. Among the Egyptians, Hebrews, Greeks, and Romans, oil-lamps were generally used, and they vied with each other in the construction of these instruments. Some of the specimens which have been preserved to the present time display much taste and elegance of design. The interiors of all of them, however, are rough and meagre. The first person who is known to have published a collection of ancient lamps, is Fortunio Liceto, an Italian, whose chief design appears to have been to prove the possibility of constructing lamps that would burn forever. The sixth hall of the museum of Portici is now entirely filled with lamps and candelabra discovered in the houses of Pompeii and Herculaneum. It would appear that the an-

cients constructed their earliest lamps of baked earth; but subsequently of various metals, bronze especially. There are a few ancient lamps of iron extant; but they are rare, either because that metal was little used for the purpose, or on account of its rapid decomposition in the ground. There are four specimens in the museum of Portici, and one specimen of a glass lamp, which is entirely solid and in one single piece. A golden lamp in the temple of Minerva is mentioned by Pausanias; and St. Augustine speaks of lamps of silver. There was a strong belief among ancient writers that perpetual lamps existed. Instances have been cited by various authors, where lamps were found burning in ancient sepulchres, which were extinguished as soon as the air was admitted. The most remarkable instance is that of the tomb of Tullia, daughter of Cicero, discovered at Rome in 1540. The notion, in most of those cases, probably arose from the inflammation of the hydrogen gas which escaped from the tombs when opened. The lamps or candles used by the Jews in their own houses were put into a high stand, raised from the ground. The lamps used by the wise and foolish virgins mentioned in the New Testament were of a different kind. Critics and antiquaries seem to agree that they were a kind of torches, made of iron or potter's earth, wrapped about with linen, and moistened from time to time with oil. It was customary among the Romans to have a lamp either hanging from the ceiling or placed on a stand in the room. These stands were often richly

Fig. 1505. — ROMAN LAMPS.

ornamented. (See CANDELABRUM.) It was also the Roman custom, on occasions of national rejoicing, to have public illuminations; on which occasions lamps were suspended at the windows. The practice of placing lamps in the sepulchres of the dead was probably meant to be allegorical of the cessation of earthly existence. Some of the sepulchral lamps are sculptured with the figure of a butterfly, in reference to the escape of the soul. The early Christians adopted this usage in their monuments; and lamps have been found in the tombs of many saints and martyrs. In treating of the construction of modern lamps, it is necessary to take into consideration the nature of the flame. By referring to the article on FLAME, it will be seen that, in order to insure a constant and steady flame, it is necessary that the supply of combustible matter be steady and uniform. It must, therefore, be either in a liquid or gaseous state, so that it may approach the flame in an uninterrupted current. The combustible substance may either be made to approach the flame by capillary attraction through wicks, or by mechanical pressure. A good lamp must have the following properties. It must be supplied with carbonaceous matter and with oxygen; it must convert the former into a gaseous state; and it must bring the gas so produced into contact with oxygen at such a temperature that the carbon will combine with oxygen in the highest degree without producing smoke. The simplest way in which a lamp can be formed is that practised in making night-lights to burn in sick chambers. A small quantity of water is poured into a glass tumbler, or other vessel, and above that a quantity of oil; a piece of cork is then pierced so as to admit a few threads of cotton to pass through it, and the cork being placed upon the oil, will float; the cotton threads will draw up the oil by capillary attraction, and a feeble, but clear light will be given. The antique lamps spoken of before, many of which possess great artistic beauty of form, cannot claim a higher construction than those of many rude nations. In general, they consist of a vessel, open or closed, with an unspun round wick, which is held by a nozzle at the beak. As combustion can only take place on the outside of the flame, more carbon is likely to be liberated from the oil than the oxygen in contact with the flame can consume. Hence all lamps of this sort give a dim light, easily go out, and possess a smoky flame. The old kitchen-lamp had the beak removed to a considerable distance from the reservoir, so as to lessen the shadow cast by the flame, and increase the illuminating power. Till 1789, however, all lamps continued to be dim, smoky, ill-made articles, soiling everything they came near, and filling the air with anything but an agreeable odor. The invention and introduction of the Argand lamp at that time, by Aimé Argand, made a revolution in illumination. (See ARGAND LAMP.) Among the inventions which appear to indicate important progress in the history of lamp-illumination, may be enumerated the following: — The *Worms lamp*. This lamp is used and well known in the countries bordering on the Rhine. It is characterized by the shape of the wick. The fibres of the wick, instead of being collected into a round bundle, are placed in small bundles side by side, forming together a flat ribbon. The effect produced by this arrangement is that the edges of the flame are at no point so distant that a nucleus can form in the centre, which, from want of air, will burn incompletely and smoke. Another advantage possessed by this and other lamps to be described, is the movability of the wick. This is effected by means of screws. The wick is raised or lowered, according as the screws are turned, and a larger or smaller quantity of air is employed in the combustion. When the wick is high, a large quantity of oil is decomposed, and when low, a small quantity. — The *Study-lamp*. In the common study-lamp, the oil-vessel is more flat, and, instead of being situated below, is behind and at the side of the flame, so that its shadow falls much beyond the immediate vicinity of the flame, and in no way interferes with the person in front of the lamp. The greater part, too, of the light passing upward, is collected by a conical shade and reflected downward. — The *Astral lamp* was constructed by Bardier-Marcet, with the idea of making the sinking of the level of the oil as imperceptible as possible, and, at the same time, the diminution of the flame by means of a very flat oil-vessel, in which, therefore, a larger quantity of oil only occupies a very insignificant height. The principle of the astral lamp was applied to the Argand. — In the *Sinumbra-lamp* (*sine umbra*, without shadow), the shadow is greatly reduced by making the circular oil-vessel in such a way that its three surfaces meet in the form of a flat wedge, the sharp edge being directed toward the flame. The position of the flame in relation to the oil-vessel is such, that two tangents drawn from the base to the apex of the flame to the latter, meet a few inches behind it. Beyond this point the lamp can cast no shadow; but even in this small space, it is almost entirely destroyed by a ground-glass shade, which, resting upon the oil-vessel, surrounds the chimney and scatters the light in all directions around. In all these lamps one common evil is to be noticed; namely, that of having the oil-vessel at all events within a few lines of the level of the burner, in a position which, consequently, throws the most objectionable shadow. A large number of contrivances have been invented in order to remove the cistern, either to a considerable distance above the flame — when its shadow would fall on the ceiling — or to a position much below the flame, when it would fall at the foot of the lamp. In the former of these cases, from the peculiar arrangement of the oil-cistern, the height of the oil in the burner cannot be quite constant, but will alternately sink and immediately rise again to its former height; whilst in those lamps described previously, the suction of the wick is always rendered more difficult by the sinking of the oil. When the oil-cistern is transposed to the foot of the lamp, all shadow is avoided; but the advantage of the free flow of oil is lost; in all lamps of this sort, therefore, the oil must be raised. They are, therefore, interesting on account of their ingenious, but at the same time complicated, apparatus, which partly depends upon hydrodynamic, partly upon hydrostatic laws, and is partly also a mere mechanical arrangement. — In *Girard's lamp*, the oil is raised by the compression of air somewhat after the manner of water in a fire-engine, or as in Hero's fountain, where the pressure exerted in one vessel is transferred to another distant vessel by means of the compressed air. — The *Hydrostatic lamp*. The principle on which this lamp is constructed is as follows: When two different fluids are brought into tubes connected at the bottom, they will balance each other at different heights in the respective tubes, according to their densities. — In *Keir's lamp* the oil is raised and supported by a column of salt and water, sufficiently dense to support a column of oil four-thirds of its own height. Instead of the salt and water, other heavy liquids, such as syrup, honey, mercury, or a solution of sulphate of zinc, may be used. The zinc solution is 1·57 times denser than oil; hence a column 10 inches high will support a column of oil 15·7 inches in height. — In *Carcel's mechanical lamp* was first carried out the idea of pumping up the oil from the foot of the lamp to the wick by simple machinery, like that of clocks, and in such proportions as to exceed the quantity consumed during the whole period of burning. Carcel brought out his invention about 1800, and carried it to such perfection, that only unimportant points connected with the works and the pump were left for the improvements of his successors, Gagneau, Nicod, Careau, and others. The complex arrangement of the machinery in Carcel's lamp, and other similar instruments, soon caused them to fall into disuse. All the difficulties which encompassed these arrangements seem, however, to have been surmounted in Meyer's elliptic, and in the French moderator lamp. In the *elliptic lamp*, a spiral spring acting on a piston is the motive power, and the constant flow of oil to the wick is regulated in an ingenious manner by means of a tube of narrow bore. A lamp of this kind will yield a good light for eight or ten hours, and will allow of the combustion of crude vegetable oils. But the greatest improvement ever effected in oil-lamps was in the so-called *French moderator* (Fig. 1506), which combines the greatest amount of illuminating power with elegance of form, easy management, and general economy. Its body is a cylinder, B, usually about 8 inches in height by 5 inches in diameter, the lower part of which contains the store of oil. On the top of the oil rests a piston, P, which is constantly pressed down by a spiral spring situated between it and the top of the barrel. The piston is represented in the figure as resting on the bottom. Through the piston is inserted a small tube, which passes up to the burner at the top; and the pressure of the spring on the piston causes a constant stream of oil to rise up through this tube and feed the wick, C. What is not consumed, flows over the burner, D, and back into the barrel above the piston. It is above the piston also that fresh oil is introduced. When the piston has reached the bottom, it is wound up again by a rack and pinion, E; and a vacuum being thus formed, the oil above it is forced to the underside through a valve-kind of contrivance round its edge. It is obvious that in this machine the flow of oil will be greatest when the piston has been newly wound up, and the spring is at its greatest tension. This inequality is regulated, or *moderated* — hence the name of the lamp — by an extremely ingenious contrivance. The tube through which the oil ascends consists of two parts — a narrow, fixed to the piston, and rising with it, and a wide, fixed to the burner, and forming a sheath into which the other ascends; within the upper tube is placed a rod or wire, which descends so as to enter only a short way into the narrow tube, when the latter is drawn down to the full. Now, the effect of the rod within the narrow tube is to retard the passage of the oil; and it is evident that the effect will be greater the further the tube is pushed up, because the narrow part is then made longer. The obstruction thus increases and diminishes with the force of the spring, and the flow of oil is rendered equal. — Young's *Vesta Lamp*, introduced in 1834, employed camphine, a volatile hydrocarbon spirit distilled from turpentine, as an illuminant, this lamp being constructed on the round-wick, or Argand, principle, with a button or constrictor over the central air tube and a constricted chimney. Of recent years the introduction of mineral oils as illuminants has caused a great variation in the construction of lamps, and a host of patents have been taken out for paraffin or kerosene lamps, some of which equal gas in illuminating power. In these the flat wick is widely used, its advantage being greater ease in trimming and a better supply of oxygen to all parts of the flame than is attainable in the case of round wicks. These lamps are now extensively used for heating and cooking, a double or triple flat wick being employed. In many parts of the U. S. and Europe vapor lamps are employed. In these, which consume the volatile hydrocarbon obtained from the products of the distillation of bituminous coal, the liquid is converted into vapor before it reaches the burner, and burned without the need of a wick. These are therefore distinguished as *vapor* or *self-generating gas lamps*. In 1868 a light-house lamp for burning mineral oils was introduced, and has been adopted in all parts of the world. These lamps have two or more concentric wicks, and yield a very powerful light. For the *safety lamp*, invented in 1815, and used everywhere by miners, see DAVY SAFETY LAMP. See also LIGHT, ARTIFICIAL, in SECTION II.

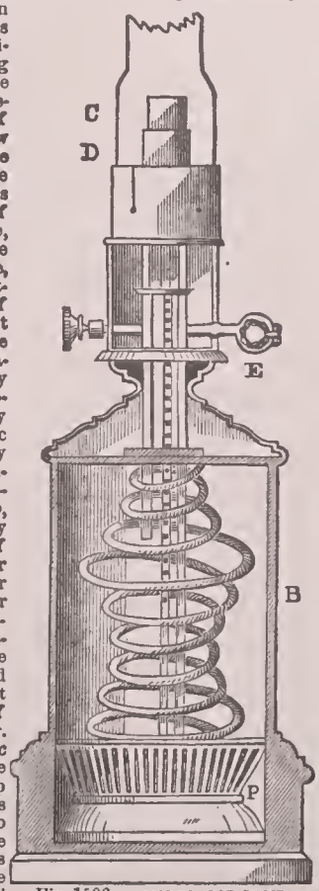


Fig. 1506. — MODERATOR LAMP.

Lam'pa, a town of Peru, cap. of the prov. of that name, dept. of Puno, about 155 m. S. of Cuzco; *pop.* of prov 80,000.

Lamp'ad, *n.* [Gr. *lampas.*] An antique lamp or candlestick.

Lamp'adist, *n.* [Gr. *lampadistēs.*] (*Gr. Antiq.*) The winner of a prize in the lampadrome.

Lampas'as, in *Texas*, a small river flowing into Leon river in Bell co.

—A central co.; *area*, about 800 sq. m. *Rivers.* Colorado and Lampasas rivers, besides many smaller streams *Surface*, mountainous; *soil*, in some parts fertile. *Cap* Lampasas.

—A post-town, cap. of the above co., on Gulf., C. & St. Fé R.R., 80 m. N.W. of Austin. *Pop.* (1897) 2,750.

Lampa'drome, *n.* [Gr. *lampas*, torch, and *dromos*, course.] (*Gr. Antiq.*) A race run by young men with torches or lamps in their hands.

Lam'pass, Lam'pers, *n.* [From Lat. *lampas.*] (*Farriery.*) A swelling of the fleshy part of the roof of a horse's mouth.

Lam'pate, *n.* (*Chem.*) A salt formed of lampic acid with a base.

Lamp-black, *n.* (*Chem.*) A very fine description of infinitely divided charcoal, much used as a pigment in the arts. It is largely manufactured by heating in an iron vessel vegetable matters rich in carbon, such as resin and tar,—the vapors of which are burnt in a current of air insufficient for complete combustion. The hydrogen, consequently, burns away, leaving the carbon behind in a finely-divided condition on the walls of the chamber, which are hung with coarse cloths. The *L. B.* thus obtained generally contains certain quantities of unburnt resinous or fatty matters. Where very fine lamp-black is required in small quantities, it is best made by holding a cold plate over a gas flame until a sufficient deposit is obtained. This is ground up with gum, water, or oil, and forms an excellent pigment for the amateur artist. *L. B.* is one of the ingredients of which printer's ink is made.

Lampedusa, (*lam'pa-doo'sa,*) an island of the Mediterranean Sea, about midway between the coast of Tunis and Malta. It has a circumference of 13 m. and belongs to Italy.

Lam'per-eel, Lam'pern, *n.* See LAMPREY.

Lam'pers, *n. sing.* (*Farriery.*) Same as LAMPASS, q. v.

Lam'peter, in *Pennsylvania*, a post-village of Lancaster co., about 5 m. S.E. of Lancaster.

Lamp'ic, *a.* [Fr. *lampique*, from Lat. *lampas.*] (*Chem.*) An acid produced by the slow combustion of the vapor of alcohol and ether in the lamp without flame; it is acetic acid modified by the presence of a peculiar hydrocarbon.

Lamp'less, *a.* Without a lamp;—hence, gloomy, dull.

Lampoon', *n.* [Fr. *lampon*, a drinking or ribald song, from *lamper*, to drink, to guzzle.] (*Lit.*) A scurrilous or personal satire couched in writing; censure written to abuse and vex rather than to reform.

"A mouthy scribbler of some low *lampoon*." — *Byron.*

—*v. a.* To abuse with personal censure or invective; to reproach in coarse or virulent written satire; to libel; to slander; to satirize; as, to *lampoon* a political opponent.

Lampoon'er, *n.* The writer or author of a lampoon; a scribbler of coarse satire.

Lampoon'ery, Lampoon'ry, *n.* Art or practice of lampooning.

Lam'prel, *n.* See LAMPREY.

Lam'prey, *n.* [Fr. *lamproie*; L. Lat. *lampetra—lambo*, to lick, and *petra*, a stone.] (*Zoöl.*) A genus of Chondropterygious fishes belonging to the *Petromyzonidæ*. The lamprey is distinguished by a cylindrical form compressed towards the tail, and without any scales. It has seven branchial openings on each side, and another small opening connected with them on the upper surface of the head, situated nearly between the eyes; its maxillary ring, or mouth, is supplied with strong teeth, and in the inner disc there are smaller, rasp-like tubercles; its tongue is so formed that, by a movement of the mouth, it acts like a piston, and enables the lamprey to attach itself to any foreign body by means of suction. It is usually about two feet in length, and of a yellowish color, mottled with brown irregular streaks. The two

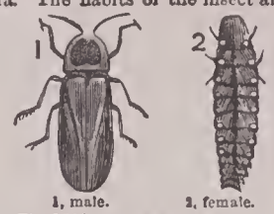
Fig. 1507. — COMMON LAMPREY.

dorsal fins are distinctly separated, the second one joining with the tail-fin, as well as with a small strip which represents the anal-fin. The lamprey generally quits the sea in the spring for the purpose of spawning, and then returns back to its element after an absence of a few months. It is a fish in high repute as an article of food, and it is, consequently, much sought after for the table. It is a fact that Henry I., king of England, died from the effects of a surfeit of lampreys. The most common of the American species is the *Petromyzon Americanus*, 2½ feet long, color olive-brown above, with blackish-brown confluent patches, and beneath uniform dull brown. It is not uncommon in the rivers of New England and New York, especially near their mouths.

Lam'pron, *n.* Same as LAMPREY (*q. v.*).

Lamps'ville, in *Ohio*, a village of Belmont co., about 112 m. E. of Columbus.

Lampy'ridæ, *n. pl.* (*Zoöl.*) A genus of coleopterous insects, of the section *Malacodermi*. The *Lampyridæ* have five joints to all the tarsi; flexible elytra, with the body usually elongated and somewhat depressed. The head is more or less concealed by the thorax, the mandibles generally small and terminated in a sharp point; the penultimate joint of the tarsi is always bilobed, the claws simple, and the antennæ closely approximated at the base. The family of the *Lampyridæ* contains several genera, the most important of which are,—1. *Lycus*, the distinguishing characters of which are, that the fore part of the head is prolonged into a snout, the antennæ serrated, and the elytra usually dilated in the middle or near the posterior part. A species of this genus is found in England,—the *Lycus minutus*; in length it is about a quarter of an inch, and of a black color, except the antennæ, which are of a brilliant red.—2. *Omalisus*. This genus has the joints of the tarsi elongated and nearly cylindrical, with the penultimate joint heart-shaped; the head not sensibly prolonged in front; the antennæ simple; and the elytra tolerably firm.—3. *Omalisus sutularis*, a black variety, closely resembling the insect last described; it is found in France.—4. *Lampyris*, the Glow-worm, remarkable for the luminosity of some of the last segments of the abdomen. The common glow-worm, *Lampyris noctiluca*, has the antennæ short. The male has very large eyes. The female, which is larger than the male, is fully half an inch in length, of a blackish color, the legs dusky red, and the thorax and abdomen margined with that color. The female is perfectly destitute both of wings and elytra. The habits of the insect are nocturnal. The male emits a faint light, the female a soft but strong light, of which the use is supposed to be to attract and guide the male. The female *G.* is generally to be found, during the summer months, among grass, or on mossy banks. There is reason to think that the *G.* has the power of displaying and extinguishing its light at pleasure, so that it may not be unnecessarily exposed to enemies; but if the luminous portion of the abdomen be removed it retains its luminosity for some time. If placed in hydrogen gas, it sometimes detonates. The luminous matter is capable of being mixed with water, and warm water increases its brilliancy. Two spots on the last segment of the abdomen are more luminous than any other part, and a constant motion of this segment seems to be connected with the emission of the light. The two segments next to this are each surrounded by a band brighter than the rest of the segment. The larva of the *G.* is very similar to the perfect female insect, but is very faintly luminous. It is very voracious, attacking and devouring snails, whereas the perfect insect eats little, and is supposed to prefer the tender leaves of plants. The luminosity of the males of the genus *Lampyris*, and of other winged insects of the family *Lampyridæ*, has obtained for them the name of Fire-flies.



1, male. 2, female.

Fig. 1508. — THE GLOW-WORM.

Lampy'rine, *n.* (*Zoöl.*) A coleopterous insect of the LAMPYRIDÆ, *q. v.*

Lamsacus, or **Lam'sakí,** (anc. **Lampsacus,**) (*lam'sa-kus,*) a marit. village of Asia Minor, on the Hellespont, nearly opposite Gallipoli. It was in ancient times given by Xerxes to Themistocles.

Lam'son's, in *New York*, a post-village of Onondaga co., abt. 17 m. S.W. of Syracuse.

Lan'ark, LANARKSHIRE, or CLYDESDALE, an inland co. of Scotland, bounded N. and N.W. by the cos. of Renfrew, Dumbarton, and Stirling; N.E. by the cos. of Linlithgow and Edinburgh; E. by Peebleshire; S. by Dumfriesshire, and S.W. by Ayrshire; *area*, 889 sq. m. In the N. the soil is very fertile, and produces excellent grain crops. The S. part is mountainous and barren, one summit rising to an elevation of 3,100 ft. above the sea. It is particularly noted for its breed of draught horses. Iron, lead, and coal abound, and there are extensive iron works. *Manuf.* Woollens, linens, cottons, glass, pottery, &c. *Prin. towns.* Glasgow, Lanark, Hamilton, Airdrie, Kilbride, Carluke, Douglas, and Biggar. *Prin. Rivers*, Clyde, Mouse, Avon, Dee, Coulter, Methven, Douglas, &c. *Pop.* (1897) 1,211,440.

LANARK, a town of Scotland, cap. of the above co., 33 m. S.W. of Edinburgh, and 23 m. S.E. of Glasgow. It is situated on a rising ground near the Clyde *Manuf.* muslins, and other cotton goods. *Pop.* 5,800. About 1 m. S. lies the manuf. village of New Lanark, celebrated as the scene of Robert Owen's experiment for the social improvement of working classes. *Pop.* (1897) 4,750.

Lan'ark, an E. co. of province of Ontario; *area*, about 1,194 sq. m. *Rivers.* Clyde, Mississippi, and Rideau rivers, besides several lakes. *Surface*, diversified; *soil*, fertile. *Cap.* Perth. *Pop.* (1897) 40,040.

—A village of the above co., about 11 m. N.W. of Perth.

Lan'ark, in *Arkansas*, a post-village of Bradley co., about 75 m. S.E. of Little Rock.

Lan'ark, in *Illinois*, a city of Carroll co., on C., M. & St. P. R. R., 21 m. S.W. of Freeport. *Pop.* (1897) 1,480.

Lan'ark, in *Pennsylvania*, a post-village of Lehigh co. *Pop.* (1897) 148.

Lan'ark, in *Wisconsin*, a post-township of Portage co.

La'nary, *n.* [Lat. *lanaria*, from *lana*, wool.] A magazine or storehouse for wool.

La'nate, La'nated, *a.* [Lat. *lanatus.*] Woolly. (*Bot.* and *Zoöl.*) Covered with long, fine, soft hair; woolly.

Lanc'aster, the name of a royal English house, which flourished in two lines. The first commences with EDMUND, son of Henry III. and Eleonora of Provençe, and brother of Edward I, employed by the latter as ambassador to Philip of France, and afterwards as commander in the expedition for the recovery of Guienne. Born in London, 1245; died at Bayonne, 1296.—THOMAS, his son and successor in the earldom, cousin-german to Edward II., headed the confederacy of barons against Piers Gaveston, and, finally, shared the responsibility of his death with Hereford and Arundel. He was at length taken in arms against the sovereign, and beheaded at Pomfret, 1322.—HENRY (previously earl of Leicester), brother and heir of Thomas, joined the conspiracy of Isabella and Mortimer against Edward II., and received the king into his custody at Kenilworth. He was freed from this charge on account of his too great humanity: and, when fortune changed, was appointed guardian and protector of the person of his son, Edward III. He died 1345. HENRY, his son, (previously earl of Derby,) after vainly endeavoring to make peace with John, king of France, under the mediation of the Pope at Avignon, was sent with an army into Normandy, and took part in the victory of Poictiers, and the subsequent French wars. About this time his title was changed to Duke of Lancaster, this degree of nobility being then newly introduced into England. He died 1362.—The next duke of Lancaster commences a new lineage, that of the princes opposed to the house of York. The first in the line was JOHN OF GAUNT, or GHENT, third son of Edward III., born 1339. He was married successively to the daughter of Henry, the last duke, who died without male issue, and to the daughter of Peter, king of Castile. His name is one of the most celebrated in English history, and in the chivalry of the Middle Ages. Died 1399.—HENRY OF HEREFORD, the successor of John of Gaunt in the dukedom, was son to him by his first wife. He claimed the crown by descent, by the mother's side, from Edmund the first earl, who was popularly supposed to be the elder brother of Edward I., and to have been deprived of the succession by his father for personal reasons. He became king by deposing Richard II., 1399, and was a prince of great ability and valor. He reigned as Henry IV. till his death in 1422, and was succeeded by his son, Henry V. The son of the latter also inherited the crown as Henry VI., and in his reign the feuds of York and Lancaster broke out, which ended in the union of the two houses in the person of Henry VII.—See YORK.

Lan'caster, JOSEPH, an English educationist, B. in London, 1771. He was a member of the Society of Friends, and in 1789, while yet a boy, opened a school for poor children at Southwark, whom he taught almost gratuitously. So great was the success attending his system that numerous schools founded upon it sprung up throughout the country. A rival, however, in the person of Dr. Bell, who claimed to have been the original introducer of *L.*'s system appeared, and, being patronized by the clergy, succeeded in throwing *L.* into the shade, who thereupon departed for the U. States. In this country, however, and also in Canada, *L.* was well received and assisted, but becoming involved in pecuniary embarrassments, his friends purchased for him an annuity, and he retired to New York, where he D. in 1838. He was the author of a work on *Improvement in Education*, (Lon. 1805), and of various elementary school-books. His system forms the basis of popular education in many parts of England.

Lan'caster, or **Lancashire,** (*lan'ka-sheer,*) a N.W. co. of England, bordering on the Irish Sea; *area*, 1,806 sq. m. *Surf.* Level along the coast, but mountainous in N. and E., where the ridge called the "back-bone of England" separates it from Yorkshire. In the N. Coniston Fell attains the height of 2,600 ft. above the sea. *Rivers.* Mersey, Ribble, Myre, Duddon, and the Irwell. *Lakes.* Windermere, Coniston, and Esthwaite. *Soil* is various, being on the higher grounds rocky and barren, but on the coast and in the valleys fertile, producing large crops of oats and other grain. *Min.* Iron, copper, and coal, the latter of which is abundant. *L.* is famous for its cotton manufactures, which employ over 300,000 persons, also pins, needles, nails, watch-tools and movements, porcelain, silk, woollens, &c. *Prin. towns.* Manchester, Liverpool, Preston, Blackburne, &c. *Pop.* (1897) 4,120,500.

Lancaster (*lăñk'ăs-ter*), a seaport town of England, cap. of the above co., beautifully situated on the Lune, or Loyne, 20 m. N.N.W. of Preston. It contains numerous scientific and educational institutions. *Manuf.* Furniture, cotton, silk, table-baize cloth, and cast-iron wares. *Pop.* (1897) about 34,500.

Lancaster, a village of Glengarry co., prov. of Ontario, on the St. Lawrence river, about 54 m. E. of Montreal.

Lancaster, in *Arkansas*, a post-township of Crawford co.

Lancaster, in *Illinois*, a township of Stephenson co.

Lancaster, in *Indiana*, a township of Huntingdon co.

—A post-village and township of Jefferson co., about 10 m. N.W. of Madison.

—A village of Orange co., about 52 m. N.W. of New Albany.

—A township of Wells co.

Lancaster, in *Iowa*, a post-village and township, formerly cap. of Keokuk co., 50 m. S.W. of Iowa City.

Lancaster, in *Kansas*, a post-township of Atchison co., about 11 m. W. of Atchison.

Lancaster, in *Kentucky*, a post-village, cap. of Garrard co., about 57 m. S.S.E. of the city of Frankfort. *Pop.* (1897) 1,710.

Lancaster, in *Massachusetts*, a post-town and township of Worcester co., about 19 m. N.N.E. of Worcester.

Lancaster, in *Missouri*, a post-town, cap. of Schuyler co., about 140 m. N. by W. of Jefferson City.

Lancaster, in *Nebraska*, an E. by S. co.; *area*, about 864 sq. m. *Rivers.* Saline, or Salt Creek, and numerous smaller streams. *Surface*, diversified; *soil*, fertile. *Cap.* Lincoln. *Pop.* (1890) 76,395.

Lancaster, in *Nevada*, a village of Humboldt co., about 30 m. N.W. of Unionsville.

Lancaster, in *New Hampshire*, a post-town and township, cap. of Coos co., on the Connecticut river and Maine Central R. R., 135 m. N. of Concord. A favorite summer resort. *Pop.* (1897) about 3,450.

Lan'caster, in *New York*, a post-village and township of Erie co., about 10 m. E. of the city of Buffalo. *Pop.* of village (1897) about 1,720.

Lancaster, in *Ohio*, a thriving city, cap. of Fairfield co., on Hocking river and canal, and the C., H. V. & T. and C. & M. V. R. Rs., 32 m. S. E. of Columbus; in the natural gas belt. Has extensive manufactures and a fine general trade; fire-clay and glass-sand are abundant, and the surrounding agricultural region is very rich. *Pop.* (1897) about 9,000.

Lancaster, in *Pennsylvania*, a S. E. co., adjoining Maryland; *area*, about 965 sq. m.; watered by the Susquehanna river, Octorara and Conestoga creeks, and their tributaries. *Surface*, diversified; a ridge called South Mountain, or Conewago Hill, extends along the N.W. border; *soil*, extremely fertile, farms well tilled; there is an immense crop of tobacco every year, which is largely manufactured within the county, though great quantities of leaf are shipped. *Cap.* Lancaster. *Pop.* (1897) about 160,000.

—An important city, cap. of above county, on Penna. and Phila. & Reading R.Rs., 69 m. W. of Philadelphia. From 1799 to 1812 it was the seat of State government, and for many years it was the largest inland city in the U. S. There are large manuf. of cotton goods, machinery, &c., and an immense trade in leaf and manuf. tobacco. Franklin and Marshall College is here located. *Pop.* (1897) about 40,000.

Lancaster, in *South Carolina*, a N. co., adjoining North Carolina; *area*, about 635 sq. m. *Rivers.* Wateree river, and Lynche's, Sugar, Waxsaw, and other creeks. *Surface*, hilly; *soil*, in some parts fertile. *County-seat*, Lancaster Court-House. *Pop.* (1890) 20,761.

—A post-village, cap. of Lancaster co., about 72 m. N.N.E. of Columbia.

Lancaster, in *Texas*, a post-town of Dallas co.

Lancaster, in *Virginia*, an E. co., bordering on Chesapeake Bay; *area*, about 160 sq. m. *Rivers.* Rappahannock river, and some smaller streams. *Surface*, uneven; *soil*, not very fertile. *Cap.* Lancaster Court-House. *Pop.* (1890) 7,191.

Lancaster, in *Wisconsin*, a city, cap. of Grant co., about 85 m. W. S.W. of Madison. *Pop.* (1895) 2,174.

Lancaster Court-House, in *Virginia*, a post-vill., cap. of Lancaster co., about 60 m. N. E. of Richmond.

Lancaster Gun, *n.* (*Gun.*) A name given to two weapons, so called from Mr. Lancaster, an English gentleman who introduced the system of elliptic rifling, which he applied to cannon as well as to small-arms. The transverse section of any part of the barrel would show the bore to be elliptical in shape; the eccentricity, however, is so slight that it can scarcely be discovered without the application of a gauge. Although the invention may be original as far as Mr. Lancaster is concerned, the method appears to have been practised in England many years ago, as the system is accurately described in an old work on gunnery, called *Scloppetaria*, which was published in 1809, and is characterized as a "very old invention, quite obsolete." The oval form of bore tends to reduce the windage without increasing the friction or resistance of the air to the bullet when it is passing through it. The twist of the grooving, if it may be called so, is one turn in 32 inches. The diameter of the bore is ·498 inch, an eccentricity of ·01 inch in half an inch being sufficient to cause the bullet to rotate on its axis during the entire period of its flight. The bullet used is conical, elliptic in form, and made of the softest lead that can be procured. It should fit the barrel accurately, having a windage of 4- or 5-1000ths of an inch. From the peculiar formation of the bore, no other kind of bullet can be used in the *L.* rifle except those that are made expressly for the purpose. The *L.* guns are rifled on the same principle.

Lancaster Sound, a passage in British N. America, connecting Baffin's Bay with Barrow's Strait, abt. Lat. 74° N., Lon. 80° W. It averages abt. 65 m. in width.

Lance, *n.* [Fr.; Lat. *lancea*; Gr. *longhē*—probably from *elaunō*, to drive.] (*Mil.*) A warlike weapon, in the form of a long shaft, pointed with a spear-head, and adorned with a bannerol, much used by the nations of antiquity, and also by the moderns before the invention of gunpowder. The ancient *lancea* was a general term for missile weapons or javelins. The Macedonian phalanx and the Roman infantry, as well as the most barbarous nations, all considered the lance as one of the most effective weapons; and even at the present day, it is still considered of great value, though it is now borne by cavalry only. Almost all the regular armies have now regiments of *lancers*, so called from the lance being the chief offensive weapon with which they are armed.—A regiment of lancers was organized at Philadelphia during the late civil war; but being unsuited for the thick woods of Virginia, the lance was soon discarded. The lances in use have a shaft of ash- or beech-wood, 8, 12, or, in some cases, even 16 feet long, with a steel point 8 or 10 inches in length, adorned with a small pennon. In the Middle Ages, the terms *man-at-arms* and *lance* were synonymous. To each man-at-arms was allotted a certain number of horses and attendants, such warrior with his followers being then classed as a *lance fournie*. This establishment varied at different periods from 3 to 10 horses.

—A javelin; a spear.

"Their *lances* glittered in the morning ray."—*Aytoun.*

—*v. a.* To pierce or transfix with a lance or other sharp-pointed instrument.

"In their cruel worship they *lance* themselves with knives."—*Glanville.*

—To puncture or open with a lancet; as, to *lance* a vein.

—To throw in the manner of a lance or javelin.—See LAUNCH.

Lance, GEORGE, the most distinguished still-life painter of the English school, B. 1802. He studied under Haydon, and became a yearly exhibitor at the Royal Academy, and British Institution. His favorite subjects, as fruit, flowers, dead game, &c., are painted with an elaborateness of detail and gorgeousness of color almost surpassing the old Dutch masters in this line of art. He restored the principal part of the celebrated picture, by Velasquez, the *Boar Hunt*, in the National Gallery, and D. 1864.

L'Ance, or **L'Anse,** in *Michigan*, a township of Baraga co. Formerly spelled LE ANSE.

Lance'-corporal, *n.* (*Eng. Mil.*) A private who performs the duties of a corporal. (Sometimes called *lancepesade.*)

Lance'gaye, *n.* A kind of spear anciently used.

Lance'-head, *n.* The head, point, or apex of a lance.

Lance'-knight, (*-nīt,*) *n.* Same as LANSQUENET, *q. v.*

Lan'celot of the Lake. (*Lit.*) The hero of a celebrated middle-age romance, which was originally written in Latin by an unknown author, and afterward translated into the Romance tongue by Chevalier Gautier Mapp. He was one of the Knights of the Round Table, and was inspired with a lively passion for the beautiful Guinevere, wife of King Arthur. Tennyson, in his *Idylls of the King*, has interwoven the adventures of this knight with those of Arthur, his kingly hero, and beautifully depicts the grief of Elaine, the maid of Astolat, who dies of unrequited love for Sir Lancelot.

Lan'ceolar, *a.* [Fr. *lancéolaire*, from Lat. *lanceola.*] (*Bot.*) Tapering toward each end, as a leaf.

Lan'ceolate, Lan'ceolated, *a.* [Lat. *lanceolatus.*] (*Bot.* and *Zoöl.*) Oblong in form, and tapering by degrees towards the apex or outward end.

Lancepesade', *n.* [Fr.] (*Mil.*) Same as LANCE-CORPORAL, *q. v.*

Lan'cer, *n.* One who carries or uses a lance.—See LANCE.

—*pl.* (*Dancing.*) The name of a certain set of quadrilles.

Lance'-rest, *n.* A sort of grooved projection on the right side of a breastplate, to assist in supporting a lance.

Lan'cet, *n.* [Fr. *lancette.*] (*Surg.*) A surgical instrument, sharp-pointed and two-edged, used in letting blood and in opening tumors, abscesses, &c.

(*Arch.*) Same as LANCET-ARCH, *q. v.*

Lan'cet-arch, *n.* An arch made in the form of a lancet, tapering to a point; a pointed arch, (Fig. 1509.)

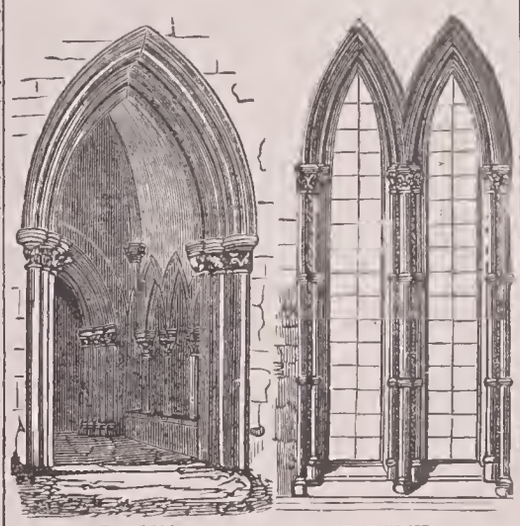


Fig. 1509.—LANCET-ARCH AND WINDOW. (12th century.)

Lan'cet-fish, *n.* (*Zoöl.*) See TEUTHIDÆ.

Lan'cet-window, *n.* (*Arch.*) A window (Fig. 1509) having a lancet-arch.

Lance'-wood, *n.* (*Bot.*) A tree (*Gnatteria virgata*), indigenous to the West Indies, imported in long poles, from 3 to 6 inches in diameter; is of a paler yellow than box-wood, and much used in the fabrication of gig-shafts, archery bows and springs, surveyors' rods, hilliard cues, &c.

Lanch, *v. a.* See LAUNCH.

Lan'cha Pla'na, in *California*, a post-village of Amador co., about 30 m. N.E. of Stockton.

Lanciano, (*lan-che-a'no,*) (anc. ANXANUM,) a town of S. Italy, prov. Abruzzo Citeriore, 6 m. from the Adriatic, and 13 S.E. of Chieti; *pop.* 16,500.

Lancif'erous, *a.* Bearing a lance.

Lan'ciform, *a.* [Lat. *lancea*, and *forma*, form.] Formed like a lance.

Lan'cinate, *v. a.* To tear; to lacerate; to gash.

Lancina'tion, *n.* [Lat. *lancinatio.*] Laceration.

Land, *n.* [A. S., Icel., and Goth. *land*; W. *llan*, a clear place.] In a general sense, the earth, or the solid mass of terrene matter of which the earth is composed. In the more restricted and legal acceptation of the word, it signifies every species of ground or earth; as meadows, pastures, woods, moors, waters, marshes, furze, and heath. It also includes dwelling-houses, &c.; for, with the conveyance of land, the structures upon it pass also. Land is considered to extend indefinitely upward and downward to the centre of the globe. The relations of landed property are among the most complicated and most important in civil society. They lie at the basis of nearly all the relations and institutions of the state; and the strength and vigor of the government depend on their right direction. In them it is possible to trace the progress of a country's civilization;—from hunting and fishing to raising of cattle; from thence to agriculture, conducted by slaves and hondmen, or by freemen with or without a right in the soil. In nearly all modern constitutions, landed property has been taken as the foundation of the more important institutions, and a power has been given to the owners of property over the other members of society. In many modern states, it is so provided by the constitution that the representative body is composed entirely of landed proprietors; it is, however, a very grave question whether this principle is just or not; consequently, in many representative governments, arrangements are made for producing a variety in the condition and rank of the representatives.

—The inhabitants of a country, region, or territory; a nation, people, or community.

"The King himself divulged; the *land* believed."—*Dryden.*

—Ground; floor; surface of a place.

"He . . . roll'd, with limbs relax'd, along the *land*."—*Pope.*

—The mainland or continent, as distinguished from an adjacent island.

NOTE. *Land* is often used in the compound form of words which are self-explanatory; as, *land*-agent, *land*-lord, *land*-owner, &c.

Land of the leal, abode of the loyal and free; place of the faithful and blest. (A Scotticism.) *To make land*, or *to make the land* (*Naut.*), to descry land from seaward; as, towards evening we *made the land*. *To set the land*, to fix the bearings of land by the compass. *To shut in the land*, to get out of sight of land sailed from, as by the intervention of a headland or promontory.

—*v. a.* To set on the land or shore; to debark; to disembark; as, to *land* passengers.

—*v. n.* To go on land or shore from a ship or boat; to disembark.

"To die is *landing* on some silent shore."—*Garth.*

Land, *n.* See LANT.

Lan'daff, in *New Hampshire*, a post-township of Grafton co.

Land'amman, *n.* [From Ger. *land*, country, and *amtmann*, bailiff.] The title-designate of the chief magistrate in some cantons of the Helvetic, or Swiss Confederation; also, the title assumed by the president of the Swiss diet.

Lan'dau, Landaw, a town of Rhenish Bavaria, beautifully situated on the Queich, 20 m. N.W. of Carlsruhe. *Manuf.* Woollens, linens, and tobacco. *Pop.* 7,900.

Landau', *n.* [From *Landau*, a town in Germany.] A kind of carriage having a top or roof which may be opened out and thrown back.

Landaulet', *n.* A chariot, having a moveable top like that of a landau.

Land'-breeze, *n.* A breeze or current air setting in seaward from the land; a land-turn.

Land'-carriage, *n.* Transportation or conveyance by land.

Land'-chain, *n.* (*Surveying.*) See GUNTER'S CHAIN.

Land'-crab, *n.* [CANCER, *q. v.*] (*Zoöl.*) The common name of the *Batruchinus*, comprising the genus *Gecarcinus*, which includes the species of crabs which in a mature state are not aquatic. They are now erected into a family or tribe, and divided into several genera. The species are numerous, and all inhabitants of warm countries. They very much resemble the common crabs of our shores, and are remarkable as animals breathing by gills, and yet not aquatic, some of them inhabiting very dry places, where they burrow in the sand or earth. But such presence of moisture is absolutely necessary to them as to prevent the desiccation of the gills. The Black-crab, or Mountain-crab (*Gecarcinus ruricola*), of the West Indies, usually resides in woods and on hills at a distance of at least 1 mile, often 2 or 3 miles, from the sea, which, however, it regularly visits in the months of April and May, when immense numbers may be seen

Fig. 1510.—LAND-CRAB.

journeying together, moving straight on, unless obstacles quite insuperable impede their progress. Like most of the other species, the *L.-C.* is active chiefly during the night; and except in rainy weather, it seldom leaves its burrow by day. It feeds chiefly on vegetable food. When in season, it is highly esteemed for the table, as some of the other *L.-C.* also are; and its spawn or roe, which before being deposited forms a bunch as large as a hen's egg, is accounted a delicacy. A *L.-C.* of Ceylon (*Ocypode*) is so troublesome on account of the burrows

which it makes in the dry soil of the equestrian promenade at Colombo, that men are kept in regular employment to fill them up.

Land-damn, (*lănd'dam,*) *v. a.* To outlaw or banish from the land. (R.)

"Would I knew the villain, I would *land-damn* him." — *Shaks.*

Land'ed, *a.* Having an estate in land; owning territorial possessions; as, a *landed* proprietor, the *landed* gentry, &c.

—Consisting in land; comprising real estate; as, *landed* interest, *landed* property.

Lan'den, a village of Belgium, 19 m. N.N.W. of Huy; *pop.* 750. Here, July 19, 1693, William III. was defeated by Marshal Luxembourg, with a loss of 12,000 men. It is called by the French the battle of Neerwinden.

Lander, RICHARD and JOHN, two English brothers, whose names are indissolubly associated with African discovery, were natives of Cornwall, and born, the former in 1804, the latter in 1806. They were both apprenticed to a printer; but the elder abandoned his occupation to accompany Clapperton in his expedition to the Niger in 1825; and after his death, in 1827, he returned to England, where he submitted to government a plan for exploring the course of the Niger, which was adopted. Accompanied by his younger brother, he set out for Badagry in 1830; where, after encountering many dangers, they reached Kirree, but were taken prisoners at Eboe, and only, after the promise of a high ransom, succeeded in getting arrangements made for conveying them to the sea. This they reached by the channel called by the Portuguese, *Nun,* and by the English, *Brass* River; and thus was solved by their agency one of the grandest problems in African geography. This important discovery, opening a water communication into the very heart of the African continent, made a great impression on the mercantile world; and soon after the brothers' arrival in England, an association, of which Mr. Macgregor Laird was the head, was entered into for forming a settlement on the Upper Niger; but the expedition that was fitted out for this purpose at Liverpool, in 1852, unfortunately proved a failure; and the Landers, together with nearly all that joined it, fell victims either to the unhealthiness of the climate, or in combats with the natives, in 1853.

Land'er, *n.* One who lands; one who effects a landing.

(*Mining.*) A man who waits to receive the skips of ore at the mouth of a shaft.

Lan'der, in *Maryland,* a post-office of Frederick co.

Lan'der, in *Nevada,* a N. central co.; *area,* about 5,296 sq. m. *Rivers.* Humboldt and Reese rivers. *Surface,* mountainous; *soil,* in some places fertile. *Min.* Silver. *Cap.* Austin. *Pop.* (1890) 2,266.

Lan'der, in *Pennsylvania,* a post-village of Warren co., about 9 m. N.W. of Warren.

Lan'der, in *Nevada,* a village of Lander co., about 18 m. S. by W. of Austin.

Lan'derer, *n.* See LAUNDERER, the more correct spelling.

Landes (*land*), a dep. of France, and one of the largest, though the poorest, in the Republic, region S.W., chiefly between Lat. 43° 30′ and 44° 30′ N., and Lon. 0° 7′ and 1° 32′ W.; having N. Gironde, E. Lot-et-Garonne and Gers, S. Basses Pyrenées, and W. the Bay of Biscay. Length and greatest breadth about 70 m. each. *Area,* 3,598 sq. m. *Pop.* (1897) about 305,500. The dep. derives its name from an extensive tract of heath, marsh, and other waste land, with a loose sandy soil, about 300 ft. above the level of the sea, termed the "Landes," which occupies 731,142 hectares, or nearly 4-5ths of its total surface, besides a considerable portion of the adjacent dep. of the Gironde. This extensive and almost desert plain is for the most part a dead flat, interspersed with patches of pasture or cultivated land, clumps of pines, scattered habitations of a miserable kind, and a few

Fig. 1511. — LANDES.

wretched hamlets; and bounded towards the sea by a chain of *dunes* or sandy downs, inside of which is a succession of lagoons frequently communicating with each other, and occasionally with the sea by openings between the *dunes.* The *dunes* extend along the shore nearly from the mouth of the Gironde to the Pyrenees, forming a chain from 140 to 150 m. in length, by about 5 m. in width, and from 100 to 150 feet in height. They consist of loose shifting sand thrown up by the sea. They are continually changing in form and position, according to the prevalent winds, but have a general tendency to move easterly, in which direction they are said to advance about 25 yards a year; and in process of time they would infallibly overspread the whole country, unless arrested and fixed by planting them with pines or other trees, as is done in Holland. Occasionally immense masses of sand have shifted their position through the agency of tempests, as in the African and Arabian deserts. The church, and a considerable part of the village of Mimizan, was overwhelmed by an inundation of this sort. The increase of the *dunes* having prevented the egress into the sea of many small rivulets, the lagoons have been formed, the largest of which is 7 m. in length and about as many in width. These also continue to extend, since the shifting sands have been gradually shallowing the channels by which they communicate with the sea. The surface of the "Landes" is usually parched and arid, except for about 4 months of the year, when the rains form extensive pools in its depressed portions, varying to the depth of several feet. These are often covered with sand carried over them by the wind, when they are called *blouses,* and are exceedingly dangerous to strangers. To avoid such dangers, and to travel more speedily through the loose soil, the inhabitants use long stilts, having notches for the feet 1, 2, or 3 ft. above their lower extremity; so that a person of ordinary stature, when in walking order, has at a distance the appearance of a giant 8 ft. high (Fig. 1511). The inhabitants are very expert at the use of these singular helps to locomotion. The Adour, and its tributary the Midouze, bound the "Landes" to the S.E., and form the N. limit of the fertile portion of this dep. The soil is there light but productive. Maize, millet, wheat, rye, saffron, hemp, and flax, are grown: in the arrond. St. Sever, about 250,000 kilog. of linseed-oil are produced annually, and about 320,000 hectol. of wine, certain kinds of which, termed the *vins de sables,* rival some of the growths of the Gironde. The culture of the mulberry is on the increase. Agriculture in the Landes was in an exceedingly backward state till the year 1857, when, on the initiative of the Emperor Napoleon III., the French legislative assembly voted considerable sums for the drainage and general improvement of the soil. Since then, immense districts, which formerly were not only entirely unproductive, but frequently engendered disease, have been brought under cultivation. *Chief towns.* Mont-de-Marsan, the cap., St. Sever, and Dax. *Pop.* 306,593.

Land'fall, *n.* (*Naut.*) The first dim outline of land seen after a voyage; as, a good *landfall*; *i. e.* timely sight of land according to calculation of time and place.

(*Law.*) A sudden transferring of landed property by the death of its owner.

Land'-fish, *n.* A fish on land; — hence, any person or thing out of his, or its, proper place or element. (Called, generally, in England, *a fish out of water.*)

Land'-flood, *n.* An overflowing of land by water, an inundation; a freshet.

Land'-force, *n.* A military force, army, or body of troops serving on land; — in contradistinction to *naval force.* (Often used in the plural.)

Land'grave, *n.* [Ger. *land,* land, and *graf,* or *grave,* a count or judge.] A title which was formerly common among the rulers of petty German principalities and states, but which is now borne only by the prince of Hesse-Homburg, and a few German noblemen of high rank, among whom may be named the Landgrave Wilhelm of Hesse-Cassel, the grand-father, on her mother's side, of the Princess of Wales. The graves, in early times, were men of integrity and experience, who were chosen by the people of different districts to administer justice among them. The title was afterwards given to persons who were appointed by the sovereign, and were intrusted with the civil administration of a province, having judges under them, who were set over the different districts of which the province was composed. In course of time there were three classes of graves, distinguished as *palgraves, margraves,* and *landgraves,* of whom the first acted as judges in the king's court, and settled all cases which it was not considered necessary to bring before the king in person; while the margraves guarded the frontiers of the land, and the *L.,* as it has been said, administered the government of extensive provinces. Subsequently, many of the *L.* asserted their independence, and became the sovereigns of the countries over which they had ruled as viceroys; and among these were the *L.* of Thuringia and Hesse. In the 16th century, Hesse was subdivided into the landgraviates of Hesse-Cassel, Hesse-Darmstadt, and Hesse-Homburg; but in 1803, the *L.* of Hesse-Cassel took the title of elector, and, three years later, the *L.* of Hesse-Darmstadt took the title of grand-duke, and by this they are still known.

Landgrav'iate, *n.* The territory possessed by a landgrave; as, the *landgraviate* of Hesse-Homburg.

—Rank, office, or jurisdiction of a landgrave.

Land'gravine, *n.* The title-designate of the wife of a landgrave.

Land'grove, in *Vermont,* a township of Bennington co.

Land-guard, (*-gärd,*) *n.* A river-fence, or bulwark, to protect land from floods; an embankment; a dike.

Land'-holder, *n.* A holder or proprietor of land; a land-owner or farm-tenant.

Land'-ice, *n.* A field of ice placed in juxtaposition with the coast.

Land'ing, *p. a.* Relating to the disposal of a vessel's cargo; as, a *landing*-surveyor of customs.

Landing charges. (*Naut.*) Dues or fees incurred during the landing of a ship's cargo. — *Landing-net,* a small, concave net, used by fly-fishers for landing a fish when hooked. — *Landing-surveyor,* a superior custom-house officer who has supervision over the landing-waiters. — *Landing-waiter,* a subordinate custom-house officer, who inspects goods landed from a vessel.

Land'ing, *n.* Act of going or setting on land or shore from a ship or boat. — A place for going or setting on shore; a water-stairs; a pier; a landing-place.

(*Arch.*) That part of a staircase which, being level, without steps, connects one flight with another.

Landing'-place, *n.* A pier; a slip; a water- or river-stairs; a landing; a place for the putting ashore of goods or passengers.

(*Arch.*) Same as LANDING, *q. v.*

Lan'disburg, in *Pennsylvania,* a post-borough of Perry co., abt. 25 m. W. by N. of Harrisburg.

Lan'dis' Store, in *Penna.,* a post-village of Berks co.

Landis Valley, in *Pennsylvania,* a post-village of Lancaster co. *Pop.* (1897) 310.

Lan'disville, in *Pennsylvania,* a post-village of Lancaster co., 8 m. W.N.W. of Lancaster. *Pop.* (1897) 680.

Land'-jobber, *n.* One who jobs or speculates in land; a land-agent; one who buys or sells land for others.

Land'lady, *n.* A woman who has property in land, and tenants holding from her; a landed proprietrix. — The mistress of an inn or boarding-house.

Land'leaper, *n.* See LANDLOUPER.

Land'less, *n.* Without landed property; destitute of territorial possessions; as, a "*landless* knight."—*Shaks.*

Land'lock, *v. a.* To encompass or almost wholly encircle by land; as, a *landlocked* harbor.

Land'loper, *n.* Same as LANDLOUPER, *q. v.*

Land'lord, *n.* [A. S. *landhlaford.*] The lord of a manor, or proprietor of a territorial or real estate; the owner of land or houses which are let to tenants. — The master of an inn or tavern.

"The *landlord's* laugh was ready chorus." — *Burns.*

Land'louper, Land'loper, Land'leaper, *n.* [D. *landlooper* — *land,* land, and *loopen,* to run. See LEAP.] A land-runner; — hence, a vagabond; a vagrant; a hummer; one who has no settled habitation.

Land'louping, (*-looping,*) *n.* Vagrancy; vagabondism.

Land'-lubber, *n.* [Corrupted from LANDLOUPER, *q. v.*] A landsman; one who passes his whole time on shore; — used by seamen as a term of contempt.

"Jack shoved the tar-brush into the *land-lubber's* mouth." *Cupples.*

Land'man, Lands'man, *n.; pl.* LANDMEN, LANDSMEN. A dweller upon land, — as opposed to *seaman.*

"List, ye *landsmen,* all to me!" — *Dibdin.*

Land'-mark, *n.* A mark to denote the boundary of land; any fixed object by which the extent of a farm, district, &c., is marked.

(*Naut.*) Any elevated object on land serving as a guide to mariners.

Land-measure, (*-mĕzh'ūr,*) *n.* A table of square measure, according to which the superficial contents of portions of land are estimated.

Land'-measurer, *n.* One who measures land; a land-surveyor.

Land'-measuring, *n.* Art or process of determining by admeasurement and computation the superficial area and contents of portions of land, as fields, farms, &c.; land-surveying.

Land'-office, *n.* In the U. States, an office for the registration of saleable lands, and the locating of them to buyers.

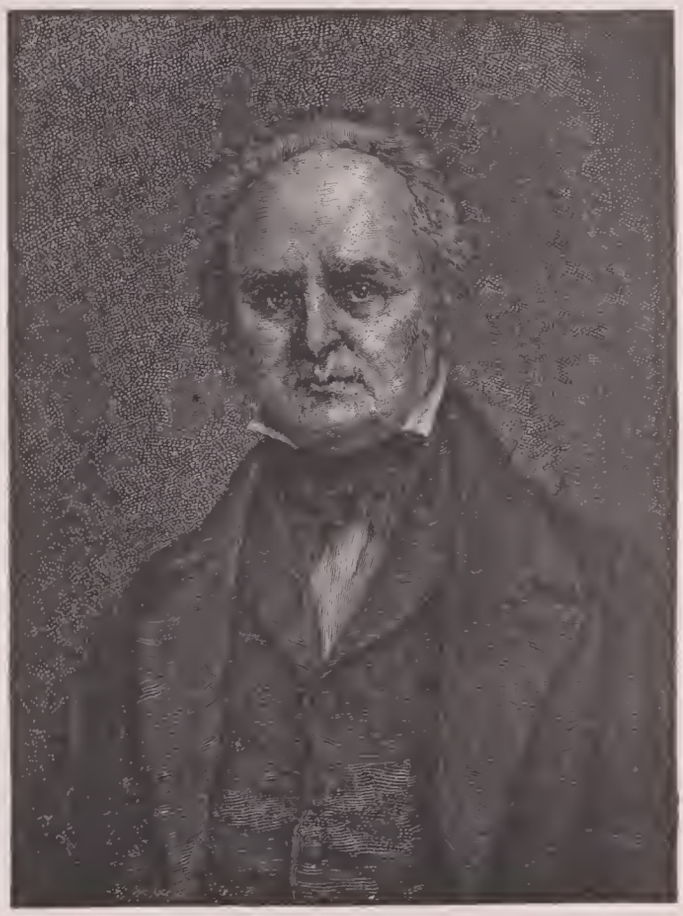
Lan'dor, WALTER SAVAGE, an English poet, b. of an ancient family, in Warwickshire, 1775. He was educated at Rugby and Oxford, and after graduating at the latter university, published a volume of poems, being then in his 20th year. Shortly after succeeding to his patrimonial estates, he sold them, to relieve himself from the cares of a landed proprietor. During the Peninsular War, *L.,* raising a troop of cavalry at his own cost, fought for the Spanish cause until the restoration of Ferdinand VII. After his marriage, in 1811, he took up his abode in Florence, where he resided for several years, and where many of his works were written. He afterwards returned to England, and remained there for some years absorbed in literary occupations, but, his eccentric temper constantly involving him in difficulties and litigation, he went back to Italy, and died there, at Florence, in 1864. His principal poetical works are *Gebir, Count Julian, and other Poems; Hellenics; Pæmata et Inscriptiones; Dry Sticks;* and *Last Fruit of an Old Tree.* (1853.) His most important prose work is the *Imaginary Conversations of Literary Men and Statesmen,* which first appeared in 5 vols. between 1824 and 1829. *L.* neither sought nor won popularity. Haughty and of a savage independence, he probably despised his contemporaries, and was neglected by them. But the masculine intellect, lofty wisdom, and manly tenderness which reveal themselves in his works, most of them of exquisite finish, can hardly fail to secure to them a high place in the esteem of future generations. A very excellent *Life of Walter Savage Landor,* by John Forster (the biographer of Goldsmith, &c.), appeared in the early part of 1870.

Land'-owner, *n.* An owner or proprietor of land; — in Great Britain, opposed to *tenant,* or *tenant-farmer.*

Land'-pilot, *n.* A guide or pilot on land.

Land'-pirate, *n.* One who robs on land; a brigand; a highwayman; a bushwhacker.

Lands'berg, a town of Prussia, prov. of Brandenburg, on the Warta, 40 m. E. of Frankfort. It carries on a



Walter Savage Landor

1775–1864

brisk trade in woollens, leather, paper, and corn. *Pop.* 17,300.

Land'-rail, *n.* (*Zoöl.*) See CRAKE.

Land'-reeve, *n.* An assistant land-steward on a large estate. (Eng.)

Land'-roll, *n.* A roller or clod-crusher, used in levelling the soil.

Land'scape, *n.* [Du. *landschap.*] In general language, a portion of country which the eye can comprehend in a single view, including mountains, rivers, lakes, and whatever else the land may contain.

(*Paint.*) A picture representing the form of a district of country as far as the eye can reach. The art of painting *L.* may be said not to have originated till the 14th or 15th century. From that time, however, it claimed the attention and admiration of artists, who, by imparting ideal beauty to the scenes which they depicted, elevated the art to the high position in which it now stands. See PAINTING.

Landscape', *v. a.* To picture or represent in landscape, or as a landscape.

Land'scape-gar'dening, *n.* The art of laying out grounds so as to produce the effect of natural landscape. See GARDENING.

Land'scapist, *n.* A lover of landscape, or landscape pictures; a painter of landscapes.

Land'-scrip, *n.* In the U. S., a certificate of payment of purchase-money by buyers of public lands.

Land's End (anc. *Bolerium Promontorium*), a celebrated headland of England, forming its W. extremity; Lat. 50° 4′ 4″ N., Lon. 5° 44′ 44″ W. It is formed of granite, 70 feet in height, and projects out into the Atlantic Ocean, at the W. extremity of co. Cornwall. About 1 m. W. are the dangerous rocks called the Longships, with a lighthouse and fixed-lights 88 feet above high-water.

Land'seer, CHARLES, R.A., elder brother of the below, is also well known as a historical painter. Of his productions, we may mention, *The Battle of Langside; Plundering of Basing House; Clarissa Harlowe in the Prison-Room of the Sheriff's Officer*, now in the Vernon gallery), &c.

Landseer, SIR EDWIN HENRY, an English animal painter, son of John Landseer, the engraver, born in London, March 7, 1802. He was carefully trained by his father to sketch animals from life, and began to exhibit in the Royal Academy when only thirteen, while at sixteen he attracted general attention by his *Fighting Dogs Catching Wind.* Until 1823 he contented himself with reproducing the natural expression of animals, but after that each of his animals represented some idea or sentiment, without losing its correctness or naturalness. Dogs and deer were his favorite and best subjects. He was elected an A. R. A. in 1826, and R. A. in 1830; was knighted in 1850, and elected president of the Royal Academy in 1866, which honor he declined. He died October 1, 1873. Among his most celebrated pictures are *The Cat's Paw, High Life and Low Life, The Challenge, Monarch of the Glen,* and *Deer Stalking.*

Landseer, THOMAS, elder brother of the two preceding artists, is one of the most distinguished engravers of the day. His finely-executed plate of Rosa Bonheur's *Horse-Fair* (1861), added greatly to the reputation he had already earned. Born about 1796; died 1880.

Landshut (*länt'shoot*), a town of Bavaria, on the Iser, 40 m. from Munich. The castle of Trausnitz, long the residence of the dukes of Bavaria, is supposed to have been originally a Roman station. During the Thirty Years' War, and the War of the Austrian Succession, *L.* was an important fortress, and the scene of many conflicts. *Pop.* 14,216.

Land'skip, *n.* An old form of *landscape* (*q. v.*). (Sometimes used in poetry.)

Land'-slide, *n.* A portion of a hill or mountain, or other elevated ground, which slips or slides down; also, the act of sliding down of such land.

Land'slip, *n.* A portion of land which, from some cause, has become detached from its original position on more or less elevated ground and slid to a lower level. Such changes are common in districts exposed to volcanic and earthquake disturbances, the earth-tremor which is apt to attend or precede the eruption of a volcano being at times sufficient to split off large portions of mountains, which slide down to the plain below. But this is not the only nor the most frequent cause of landslips, water being a more common agent in the phenomenon than fire. This element does its work in various ways, most usually perhaps by insinuating itself into minute cracks, which are widened or deepened through the expansive effect of freezing. A long continuation of this process may open the cracks so widely that a landslip becomes inevitable. In other instances, the strata may be very much inclined, and rest on a bed of clay or other impermeable substance. Here the water, which makes its way down through the pores of the rocks and is checked by the clay, softens the latter, making it slippery, the result being that the heavy mass above slides down to a lower level. Such a slide, on a large scale, took place in Dorsetshire, England, in 1839, as a consequence of an unusually wet season. A large mass of chalk and greensand slid over a slippery bed of clay into the sea. Similar instances were the destructive ones of the Rossberg, in Switzerland, in 1809, and that which overwhelmed the village of Elm, in Glarus, in 1881, destroying 200 of the inhabitants. At Zug, in 1887, a landslip took place which carried 27 houses, with 11 persons, into the lake. Landslips of a different nature have been produced in peat-mosses, through their thorough saturation by heavy rains, which caused them to burst their natural boundaries and pour down on a lower level. In 1772, the Solway Moss, swelled by rains, precipitated itself in a flood of black mud over 400 acres of cultivated fields. One of the most destructive of recent landslips was that which occurred at Naina Tol, a health resort in the Himalayas, in 1880. Part of the town was built on a sloping terrace of shale that overhung the lake, and which, saturated with heavy rains, suddenly slipped, burying many houses, and with them 40 Europeans and 100 to 200 natives, in the *débris.*

Lands'man, *n.; pl.,* LANDSMEN. One who lives on the land;—in contradistinction to *seaman.*

(*Naut.*) A raw, inexperienced sailor; a novice in seamanship; a green hand on shipboard.

Land'-snail, *n.* (*Zoöl.*) See HELICIDÆ.

Land'-spout, *n.* A tornado accompanied by a heavy down-pour of water; a water-spout on land.

Land'-spring, *n.* A spring of water bursting forth after heavy falls of rain

Land'-steward, *n.* A person who has the care or superintendence of a landed estate; a land agent.

Land'-tax, *n.* A tax assessed on real estate.

Land'-turn, *n.* A land-breeze.

Land'-waiter, *n.* See LANDING-WAITER.

Land'-surveying, *n.* Same as LAND-MEASURING (*q. v.*)

Land'-surveyor, *n.* See LAND-MEASURER.

Land'ward, *a.* In the direction of the land;—opposed to *seaward;* as, the *landward* set of a current.

Land'-warrant, *n.* In the U. S., a warrant or official instrument of conveyance authorizing a person to take ownership or possession of a tract of public land.

Landwehr (*länd'vār*), *n.* [From Ger. *land,* country, and *wehr,* defence.] In the Prussian States, and in Austria, the term applied to the militia, or defensive forces of the country. Many unsuccessful efforts were made by German sovereigns, during the wars of the 18th century, to organize bodies of troops which should be as cheaply raised as militia, and yet be serviceable in foreign war. Frederick the Great used such troops for garrison service. In Prussia every man who has served his three years, or a single year in certain cases, of lawful service in the standing army, belongs to the first class of the *L.* until his 30th year; and from that time until his 40th to the second class.

Land'-wind, *n.* A wind blowing from off the land; a land-turn.

Lane, *n.* [D. *laan,* an alley; Gael. *lann,* an inclosure, hedge, fence.] A narrow way or passage between houses, hedges, &c.—A narrow street or public way; an alley between houses; as Drury *Lane,* London.—A passage between lines of people standing on each side.

"The earl's servants stood ranged on both sides, and made the king a *lane.*—*Bacon.*

—A navigable channel in a field of ice.

—A Scotticism for alone; by one's self; as his *lane; i. e.,* himself alone.

Lane, EDWARD WILLIAM, the most eminent of English Arabic scholars, and of celebrity for his translation of the *Arabian Nights,* was born at Hereford, Sept. 17, 1801, and began his career as an engraver. But the need of a warmer climate took him to Egypt, with which country his later life became closely associated. His first visit gave rise to his *Manners and Customs of the Modern Egyptians,* whose accuracy and completeness make it still the standard work on the subject. His translation of the *Thousand and One Nights* followed in 1838–40, the first accurate rendition of the tales and still the standard library edition. His other works include *Arabian Scenery in the Middle Ages; Selections from the Koran,* and the *Arabic Lexicon,* the great work of his life, on which he toiled incessantly for 20 years. This work was instantly accepted throughout Europe as the supreme authority on the subject. He died before completing it, Aug. 10, 1876.

Lane, JOSEPH, an American general, born in North Carolina, 1801. In 1821, *L.* settled on a farm in Indiana, and, the next year, was returned to the legislature. His representative career thenceforward exteuded over 25 years. In 1846, on war breaking out with Mexico, *L.* resigned his senatorial seat, and volunteered as a private soldier. He was almost immediately appointed colonel, and then directly afterward received from President Polk a brigadier-general's commission. At the Battle of Buena Vista (where he was wounded), *L.* commanded the left wing of the Americans. Oct. 9, 1847, at the head of 3,000 men, he defeated General Santa Anna at Huamantla. On the 19th, he took Atlixco, losing only one man, while the enemy lost 500. Nov. 22, *L.* took the strongly-fortified town of Matamoras, with a large quantity of military munitions. He afterward took Orizaba. On the 24th. he defeated General Jarauta at Tehualtapan. At the conclusion of the war, *L.* was brevetted a major-general, and, in Aug., 1848, was appointed governor of Oregon Territory, from which office he was removed by President Taylor. In 1859, on the admission of Oregon into the Union as a State, *L.* represented it as U. S. Senator, and, in 1860, was nominated for the Vice-Presidency by the Democratic Convention at Baltimore. Died 1881.

Lane, in *Oregon,* a W. co., bordering on the Pacific Ocean; *area,* about 3,840 sq. m. *Rivers.* Willamette and Siuslau rivers. *Surface,* mountainous; *soil,* in some parts fertile. *Min.* Gold. *Cap.* Eugene. *Pop.* (1897) about 17,500.

Lane'-end, now **Long'ton,** a town of England, co. Stafford, 3 m. S.E. of Stoke. *Manuf.* Earthenware. *Pop.* (1897) 35,650.

Lanes'borough, in *Massachusetts,* a post-town and township of Berkshire co., about 5 m. N. of Pittsfield. *Pop.* (1897) 1,105.

Lanes'borough, in *North Carolina,* a village of Anson co., about 125 m. S.W. by W. of Raleigh.

Lanesborough, in *Pennsylvania,* a post-village of Susquehanna co., about 185 m. N.E. of Harrisburg.

Lanes'burg, in *Minnesota,* a township of Le Sueur co.

Lane's Creek, in *North Carolina,* enters the Rocky river about 12 m. N.W. of Wadesborough.

Lane's Prairie, in *Missouri,* a post-village of Maries co., about 40 m. S.E. of Jefferson City.

Lanes'ville, in *Connecticut,* a post-village of Litchfield co. *Pop.* (1897) 185.

Lanesville, in *Indiana,* a post-town of Harrison co., about 10 m. E.N.E. of Corydon.

—A village of Marion co., about 2 m. N.E. of Indianapolis.

Lanesville, in *Illinois,* a post-village of Saugamon co.

Lanesville, in *Louisiana,* a post-office of Webster par.

Lanesville, in *New York,* a post-office of Greene co.

Lanesville, in *Massachusetts,* a suburb of Gloucester.

Lanesville, in *Virginia,* a post-village of King William co., about 28 m. N.E. of Richmond.

Lan'franc, the first Norman archbishop of Canterbury, born at Pavia, 1005. Being an ecclesiastic of great learning and piety, and having distinguished himself by several public disputations on church subjects, he was invited by William of Normandy to take up his residence in that country, the Abbey of St. Stephen at Caen being offered for his acceptance. Complying with the invitation, Lanfranc removed in 1062 to Caen, where his learning and political wisdom strongly recommended him to William's regard and confidence; four years subsequently, when the duke obtained the crown of England, he installed Lanfranc archbishop of Canterbury, the cathedral of which city he rebuilt on a larger and much more splendid scale than any of the former buildings; he likewise founded two hospitals near his diocese, and was in all things a munificent patron of art and letters. Scarcely had he taken his seat, when he was involved in a vehement dispute with Thomas, archbishop of York, and the Pope in regard to the primacy —York, backed by Rome, maintaining that the dignity of the primacy was vested in the archbishop of York, and not the younger see of Canterbury. After much argument, the point was at length settled by the archbishop of York taking the title of "Primate of England," and Lanfranc that of "Primate of *all* England." Died 1089.

Lan'gate, *n.* (*Surg.*) A kind of linen swathe used in the binding of wounds.

Lang'don, in *New Hampshire,* a post-township of Sullivan co.

Lang'don, in *Kansas,* a post-township of Reno co.

Lang'don, in *North Dakota,* a post-village and township of Cavalier co.

Langeland (*lang'i-land*), an island of Denmark, in the Baltic, between Zealand, Laaland, and Funen; Lat. between 54° 43′ and 55° 20′ N., Lon. 10° 40′ and 11° E. *Length,* N.N.E. to S.S.W., 32 m.; average breadth, 2½ m. *Area,* 80 sq. m. It consists of a ridge of low hills, which are very fertile, and produce excellent grain crops. *Climate,* healthy. *Cap.* (1897) 19,880.

Langenbielau (*lan'gen-be-lou*), a town of Prussia, prov. Silesia, 33 m. S.W. of Breslau. *Manuf.* Linen, cotton, woollen fabrics, and sugar. *Pop.* (1897) 15,150.

Lang'ford, in *New York* a post-village of Erie co.

Lan'gite, *n.* (*Min.*) A sulphate of copper forming a crystalline crust on killas, from Cornwall.

Lang'land, or **Lang'ley,** WILLIAM, the author of *The Vision of Piers the Plowman,* was born about 1332. Of his life little is known, but his work has made him famous in literary history, and though it has great defects as a work of artistic poetry, its moral earnestness and energy, particularly in its invectives against injustice and wrong, the idleness and pride of the clergy, &c., have given it a permanent standing in English literature. The poem is alliterative in meter, and has the allegorical character of much of the literature of his day. We get vivid glimpses of the life of the poorer classes of the period, and some of the allegories, such as that of the glutton and sloth, are life-like in their realism. *L.* seems to have lived long in London, and to have become embittered by continued poverty. His last work, *Richard the Redeles,* shows that he was at Bristol in 1399.

Lan'gola, in *Minnesota,* a village of Benton co., about 18 m. N. by W. of Sauk Rapids.

Lan'grage, Lan'grel, *n.* (*Naut.*) A kind of shot formed of bolts, nails, and other pieces of iron, tied together, and forming a sort of cylinder which corresponds with the bore of the cannon from which it is discharged. It was used chiefly to destroy the masts and riggings of the enemy's ships. The term is now obsolete.

Langres (*langr'*), a town of France, dep. of Haute Marne, situated at an elevation of 1,408 feet above sea-level, 20 m. S.E. of Chaumont. It is noted for the fine quality of its cutlery, which is extensively manufactured. *Pop.* (1897) 9,245.

Langs'burg, in *Georgia,* a village of Camden co., 6 m. S. of Waynesville.

Lang'-settle, *n.* In the N. of England, a long bench or settle, used as a seat.

Lang'-syne, *adv.* [Scot. *lang,* for long, and *syne,* since.] Long ago; in the olden time; former days. See AULD LANG-SYNE.

Language (*läng-gwij*), *n.* [Fr. *language,* from Lat. *lingua,* the tongue.] That which is spoken by the tongue; the expression of ideas and their various relations by words or significant articulate sounds for the communication of thoughts.

—The word *L.*, in a restricted sense, is also used to express words duly arranged in sentences, written, printed, or

engraved, and exhibited to the eye. — The speech or mode of expression of ideas peculiar to a particular people, race, or nation; dialect; idiom.

"Under the tropic is our *language* spoke."—*Waller.*

—Characteristic mode of parlance, or manner of written expression peculiar to an individual; style; diction; as, poliehed *language*, coarse *language*, &c. — The inarticulate sounds uttered by irrational animals, when expressing their feelings or wants.

"And with no *language* but a cry."—*Hood.*

—Any manner or method of expressing thoughts or sentiments by association with objects connected therewith; as, the *language* of flowers.

—A nation, race, or people, as exemplified by their speech.

Lan'guage, *v. a.* To express or state in language or articulate speech.

Lan'guaged, (*lăng'gwajd,*) *a.* Possessing a language, or languages: expert or versed in speech; — chiefly used poetically

"He . . . many-*languaged* nations has surveyed."—*Pope.*

Lan'guageless, *a.* Without speech or language; mute.

Lan'guage-master, *n.* A professional teacher of languages.

Lan'guage of Flowers, *n.* The name given to an emblematical mode of expressing and interchanging ideas by means of flowers. The origin of this practice was doubtless suggested by the natural characteristics of certain flowers. "Lovely as the rose," "Fair as the lily," and "Modest as the violet," are phrases that seem to come naturally into use. Acting upon this principle, several elegant little works have been drawn out, in which nearly every known flower is tabularly arranged, with the object which it is supposed to symbolize placed beside it. Among the best known are the carnation, signifying fascination; the dahlia, instability; the rose, love; the geranium, gentility; the forget-me-not, remembrance; the fuchsia, elegance: and the ivy, friendship.

Langued, (*lang'd,*) or **Lampasse,** *a.* (*Her.*) An animal whose tongue is of a different color from his body is said to be *langued* of that color. When a beast or bird is represented without teeth or claws, this is expressed in blazon *sans langue and arms.*

Lan'gue d'Oc, and **Lan'gue d'Oil.** (*French Hist.*) In the 11th cent., two languages were spoken in France; in the S., the Provençal or Romance, called *langue d'Oc;* and in the N., the *langue d'Oïl*, or *oui* — because in the former the word oc (probably from the Teutonic *auch*) was used for *yes*, and in the latter, *oïl* or *oui*, (Teutonic *wohl.*) The use of the langue d'oc began to decline towards the end of the 13th century.

Languedoc, (*lan'ge-dok.*) [So called from being the country where the *langue d'oc* was spoken.] An old prov. in the south of France, extending on the E. to the Rhone, and on the W. to the Garonne and the bordere of Gascony, with Toulouse for its capital. It now forms the depts. Aude, Ardèche, Gard, Hérault, and Tarn, with parts of Haute-Loire, Haute-Garonne, and Tarn-et-Garonne.—The *Canal of Languedoc* connects the Garonne, near Toulouse, with Lake Thau, in the Mediterranean. It is over 150 m. in length.

Languen'te, *adv.* [It., from *languire*, to languish.] (*Mus.*) In a soft and languishing manner.

Languet, (*lăng'gwet,*) *a.* [Fr. *languette.*] Anything cut or fashioned in the form of a tongue. (R.)

Languid, (*lăng'gwid,*) *a.* [Lat. *languidus*, from *langueo*, to be faint or weary; allied to Gr. *langgazō*, *langgeō*, to slacken, and to Eng. *lag.* See LAG.] Faint; weary; weak; feeble; inert; heavy; dull; flagging; drooping; indisposed to effort or exertion through feebleness or exhaustion; without animation, spirit, or activity; as, a *languid* condition of body.—Sluggish; slow; tardy in progression; as, "a *languid* motion."—*Bentley.*

—Superinducing or betokening weakness or lassitude; as, *languid* ease, a *languid* market.

Languid'ly, *adv.* Feebly; slowly; dilatorily; droopingly.

Languid'ness, *n.* State of being languid; languor; lassitude; weakness from exhaustion of strength; indisposition to effort or activity; dullness. — Sluggishness; tardiness; slowness.

Lan'guish, *v. n.* [Fr. *languir;* Lat. *languesco*, from *langueo.*] To be, or become, faint, weary, or feeble; to lose strength or animation; to become dull, inert, or spiritless; to be or grow heavy; to pine.

"I . . . *languish'd* under the displeasure of an inexorable father." *Addison.*

—To droop; to fade; to wither; to lose the vegetating power, as plants. — To grow dull; to be no longer active or vigorous; to become deteriorated; as, business *languishes.* — To look with softness or tenderness; to glance amorously; as, a *languishing* lover.

"With *languishing* regards, and bending head."—*Dryden.*

—*n.* Act of languishing or drooping; languishment. — A glance of tenderness; a soft, amorous look.

"And the blue *languish* of soft Allia's eye."—*Pope.*

Lan'guisher, *n.* One who pines or languishes.

Lan'guishing, *a.* Having a languid appearance.

—*n.* Feebleness; pining.

Languish'ingly, *adv.* Feebly; weakly; inertly; slowly; tediously.

—Amorously; with pining tenderness; as, she looked at him *languishingly.*

Languish'ment, *n.* Act of languishing; state of pining or dissolving in languor.

"Years I have wasted in long *languishment.*"—*Sir P. Sidney.*

—Tenderness of look; softness of mien or manner.

Languor, (*lăng'gwur,*) *n.* [Lat. *langueur.*] Heaviness; dullness; lassitude of body; feebleness; weariness; laxity of the bodily system.

"My heart's deep *languor*, and my soul's sad tears."—*Shaks.*

—Intellectual dullness; enfeebled state of the mind; listlessness. — Laxity; tenderness; softness.

"Diffusing *languor* in the parting gales."—*Pope.*

Lan'guorous, *a.* [Fr. *langoureux.*] Heavy; tedious; calculated to inspire melancholy; as, "*languorous* hours."—*Tennyson.*

Lang'worthy, In *Iowa*, a post-village of Jones co., abt. 47 m. S.W. of Dubuque.

Laniard, Lanyard, (*lan'yard,*) *n.* [Fr. *lanière.*] (*Naut.*) A short piece of strong rope or cord, used to fasten and secure shrouds, stays, buoys, hammocks, &c., on board ship.

Laniari'form, *a.* [From Lat. *laniarium*, a canine tooth, and *forma*, shape.] Having the shape or form of a canine tooth.

Lani'ary, *n.* [Lat. *laniarium.*] A shamblee; a place where slaughter is carried on. — One of the canine teeth.

Lan'idæ, *n. pl.* (*Zoöl.*) The Shrike family, comprising Insessores, birds with a strong compressed bill, the tip abruptly hooked, both mandibles distinctly notched, the upper with a distinct tooth, the lower with the point bent upward, and the tarsi longer than the middle toe,

Fig. 1512 — THE BUTCHER-BIRD, OR GREAT NORTHERN SHRIKE.

and strongly ecutellate. This family comprises the *Shrikes* and the *Vireos.* The larger and stronger species, among which is the Great Northern Shrike (Fig. 1512), described under *Collyrio* (q. v.), are predatory, and attack, slay, and devour smaller birds; whence the name *butcher-bird* given to them.

Lanier, Lanyer, (*lan'yer,*) *n.* [Fr. *lanière.*] The thong of a whip; a lash made of leather. (Used in some parts of England.) — A leathern strap used to fasten pieces of armor together.

Lanier', in *North Carolina*, a post-office of Onslow co.

Lanier, in *Texas*, a post-village of Cass co.

Lanier, in *Ohio*, a twp. of Preble co. *Pop.* (1897) 1,858.

Laniferous, *a.* [Fr. *lanifère;* from Lat. *lana*, wool, and *ferre*, to bear.] Producing wool.

Lanifical, *a.* [Lat. *lanificus.*] Working in wool.

Lanigerous, (*-nij'e-rŭs,*) *a.* [It. *lanigero.*] Bearing or yielding wool.

Lani'idæ, *n. pl.* (*Zoöl.*) See LANIDÆ.

Lank, (*langk,*) *a.* [A. S. *hlanca;* D. *slank*, slender, thin: Ger. *schlank*, slender, thin.] Loose or lax; not spread or distended out; easily compressible; not plump, or stiff and firm by rotundity. — Spare; meagre; lean; slender; thin to tenuity. — Drooping; languid; faint. *Milton.*

Lank'ly, *adv.* Thinly; loosely; laxly; in a lank manner.

Lank'ness, *n.* State or condition of being lank or tenuous; laxity; leanness; flabbiness; slenderness; paucity of flesh or substance; — the counterpart of *plumpness.*

Lank'y, *a.* Slim; slender; lank in a minor degree; as, a *lanky* youth.

Lannahas'see, in *Georgia*, a village of Stewart co., abt. 18 m. E. of Lumpkin co.

Lan'ner, Lan'neret, *n.* [Fr. *lanier*, from Lat. *laniarius.*] (*Zoöl.*) A species of falcon, *Falco lanarius* (Fig. 1513), very common in

Fig. 1513. — THE LANNER, (*Falco lanarius.*)

France; also found in Ireland, and much valued in the days of falconry for flying at the kite. In the language of falconry, the female was called a *Lanner*, and the male, being smaller, a *Lanneret.*

Lan'nes, JEAN, DUC DE MONTEBELLO, and marshal of France, b. at Lectoure, 1769. He began life as a dyer, but at the commencement of the revolutionary war, in 1792, he entered the army, in which he was rapidly promoted. In 1795 he allied himself with General Bonaparte, and served with him at Paris against the Sections. He followed Bonaparte to Italy, and greatly distinguished himself at Millesimo, Lodi, and Arcola. In 1798 he took part in the expedition to Egypt, was named general of division, and especially displayed his impetuous courage at Aboukir. He returned to France with Napoleon, and contributed to the success of the campaign of Marengo. In 1801 he was sent as ambassador to Lisbon, but he had not the finesse of a diplomatist, and though he gained the points insisted on by the first consul, he was recalled in 1804. He was then created marshal, and, soon after, Duke of Montebello. *L.* next served, and with great distinction, in the campaign of Austerlitz; also, in Prussia, Poland, and Spain, conducting, in 1809, the famous siege of Saragossa. He was then called upon to serve in the campaign against Austria, and was mortally wounded at Essling, May 22, 1809, dying 9 days later, after very great suffering. Napoleon felt the loss of *L.* very keenly. His son was created a peer of France in 1815.

Lannion, (*lan'ne-ōne,*) a town of France, dept of Côtes-du-Nord, on the Guer, 35 m. W.N.W. of St. Brieuc. *Manuf.* Linen fabrics, and has an active trade in agricultural produce. *Pop.* (1897) 5,940.

Lanornie (*la-no-rā'*), a village of Berthier co., prov. Quebec, about 36 m. N. of Montreal.

Lanos. [Sp. *llanos.*] The same as PAMPAS (*q. v.*).

La Noue, FRANÇOIS DE, one of the most distinguished French Calvinist captains of the 16th century, born 1531, distinguished in the principal action fought with the League. He was killed at the siege of Lamballe, 1591.

Lan'quet, *n.* [Fr.] (*Mus.*) A piece of metal which separates the body of an organ-pipe from its foot.

Lans'dale, in *Pennsylvania*, a post-borough of Montgomery co., 22 m. N. of Philadelphia on the P. & R. R.R. *Pop.* (1897) about 2,100.

Lan'sing, in *Iowa*, a city, the former cap. of Allamakee co. *Pop.* (1895) 1,566.

Lansing, in *Michigan*, a thriving city of Ingham co., cap. of the State, on Grand river, 85 m. N.W. of Detroit. The State Reform School and State Agricultural College are situated near Lansing. *Pop.* (1897) about 16,000.

Lansing, in *Minnesota*, a post-township of Mower co., about 5 m. N. of Austin.

Lansing, in *New York*, a township of Tompkins co.

Lansing, in *Wisconsin*, a village of Outagamie co., about 125 m. N.N.E. of Madison.

Lan'singburg, in *New York*, a suburb of Troy, in Rensselaer co., on the Hudson river, about 10 m. above Albany; has very extensive manuf. of brushes, oil-cloth, collars, cuffs, and shirts. *Pop.* (1897) about 14,500.

Lan'singville, in *New York*, a post-village of Tompkins co., about 12 m. N. of Ithaca.

Lan'sium, *n.* (*Bot.*) A genus of plants, order *Meliaceæ*, inhabiting the East Indian Archipelago. They yield fruits which are much esteemed, and known under the names of the *langsat* or *lanséh*, and the *ayer-ayer.*

Lan'squenets, *n. pl.* [Ger. *lanzknecht*, from the *lance* or pike which they carried.] (*Mil.*) The name of the first infantry raised by the emperor Maximilian to confront that of the Swiss, towards the end of the fifteenth century. The lanzknechts were very irregularly armed; the greater part with pikes, but certain companies in every division had muskets. They were raised by voluntary enlistment, and their leaders passed with little reluctance into the service of any power which was willing to pay them. This infantry played a conspicuous part in the wars of Italy, in the first half of the sixteenth century, after which the name fell into disuse.

(*Games.*) A game of chance at cards. (Sometimes called, vulgarly, *lambskinnet.*)

Lant, *n.* Urine. (An English provincialism.)

—*v. a.* To moisten or mix with urine. (Prov. Eng.)

Lan'tern, (often written LANTHORN,) *n.* [Fr. *lanterne*, from Lat. *lanterna, laterna*; Gr. *lamptēr*, a lamp, from *lampō*, to shine. See LAMP.] A common contrivance used for carrying a lamp or candle in, consisting of a case or vessel made of tin, with sashes of some transparent substance, such as horn or glass. *L.* are first spoken of by Theopompus, a Greek comic poet, and Empedocles of Agrigentum. *L.* were used by the ancients in augury. They were also carried before troops on the march by night, being then borne on the top of pikes, and so constructed as to throw lights only behind them. It is remarkable that the only trace of a *L.* which the Egyptian monuments offer, is that contained in our Fig. 1514. It did not probably differ sensibly from those of which it is spoken in St. John xviii. 3, where the

Fig. 1514. EGYPTIAN LANTERN.

party of men which went out of Jerusalem to apprehend Jesus in the garden of Gethsemane is described as being provided "with *lanterns* and torches." — *Dark L.* are provided only with a single opening, which can be closed up when the light is required to be hidden, or opened when there is occasion for its assistance to discover some object. (See BULL'S-EYE.)

(*Arch.*) A small structure on the top of a dome, or in other similar situations, for the purpose of admitting light, promoting ventilation, or for ornament, of which that on the top of the Capitol at Washington may be referred to as an example. In Gothic architecture the

Fig. 1515. — ST. HELEN'S LANTERN, (York, England.)

term is sometimes applied to *louvres* on the roofs of halls, &c., but it usually signifies a tower which has the whole height, or a considerable portion of the interior, open to view from the ground, and is lighted by an upper tier of windows; lantern-towers of this kind are common over the centre of cross churches, as at York, England, (Fig. 1515.)

Lantern, (*Magic.*) See MAGIC LANTERN.

Lan'tern, *v. a.* To provide or furnish with a lantern; as, to *lantern* a body of watchmen.

—To put to death by suspension from a lamp-post.

Lanterns. (Feast of.) A celebrated feast held in China on the 15th day of the first month of the year. It derives its name from the vast number of lanterns which are hung out of the houses and in the streets, the number of which has been stated to have exceeded even 200,000,000. The lanterns used are often of great value, some being estimated at 2,000 crowns. They are richly ornamented with gilding, painting, japanning, sculpture, &c. Some of them are of great size, reaching nearly 30 feet in diameter, and are so constructed as to resemble halls or chambers; hence, two or three together would make an elegant house. In this way the Chinese may be said to live, to receive visits, dance, and act plays in a lantern. When lighted up with torches, these lanterns have a beautiful effect at a distance. Besides the large lanterns, there are also a vast number of smaller ones, which usually consist of six faces or lights, each about four feet high and one and a half broad, framed in wood, finely gilt and adorned. Over these they stretch a fine transparent silk, painted with flowers, trees, and other objects: the colors are very vivid, and, when the lanterns are lighted up, the effect is lively and picturesque.

Lan'tern-fly, *n.* (*Zoöl.*) See FULGORIDÆ.

Lan'tern-jawed, (*-jawd,*) *a.* Having a long, lank visage; thin in the chaps.

Lan'tern-jaws, *n. pl.* Long, lank, hollow jaws; — hence, a thin, wearened visage.

Lan'tern-pin'ion, Lan'tern-wheel, *n.* (*Mach.*) A kind of pinion having, instead of leaves, cylindrical teeth or bars, known as *trundles*, or spindles, in which the teeth of the main wheels act. The ends of the trundles being fixed in two parallel boards or plates, the lantern-wheel has the form of a box, or a lantern, whence the name; it is much used in horology, but is now seldom employed in mechanics, for which purposes toothed wheels have been substituted for it.

Lantha'nium, LANTHANUM, LANTANIUM, LANTANUM, *n.* [Gr. *lanthenein*, to lie concealed.] (*Chem.*) An extremely rare metal, found in small quantities in the minerals *cerite*, *yttro-cerite*, and one or two more, in company with cerium and didymium. It forms a gray, infusible, non-volatile powder, that becomes lustrous when burnished. It forms only one oxide, LaO, which is a white powder, soluble in acids, and in the salts of ammonia, from which it expels the alkali. Its salts have a sweet, astringent taste, and are unimportant. Lanthanum was discovered by Mosander, 1839. *Equiv.* 138. *Symbol*, La.

Lan-Tsze, LAO-TSE, LAO-TSEU, or LAO-KIUN, a Chinese philosopher, who flourished in the 6th cent. B. C., and who is regarded as the founder or reformer of the Taoist Sect. See TAOIST.

Lantz Mills, in *Virginia*, a post-vill. of Shenandoah co.

Lanu'ginose, Lanu'ginous, *a.* [Lat. *lanuginosus*; Fr. *lanugineux.*] (*Zoöl.* and *Bot.*) Downy; covered with soft hair; floesy.

Lan'yard, *n.* (*Naut.*) See LANIARD.

(*Mil.*) A piece of strong cord, measuring 12 feet, and having an iron hook at one end. It is employed with a friction-tube in the firing of heavy guns.

Lanzarote, (*lan-za-ro'tai,*) the most N.E. of the Canary Islee, (*q. v.*); *area*, 300 sq. m. It is of volcanic origin and very fertile, yielding fine fruits, barilla, and orchil. *Cap.* Teguise. *Pop.* 19,800.

Laocoon, (*lai-ŏk'o-ŏn,*) *n.* (*Fine Arts.*) A celebrated Greek statue (Fig. 225), the production of the Rhodian sculptors, Agesander, Polydorus, and Athenodorus, who flourished in the reign of Titus, 79–81, was found among the ruins of the baths of Titus at Rome in 1506, and is preserved in the Vatican. The subject of the group is the death of the Trojan priest, Laocoon, and his two sons, by serpents, sent against them by Minerva (*Æneid*, ii. 200). It was carried to Paris, but restored to Rome in 1814.

Laodicea, (*lai'o-di-se'a.*) (*Anc. Geog.*) The name of several towns of Asia, the most important of which was a city of ancient Phrygia, near the river Lycos, so called after Laodice, queen of Antiochus Theos, its founder, built on the site of an older town named Diospolis. It was destroyed by an earthquake during the reign of Tiberius, but rebuilt by the inhabitants, who were very wealthy. Its luxury in the early times of Christianity is attested by the severe rebuke addressed to its inhabitants in the Apocalypse. It fell into the hands of the Turks in 1255, was again destroyed in 1402, and is now a heap of uninteresting ruins, known by the name of Eski-Hissar. Art and science flourished among the ancient Laodiceans, and it was the seat of a famous medical school. The number of Jews who were settled here at the rise of Christianity will account for its importance in the primitive history of the church. An important ecclesiastical council, the First Council of Laodicea, was held here in 363, which adopted resolutions concerning the canon of the Old and New Testaments, and referring to ecclesiastical discipline. A second council, 476, condemned the Eutychians.

Laodice'an, *a.* [From *Laodicea*, a city of Phrygia.] Supine, indifferent, or lukewarm in religious matters; — a quality characteristic of the people of ancient Laodicea.

Laodice'anism, *n.* Absence of religious zeal or fervor.

Laomedon, (*lai-om'e-don,*) son of Ilius, king of Troy, was father to Priam and Hesione. He built the walls of Troy, assisted by Apollo and Neptune. When the walls were finished, Laomedon refused to reward the labors of the gods, and, soon after, his territories were laid waste by the sea, and his subjects visited by a pestilence. Sacrifices were offered to the offended divinities, but nothing could appease the gods, according to the oracle, save annually to expose to a sea-monster a Trojan virgin. This victim was decided by lot, and when the calamity had continued for five or six years, the lot fell upon Hesione, Laomedon's daughter; but Hercules came and offered to deliver the Trojans from this calamity, if Laomedon would reward him with a number of fine horses. The king consented; but when the monster was destroyed, he refused to give them. Hercules was obliged to besiege Troy, and take it by force of arms. Laomedon was put to death, after a reign of 29 years, and his son Priam placed upon the throne.

Laon, (*la-on',*) a town of France, dept. Aisne, 20 m. N.E. of Soissons, 80 N.E. of Paris. *L.* has a large Gothic cathedral, with 5 lofty towers, consecrated in 1114; and a public library of over 20,000 vols. *Manuf.* Coarse cloth, leather, nails, and earthenware. Napoleon I. sustained a check at this place, from the Allies under Blücher, March 9 and 10, 1814. The French lost 6,000 men and 46 cannon in the conflict, and were compelled to retreat to Soissons. The Allies lost about 4,000 men.

Lao'na, in *Illinois*, a post-village and township of Winnebago county, about 110 m. W.N.W of the city of Chicago.

Laona, in *New York*, a post-village of Chautauqua co., about 300 m. W. of Albany.

La'os, in India. See SHAN STATES.

Lao-Tse'. See LAN-TSZE.

Lap, *n.* [A. S. *læppe*, a hem; D. *lap*, a shred; Ger. *lappen*, a flap, a rag. Allied to FLAP, *q. v.*] That which flaps or hangs loose; — hence, the loose part of a coat; the skirts of a garment. — The part of a person's clothing that spreads over the knees when the wearer sits down; also, the portion of a person's body thus covered.

"I'll make my haven in a lady's *lap*." — *Shaks.*

—That portion of any fixed body which lies over the edge of another; as, the *lap* of a piece of clinker-work. — A wheel used by cutters in polishing; a glazer.

—*v. a.* [Probably from the root of ENVELOP; Fr. *envelopper.*] To infold; to fold up; to lay over and over; as, to *lap* a roll of cloth. — To wrap or twist round.

"About the paper I *lapp'd* a slender thread of black silk." — *Newton.*

—To involve; to infold; to circumvest. — To place one thing partly over another; as, to *lap* tiles on a roof.

(*Mach.*) To cut or burnish with a lap, as precious stones, porcelain, cutlery, &c.

—*v. n.* To be spread or laid; to be turned over or upon.

"The upper wings are, where they *lap* over, transparent." *Grew.*

To lap boards, tiles, shingles, &c., to lay one partly over the other.

Lap, *v. n.* [A. S. *lappian*; D. *slabben*; Dan. *labe*; Fr. *laper*; Gr. *laptō*, to lick up, to suck greedily; allied to Lat. *lambo* — Sansk. *lih*, to lick.] To lick up; to take up food or liquor with the tongue; to feed or drink by sucking in with the tongue; as, a dog *laps* water. — To make a gurgling sound, like that which accompanies the taking up of drink with the tongue.

"I heard . . . the waters *lapping* on the crag." — *Tennyson.*

—*v. a.* To lick up with the tongue; to take into the mouth by sucking.

"They'll take suggestion as a cat *laps* milk." — *Shaks.*

Lap'ageria, *n.* [Named after Josephine Lapagerie, the first wife of Napoleon I.] A beautiful genus of twining undershrubs from Chili, belonging to the *Philesiaceæ*. *L. rosea*, with its great bell-shaped, rosy-crimson, lily-like flowers, is one of the most gorgeous creepers introduced for the ornamentation of our greenhouses.

Laparocele, (*lap'a-ro-sēl.*) *n.* [Gr. *laparokēle.*] (*Med.*) Rupture through the loins; lumbar hernia.

La Paz, a town of Mexico, cap. of Lower California, in about Lat. 24° N., Lon. 110° W.

La Paz, a W. dept. of Bolivia, adjoining Peru, between Lat. 14° and 16° S., and Lon. 67° and 70° W; *area*, abt. 40,000 sq. m. It extends over the N. half of the Bolivian portion of the valley of the Desaguadero, and comprises those valleys of the Cordilleras, through which the head streams of the Beni (a principal affluent of the Amazon) flow. It is not much cultivated, although the lower parts of the valleys are very fertile. Lake Titicaca forms a part of the W. boundary. *Pop.* (1897) 648,400. —A town, cap. of the above department, about 125 m. N.W. of Sucre, and 12,226 feet above the sea-level. It was founded in 1548, and is the principal emporium of Bolivia. *Pop.* (1897) 81,250.

La Paz, in *Arizona*, a village, the former cap. of Yuma co., on the Colorado river, about 150 m. above the mouth of the Gila river. Gold and quicksilver are found in this vicinity.

Lap'-dog, *n.* A little dog, fondled in the lap by ladies; a pet dog; a poodle; a King Charles spaniel.

"One of them made his court to the *lap-dog*, to improve his interest with the lady." — *Collier.*

Lapeer', in *Michigan*, a S.E. co.; *area*, about 660 sq. m. *Rivers.* Flint and Belle rivers, and Kearsley, Farmer's, and Mill creeks. *Surface*, undulating; *soil*, in some parts fertile. *Cap.* Lapeer. *Pop.* (1894) 28,874.

—A thriving city, the cap. of Lapeer co., on Flint river, about 57 m. N. by W. of the city of Detroit. *Pop.* (1897) about 3,150.

Lapeer, in *New York*, a village of Cortland co.

—A township of Cortland co.

Lapel', *n.* [From *lap.*] That part of a man's coat which laps over the facing.

Lapelled, (*lapĕl'd,*) *a.* Having lapels, as a coat.

La Pérouse, JEAN FRANÇOIS GALAUP DE, (*pe-roose',*) a French navigator, B. at Albi, 1741. After serving as captain in the French navy, with much distinction, he was sent by Louis XVI., in 1785, on a voyage of discovery, — sailed with 2 frigates from Brest, and visited the coasts of Tartary, of Japan, and of New Holland, when, in 1788, he ceased to be heard of. Several expeditions were dispatched to discover traces of him; but in vain. In 1827, however, the wreck of his vessels was observed by Captain Dillon, at one of the Vanikoro islands. In 1828, a French captain visited the place, and discovered that La Pérouse and his men had been wrecked among the reefs surrounding the island.

Lap'ful, *n.*; *pl.* LAPFULS. As much as the lap can contain.

Lap'ham, in *New York*, a post-office of Clinton co., about 10 m. S.W. of Plattsburg.

Lap'hamville, in *Michigan*, a village of Kent co., about 50 m. W. by N. of Lansing.

Lapida'rian, *a.* Recorded on stone; as, a *lapidarian* inscription.

Lapida'rious, *a.* [Lat. *lapidarius.*] Containing or consisting of stones.

Lap'idary, *n.* [Fr. *lapidaire*; Lat. *lapidarius* — *lapis* = Gr. *lāas*, a stone.] One who cuts, polishes, and engraves gems or precious stones. — A dealer in precious stones. — A virtuoso or connoisseur in the nature and kinds of gems or precious stones. (Sometimes called *lapidist.*)

—*a.* Relating or belonging to the art of cutting stones.

L. Style. That style which is suitable for mortuary memoriale.

L. Work. (*Arts.*) The employment of the lapidary consists in cutting and polishing gems and precious stones, and any description of hard mineral substance which may be used for ornamental purposes. *L. W.* is entirely performed by the friction of small metal or wooden wheels, which revolve with great rapidity, being frequently driven by means of a small steam-engine. For cutting gems and stones, the wheels are made of iron, and have a sharp edge, to which diamond or emery powder, moistened with water, is applied during the operation; but for polishing the same, wheels made of softer metal, or wood, are used, the edges of the wooden wheels being sometimes coated with buff-leather; but when the wheels are without a coating of leather, the stone is frequently held against the side, instead of the edge. Gems and precious stones differ greatly from each other in hardness, and require a different mode of treatment accordingly, although the means used for cutting and polishing are the same in all cases. The softest substances that are cut by the lapidary are alabaster, mother-of-pearl, coral, malachite, and glass. The emerald, agate, garnet, amethyst, opal, topaz, carbuncle,

and many kinds of ornamental stones, are considerably harder than the substances that have just been mentioned, but not so hard or difficult to cut as the diamond, sapphire, and ruby.

Lapidescence, (*-ĕs'enz,*) *n.* [Lat. *lapidesco*, to turn to stone.] The process of hardening into stone or a stony substance. — A stony concretion.

Lapides'cent, *a.* [Lat. *lapidescens.*] Growing or turning to stone; that has the quality of converting bodies into petrifactions.

Lapidific, Lapidifical, *a.* [Lat. *lapis, lapidis*, stone, and *facere*, to make.] Converting into stone.

Lapidifica'tion, *n.* Act of lapidifying; process or operation of forming or converting into stone or a stony substance.

Lapid'ify, *v. a.* [Fr. *lapidifier* — Lat. *lapis*, and *facio*, to make.] To turn into stone.

—*v. n.* To become stony; to petrify.

Lap'idist, *n.* Same as LAPIDARY, *q. v.*

Lapilla'tion, *n.* Act of petrifying; also, state of being stony.

Lapil'li, *n.* [Lat. *lapillus*, dim. of *lapis.*] Volcanic scoriæ in the form of small stony particles.

Lap'is, *n.; pl.* LAP'IDES. [Lat.] A stone.

Lap'is Infernal'is, *n.* (*Chem.*) Fused nitrate of silver; — often called *lunar caustic.*

Lap'is Lazu'li, *n.* [Lat. *lapis*, and Arab. *azul*, heaven.] (*Min.*) A well-known mineral of an ultramarine or azure-blue color, formerly much used for the production of the pigment known as ultramarine. It varies considerably in composition, according to the locality in which it is found. It may be described chemically as a silicate of alumina and lime, colored with variable amounts of iron and sulphur. Since the introduction of artificial ultramarine, it is principally employed for ornamental purposes. — See ULTRAMARINE.

Lap'is Lydius, *n.* (*Min.*) The Lydian stone, a silicious slate, used as a touchstone for trying the quality of gold and silver by the color of the streak.

Lap'iths, *n. pl.* [Gr. *Lapithai.*] In mythical geography, a people of Thessaly, chiefly known to us from their fabled contests with the Centaurs. The battle between the Centaurs and the *L.* has been described by Hesiod and Ovid with great minuteness.

Laplace', PIERRE SIMON, MARQUIS DE, a celebrated French mathematician and astronomer, b. at Beaumont-en-Auge, near Honfleur, 1749, where, at the age of 17, he became professor of mathematics in the military school. He obtained letters of introduction to the celebrated philosopher D'Alembert, and went to Paris with the view of seeking an interview with him; but finding no notice taken of his letters, he wrote a short paper on some points of mechanical philosophy which immediately procured for him the attention to his claims that he desired. D'Alembert sent for him, and, about 1769, had him appointed professor of mathematics at the Paris Military School. By his treatises, memoirs, and larger works, *L.* rapidly obtained the reputation of the greatest living mathematician since Newton. Napoleon, when First Consul, appointed him minister of the interior; but as a politician he was very unsuccessful, and he was in a short time removed to the presidentship of the *Sénat Conservateur.* Napoleon afterwards related of his minister, that, "a mathematician of the highest rank, he lost not a moment in showing himself below mediocrity as a minister. He looked at no question in its true point of view. He was always searching after subtleties. All his ideas were problems; and he carried the spirit of the infinitesimal calculus into the management of business." He was created a count by Napoleon, and a marquis by Louis XVIII. His principal works were the *Mécanique Céleste*, the *Analytical Theory of Probabilities*, and an *Essay on Probabilities.* A complete edition of his writings was published by the French government in 1843. It is quite impossible, in any short notice of the life of *L.*, to convey a proper idea of the extent and value of the great *Mécanique Céleste.* To enumerate the bare contents thereof would require several pages. That inestimable contribution to science contained 4,000 quarto pages, and, it is said, might easily be expanded to thrice that number. The intention of the work was to deduce, from the discoveries of the great astronomers who had preceded *L.*, a complete and harmonious system, and to perfect the marvellous work commenced by Newton in his discovery of the law of gravitation. He subsequently wrote his *Exposition du Système du Monde*, as an explanation of what was abstruse in his *Mécanique.* The Nebular Theory of the origin of the solar system, the most popular and striking of *L.*'s contributions to astronomical science, maintains its place in spite of later hypotheses, and seems strengthened by every new discovery concerning the movements and relations of the planets. Few will hesitate to admit that *L.* was the greatest astronomer since Newton. Died March 5, 1827.

Lap'land, the most N. country of Europe, belonging partly to Russia, and partly to Sweden, between Lat. 64° and 71° N., and Lon. 10° and 42° E.; bounded N. by the Arctic Ocean, E. by the White Sea, S. by Sweden and Finland, and W. by the Atlantic Ocean; *area*, 150,000 sq. m., about two-thirds of which belong to Russia. — *Phys. Geog.* That part of *L.* which lies along the N. shore of the Gulf of Bothnia is an extensive plain, abounding in immense forests of spruce and Scotch fir; but at the distance of 80 m. from the sea, the ground becomes gradually elevated, and culminates in lofty mountains, composed chiefly of primitive and transition rocks, very rich in copper and other metallic ores. These central mountains are the highest in *L.*, and between the Lat. of 67° and 68° 30′, rise to a height of from 5,500 to 6,200 feet, which, in this hyperborean region, is 2,700 feet above the limit of perpetual congelation. The ranges continue all the way to the N. Cape, but decline gradually in altitude.—*Rivers.* The principal rivers are the Tornea, with its affluents, and the Kemi, Lulea, and Pitea, all emptying into the Gulf of Bothnia; with the Tana and Alten, which disembogue into the Arctic Ocean. All these, like the rivers of Switzerland, are comparatively small in winter, and become mighty streams in summer, on the melting of the snows. This country abounds with lakes, some of which are of considerable size, as for instance, that of Enare, or Indiager, in Russian territory.— *Clim.* The climate of *L.* is noted for extreme coldness; but, in fact, it is milder than that of any other region under the same parallel. The coasts of Norwegian *L.*, and Finmark, are free from ice early in May, whereas the Sea of Siberia is never open till the end of July. The climate of one part of the country also differs very much from that of another. In the maritime districts the temperature is pretty uniform; the winters are not severe, but the summers are raw and foggy; while, in the interior, the winter is intensely cold, but the summer-heats are steady and fructifying. The mean annual temperature at the N. Cape (Lat. 71° 11′ 30″) is 6° higher than at Enontekis in the interior (in Lat. 68° 30′). Yet, at the latter the thermometer rises in July to 64°, while at the Cape it seldom reaches 50°. In both, the summer begins in May and ends in September, but in the valleys, among the mountains, corn ripens in the short space of three months. The sun being so many hours above the horizon, the heat is then intense, and the clouds of insects are exceedingly troublesome. The cold of winter, on the contrary, is frequently so intense as to freeze brandy or spirits of wine; and the rivers in the interior are covered with ice to the depth of several feet. Towards the N., the sun remains for many weeks below the horizon in winter, and in summer is as long without setting. During the long night of winter, however, the darkness is relieved by the brightness of the moon and stars, and the vivid coruscations of the aurora-borealis. The twilight is also such that during several hours each day, it is possible to read without a lamp or candle. — *Veg. Econ.* The vegetable productions of the maritime and mountainous districts differ as widely as the climate. In the low lands, particularly where skirting the Gulf of Bothnia, are large forests of spruce, Scotch fir, and other resinous trees; potatoes, turnips, and other vegetables are cultivated, and roses and carnations are reared during the brief summer months. In a colder region these disappear gradually, along with the birch, and nothing remains but a few lichens and mosses. The best agriculturists are the Finnish colonists, who have raised grain at Alten, in Lat. 70°, which may safely be pronounced the N. limit of husbandry; but tillage generally is in a very backward state. — *Zoöl.* The reindeer is the most valuable of the animals of *L.*, and thrives best in the cold, dry central regions, where numerous herds roam at large under the care of shepherds. This beast forms the chief wealth of the natives, the poorest having seldom less than from 50 to 200 head belonging to each person. Horses, oxen, goats, and sheep, are common; and, of the wild quadrupeds, there are found bears, wolves, elks, martens, &c. Game-birds are plentiful about the coast, and eagles and lammergeyers soar nearly to the line of perpetual snow. The rivers abound with salmon, herring, and other fish.—*Inhab.* The Lapps, or Laplanders, who call themselves *Same*, are most probably a tribe of Tschonde, or Finns, though difference of situation has, in the course of ages, produced a fundamental difference of character. The Finns, an industrious, though an unpolished race, were encouraged to form colonies in *L.* about a century ago, and their number has since increased rapidly, while that of the Lapps has been stationary, perhaps on the decline. Of the 27,000 inhabitants of Norwegian *L.*, there are not, it is thought, above 6,000 Lapps. They have swarthy complexions, short black hair, wide mouths, hollow cheeks, and long and pointed chins. They are strong, active, and hardy; but they suffer much from disease, and few live beyond fifty. Dishonesty is their leading trait, and dram-drinking is often carried to a fatal extent. They were not converted to Christianity till the 17th century. Those of the Russian prov. are professedly of the Greek Church, while those subject to Sweden are Lutherans. They are still, however, very ignorant, and retain many heathen superstitions. The *Reindeer Lapps* live almost wholly on the produce of their herds, building their rude huts during summer in the mossy pastures of the upper country, and in winter on the level tracts inhabited by other nations; but the *Fishing Lapps* confine their habitat to the banks of lakes and rivers, and catch fish and beavers, which, as well as skins and deer-meat, they exchange with the Swedes and Russians for spirituous liquors, meal, salt, and tobacco. — *Costume.* The clothing of these half-civilized tribes is abundantly coarse, consisting of a woollen cap, a sheepskin coat, with the wool inwards, and an overcoat, either of kersey or of reindeer skin, with the hair outwards. They wear no stockings, but a kind of pantaloons of coarse cloth, or tanned leather, fitting close to the legs; their shoes are of reindeer's skin, the sole being taken from the forehead, and the upper leather from the legs. In the winter the use of a kind of snow-shoes (see Fig. 1516) is universal. The women are attired much in the same manner, with the addition, however, of some rude ornaments, and, occasionally, a linen or cotton garment. — *Language.* The tongue spoken by the Lapps is a Finnish dialect, but so corrupted by admixture with foreign and obsolete words, as to be unintelligible to the Finns themselves; nor indeed can the Lapp tribes in one part understand the language spoken by those of another. — *Chief town.* Hammerfest. — *Pop.* Vaguely estimated at 60,000, of whom only about 9,000 are Lapps, the rest being Swedes, Norwegians, Finns, and Russians.

Fig. 1516. — A LAPLANDER.

Lap'land, in *Indiana*, a post-office of Montgomery co.

Lap'land, in *Kansas*, a post-office of Greenwood co.

Lap'lander, Lapp, *n.* A native or inhabitant of Lapland.

Lap'landish, *a.* (*Geog.*) See LAPPISH.

La Pla'ta. See ARGENTINE REPUBLIC.

La Plata, in *Missouri*, a post-village of Macon co., about 18 m. N. of Bloomington. *Pop.* (1897) 1,250.

La Plata, Rio de. See PLATA, RIO DE LA.

La Platte, in *Nebraska*, a post-office of Sarpy co., on the Missouri river, about 20 m. below Omaha.

La Plume, in *Pennsylvania*, a post-borough of Lackawanna co., on the D., L. & W. R.R., 15 m. N.W. of Scranton.

La Pointe, in *Wisconsin*, a post-village of Ashland co. *Pop.* (1897) 500.

La Porte, in *California*, a post-village of Plumas co., about 25 m. N.E. of Marysville.

La Porte, in *Colorado*, a post-village, the former cap. of Larimer co., about 60 m. N. of Denver.

Laporte', in *Indiana*, a N.N.W. co., bordering on Michigan and Lake Michigan; *area*, about 540 sq. m. *Rivers.* Kankakee river, and some smaller streams. *Surface*, generally level; *soil*, fertile. *Cap.* Laporte. *Pop.* (1890) 34,445.

—A city, the cap. of above co., on the Lake Shore & M. S. and 3 other R.Rs., 148 m. N. by W. of Indianapolis; has extensive and varied manufacturing industries. *Pop.* (1897) about 9,000.

Laporte, in *Missouri*, a village of Macon co.

Laporte, in *Ohio*, a post-village of Lorain co., about 3 m. S.E. of Elyria.

Laporte, in *Penna.*, a post-borough, cap. of Sullivan co., about 107 m. N. by E. of Harrisburg. *Pop.* (1897) 430.

Lapp, *n.* (*Geog.*) See LAPLANDER.

Lap'pa, *n.* [Lat., a burr; from Gr. *labein*, to lay hold of.] (*Bot.*) A genus of plants, ord. *Asteraceæ. L. major*, the Burdock, is common in waste and cultivated grounds, &c., in the N. Eng., Mid., and W. States. Each plant is a large, conical, ill-scented, and coarse looking mass of vegetation, surmounted by a branching, irregular panicle of ovoid heads with tubular corollas of an exceedingly delicate pink color. The leaves are very large, with wavy edges. This plant is such an instance of design in the dissemination of seeds, as cannot be mistaken. The scales of the involucre all end in a minute, firm hook, which seizes hold of everything that passes by. Thus men and animals are made the unwilling agents of scattering widely the seeds of this unsightly plant.

Lap'per, *n.* One who wraps or folds; as, "*lappers* of linen."—*Swift.*

—One who laps or licks with the tongue.

Lap'pet, *n.* [From *lap.*] A little lap or flap; a loose hanging part of a robe or garment.

"*Lappets*, and ruffles, and mantuas."—*Swift.*

—*v. a.* To cover, as with a lappet.

Lap'ping, *n.* A kind of coarse wrapping used by calico-printers.

Lap'pish, Lap'landish, Lappo'nian, *a.* (*Geog.*) Of, or belonging, or having reference to, Lapland, or to the Lapps.

Lap'pon's Cross Roads, in *Maryland*, a village of Washington co.

La Prai'rie, a S.W. co., prov. of Quebec, on the St. Lawrence; *area*, about 170 sq. m. *Cap.* Laprairie, 9 m. S.E. of Montreal.

La Prai'rie, in *Illinois*, a post-village of Adams co.

—A township of Marshall co. *Pop.* (1897) 900.

La Prai'rie, in *Wisconsin*, a township of Rock co. *Pop.* (1890) 832.

Laps'able, *a.* That may lapse, fall, or relapse.

Lapse, (*lăps,*) *n.* [Fr. *laps;* Lat. *lapsus*, from *labor, lapsus*, to slide, to fall.] A falling; a sliding, gliding, or flowing down; a smooth course; an easy descent or course of progression. — A slip; an error; a fault; an omission; a failing in duty; any slight deviation from the proper course or prescribed principle.

(*Eccl. Law.*) A slip or omission of a patron to present a clergyman to a benefice in his gift within six months after its vacancy, in which case the benefice lapses to the bishop; when, if he does not collate within 6 months, it lapses to the archbishop; and, if he neglect to collate within six months, it lapses to the crown.

Lapse, *v. n.* To fall; to slide; to slip down; to glide; to pass slowly, silently, or by degrees.—To fail in duty; to deviate from virtue or rectitude; to commit a fault; to slip, or commit an error by inadvertency, mistake, or oversight. — To fall or pass from one proprietor to an-

other, by the omission or negligence of the patron; as, the advowson *lapsed* to the Crown.

(*Eccl. Law.*) See the noun.

Lapsed, *p. a.* (*Eccl. Hist.*) A term applied to such as in the time of persecution denied the faith of Christ. Much controversy arose in the Church in early times as to how such persons should be dealt with on their seeking to be re-admitted.

L. devise. (*Law.*) A devise which has lapsed, or does not take effect, because of the death of the devisee before that of the testator.

L. legacy. (*Law.*) A legacy which, on account of the death of the legatee before the period arrives for the payment of the legacy, lapses or deviates from the course prescribed by the testator, or falls into the residuum.

Lap'sided, *a.* Weighed down, or hanging over, on one side; — said of a ship. (Sometimes written *lobsided*, or *lopsided*.)

Lap'stone, *n.* A stone for hammering leather on; as, a cobbler's *lapstone*.

Lap-streak, (*-strāk,*) *a.* (*Naut.*) Made in the form of clincher-work; as, a *lap-streak* boat.—See CLINCHER-WORK.

La Puebla, a State of Mexico. See PUEBLA, (LA.)

Lapu'ta, in *Kentucky*, a village of Franklin co., about 10 m. N.W. of Frankfort.

La Purissima, (*la-poo-rees'se-ma,*) in *California*, a village of Santa Barbara co., about 247 m. S.E. of San Francisco.

Lap'wing, *n.* [A name derived from the sound which the wings of the bird make in flight.] (*Zoöl.*) A genus of birds (*vanellus*, Linn.), belonging to the family *Charadidæ*. (Plovers, &c.) About half a dozen species are described in Europe, S. America, and N. Africa. The European species, Crested Lapwing, or Pewit (*V. cristatus*), is a very handsome bird, not quite so large as a pigeon, and has its head surmounted with a beautiful

Fig. 1517. — THE CRESTED LAPWING.

crest. The head and crest are black; the throat black in summer, and white in winter; the back is green, glossed with purple and copper-color. The *L.* is very plentiful in moors, open commons, and marshy tracts, in pairs during the breeding-season; and in winter in flocks, chiefly on the sea-shore. Its artifices to prevent the discovery of its nest are very interesting. The nest is little more than a mere depression in the ground, and the full complement of eggs is 4; but if some are taken away, the bird goes on laying — an instinct of which the egg-gatherers take advantage. The eggs are esteemed a great delicacy. The Feru-Fero of S. America (*V. cayanensis*), a species with spurs on the wings, abounds on the pampas of that continent, is noisy on the approach of travellers, like the common *L.*; and its eggs are likewise held in highest esteem as a delicacy.

Lap'-work, (*-wurk,*) *n.* Work in which one part overlaps another.

Laquais, *n.* [Fr.] See LACKEY.

Laque Mineral, *n.* [Fr. *mineral lac.*] (*Painting.*) A French pigment, being a kind of chromic orange. This name is also given to orange-oxide of iron.

Laq'uering, *n.* See JAPANNING.

Lar, *n.; pl.* LARES. [Lat.] (*Roman Antiq.*) The Lares were a kind of domestic genii, good spirits, or household gods, worshipped in each dwelling, and regarded as the guardians or protecting deities of the family, and supposed to reside more particularly in the chimney-corner, literally the hearth; the whole fire-place being in fact consecrated to them. The Lares were distinguished from the *Penates*, the special protectors of the master of the house, his wife and children, as the Lares were of the servants, the housekeeping, and economy of the family generally. The Lares were usually dressed in short garments, to show their readiness to serve and dispense the gifts of hospitality, and often held a cornucopia in their hands, as symbolical of that virtue. There were generally two of those gods, and either with a dog between them, or some property or attribute of that animal about them, to denote honest and faithful service. Thus the Penates were often clothed in the skin of a dog, to signify the benefit they conferred on man by watching over his house. Besides the private Lares, there were several denominations of inferior divinities connected with the public; some who presided over cross-roads; others over travellers; special ones to protect cities and public institutions; and others, whose functions were less definite, such as the Hostilii, whose supposed duty was to avert the horrors of war. The Lares were originally human beings, who becoming pure spirits after death, loved still to hover round the dwellings and objects which their mortal affections had once made dear and memorable, and watch over their safety, and the welfare of those in whom, while living, they centred their human affections. In this pure and beautiful light, what Christian may not still acknowledge a household Lar! These Lares were usually images of wood or stone, and sometimes of metal, and stood upon the hearth in a kind of shrine, the *Lararium;* while, in more opulent houses, they were distributed in the study, bed-room, and other apartments, but, not like the Penates, into the more secret places of the household. — See PENATES.

Lar, a town of Persia, cap. of prov. Laristan, 60 m. from the Persian Gulf, and 180 m. S.S.E. of Shiraz; Lat. 27° 30′ N., Lon. 42° 35′ E. *L.*, formerly cap. of an Arabian kingdom, is situated on an extensive plain covered with palm-trees. Its bazaar is the finest and largest in Persia. *Pop.* 12,000.

La'ra, a celebrated Spanish family, the founder of which was Ferdinand Gonzalez, count of Castile and Lara, D 970.—In 1130, the family was divided into two branches, the *first* from MANRIQUE DE LARA, which took the title of viscount of Narbonne, for its stock; and the *second* deriving from ORDOGNO PEREZ, and preserving the title of count of Lara, until it became extinct in the latter half of the 14th century. The members of this family played an important part in the civil wars of Castile, under Alphonso X., Sancho IV., Ferdinand IV., and Alphonso XI., with whom they often disputed the crown.

Lar'acor, a parish of Ireland, in Leinster, co. of Meath, abt. 2 m. S.E. of Trim. It contains Dangan Castle, the birthplace of the Duke of Wellington.

Laranjeiras, (*la-ran-zha'ras,*) a town of Brazil, on the Cotindiba River, abt. 20 m. above its mouth; *pop.* 3,000.

Larbert, (*lar'bert,*) a parish of Scotland, co. Stirling, 2 m. N.W. of Falkirk. It was the birthplace of the celebrated traveller in Abyssinia, James Bruce (*q. v.*) *Pop.* 5,500.

Lar'board, *n.* [D. *laager*, lower, left, and *bord*, side.] (*Naut.*) The left-hand side of a ship when a person stands with his face to the head; port; — opposed to *starboard*, or right-hand side.

(NOTE. This term is now seldom used among seamen, the word *port* being substituted, in order to avoid mistakes consequent upon the similarity of sound between *larboard* and *starboard*.)

— *a.* Having reference or pertaining to the left-hand or port side of a vessel; as, she stood on the *larboard* tack.

Larcenous, (*lär'se-nŭs,*) *a.* Characterized by larceny; as, a *larcenous* act. — Prone to larceny; as, "the *larcenous* world." — *Sidney Smith.*

Lar'cenously, *adv.* In a manner characterized by larceny; thievishly.

Lar'cener, Lar'cenist, *n.* A person who commits larceny; a thief.

Lar'ceny, *n.* [Fr. *larcin;* from Lat. *latrocinium*, from *latro*, a hired servant, a robber, a freebooter; allied to Gr. *latris*, a hired servant, from *latron*, pay, wage, hire.] (*Law.*) Theft; the act of taking and carrying away the goods and property of another felouiously. *L.* is divided into two kinds, — *simple larceny*, or plain theft, when it is unaccompanied with any aggravating circumstances; and mixed, or *compound larceny*, when accompanied by circumstances which are considered as aggravating the offence. Formerly, larceny was distinguished as *grand* and *petty* larceny, which was determined by the value of the thing stolen, but the distinction is now abolished in almost all the States. *Simple L.* is defined to be "the felonious taking and carrying away of the personal goods of another." In *L.* there must be, — 1, a taking against the will of the owner; for wherever the owner is indneed willingly to part with his goods, there is no *L.*; as where goods are delivered upon trust. If A lends a horse to B, and he rides away with him, this is not *L.* When possession is obtained in the first instance without fraudulent intention, *L.* is not committed. Where a finder of goods or money converts the same to his own use, and at the time of conversion knows, or has the means of knowing, the real owner, he is guilty of *L.*; but if he find it with the intent to restore it, but afterwards appropriates it to his own use, he does not commit *L.* A servant intrusted with his master's goods, as a butler with plate, a shepherd with sheep, and embezzling them, is guilty of *L.* at common law; but if the goods have never been in the possession of the master, as money or goods received by a servant from a third party, and embezzled, it is not *L.* If a guest robs his inn or tavern of a piece of plate, or if a lodger run away with goods from his lodgings, it is *L.*; for he had not the possession delivered unto him, but the use. Under some circumstances, a man may be guilty of *L.* in taking his own goods; as if he steals them from a pawnbroker. The distinction as to what constitutes *L.* will thus be seen to be often very nice; and hence various statutes have been passed in most of the States, providing for particular cases. — 2. There must not only be a taking, but a carrying away (*cepit et asportavit*), to constitute *L.* A bare removal from the place in which he found the goods, though he does not quite make off with them, is a sufficient asportation or carrying away; thus, where a thief, intending to steal plate, takes it out of a chest in which it was, and lays it down upon the floor, but is surprised before he can make off with it, it is *L.* — 3. The taking away must be felonious, that is, *animo furandi*, or, as the civil law expresses it, *lucri causâ*. The ordinary discovery of a felonious intent is where the party does it clandestinely, or, being charged with the fact, denies it; but there are numerous other circumstances that may be taken as evidence of a felonious intent, so complicated and mingled, that it is impossible for us to enter upon them in this place. — 4. The felonious taking and carrying away must be of the personal goods of another; for if they are things real, or savor of the reality, *L.* at common law cannot be committed of them. Lands, tenements, and hereditaments, cannot in their nature be taken and carried away; but even corn, grass, trees, and the like were regarded as part of the real estate, absolutely fixed and immovable, and, therefore, unable to be the subject of theft by the common law. Most of these cases are now made felonies by statutes. No *L.* can be committed of things which are not the subject of property; as of beasts that are *feræ naturæ* and unreclaimed, as deer, hares, and conies, in a forest, chase, or warren; fish in an open river or pond, or wild fowls in their natural liberty. But if they are reclaimed or confined, and may serve as food, it is otherwise. Of all valuable domestic animals, as horses and other beasts of draught, and of all animals, *domitæ naturæ*, which serve for food, as meat or other cattle, swine, poultry and the like, *L.* may be committed. But the stealing of dogs, cats, and ferrets, though tame and valuable, and of monkeys, bears, &c., though reclaimed or confined, does not amount to *L.* The penalty varies in the different States; but, generally, in ordinary cases, a person convicted of *L.* is liable to imprisonment with hard labor for not more than two years; and in case of a conviction after a previous conviction for *L.*, penal servitude for not more than ten, or less than four years. — *Compound L.* is such as has all the properties of the former, but is accompanied by circumstances which are considered as aggravating the offence and requiring an increase of punishment; as stealing from one's house or person. The stealing from any dwelling-house of any chattel, money, or valuable security, to the value of $25 or more, or counselling the commission thereof; the breaking any dwelling-house, and stealing therefrom any chattel, money, or valuable security, to any value whatever, are offences punishable with penal servitude for not less than seven or more than fifteen years. When the breaking of the house is by night, then it constitutes another offence, — namely, burglary. *L.* from the person is either by privately stealing, or by open and violent assault, usually called ROBBERY, *q. v.*

Larch, *n.* [Lat. *larix;* Gr. *laris, larikos.* Etymol. uncertain.] (*Bot.*) The common name of the genus *Larix*, tribe *Abietineæ*, order *Pinaceæ;* this Lindley and other botanists consider wrongly as a sub-genus of *abies*, being essentially distinguished from the first by having the scales of the cones attenuated at the tip, and not falling off from the axis of the cone when fully ripe, and the leaves deciduous and in clusters, except on shoots of the same year, on which they are single and scattered. The common *L.*, *larix Europea*, is a beautiful tree growing wild on the mountains of the south and middle of Europe, and found also in Asia, where it extends much farther north than in Europe, even to the limits of perpetual snow. It attains a height of 60–100

Fig. 1518. — RED AMERICAN LARCH, (*Larix tenuifolia.*)

feet, and an age of 200 years. The male catkins are small and bright yellow, the female catkins generally purple and erect; the cones ovate-oblong, about an inch long, and erect. The *L.* grows rapidly, and is useful even from an early age; the thinnings of a plantation being employed for hop-poles, palings, &c.; the older timber for a great variety of purposes. It is very resinous, does not readily rot, even in water, is not speedily attacked by worms, and is much used in ship-building. It is, however, very apt to warp, and is therefore not well suited for planks. In Siberia, where large tracts of *L.* forests are not unfrequently consumed by accidental fires, the scorched stems yield, instead of a resin, a gum similar to gum-arabic, reddish, and completely soluble in water, which is known as *Orenburg Gum*, and is used for cementing, and, notwithstanding a somewhat resinous smell, as an article of food. — The Red American *L.*, or Hackmatack, *L. tenuifolia*, (Fig. 1518), distinguished by very small cones not quite half an inch in length, is common in the northern parts of North America, and on the Alleghany Mountains, often covering extensive tracts. It is a noble tree, much

rcsembling the European *L.*, and its timber is highly valued. The Pendulous *L.*, or Black American *L.*, *Larix pendula*, is another very fine N. American species, with large leaves.

Lard, *n.* [Fr.; Lat. *lardum, laridum;* Gr. *larinos*, fatted, fat, from *laros*, dainty, sweet.] The fat of swins after being melted and separated from tbe flcsb. In the pig, the fat differs from tbat of almost every other quadruped, as it covers the animal all over, and forms a thick layer between the flesb and the skin, not unlike the blubber in whales. Lard is applicable to various purposes, both in medicine and in cookery. In the former case it is known as *adeps*, and is specially useful in making ointments and cerates. It is generally prepared by melting it in a jar placed in a kettle of water, and in this state to boil it and run it into bladders that have been cleaned with great care. Ths lard keeps better in small bladders. That portion of the fat which adheres to the part connected wi the intestines is used for greasing carriage-wheels, and differs from comuon lard. By the separating of the stearine and margarine from lard the fluid product called *Lard-oil* is obtaincd. The manufacture of this is carried on to an immense extent in Chicago, Kansas City, Omaha, and Cincinnati. Of the stearine aro made candles, and other portions of the lard enter into the production of soap. In the U. S., lard and its products form important articles of exportation. The annual production averages nearly 250,000,000 pounds. Lard oil has often 25 per cent. of rosin mixed with it, to cbeck its tendency to become rancid and to improve its usefulness as an illuminant.

Lard, *v. a.* [Fr. *larder.*] To stuff with fat bacon or pork; to baste or smear with lard; to mix with lard, or other adipose matter; as, a *larded* capon. — To feed; to fatten; to enrich.

"Falstaff . . . *lards* the lean earth as he walks along." — *Shaks.*

—To interlard; to mix with another substance by way of improvcment.

"He *lards* with flourishes his long harangue." —*Dryden.*

—r. *n.* To grow fat.

Lardaceous, (*-dā'shus,*) *a.* Forming lard; resembling lard; consisting of lard.

Lard'er, *n.* [O. Fr. *lardier.*] A pantry; a place where meats and other comestibles are kept prior to cooking.

Lard'erer, *n.* One who has charge of the larder.

Lard'ile, *n.* (*Min.*) Same as AGALMATOLITE, *q. v.*

Lardizabalaceæ, (*lar-de-zăb-ă-lā'se-e,*) *n.* [After Lardizabel, a Spanish naturalist.] (*Bot.*) An order of plants, alliance *Menispermales*. DIAG. Parietal seeds and a minute embryo in abundant solid albumen. — They are twining shrubs, with alternate, exstipulate, compound leaves and unisexual flowers; carpels distinct superior. Two genera inhabit the cooler parts of South America, one is tropical, and the remainder are found in the temperate parts of China. The order has furnished our greenhouses with some pretty evergreen climbers.

Lard'ner, DIONYSIUS, LL.D., an eminent Irish scientist, b. in Dublin, 1793. He was educated in his native city, and afterwards entered at Trinity College, Cambridge, where he devoted himself to scientific studies. In 1817 he obtained a B. A. degree, and for ten years remained at the university, publishing at first various treatises on mathematics, including the differential and integral calculus, and subsequently on the steam-engine. For this he obtained a gold medal from the Royal Dublin Society, and his reputation being now established, he began to contribute to the *Edinburgh Encyclopædia*, and the *Encyclopædia Metropolitana*, writing elaborate articles on pure mathematics as well as on the applied sciences. In 1827, on the establishment of the London University, Dr. *L.* accepted the chair of Natural Philosophy and Astronomy, and removing to London, he set on foot a scheme for the *Cabinet Encyclopædia*, which he gradually perfected, obtaining the coöperation of many eminent men, and himself contributing many of the scientific treatises comprised in that work. In 1840 he went to the U. States, and delivered, with much success, a series of lectures, which have since been published. After devoting much time to *Railway Economy*, and after writing a good deal on this and other subjects, he published his very useful *Handbook of Natural Philosophy*, and the serial, the *Museum of Science and Art*, which contain many of the best popular treatises on science which have ever been written. All his writings are marked by a clearness of exposition and a simplicity of style rarely to be met with in scientific works. D. 1859.

Lard'ner, NATHANIEL, a learned English divine, B. 1684. He is the author of *Credibility of the Gospel History*, *Letter on the Logos*, *A Vindication of Three of our Saviour's Miracles*, *The Testimonies of the Ancient Jews and Pagans in Favor of Christianity*, *A History of Heretics*, &c. D. 1768.

Lard'-oil, *n.* The expressed oil of lard. See LARD.

Lar'don, *n.* [Fr.] A bit of fat bacon.

Lard'y, *a.* Containing lard; full of lard.

Laredo (*lah-rā'-do*), in *Texas*, a city, cap. of Webb co., on the Rio del Norte and three lines of R. R., 153 m. S.W. of San Antonio; one of the most important trading points on the Mexican border. *Pop.* (1897) about 15,000.

Large, (*lārj,*) *a.* [Fr.; Lat. *largus.* Etymol. uncertain.] Possessing great size; big; bulky; lugs; great; abundant; ample; copious; plentiful; extensive; wide; diffusive; comprehensive; exceeding the usual or common number, size, &c.; of great bulk, extent, amount, capacity, population, style, &c.; — opposed to *small;* as, a *large* area, field, river, tree, ship, city, assembly, person, mind, heart, &c.

(*Naut.*) Crossing the course of a ship transversely; as, the wind was *large* on her quarter.

At large: free; at liberty; without restraint or confinement; as, he is permitted to go *at large;* diffusely; thoroughly; to the full extent; as, the subject was debated *at large.*

To go large, to sail large. (*Naut.*) To sail free, with the wind across the quarter.

Electors at large. (*Amer. Pol.*) Electors chosen to represent the whole of a State, in distinction from those chosen to represent one of the districts in a State. *Webs.*

Large-acred, (*-ā'kĕrd,*) *a.* Owning a large landed estate.

Large'-handed, *a.* Having large hands; — hence, grasping; rapacious; covetous.

Large'-hearted, (*-harted,*) *a.* Possessing a large heart; — hence, liberal; munificent; generous; noble; beneficent; as, a *large-hearted* patron.

Large'-heartedness, *n.* Munificence; liberality of disposition.

Large'ly, *adv.* Widely; extensively; copiously; diffusely; amply; liberally; abundantly; bountifully.

—*a.* Boastingly; exultingly; ostentatiously; as, he talks *largely* of what he can do.

Large'ness, *n.* State or quality of being large; bulk; bigness; magnitude; extent. — Greatness; comprehension; as, *largeness* of mind. — Amplitude; liberality; generosity; as, *largeness* of heart, the *largeness* of an offer.

Largess, (*lär'jess,*) *n.* [Fr. *largesse*, from Lat. *largior, largitus*, to give bountifully, from *largus*, abundant.] That which is given freely, or out of liberality; — hence, a present; a gift; a donation; a bounty.

Larghetto, (*lar-gĕt'to,*) *n.* [Dim. of It. *largo*, q. v.] (*Mus.*) A movement a little quicker than *largo.*

Largish, (*lär'jish,*) *a.* Somewhat large; biggish.

Largo, *n.* [It., large.] (*Mus.*) A direction for the time, or, rather, the style, in which a piece of music is to be performed. It is generally understood to mean *slow;* but the real meaning is *wide, roomy* — a figurative expression for a broad, expressive style. — See ALLEGRO.

Largs, a seaport-town and watering-place of Scotland, co. Ayr, beautifully situated on a bay of same name, 20 m. S.W. of Glasgow; *pop.* 3,500.

Lar'iat, *n.* [Sp. *lariata.*] Same as LASSO, *q. v.*

Lar'idæ, *n. pl.* (*Zoöl.*) The Gull family, belonging to the order of birds *Anseres* or *Natatores.* (In M. Cuvier's system, they belong to the longipennate division of *Palmipeds.*) The birds of this web-footed, well-known marine family are dispersed over every part of the globe, and in some places, at certain seasons of the year, are met with in multitudinous quantities. Their characteristics are as follows: — A strong, straight bill; the body clothed with a great quantity of down and feathers, which give these birds an appearance of greater bulk than their weight warrants; the legs are small, and naked above the knees, and the feet are webbed. The gulls which are seen on the different coasts mostly assemble in flocks, and are characterized by the greediness and gluttony which seems natural to all sea-birds.

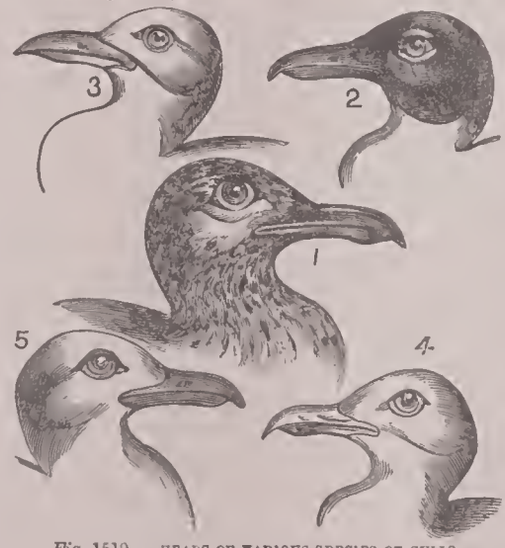


Fig. 1519. — HEADS OF VARIOUS SPECIES OF GULLS.

1. Great Black-backed.
2. Black-headed Gull.
3. Burgomaster.
4. The Kittiwake.
5. Herring, or Silvery Gull.

There are several genera, the genus *Larus* containing the largest and best-known species. The Herring or Silvery Gull (*L. argentatus*), of the Atlantic coast and interior of the U. States (5, Fig. 1519), is the most numerous by far of the different genera. It generally measures about 17 inches in length, by 36 in breadth; and it frequents the ledges of cliffs which overhang the sea round the coast. The bill is yellow; the back gray; the head, neck, tail, and under part of the body perfectly white; and the legs are a dull-white, tinged with green. It eats any sort of carrion which comes in its way; but its more general diet is fish, which it catches whenever in want of food. This gull is a great scourge to the herring-shoals which frequent the waters round our coasts. The gull is a very courageous bird; and there are many anecdotes related of the encounters witnessed between it and some large fish which it has selected for a prey, but which proves too strong for its assailant. The Great Black-backed Gull (*L. marinus*) (1, Fig. 1519), is about the size of a raven. The back and head, and upper parts of the body, are of a deep-brown color, the under parts pale ashy-gray; the legs black, and the talons very strong and hooked. It is found from the entrance of Baffin's Bay to Maine. In winter, it goes as far S. as Florida; and is rarely found at any season far from the sea. The Black-headed Gull (*L. ridibundus*) (2, Fig 1519), about 23 inches long, is pretty common in all northern seas. The Glaucous or Burgomaster Gull (*L. glaucus*) (3, Fig. 1519), the largest of the gulls, is 30 inches long, with an alar extent of 5 feet. The general color is pure white, with a light grayish-blue tinge on the back and wings. It is an inhabitant of the Arctic seas, coming down occasionally as far as New York. The Kittiwake (*L. tridactylus*, or *rissa*) (4, Fig. 1519), rather smaller than the above-named species, is found plentifully in all the northern parts of the world, wherever the coast is high and rocky, migrating southwards in winter, and extending its range as far south as the Mediterranean and Madeira. It is found on the Caspian Sea. Its young and eggs are among the chief objects of pursuit of the rock-fowlers.

Lar'imer, in *Colorado*, a N. co., adjoining Wyoming; *area*, about 4,100 sq. m. *Rivers.* Cache La Poudre river, and Big Thompson Creek. *Surface*, mountainous; *soil*, in some parts fertile. *Cap.* Fort Collins. *Pop.* (1897) about 11,200.

Laris'sa, a town of Greece, cap. of department Pelasgiotis, on the Salembria (anc. Peneus), 75 m. S.S.W. of Salonica. It is the seat of a Greek archbishop, and possesses some manufacturing establishments. It was an important town in the ancient Grecian province of Thessaly, but in modern times belonged to Turkey till June 16, 1881, when it was added to Greece. It was captured by the Turks during the war of 1897, but restored to Greece by the treaty of peace. *Pop.* (1897) 14,140.

Larissa, in *Texas*, a post-village of Cherokee co.

Laristan', a prov. of Persia, extending along the N. coast of the Persian Gulf; Lat. bet. 26° and 29° N., Lon. bet. 55° and 58° E.; *area*, 16,000 sq. m. It is mostly a sandy waste, interspersed with salt-steps. *Pop.* Unascertained, and mostly consisting of wandering tribes.

Lar'ix, *n.* [Lat., the larch.] (*Bot.*) See LARCH.

Lark, *n.* [A. S. *laferc;* Ger. *lerche.*] (*Zoöl.*) See ALAUDA.

—A frolic; a sportive bout; a piece of fun or merriment, and, sometimes, a practical joke. (Colloquially used.)

"Now, boys, for a *lark!*" —*Dickens.*

Lark, *v. n.* To catch larks. — To frolic; to make sport; to play a prank, and, sometimes, a practical joke. (Colloquially used.)

Lark'er, *n.* One who catches larks. — One who plays a prank, or carries out a practical piece of fun.

Lark'insville, in *Alabama*, a post-village of Jackson co., about 15 m. W. by S. of Bellefonte.

Lark'spur, *n.* (*Bot.*) See DELPHINIUM.

Larmes, *n. pl.* [Fr., tears.] (*Her.*) When the field is bestrewed with an indefinite number of drops of a blue color, it is said to be *gutté de larmes*, a nomenclature which, though French, is peculiar to British heraldry, the French blazoning such a shield *gutté d'azur.*

Lar'mier, *n.* [Fr., from *larme*, a tear, a drop.] (*Arch.*) See CORONA.

(*Zoöl.*) A membranous pouch, which secretes a thick, blackish humor, situated at, or below, the inner corner of the eye in the deer and antelope.

Larne, a seaport-town of Ireland, in the co. of Antrim, about 17 m. N.N.E. of Belfast: *pop.* 3,000.

La Rochefoucauld, FRANÇOIS, DUKE DE, (PRINCE DE MARSILLAC,) (*rosh'foo-kōlt,*) a distinguished courtier and man of letters in the reign of Louis XIV., b. 1613. He acted a conspicuous part in the civil war of the Fronde, but he is chiefly remembered as the writer of *Réflexions et Maximes*, a work which has been extolled and criticised in no ordinary degree. Its distinctive characteristic is that hard, worldly wisdom which finds selfishness at the bottom of everything. He also wrote *Mémoires de la Régence d'Anne d'Autriche*, and during the latter part of his life, his house was a resort of the most eminent wits and literati of France. D. 1680.

La Rochejaquelein, HENRI DU VERGER, COMTE DE, (*la-rosh'zhak'lăn,*) the heir of an old and noble family of France, and one of the most distinguished of the Vendean royalists, b. at Chatillon, in Poitou, 1772. The peasants of the neighborhood having risen in the royal cause in 1792, he placed himself at their head, and addressed them in the following pithy harangue: "I am young and inexperienced, but I have an ardent desire to render myself worthy of heading you. Let us march to meet the enemy; if I give way, kill me; if I advance, follow me; if I fall, avenge me." He was subsequently chosen commander-in-chief of the Vendeans, and displayed great military talent and the most daring valor. After gaining sixteen victories in ten months, he fell, at the age of 22 years, March 4, 1794, in a single combat with one of the republican soldiers, while defending the village of Nouaille. — The widow of LOUIS, his brother, Marie-Louise Victoire, Marquise de La Rochejaquelein (b. 1772 — d. 1857), published *Mémoirs of the War in La Vendée*, of which she was an eye-witness (Bordeaux, 1855), which are of great value, and have gone through many editions.

La Rochelle, (*la ro-shel',*) a fortified seaport of France, cap. of dept. Charente-inférieure, on an islet of the Bay of Biscay, formed by the islands Ré and Oleron, 200 m. N.W. of Paris. The inner harbor, which has two basins, in which ships of any size may remain afloat, is surrounded by fine quays and commodious docks, close to which lie the principal streets and squares. The public

buildings most worthy of notice are the arsenal, the palace, the town-hall, the cathedral, and the great clock tower (Fig. 1520), an interesting remnant of the ancient fortifications. — By the marriage of Eleanor of Guienne with Henry Plantagenet, afterwards Henry II., May 18, 1152, this town came into the hands of the English, and was captured by Louis VIII. in 1224. In 1360 it was

Fig. 1520. — THE GREAT CLOCK TOWER.
(La Rochelle.)

ceded to England, but was recovered by Bertrand du Guesclin in 1372. The Huguenots held it from 1557 to Oct. 28, 1628, when it surrendered to Louis XIII. They had sustained a siege from December, 1572 to 1573, when peace was made. It was again fortified by Vauban in the reign of Louis XIV. An attempt made by the English, in 1809, to destroy the French fleet here was unsuccessful. *Pop.* (1897) about 24,500.

La Roda, (*ro'da,*) a town of Spain, prov. of Albaceto, 24 m. N.W. of Albacete; *pop.* 5,000.

La'roue, in *Maine,* a post-village of Somerset co., abt. 28 m. N. of Augusta. It is sometimes called *Winslow's Mills.*

Lar'rabee's Point, in *Vermont,* a village of Addison co., about 50 m. S.W. of Montpelier.

Lar'rey, DOMINIQUE JEAN, BARON, a celebrated French military surgeon, B. 1766. He was first attached to the army of the Rhine, accompanied Bonaparte to Egypt, and on his return to France, published an historical and medical narrative of the expedition. On the establishment of the empire, he was raised to the dignity of a baron; and in 1812, appointed surgeon-in-chief of the army. Napoleon pronounced him the most virtuous man that he had ever known. D. 1842.

Lar'rup, *v. a.* [Etymol. unknown.] To flagellate; to beat; to whip; to flog; as, to *larrup* a jackass.

Lar'ry's Creek, in *Penna.,* a p.-v. of Lycoming co.

La Rue, in *Arkansas,* a post-office of Benton co.

La Rue, in *Kentucky,* a central co.; *area,* about 260 sq. m. *Rivers.* Rolling Fork and Salt River, and Nolin creek. *Surface,* undulating; *soil,* fertile. *Cap.* Hodgenville. *Pop.* (1890) 9,433.

Larue, in *Ohio,* a post-village of Marion co., about 14 m. W. of Marion.

Lar'um, *n.* [Ger. *lärm.* See ALARM.] An alarm-bell; a reveille; anything which sounds an alarm, or gives notice of danger.

"Æneas . . . stunn'd with his *larum* half the town." — *Dunciad.*

—Alarm; any noise significant of danger.

Larus, *n.* (*Zoöl.*) See LARIOÆ.

Lar'va, *n.*; *pl.* LARVÆ, (*lär'vē.*) [Lat., a ghost, a mask; Fr. *larve.*] (*Zoöl.*) A term applied to an insect in its first state after leaving the egg, and previous to its assuming the chrysalis or pupa form. See INSECT. — The term is also applied to those reptiles which undergo a metamorphosis, as the frog, when at a correspouding period of existonce.

(*Antiq.*) The spectre of a deceased person was so termed by the Romans. Larvæ were held to be mere empty forms or phantoms, as their name indicates, yet endowed with a sort of existence resembling life, since they were to be propitiated by libation and sacrifice. The *L.* of Caligula, acccording to Suetonius, was often seen in his palace after his decease. The larvæ are described by Seneca, and often represented in paintings and on gems under the figure of a skeleton; sometimes under those of old men, with shorn locks and long beards, carrying an owl in their hands.

Lar'val, Larve, *a.* Resembling, or pertaining to, a larva.

Lar'vated, Lar'vate, *a.* [Lat. *larvatus.*] (*Zoöl.*) Invested, as with a mask.

Larve, *n.*; *pl.* LARVES. (*Zoöl.*) Same as LARVA.

Larvi'form, *a.* Exhibiting the form of a larve.

Larvip'arous, *a.* [Lat. *larva,* and *parere,* to produce.] (*Zoöl.*) Bringing forth young in larval form, as certain insects.

Laryngē'al, Laryngē'an, (*-jē-,*) *n.* [From Eng. *larynx.*] Belonging to the larynx.

Laryngismus, (*jis'mus,*) *n.* (*Med.*) Spasm of glottis, giving occasion to contraction or closure of the opening

Laryngi'tis, *n.* [N. Lat., from *larynx,* q. v.] (*Med.*) An acute inflammation of the mucous membrane lining the larynx, particularly the *glottis* and *epiglottis.* This disease is characterized by a high degree of fever; the pulse is frequent and hard, and the patient manifests a considerable degree of restlessness and anxiety; he likewise complains of sore-throat: and among the earliest symptoms that bespeak danger is difficulty of deglutition, for which no adequate cause is visible in the fauces; and to this is presently added difficulty of breathing. The act of inspiration is protracted and wheezing, and the patient points to the *pomum Adami* as the seat of the disease. He speaks either hoarsely, or what is more common, all power of audible voice in the larynx is lost, and he speaks only by means of his lips and tongue in a whisper. As the disorder advances, the patient's general distress increases. His countenance, from being flushed, becomes pale or livid; his look anxious and ghastly; he struggles for breath, and if he does not obtain timely relief, dies strangled. Its course is generally rapid, terminating fatally before the fifth day, and even, in some cases, within twelve hours. Active remedies, therefore, require to be promptly applied. Blood-letting, both generally and locally, and blistering, are to be immediately resorted to during the periods of the fever; but if the powers are beginning to sink, blood-letting will be of little use. In such cases, however, tracheotomy may be resorted to with advantage, and the operation of breathing carried on by means of an artificial opening till the parts of the larynx recover. — See TRACHEOTOMY.

Laryngol'ogy, *n.* [Gr. *larygx,* larynx, and *logos,* description.] (*Med.*) A treatise on the larynx.

Laryngoph'ony, *n.* [Gr. *larygx,* and *phonē,* sound.] (*Med.*) The sound heard, in health, when the stethoscope is placed over the laryux or trachea at the time a person speaks. The voice appears to pass immediately up to the ear of the auscultator.

Laryn'goscope, *n.* [Gr. *larygx,* and *skopein,* to view.] (*Med.*) An instrument which, by means of a mirror, enables the larynx to be inspected.

Laryngot'omy, *n.* [Gr. *larygx,* and *temnein,* to cut.] (*Surg.*) An operation which consists in opeuing the larynx, either to extract a foreign body, or to remedy an obstruction of the glottis.

Larynx, (*lar'ingks,*) *n.* [Gr. *larygx,* gen. *laryggos.*] The organ of the voice situated at the upper and fore part of the neck, where it forms a considerable projection. It extends (Fig. 1521) from the base of the tougue to the trachea; is narrow and cylindrical below, but broad above, where it presents the form of a triangular box, being flattened behind and at the sides, whilst in front it is bounded by a prominent vertical ridge. It is composed of cartilages connected together by ligaments, moved by numerous muscles, lined by a mucous membrane, and supplied with vessels and nerves. The cartilagea of the *L.* are 9 in number, 3 single, and 3 in pairs: viz., the *thyroid, cricoid, epiglottis,* the two *arytenoid,* the two *corniculæ laryngis,* and the two *cuneiform.* The thyroid cartilage consists of two plates, of a dense, tough, fibro-cartilaginous substance, irregularly quadrilateral in form, and united at an acute angle in front, forming that prominence which is felt in front of the throat, called *pomum Adami.* The lower border is connected with the cricoid cartilage, so called from its resemblanco to a signet-ring (Gr. *krikos, eidos,* like a ring.) It is smaller, but thicker and stronger, than the thyroid cartilage, and forms the lower and back part of the cavity of the larynx. Tho arytenoid cartilages are each of the form of an irregular triangular pyramid, and are placed upon the upper edge of tho broad part of the cricoid cartilage, at tho back of tho *L.* The baso of each cartilage is broad, and presents a concave smooth surface for articulation with the cricoid cartilago. The apex of each cartilage is surmounted by a small, conical-shaped cartilaginous nodule — the *corniculum laryngis.* The cuneiform cartilages aro two small, elongated, cartilaginous bodies, placed one on each side in the fold of mucous membrane which extends from the apex of the

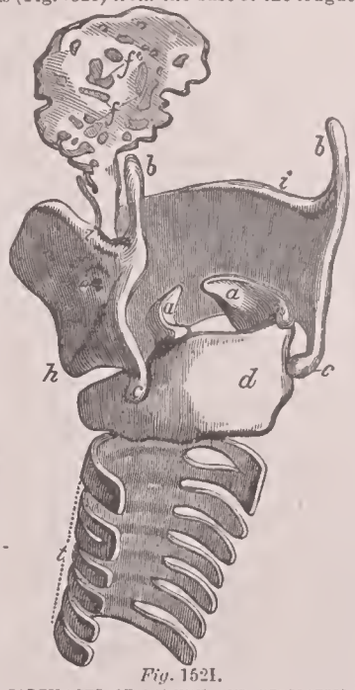


Fig. 1521.
CARTILAGES OF LARYNX AND EPIGLOTTIS, AND UPPER RINGS OF TRACHEA, SEEN FROM BEHIND (taken from Todd and Bowman).
a, arytenoid cartilages; *b,* superior cornua of thyroid cartilage; *c,* its inferior cornua; *d,* posterior surface of cricoid; *f,* epiglottis, with its perforations; *h,* its left inferior tubercle; *i,* upper margin of thyroid; *t,* trachea.

arytenoid cartilage to the side of the epiglottis. The epiglottis is a thin lamina of fibro-cartilage shaped like a leaf, and placed behind the tongue, in front of the superior opening of the larynx. During respiration, its direction is vertically upward, its free extremity curving

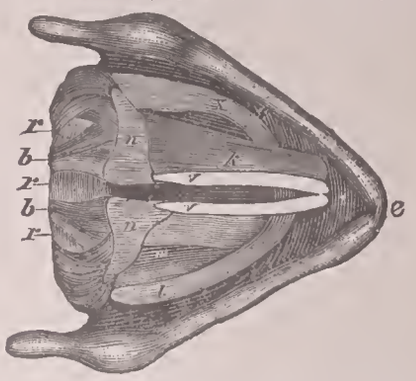


Fig. 1522. — VIEW OF LARYNX FROM ABOVE, (after Willis.)
b, ligaments uniting arytenoid and cricoid cartilages; *e,* thyroid cartilage in front; *k,* left thyro-arytenoid muscle, right removed; *l, r, z,* cricoid cartilage; *m,* right crico-arytenoid muscle; *n,* arytenoid cartilage; *t, v,* vocal cords.

forward toward the base of the tongue; but when the larynx is drawn up beneath the base of the tongue during deglutition, it is carried downward and backward, so as to completely close the opening of the larynx. The upper opening of the larynx is termed the glottis. The mucous membranc of the larynx is continuous with the lining of the month and pharynx, and is prolonged through the trachea and bronchi into the lungs. The vocal ligaments are two narrow bands of dense, fibrous, and highly elastic tissue, stretched between the anterior angle of the thyroid and the anterior surfaces of the arytenoid cartilages.

La Salle (*lä-säl'*), in *Illinois,* a N. central co.; *area,* about 1,152 sq. m. *Rivers.* Illinois, Fox, and Vermilion rivers, besides Indian and other creeks. *Surface,* undulating; *soil,* very fertile. *Min.* Coal. *County-town,* Ottawa. *Pop.* (1897) about 85,500.

—An important city of La Salle co., on the Illinois river (at the head of uavigatiou) and at the terminus of the Michigan Canal, 60 m. N. of Bloomington; Ill. Central, Ch., Bur. & Q., and C., R. I. & Pac. R.Rs. Here are extensive zinc works, breweries, sulphuric acid and cement works, and other industries; coal is largely mined in the vicinity. *Pop.* (1897) about 12,500.

La Salle, in *Michigan,* a post-township of Monroe county.

La Salle, in *New York,* a post-village of Niagara co.

La Salle, in *Texas,* a village of Calhoun co., on Matagorda Bay, about 165 m. S.S.E. of Austin.

Lascar', *n.* [Hind. *lashkar,* a coolie, a native sailor.] In the East India trade, the name given to a native sailor, or dock-laborer. The *L.* make good seamen, but they are excessively irritable and of a revengeful natnre.

Lascaris, THEODORE (*las-kar'is,*) emperor of Nicæa, was a young Greek prince who married, in 1200, Anna, daughter of the elder Alexius, emperor of the East. On the capture of Constantinople by the Crusaders, in 1204, Theodore, having vainly attempted to save it, escaped into Anatolia, and under the title of despot ruled over part of the empire at Nicæa. In 1206 he took the title of emperor, and extended his dominion as far as the river Mæander. He was the greatest soldier and the best statesman of his time, and though placed between the Latins on the one hand and the Turks on the other, he resolutely and successfully held his ground, and reigned prosperously eighteen years. D. 1222. He left his vast dominions to his son-in-law, John Ducas (see JOHN III.), and his grandson, Theodore Lascaris, called the Young, who reigned from 1255 to 1259. This latter was succeeded by John Lascaris. (See JOHN IV.)

Lascaris, two learned Greeks, descended from the imperial family of this name, were among the fugitives who quitted Constantinople in 1454. The *first,* CONSTANTINE LASCARIS, died at Messina, 1493. He is the author of the first book printed in the Greek character. The *second,* ANDREW JOHN LASCARIS, of the same family, distinguished as a scholar and ambassador, was patronized by Leo X., and became principal of the Greek college founded at his own instance. Died at Rome 1535. Constantine Lascaris is generally called BYZANTINUS, and John, or Andrew John, RHYNDACENUS.

Las Ca'sas, BARTHOLOMEW DE, a Spanish prelate, distinguished for his generous and constant, though unavailing, exertions in favor of the natives of S. America. He was born in 1474, and in his 19th year accompanied his father, who sailed with Columbus, to the W. Indies. On his return to Spain, he embraced the ecclesiastical profession, in order that he might act as a missionary in the western hemisphere, "there to spend his days in preaching the gospel to the Indians, and humanity to their oppressors." Never did man more zealously endeavor to effect a great and good object. Twelve times he crossed the ocean, to plead at the foot of the Spanish throne the cause of the wretched Indians, and passed fifty years of his life in attempting, though with little effect, their amelioration. He was made bishop of Chia, in 1544; but he resigned his see in 1551, returned to his native country, and died at Madrid, in 1566, in the 92d year of his age. Of the writings of Las Casas, the most valuable is his *General History of the Indies.*

Las Cases, Marin Joseph Emmanuel Auguste Dieudonné, Comte de, (*las'kaz,*) a French patrician, celebrated for his chivalrous devotion to Napoleon Bonaparte. He was born at the chateau of Las Cases, in the department of the Haute-Garonne, in 1766, and acquired distinction in several actions as a naval officer; among these, was the storming of Gibraltar by the combined fleets of France and Spain. At the outbreak of the French revolution, he joined the emigrants at Coblentz, and after sharing in the fruitless efforts of the Vendean war and the expedition to Quiberon, settled in England. He was among the first of the emigrants to return to France on the invitation of Napoleon; and having engaged himself as a volunteer under Bernadotte, when the English attacked Flushing in 1809, he became known to the emperor, and gradually rose high in his confidence. His loyalty to Napoleon shone the brighter for his reverses in 1814 and the year following, when he accompanied him to St. Helena, and remained in the closest intimacy with him for eighteen months. At the close of each day, Las Cases noted all that transpired, and every thought expressed by the emperor, in a journal, which has since been published as a *Mémorial de Sainte Hélène*; and in the perusal of which, it must be remembered, that it came under the eye of Napoleon, leaf by leaf, as it was written. This modern Baynrd was at length sent a prisoner to England, and treated with every indignity, not to say petty spite, by the government of the time, under Lord Castlereagh. The Emperor Francis at last interfered in his favor, and he was allowed to pass the remainder of his days in peace in the vicinity of Paris. D. 1842.

Lascivious, *a.* [Fr. *lascif;* Lat. *lascivus,* from Sansk. *las,* to play amorously.] Wanton; lewd; libidinous; lustful; voluptuous.

"The loosa encounters of *lascivious* men."—*Shaks.*

—Having a tendency to excite wanton motions or salacious desires.

"He capers . . . to the *lascivious* pleasing of a lute."—*Shaks.*

Lasciviously, *adv.* In a lascivious or voluptuous manner; lewdly.

Lasciviousness, *n.* State or quality of being lascivious; salaciousness; voluptuousness; lewdness; wantonness.

—Tendency to foster sensuality and promote lustful indulgences.

Laser, Cyrena'ioum, Asa Dul'cis. *n.* [Lat.] A gum-resin which was greatly esteemed by the ancients, and obtained from the north of Africa. It is described by Dioscorides (lib. iii., c. 48), and, under the name of *silphion,* by Theophrastus. Different names were given to different parts of the plant which affords it, the term *laser* being exclusively applied to the inspissated juice. From the representations of the plant upon the coins of Cyrene, it appears to have been one of the *Umbelliferæ;* and according to Lindley (*Flora Medica,* p. 52), was in all probability obtained from *Thapsia Silphion* or *Garganica.*

Laserpitium, *n.* (*Bot.*) A genus of umbelliferous plants, order *Apiaceæ.* The root of *L. glabrum,* the Laser-wort, is violently purgative, and even caustic.

Laser-wort, La'zar-wort, *n.* (*Bot.*) See Laserpitium.

Lash, *n.* [Another form of *leash,* q. v.] The thong or plaited cord which forms the cutting part of a whip; a cord; a string.—A stroke with a whip or anything pliant and tough; as, to inflict the punishment of the *lash.*—A stroke of trenchant sarcasm; a cutting satire; any expression or retort calculated to wound or give pain; as, his speech was a *lash* at vice.

—*v. a.* To strike with a lash or anything pliant and tough; to flagellate; to castigate; to scourge or whip.—To throw up with a sudden jerk; to move with a sudden spring; to kick out.

"He falls, and *lashing* up his heels, his rider throws."—*Dryden.*

—To beat or strike, as with something loose; to dash against.

"And big waves *lash* the frighted shores."—*Prior.*

—To bind or tie with a leash, or a rope or cord; to secure or fasten by tying a cord to; as, to *lash* a sailor to the rigging, to *lash* a broken chair.

—*v. n.* To ply the whip; to strike at.

"To laugh at follies, or to *lash* at vice."—*Dryden.*

To lash out. To be unruly or unmanageable; also, to fling or kick out; as, a horse *lashes out* his heels.

Lash'er, *n.* One who whips or castigates with a lash.

—In England, a salmon-weir.

—A cord for binding.—See Lashing.

Lash'ing, *n.* A rope or cord for binding or securing. (Sometimes written *lasher.*)—Flagellation; castigation; a flogging; a whipping.—Extravagance; unruly or unmanageable conduct.

Las'ket, *n.* (*Naut.*) Same as Latching, *q. v.*

Lass, *n.* [From *laddess,* the old feminine of *lad.*] A young woman or grown girl,—particularly a country girl.

Lassa, (*las'sa,*) or **H'lassa,** (*h'las'sa,*) [*i. e.,* "Land of the Divine Intelligence,"] a city of Asia, cap. of Great Thibet, on the Monrau River, an affluent of the Sampoo; Lat. 29° 30′ N., Lon. 90° 40′ E. It is a populous and commercial town, and distinguished by numerous handsome buildings, large numbers of convents, and the great temple of the Buddhist faith, a building situated in the centre of the town, and covering twelve acres of ground. The city, which is of an oval form, is about 4 miles long by 1½ in width, is entirely walled in, and entered by 5 strongly defended gates. *Pop.* Estimated at 24,000.

Lasselle', in *Wisconsin,* a village of Douglas co., about 22 m. E. by N. of Superior City.

Lassellville, in *New York,* a post-village of Fulton co., about 58 m. W.N.W. of Albany.

Las'sen, in *California,* a N.E. co., adjoining Nevada; *area,* about 4,890 sq. m. *Rivers.* Susan and Pitt rivers, besides several smaller streams and lakes. *Surface,* diversified; *soil,* in the valleys, fertile. *Min.* Gold, silver and copper. *Cap.* Susanville. *Pop.* (1890) 4,239.

Las'sen, in *Nevada,* a mining village of Humboldt co., about 20 m. N. of Unionville.

Las'sens, in *California,* a village and township of Tehama co., abt. 22 m. S.E. of Red Bluff; *pop.* of township abt. 600.

Las'sen's Peak, in *California,* a peak of the Sierra Nevada, in Shasta co.; *elevation* abt. 10,000 feet.

Las'sie, *n.* In Scotland, a lass; a country girl.

"*Lassie* wi' the lint-white locks, . . .
Wilt thou be my dearie, O?"—*Burns.*

Las'situde, *n.* [Fr.; Lat. *lassitudo,* from *lassus,* faint, languid, weary, from *langueo,* to be faint, weary.] Faintness; heaviness; weakness; languor of body or mind; dulness.

"Lost in *lassitude* lay all the man."—*Pope*

Lass'lorn, *a.* Forsaken by his lass or mistress, as a lover.—*Shaks.*

Las'so, *n.* [Fr. *laisse;* Sp. *lazo.*] A long rope or cord, sometimes made of strips of leather, and used by the natives of the pampas of South America to catch wild horses, or any animal, though in full career. The Gauchos (*q. v.*) are so expert in the use of this article, that they can take the smallest animal with equal facility with a horse or bull, either by entangling the head,

Fig. 1523.—lassoing.

leg, or encircling the body (Fig. 1523); so that, whether in the peaceful occupation of the chase, or in the strife of battle, the S. American hunter, with his lasso, becomes a most formidable antagonist, as he can jerk his missile from a great distance, and drag the soldier as readily from his saddle as hurl him, steed and arms, in helpless defeat on the plain. In California and Mexico, the lasso is called a *lariat.*

—*v. a.* To catch with a lasso; as, to *lasso* a buffalo.

Lasswade, (*las'waid,*) a town and parish of Scotland, in Mid-Lothian, 5½ m. S.E. of Edinburgh. *Manuf.* Gunpowder and paper; also iron and brass foundries, and oatmeal mills. *Pop.* 6,600.

L'Assomption, a S.W. co., p. Quebec, on the St. Lawrence; *area,* 325 sq. m. *Cap.* L'Assomption. *Pop.* 15,473.

Last, *a.* [A. S.; Ger. *letzt;* O. Ger. *lezest.*] The latest; that comes after all the others in time; that follows all the rest; hindmost; that is behind all the others in place; beyond which there is no more; final; ultimate; as, the *last* day of the year.

"The *last* of all the Romans, fare thee well!"—*Shaks.*

—Next before the present; as, *last* week.—Utmost; that does not admit of increase, extension, or superiority.

"They are contending for principles of the *last* importance."
Rob. Hall.

—Meanest; lowest; as, to take the *last* prize.—Completed or finished with excellence derived from long practice; as, he gave his picture the *last* touches.—Most unlikely; least adapted; apparently not possessed of the necessary character or quality; as, ehe is the *last* woman to be trusted, he is the *last* man I would recommend, &c.

At last, or *at the last,* finally; at the end; in the conclusion.

"To return, and die at home *at last.*"—*Goldsmith.*

To the last, to the end, finish, or conclusion.

"Politicians . . . blunder on in business *to the last.*"—*Pope.*

On one's last legs, on the verge of failure, ruin, or death; in the last extremity of health, credit, or fortune.

—*adv.* The last time; the time immediately before the present; as, I saw her *last* at the opera.—Finally; in conclusion; ultimately.—Following all others in order, place, or time.

—*v. n.* [A. S. *læstan, gelæstan,* to fulfil, to follow, to endure, to continue; Ger. *leisten,* to do, to fulfil.] To continue to serve some purpose or end; to stay; to continue in time or progress; to endure; to maintain existence.—To continue without diminution or decay; to keep in an intact or unimpaired state; to hold out.

"The Latin volume . . . may *last* as long as books *last.*"—*Bacon.*

Last, *n.* [A.S. *læste,* a footstep.] A pattern or mould exhibiting the form of the human foot, made of wood, on which boots or shoes are shaped.

—[A. S. *hlæst;* Ger. *last;* Fr. *laste.*] (*Com.*) A load or burden;—hence, a certain weight or measure of capacity, varying in different countries, and also in application to different articles. The *ship last,* in Denmark, N. Germany, Norway, Russia, and Sweden, is equal to 2 tons English. In N. Germany and the Zollverein, the *grain last* measures about 11 imp. grs., and the *coal last,* is equivalent to about 1½ tons. In Holland, the grain last comprises 10½ imp. grs. At the Cape of Good Hope, the last is equal to 10 madden = 30·608 Imp. bush.

—The burden or tonnage of a ship.

(*Eng. Law.*) A local court holden in Kent, for laying rates for the preservation of the marshes.

—*v. a.* To form with a last; to fit or adjust with a last; as, to *last* a boot.

Last'age, *n.* [Fr. *lestage,* from *lest,* ballast. See Last.] A duty levied in some markets, for permission to transport commodities.

(*Naut.*) Ballast; lading of a ship.—Stowage-room, in a ship.

Last'ing, *p. a.* Durable; that may last, continue, or endure; of long continuance; as, a *lasting* evil, a *lasting* color, a *lasting* peace.

—*n.* Endurance.—A sort of strong durable woollen stuff.

Last'ingly, *adv.* With continuance; durably; perpetually.

Last'ingness, *n.* Durability; state of long continuance.

Last'ly, *adv.* In the last place; in the end or conclusion.—At last; finally; at length.

Lastre'a, *n.* (*Bot.*) A genus of ferns, order *Polypodaceæ.* The *L. filix-mas* has been used in medicine. The rhizome, when powdered, is considered an excellent vermifuge, especially in case of tapeworm. It is also used for tanning.

Las Vegas (*las vā'gas*), in *New Mexico,* a city, cap. of San Miguel co., on A., T. & S. Fé R.R., 40 m. E. of Santa Fé. Has hot springs. *Pop.* (1897) 3,750.

Latakia, or **Ladakieh,** (*lăt-a'kē-ā.*) a decaying town of Syria, 96 m. N.W. of Aleppo, and 74 m. S. by E. of Iskanderoon; *pop.* from 6,000 to 10,000. It is the ancient Laodicea (ad Mare), *q. v.*

Lata'kia, *n.* A kind of fine Turkish tobacco, obtained from Latakia, in Syria.

Lata'nia, *n.* [Fr. *latanier.*] A genus of African plants, order *Palmaceæ,* with fan-shaped leaves, and forming trees 20 or 30 feet high. The pulp of the fruit of *L. Commersonii,* though disagreeable in flavor, is eaten by the negroes. This species is a native of the Mascarenhas Islands, and is often cultivated in our hot-houses.

Latch, *n.* [From A. S. *læccan,* to seize, to take hold of; Gael. *glac,* to seize.] A small piece of wood or metal used as a fastening for a door.

(*Naut.*) See Hatching.

—*v. a.* To fasten or secure with a latch, as a door.

Latch'et, *n.* [From *latch;* Fr. *lacet.*] A shoe-string or fastening.

Latch'-key, *n.* A key employed in raising the latch of a door.

Latch'ing, Latch, Las'ket, *n.* (*Naut.*) On board ship, one of the loops formed on the line that is sewed to the head of the bonnet, and connecting it with the foot of the sail.

Late, *a.* (*comp.* later, or latter; *super.* latest, or last.) [A. S. *lat;* Du. *laat;* Icel. *latr,* slow, tardy; Goth. *lats,* sluggish; probably allied to *lassus,* weary. See Lassitude.] Coming after the usual time; slow; tardy; long delayed;—opposed to *early;* as, a *late* comer, a *late* spring.—Far advanced toward the end or close; as, *late* at night, *late* in the London season.—Last, or recently in any place, office, or character; existing not long ago, but now decayed, departed, or deceased; as, the *late* George Peabody, the *late* government, my *late* partner.—Occurring not long ago; not long past; hence, recent; new; novel; modern; as, the *latest* news.

—*adv.* After the proper time or usual season; after long delay; behindhand. "Better *late* than never." (*Tusser.*)—Recently; not long ago; lately.

"Words or deeds long past or *late.*"—*Milton.*

—Far into the night, day, week, or other particular period of time.

Of late, lately; in times past; near the present; as, business has been dull *of late.*—*Too late,* not in time; after the due or proper moment; as, it was then *too late* to take precautions.

Lateen'-sail, *n.* (*Naut.*) A peculiar form of sail (Fig. 1524,) usually of a triangular figure, extended by what is called a lateen-yard, which is swung about one-quarter the distance from the lower end, and is brought

Fig. 1524.—A lateen-rigged xebec.

down at the tack, while the other end is elevated at an angle of forty-five degrees. Such sails are generally used in the Mediterranean waters, and form the rig of xebecs, polaccas, feluccas, and settees.

Late'ly, *adv.* Recently; not long ago; as, he has *lately* come from abroad.

La'tency, *n.* State of being latent or concealed.

Late'ness, *n.* State of being late or delayed, or of coming after the usual, proper, or appointed time; as,

the *lateness* of the harvest. — State of being out of time, or after the specified time; time far advanced in any particular period; as, *lateness* of the day, *lateness* in life.

La tent, *a.* [Fr.; Lat. *latens*, from *lateo*, to lurk; Heb. *laat*, to muffle, to cover.] Hid; concealed; secret; not seen; not visible or apparent; as, *latent* talent.

L. bud. (*Bot*) A bud which survives long without growing, and commonly without being visible externally.

L. heat. (*Phys.*) See HEAT.

L. operation. (*Surg.*) One of the methods of cutting for the stone.

L. period. (*Med.*) A state of disease in which the symptoms are so concealed and obscure as to escape the observation of the physician.

La'tently, *adv.* In a latent manner; secretly; invisibly.

Lat'er, *a.* [Comp. deg. of *late*.] After; posterior; subsequent.

"But He is risen, a *later* star of dawn." — *Wordsworth.*

Lat'eral, *a.* [Fr.; Lat. *lateralis*, from *latus*, *lateris*, a side.] Pertaining to the side; springing from, or attached to the side; as, *lateral* branches. — Directed to or acting on the side; as, a *lateral* view, a *lateral* contingency.

L. equation. (*Math.*) An equation of the first degree.

L. stress or *pressure.* (*Mech.*) A pressure at right angles to the length, as of a beam; — in contradistinction to *longitudinal stress* or *pressure.*

Lat'erally, *adv.* By the side; sideways. — In the direction of the side.

Lateran, (*lăt'e-răn.*) (*Eccl. Hist.*) This name, derived from the old Roman family of the Laterani, whose chief, Plautius, implicated in the Piso conspiracy, was executed by Nero in 65, was applied to their palace, presented by Constantine I. to the popes. The greater part of the Lateran palace was destroyed by fire in 1308. Gregory XI., on restoring the seat of the papacy from Avignon to Rome, in 1377, took up his abode at the Vatican. The church of St. John of Lateran, called "the Mother and Head of all the churches of the city and the world," built by Constantine I., was dedicated to the Saviour. Lucius II., who rebuilt it in the 12th cent., dedicated it to John the Baptist. (Fig. 1525,) and it

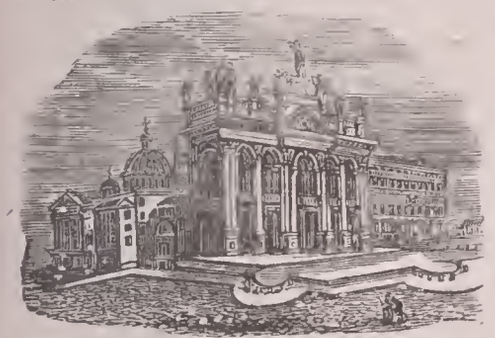


Fig. 1525. — ST. JOHN LATERAN, (Rome.)

is celebrated for the councils held in it. Oct. 5–31, 649; Nov. 1, 864; Aug., 900; Jan. 31, 993; Feb. 12, 1111; March 18–23, 1112; March 5, 1116; March 18 to April 5, 1123 (ninth general); April 20, 1139 (tenth general); March 5–19, 1179 (eleventh general); Nov. 11–30, 1215 (twelfth general); and May 3, 1512, to March 16, 1517, by some called the nineteenth general. Every newly elected pope takes possession of this church in great state, and bestows his blessings upon the people from its balcony. A new palace, adjoining the church, was built by Sixtus V. in 1586.

Lateriflorious, *a.* [Lat. *lateris*, and *folium*, leaf.] (*Bot.*) That grows on the side of a leaf at the base, as a flower.

Lateritious, (*-ish'us,*) *a.* [Lat. *lateritius.*] Resembling bricks; having the color of bricks.

L. sediment. (*Med.*) The name given to a dirty-red-colored precipitate, sometimes found in the water of persons laboring under disease; in other words, a brick-colored sediment of the urine.

Latescence, (*-es'ens,*) *n.* [From Lat. *latescere* — *latere*, to be hid.] A partial retirement from view or knowledge.

(*Zoöl.*) Tendency to milk; milkiness, or milky color.

Lat'est, *a.* [Super. of *late*, q. v.] That comes last of all; longest after the appointed time; tardiest; as, *latest* intelligence, the *latest* comer.

Late'-wake, *n.* (*Arch.*) Same as LICH-WAKE, *q. v.*

Late'ward, *a.* Somewhat late; — opposed to *forward.* (R.)

La'tex, *n.* [Lat.] (*Bot.*) A coagulable sap which circulates in the vessels of the lactiferous tissue of plants. The term is extended to any kind of viscid fluid conveyed in the lactiferous vessels, whether opaque or not.

Lath, *n.* [Fr. and Ger. *latte.*] (*Arch.*) A thin cleft piece of wood used in slating, tiling, and in plastering. Pantile laths are long square pieces of fir or oak, on which the pantiles hang. The term has also lately been applied to the wrought-iron strips that serve to fasten the slates or the sheets of metal on a roof; or to the strips that support the filling-in part of a fire-proof floor.

—*v. a.* To cover or line with laths.

Lath'am, in *Ohio*, a post-village of Pike co., about 24 m. S.S.W. of Chillicothe.

Lath'-brick, *n.* A long, narrow brick for drying malt upon in the kiln.

Lathe, *v.* [Etymol. uncertain; perhaps from W. *llathru*, to make smooth.] (*Mach.*) A machine in which objects are turned, or rotated and shaped. It is the most important of tools, and is manufactured in many forms to meet the demands of different lines of manufacturing. The machinist's lathe, in its most common form, consists of a supporting framework, called the bed or shears, on which are mounted two heads (the head-stock and tail-stock), between the pointed centers of which the piece or article to be shaped is mounted. The center at the head is fixed, but rotates, and is called the live center. That at the foot is adjustable as to distance from the head, but does not rotate, and is called the dead center. Back of the live center is a shaft, usually made hollow, called the mandrel. On this are mounted the stepped driving-pulleys, which carry the belts connecting with the source of power. Moving on a screw along the front of the bed is the slide-rest, which carries the tool-post. A cutting tool being properly placed in the post, may be brought into operation against the work turned by the adjustment of the slide rest, and a slight thickness is taken off at each back-and-forth passage of the tool across the work. For turning long, springy pieces, as light rods, a mid-rest is supplied as an attachment to the lathe. In connection with the head-stock is an arrangement of gearing that permits of changes in speed of rotation, &c. On the live center is mounted either a face-plate or a chuck for holding the work. For special work, as in the manufacture of duplicate machinery, where a great number of similar pieces have to be turned out cheaply, special forms of lathe are devised, as the axe-handle lathe, pivot-lathe (for watch pivots), wheel-lathe (for turning car-wheels), &c. The geometric lathe is a special machine, designed to form the "lathe-work" observed in bank-notes. Jewelers have special forms of lathes, having wheels for grinding and polishing. The potter's lathe is a rotating table on which the clay is mounted and shaped with a tool or by the hand. For large lathes, see MACHINE TOOLS, in SECTION II.

(*Eng. Hist.*) An Anglo-Saxon territorial division, of which the etymology is uncertain. Kent is the only county divided into lathes, each of which contains four or five hundreds. Each was originally under the jurisdiction of a lathe-reeve, subordinate to the sheriff of the county.

Lathe'-bed, *n.* (*Mech.*) That part of a lathe on which the poppet-head slides forward or backward to its required position.

Lath'er, *v. a.* [A. S. *lethrian*, to anoint; perhaps akin to Icel. *lödra*, to foam, from *lödr*, the foam of the sea.] To anoint or spread over with lather or foam of soap; as, to *lather* one's beard.

—To administer a severe flogging; as, to *lather* an unruly boy.

—*v. a.* To form a froth or foam with water and soap.

"Choose water pure, such as will *lather* cold with soap." — *Baynard*

Lath'ering, *n.* A castigation; a flogging.

Lath'ing, *n.* A covering made with laths. — Art or practice of covering with laths.

Lathræ'a, *n.* [Gr. *lathraios*, concealed.] (*Bot.*) A curious genus of the order *Orobanchaceæ*, called Toothwort. The English name arose from the root, which is parasitic on the roots of trees, and is branched and clothed with numerous fleshy scales resembling teeth. On this ground the old herbalists considered it a specific for toothache.

La'throp, in *California*, a post-vill. of San Joaquin co.

Lathrop, in *Pennsylvania*, a post-township of Susquehanna co. *Pop.* (1897) 820.

Lath'-work, *n.* Batten-work in the form of thin, narrow strips of wood, affixed to the sides of a room to receive a coating of plaster.

Lathy'rus, *n.* [Gr. *lathyros*, a vetching.] (*Bot.*) A considerable genus of herbaceous, climbing plants, order *Fabaceæ*, the most familiar species of which are *L. odoratus*, the Sweet Pea, *L. latifolius*, and *L. sylvestus*, natives of Europe, and cultivated in gardens for the beauty of their flowers. The tuberous roots of *L. tuberosus*, the Everlasting Pea (Fig. 1526), common in corn-fields in various parts of Europe, are eaten, boiled or baked, in the countries where they are abundant. *L. sativus*, grown in the S. of Europe under the name of Jesse or Jarosse, has been used for food; but it proves to be a slow poison both to man and beast, producing ultimately entire helplessness, by rendering the limbs rigid, but without pain. Some species are American, among which *L. palustus*, the Marsh Lathyrus, found in wet meadows and thickets from N. England to Oregon, and giving in June beautiful large drooping flowers, variegated with blue and purple.

Fig. 1526. — EVERLASTING PEA, (*Lathyrus tuberosus.*)

Latian, (*lā'shan,*) *a.* Belonging or having reference to the ancient *Latium*, a country of Italy, S. of the Tiber.

Latib'ulize, *v. n.* [From Lat. *latibulum.*] To hibernate; to lie burrowed or domiciled.

Latib'ulum, *n.*; *pl.* LATIBULA. [From Lat. *latere*, to lie concealed.] A burrow; a lair; a secret hiding-place or den.

Laticiferous, *a.* [Lat. *latex*, and *ferre*, to bear.] (*Bot.*) Applying to the tissue conveying the *latex* of a plant.

Lat'iclave, *n.* [Lat., from *latus*, and *clavus.*] (*Roman Antiq.*) See CLAVUS.

Laticostate, *a.* [Lat. *latus*, broad, and *costatus*, ribbed.] Broad-ribbed.

Latidentate, *a.* [Lat. *latus*, and *dentatus*, toothed.] Broad-toothed.

Latifoliate, Latifolious, *a.* [Lat. *latus*, and *folium*, leaf.] (*Bot.*) Broad-leaved.

Lat'imer, HUGH, an English bishop and reformer, B. at Thurcaston, Leicestershire, abt. 1490. He was educated at Cambridge, and received the degree of M. A. in 1514. He was then, as he says himself, "as obstinate a Papist as any in England," but became a Protestant chiefly through the influence of Bilney. He strenuously promulgated the doctrines of the Reformation, and being an admired preacher, his influence on his hearers was consequently very great. His fame reaching Henry VIII., he sent for him, and was so pleased with his discourses as to confer on him the bishopric of Worcester. But Latimer was no time-server; on the contrary, he expostulated with the king on his cruelties. He afterwards resigned his bishopric; and, on the fall of Lord Cromwell, his patron, he was sent to the Tower, where he remained till the accession of Edward VI., who would have restored him to his diocese, but he refused. He then resided with Cranmer, whom he assisted in framing his homilies, and in completing the work of reformation. When Mary came to the throne, he was committed to the Tower, whence he was sent, with Ridley and Cranmer, to Oxford, to hold a conference with several doctors from the universities. He pleaded that he was old, sick, and had used the Latin tongue but little for twenty years; he was therefore permitted to give in a long profession of faith in writing, for which he was condemned as a heretic, and imprisoned for more than one year in Bocardo, the common jail of Oxford. He was then again summoned before the commissioners, but refusing to recant, he was sentenced to the stake, and was burned at the same stake with David Ridley, 1555. Latimer, after commending his soul to God, thus cheered his brother-sufferer: "We shall this day, my lord, light such a candle in England, as shall never be extinguished." His sermons have often been printed.

Lat'imore, in *Pennsylvania*, a post-township of Adams co. *Pop.* (1897) 1,265.

Lat'imore Creek, in *Pennsylvania*, enters the Conewago Creek in Adams co.

Lat'in, *a.* Relating or belonging to the Latins, or people of Latium, Italy; — hence, Roman; as, the *Latin* language.

— Belonging to, or written in the language of, the Latins or Romans; as, a *Latin* delectus, a *Latin* oration.

—*n.* The language of the people of ancient Rome. — See LATIN LANGUAGE.

(*Anc. Geog.*) A native or inhabitant of Latium.

Lat'in Church, *n.* (*Eccl. Hist.*) A name applied to the Roman Catholic Church and the churches in communion with it, as distinguished from the Greek Church.

Lat'in Cross, *n.* A cross with the lower limb considerably larger than the other three.

Lat'in Empire. (*Hist.*) The Crusaders captured Constantinople April 9, 1204, and founded the Latin Empire of the East, which was overthrown by Michael (VIII.) Palæologus, July 25, 1261, who restored the Eastern or Greek Empire.

Lat'inism, *n.* A Latin idiom or peculiarity of speech.

"Milton has made use of frequent *Latinisms.*" — *Addison.*

Lat'inist, *n.* A Latin scholar or critic; one versed or skilled in the Latin language.

"He left school a good *Latinist.*" — *Macaulay.*

Latinis'tic, *a.* Consisting of, or pertaining to Latin; couched in a Latin style or idiomatic mode of expression.

Latin'itaster, *n.* A pretender to a knowledge of Latin; one who has a smattering of the Latin tongue.

Latin'ity, *n.* [Lat. *latinitas.*] The Latin tongue or style of speech; purity of the Latin style or idiom.

"If Shakspeare was able to read Plautus with ease, nothing in *Latinity* could be hard to him." — *Dennis.*

Latiniza'tion, *n.* Act of converting into Latin.

Lat'inize, *v. a.* [Fr. *latiniser.*] To give to foreign words Latin terminations, and to make them Latin.

—*v. n.* To use words or phrases borrowed from the Latin.

"I am liable to be charged that I *Latinize* too much." — *Dryden.*

Latin Language and Literature. The Latin language, the speech of the ancient Romans, derived its name from the country of Latium, the central region of Italy. Latium was surrounded, in the south, by colonies of Greeks, by the Tyrrhenian Pelasgi on the plain of the Po, by the Ligurians at the foot of the Alps, by the Umbrians, by the Ausonians on the Tiber, the Oscans at the foot of Vesuvius, and the Etruscans on the Arno. The territory of Latium, therefore, having Greeks on the one side and barbarians on the other, overrun in turn by both, and at last peopled by different

tribes, gave rise to a language partaking of various elements. Many of the Latin words are of Greek derivation, a number of which are probably simple transplantations adopted after the language was formed; but there are many others that have been more or less changed; and probably not a few that were originally Greek have come to lose all traces of their origin. The terms of husbandry and domestic occupation are mostly Greek, while those of warfare, on the contrary, are evidently not Greek. Hence it is concluded that the indigenous Pelasgi were subdued by victorious invaders. This view is confirmed by the fact that the terms for the simplest ideas are Greek; as, *sto*, I stand; *sedeo*, I sit; *maneo*, I remain; while the terms referring to government and laws do not appear to be Greek; as, *rex*, a king; *jus*, law; *civis*, a citizen. Words relating to religion are usually not Greek, and may have been furnished by the Etruscans. That the conquerors did not come by sea is indicated by the fact that most of the maritime terms are Greek. As the Romans became masters of Italy, the other languages of the country disappeared. During the period preceding the first Punic war, the Roman language was in no settled state. It was necessarily exposed to a mixture of various idioms, from the diversity of foreigners who composed the early population of Rome. It was not until the close of that period that any attention was paid to the regular settling of the principles and forms of the language, and not until a still later time that any approved author labored upon the cultivation of style. Traces of the old forms of the language are found in fragments of the earliest poets, and also in the comedies of Plautus. The Latin language has only twenty-three letters, corresponding to those of the English, except that *w* is entirely wanting, that *i* was used to represent both *i* and *j*, and *u* to represent both *u* and *v*. Distinctive forms for these letters were not introduced until the Middle Ages. The letter *k* seldom occurs, and *y* and *z* exist only in a few Greek words, and came late into use. *X* is also a letter of late origin; and, at an early period, *i* was used instead of *y*, and *ss* instead *z*. There is no article in the Latin language, a defect which frequently gives rise to ambiguity. The characters used in writing greatly resembled, in the earliest period of the language, those of the Greek. The Romans used only capital letters, and on account of the inconvenience in rapid writing, they formed abbreviations, by using the initial letters, or some of the principal letters of a word. Until the time of the poet Livius Andronicus, who flourished about 240 B. C., there exist few monuments of the Latin language. The oldest of them is a hymn, which was chanted at their annual festival, by the *fratres arvales*, a college of Roman priests. It was dug up at Rome in 1778, and is believed to be as old as the time of Romulus. It contains but few words that remained in the language. The next specimens belong to the time of Numa, and are the Salian hymn, which was unintelligible to Horace, and the laws of Numa; after which come the laws of the Twelve Tables, about B. C. 450. After the Romans had conquered the south of Italy and Greece, Greek terms and phrases were grafted on the old Latin stock, and the language lost much of its original form. What, however, it lost in originality, it gained in refinement and polish; so that its golden age dates nearly from this transformation, — from the death of Sylla through the reign of Augustus. The progress of the Romans in the arts and sciences during this period has excited the admiration of posterity, and secured them a rank among the distinguished nations of antiquity second only to the Greeks. They had seen their inferiority in these respects to the Greeks, and had been brought to admire and copy their poetry, oratory, and works of art. Much, too, was owing to the comparative tranquillity which they enjoyed during this period, and the protection and encouragement which was afforded to them. The language of the upper classes (*lingua nobilis, classica*) was distinguished from that of the common people (*lingua plebeia, vulgaris*), the latter of which is only preserved to us in a few phrases in the comic poets. There was also a *lingua urbana* distinct from the *lingua rustica*, as well as a *lingua provincialis*. After the death of Augustus, the language became more and more corrupt, by the introduction of foreign terms from almost every language with which the people came in contact. The degeneracy became more rapid after the time of the Pliuys, as there was no writer capable of moderating it. The successive incursions of the Goths, Vandals, and Lombards flooded it with foreign words and forms. That the Latin language did not share the destruction of the Roman empire was due to Christianity, which had adopted it; and though it at first deteriorated it, it afterwards secured its perpetuity. It remained, in Europe, the ecclesiastical, political, and official language, long after it had ceased to be spoken, except in cloisters. At the revival of letters, Latin was the common language of the savans of Europe, and was written by many of them with great ease and purity. Bacon wrote the principal of his works in Latin, believing that it was destined to be the universal and common language of learned men. The Reformation was a great blow to the general use of the Latin language, by depriving it of its prestige and authority, and exalting the vernacular languages above it. Still, however, even in the present day, many learned works are produced in Latin, particularly in Germany and Holland. — The Romans being chiefly devoted to war, politics, and legislation, for five centuries were possessed of no literature worthy of the name. From the first it was an imitation of that of Greece, and hence its general characteristics are correctness and precision, with little of the buoyant vigor and various coloring of original genius. Even in its most cultivated period, the poets seem to have had little conception of originality, except as the importation of a new style from Greece. It was not till after the Romans had conquered Magna Græcia and Sicily, and had thus become intimately acquainted with Greek literature, that they began to turn their attention to that subject. Their first poet was Livius Andronicus, a Greek taken at the capture of Tarentum, and who produced Latin tragedies and comedies, translated from and modelled after the Greek. The poet Ennius (B. C. 239–169) was regarded by the Romans as the father of their poetry. He wrote tragedies, satirical and didactic poems, and the "Annales," an epic on Roman history, for which he was the first to use the Latin hexameter. Distinguished as tragic poets about this time, were Pacuvius, the nephew of Ennius, and his contemporary Attius. Next follows the comic poet Plautus, whose plays, though rather of a low and coarse nature, abound in genuine touches of wit and humor, and were much admired. Under Terence (195–159) Latin comedy rose to its highest, though not to Attic excellence. His comedies are all translated or adapted from Greek sources, chiefly Menander, and are distinguished for the elegance and purity of their style. He sought to delineate the pathetic as well as the ridiculous features of daily life; and though inferior to Plautus in native vigor, he surpassed him in constructive talent and depth of feeling. Nearly contemporary with him were Novius and Pompouius, authors of popular farces; Cæcilius Statius and Afranius, who introduced Roman instead of Greek manners upon the stage. Lucilius (148–103), a patrician by birth, gave to literature the advantage of his rank as well as genius, and was regarded by the Romans as the father of satire, a style of poetry in which he eminently distinguished himself. The Romans, after this period, had no distinguished dramatic writers; their pieces were mostly translations or imitations of Greek works. The later tragic writers of the Augustan age, Asinius, Pollio, Varius with his *Thyestes*, and Ovid with his *Medea*, are praised, but they were never very popular. The ten tragedies which are ascribed to Seneca were never acted, and are too bombastic and rhetorical to please cultivated minds. The first rude annalists of Rome were Q. Fabius Pictor and L. Cincius Alimentus, who were succeeded by the elder Cato (234–149), author of the *Origines* of Rome, a work now lost. The last historian of importance in the pre-Augustan period of Roman literature, was L. Cassius Hemina, who wrote five or six books of *Roman Annals*, fragments of which are still extant. Pre-eminent among the numerous other authors of this period were L. Cœlius, Antipater, Cn. Gellius, Bablius, Sempronius, Asellio, C. Junius, Piso Frugi, Scaurus, Rufus, Catulus, Sylla, Valerius Antias. Distinguished among the orators who flourished before the time of Cicero were Sulpicius, the two Gracchi — whose speeches were stated to have been learned and majestic, — Catulus, Crassus, Hortensius, and Antonius. Jurisprudence, as well as oratory, was suited to the genius of the Roman people, and among those most distinguished for their legal acquirements were the elder Cato, the Scævolas, and Manilius. The Stoical philosophy had many partisans, the first famous disciples of which being Panætius and Rutilius Rufus. The golden age of Latin literature is usually reckoned from the death of Sylla to that of Augustus (B. C. 78–A. D. 14). It was then that the influence of Greek learning and Greek philosophy came most to be felt. A knowledge of Greek was an essential part of a liberal education, and it was usual for the young men of means to finish their education by a residence of some time in Greece. In this period was Virgil (B. C. 70–19), one of the greatest epic poets that ever lived, and whose great work, the *Æneid*, has ever been admired for its elegance and taste not less than for its genius. It represents the landing of Æneas and the foundation of his dominion in Latium; and although the poet did not live to give it his finishing touches, and desired it to be destroyed, yet it will ever remain a noble monument of his great genius. More perfect of its kind is his *Georgics*, a treatise of agriculture in the form of a didactic poem, and exhibiting his views and feelings respecting human life. His earlier Eclogues or pastorals manifest the same love for nature and a country life. Few writers have exerted so wide an influence upon æsthetic culture as Virgil. His contemporary and life-long friend was Horace (B. C. 65–8), whose odes and epodes are models of skill and taste, and who introduced a number of new lyric metres. This poet is also eminent in satire, a species of writing original with the Romans, and which appears to have had a decided influence on the character of their literature. The works of Horace abound with maxims of practical wisdom and happy philosophical apothegms; so that no classical author of antiquity is more frequently read or quoted from. Ovid (B. C. 43–A. D. 14) in imaginative power is scarcely surpassed by any other Latin poet. He was also possessed of a brilliant sportive wit, and great power of versification. Less generally and highly esteemed are Lucretius, the sublimest of didactic poets, whose *De Natura Rerum* served at once to illustrate the atomic theory of the world and the Epicurean system of morals, and to polish and enrich the Latin language; Catullus (B. 87 B. C.), who introduced lyric poetry into the literature of Rome, and whose elegies and epigrams are admired for their simplicity, beauty, and unaffected imagery. Tibullus, who gave to the elegy its highest degree of excellence; and his successor Propertius (B. about B. C. 51), an amatory poet, who is also learned, awkward, and obscure. The place of the legitimate drama was now occupied by the mime or melodramatic farce, in which the characters of common life were represented with the help of gesticulation and with low jests, for the entertainment of the populace. It was invented by Mattius, and acquired its greatest celebrity from Laberius and Publius Syrus, the latter of whom interspersed it with moral sentiments, expressed with great felicity; but it never reached the standard of an elevated class of poetry. The greatest master of Latin prose of this or any other period was Cicero, who, in fact, has given name to the purest Latin composition. He flourished B. C. 106–43, and distinguished himself as an orator, so as to dispute the first place with Demosthenes. The orations of Cicero are remarkable for their copiousness and luxuriance of expression. He is master at once of the impassioned, the sublime, the pathetic, the grave, and the simple style, and has the art of adapting to every subject the appropriate form and the fitting hue of expression. He also rendered most important service to the intellectual cultivation of his countrymen by the introduction to them of the more elevated moral philosophy of the Greeks. Originally a follower of Plato, he often adopted the ethical lessons of the Stoics, or, when their excessive austerities repelled him, embraced those of Aristotle. The doctrines of Epicurus he rejected as injurious to men, and especially in their relation as citizens. His works also afford much information in regard to the history of ancient philosophy; as, for example, his Tusculan questions. Poetry, also, history, and the epistolary style, he touched only to adorn. His letters are admitted to be the most perfect specimens which the literature of Greece or Rome can produce. Next to him, as orators, were the accomplished Hortensius, the obscure Cœlius Rufus, the cold, cautious, and accurate Lucinius Calvus, and especially Julius Cæsar (B. C. 100–44), whom his contemporaries believed to be capable of rivalling even Cicero in eloquence. Pollio, Carvinus, and Cassius Severus, were also distinguished in this walk. Cæsar was Cicero's rival, also, in improving and refining the language. His "Commentaries on the Gallican War" are but little inferior to Herodotus in charm of diction. The historian next to him, in respect of style, is Cornelius Nepos, whose "Lives" are models of style in biographical composition. Sallust (B. C. 86–34) approximated to his model Thucydides in richness and vigor of thought and terseness of expression, though he marred his clear conception by an affectation of antiquated forms. His accounts of the Catilinarian conspiracy and the Jugurthine war are carefully prepared and ambitious works, always profound, though often partisan in their judgments. Livy (B. C. 59–A. D. 17), pre-eminently the general historian of Rome, excels in pictorial effect, surpassing even the Greeks in the liveliness and richness of his coloring, and the animation and spirit of his delineations. The work, however, is more picturesque than accurate, and marked more by patriotism than candor. His style commands the admiration of classical scholars; but circumstantial truth must be sought elsewhere. In what is termed the Silver age of Latin literature, from the death of Augustus to the accession of Hadrian (A. D. 14–117), everything is changed. Liberty has disappeared, and talent was made subservient to flattery, or to bombast and an affectation of wit. Every subject was rendered comic; prose and poetry were confounded, and new grotesque forms of expression were invented. The purity of the language was no longer maintained, and it became corrupted by barbarism. Seneca, who, with great talents, was ambitious of shining by the brilliancy of his wit, the structure of his antitheses, and the general terseness and point of his style, contributed not a little to the degeneracy of that period. His various prose writings abound in moral sentences and maxims, but reveal the pride of a Stoic in a style full of literary affectation. Eloquence was cultivated by Julius Flavus, by Domitius, and by Julius Africanus. Plays were produced by Pomponius Secundus, Varginius, and Martinus. The epic degenerated from poetry to history; the *Pharsalia* of Lucan, the greatest effort in this line, being rather declamatory than poetical. Valerius Flaccus, author of the *Argonautics*, a work neither original nor brilliant, introduced an affectation of learned display. To this period belong Silius Italicus, author of *Punica;* Statius, author of *Thebais;* and Manilius, author of *Astronomica*. In satire this period is more distinguished. Persius and Juvenal are the chief masters of this art, — the latter disputing the palm of superiority with Horace. Martial first gave to the epigram its present meaning, as a short poem, in which all the thoughts and expressions converge to a striking and unexpected conclusion. His twelve books of epigrams exhibit a singular flow of wit and fertility of imagination, and afford much information regarding the social habits of the people. In prose, Paterculus ranks among the best authors of this period. His work on Roman history is elegant and elaborate, and is conceived in an impartial spirit, though it manifests an opposition to republicanism, and a tendency in favor of the empire. The greatest of Roman historians, however, is Tacitus, who, to great power of observation, unites intellectual strength, and whose experience of men and affairs furnishes the most sombre colors and sagacious maxims. He displays great acuteness in penetrating into the inner nature of men, exposing their hidden motives of action, their cunning, servility, immorality. With eloquence derived from indignation, and with a skill in graphic representation, such as only Thucydides and Sallust have given us examples of, he wrote a narrative of his time. Not to be compared with him, are Suetonius, the arid biographer of the emperors; the florid panegyrist Florus; Valerius Maximus, a collector of anecdotes; and Quintus Curtius, the Roman historian of Alexander the Great. Quintilian (born A. D. 40), in his great work *Institutiones*

Oratoriæ, displays a highly cultivated mind and a polished and graceful style. He attempts to restore eloquence to its former position, and lays down rules for the training of the orator. The elder Pliny displayed a great love for the study of nature, and drew attention to the physical sciences, which previous to his time had been entirely neglected. The letters of the younger Pliny are of much value for the light they throw upon the period in which they were written; but many of them are ridiculously studied and elegant. The Brazen age, from the accession of Hadrian to the fall of the Western empire (A. D. 117–476), exhibits not only the decline of taste, but the corruption of the language. The intercourse of the Romans with barbarians became much more extended. Under the Antonines, especially, the language became overlaid with exotic words, phrases, and constructions. Literature was also cultivated at Byzantium, Alexandria, Milan, and the principal cities of Gaul, as well as at Rome. As the literature declined, and the language became corrupt, the number of grammarians increased; for classical Latin had become almost a dead language, to be learned only from the ancient models. Ausonius, a grammarian, rhetorician, and poet, wrote idyls and epigrams marked by learning and wit; Claudian wrote epical sketches; Aurelius Prudentius, the greatest of primitive Christian poets, wrote a great variety of hymns and lyrical and heroic pieces, portions of which are still employed in the service of the Catholic Church; St. Ambrose wrote Latin poems remarkable for their austere simplicity and sublimity. The decline of prose appears in the *Historia Augusta*, a collection of imperial biographies from Hadrian to Diocletian. The summaries of Aurelius Victor, Eutropius, and Sextus Rufus, succeeded. Almost the last noteworthy Roman history was that of Ammianus Marcellinus, extending to A. D. 378. The grammarian Cornelius Fronto, and the rhetoricians Apulcius and Eunodius, are the best of their class. The *Golden Ass* of Apuleius is almost the only example in Latin literature of anything like a prose novel, or romance. The Church Fathers, as Tertullian, Minucius Felix, St. Cyprian, Arnobius, Lactantius, St. Hilary, St. Ambrose, and St. Jerome, are generally more remarkable for theological vigor than literary grace. In the reign of Justinian was drawn up that admirable system of laws which bears the imperial name. (See JUSTINIAN CODE.) Aulus Gellius, Nonius Marcellus, Festus Donatus, Macrobius, Servius, Priscianus, Cæsariensis, and Isidore of Seville, continued to cherish its traditions by criticisms, analyses, and such like. Maternus wrote on mathematics, Frontinus and Vegetius on strategetics, Palladius on rural economy, and Solinus Publius Victor and Vibius Sequester on geography and cosmography.

Latiros'trous, *a.* [Lat. *latus*, and *rostrum*, beak.] (*Zoöl.*) Broad-beaked, as certain birds.

Lat'ish, *a.* [From *late.*] Somewhat late.

La'tis rec'tum. [Lat., the right side.] (*Math.*) In the lower sections, the double of the ordinate of a focus.

Latis'simus Dor'si, *n.* [Lat. *latissimus*, broadest, and *dorsum*, the back.] (*Anat.*) The name of a broad, flat muscle of the back and side of the thorax, and which, being inserted into the arm, has, on account of its great strength, considerable power in moving the arm downwards and backwards, in the action preparatory to delivering a blow; and when the hands and arms are fixed, this muscle assists greatly in drawing up the body to their level.

Lat'itancy, *n.* State of lurking or lying in wait; delitescence.

Lat'itant, *a.* [Lat. *latitans*, from *latere.*] Latent; lying lurking or concealed; as, "small *latitant* bubbles of air." — *Boyle.*

Lat'itat, *n.* (*Eng. Law.*) A writ or summons issued by the Queen's Bench against a debtor supposed to be in hiding.

Lat'itude, *n.* [Fr.; Lat. *latitudo*, from *latus*, broad, wide; same root as Gr. *platys*, broad, Ger. *platt*, and Eng. *flat.*] Breadth; width; extent from side to side. "Provided the length do not exceed the *latitude*."— (*Wotton.*) — Room; space; freedom from restraint or settled rules; — hence, laxity; looseness; untrammelled volition.

> "This kind of verse allows more *latitude* than any other." *Dryden.*

—Breadth of meaning or construction; extent of deviation from a fixed rule or settled point.

—Diffusion; scope; extent; reach.

> "Albertus . . . for his great learning, and *latitude* of knowledge surnamed Magnus." — *Sir T. Browne.*

(*Astron.* and *Geog.*) *L.* and *longitude* are the means by which the exact position of any place on the earth's surface, or any star in the field of the heavens, may be determined and described; but Lat. and Lon. in geography are not identical with Lat. and Lon. in astronomy, and the terms will require a separate definition, according to their acceptation in each science. — In *Geog.*, the position of any place on the earth's surface is indicated by the intersection of two imaginary circles at right angles to each other, one of which is a great circle passing through the place itself and the poles perpendicularly to the plane of the equator; and the other, the equator itself, if the place happen to be situated on that line, or a circle, the plane of which passes through the place in question in a direction parallel to the plane of the equator. Of these circles, the former shows the degree of Lon. on which the place is situated, and the latter the degree or parallel of Lat. Lon. is measured along the equator, E. and W. of the meridian of Washington, from 0° to 180°, while Lat. is measured N. and S. of the equator, from the equator to the poles, on any great circle that is perpendicular to the plane of the equator, from 0° to 90°. Lon. may also be described, in other words, as the angle contained between the plane of the meridian of any place and the plane of the meridian of Washington, which intersect in the earth's axis; and Lat. as the angle that is subtended at the earth's centre by the arc of the meridian, or great circle, which is intercepted between the position of any place on the earth's surface and the equator. This is not strictly true, however, as far as Lat. is concerned; as the earth is a spheroid in shape, and not an exact sphere (see EARTH, DEGREE, GEODESY); but, in the construction of maps and globes, and for all practical purposes of an ordinary nature, the difference is not appreciable; and as this angle, for any position on the earth's surface, would be equal to the altitude of the pole of the heavens at that place, the Lat. of any place is usually determined by ascertaining the altitude of the pole at the place in question, wherever it may happen to be. — In *Astron.*, the Lat. of any star is its angular distance from the ecliptic measured on a great circle, the plane of which passes through the star and the poles of the heavens; or it may be defined as the arc of this great circle that is intercepted between the position of the star and the ecliptic, while its Lon. is the angle made by the inclination of the planes of the two great circles which intersect in the axis of the heavens, one of which passes through the star and the poles of the heavens, and the other through the poles of the heavens and the intersection of the equator and the ecliptic at the vernal equinox; or, in other words, the arc of the ecliptic intercepted between the planes that pass through the star and the first point of Aries, and the poles of the heavens, at right angles to the plane of the ecliptic. In astronomy, therefore, the Lon. of heavenly bodies is measured along the ecliptic instead of along the equator as in geography; and celestial Lon. is reckoned all round the ecliptic eastward in one direction, from 0°, or the first point of Aries, to 360°. It should be said that, in astronomical writings and calculations, the Lon. of places on the earth's surface is reckoned and noted in the same manner, and not E. and W. of Washington, as in geography. The positions of the heavenly bodies are not now determined by latitude and longitude, but by their right ascension and declination. (See ASCENSION, (RIGHT;) DECLINATION.) The determination of Lat. and Lon. of any place on the earth's surface depends upon astronomical observations, the *modus operandi* of which is beyond the compass of the present work. The two simplest methods generally used by navigators and travellers are: — I. For finding the *latitude* of a place, to observe the meridian altitude of a star whose declination or distance from the equator is known; or of the sun, whose declination at the time may be proved from the *Nautical Almanack;* the same or the difference (according to the direction of the declination) of the altitude and declination gives the meridian altitude of the equator, which is the co-latitude. 2. The method for the determination of the longitude consists merely in determining at what hour on the chronometer (which is set to the time at Greenwich, or some place of known Lon.) the sun crosses the meridian. It is evident, that, as the sun completes a revolution, or 360°, in 24 hours, he will move over 15° in 1 hour, or 1° in 4 minutes. Now, if the watch be set to Washington time — viz., point to 12 o'clock when the sun is on the meridian of Washington, and if at some other place, when the sun is on the meridian there, the watch points to 3 hours 52 minutes, the difference of Lon. is 58°, and the Lon. will be W., as the sun has arrived over the place *later* than at Washington; similarly, if the sun be over the meridian of a place at 9 hours 40 minutes A. M., the Lon. is 35° E. (by the chronometer). The accuracy of this method depends evidently upon the correctness of the chronometer.

(NOTE. We would here observe, that, in conformity with the general practice, and to avoid misconception and confusion, all the degrees of longitude given in this work are calculated from the meridian of Greenwich.)

Latitud'inal, *a.* Belonging to latitude; in the course of latitude.

Latitudina'rian, *a.* [Fr. *latitudinaire.*] Not restrained by rules; not confined by fixed or precise limits; as, "*latitudinarian* love." (*Collier.*) — Indulging in latitude of opinion; thinking or acting independent of prescribed principles or popular opinion; lax in views or principles in a moral or religious sense; as, *latitudinarian* ideas.

—*n.* One who indulges in latitude of thought or opinion; one who is not bound by prescribed or settled limits in thinking.

(*Eng. Eccl. Hist.*) This name was applied in the reign of Charles II. to a class of English divines who were opposed alike to the high tenets of the ruling party in the Church, and to the fanaticism which then distinguished many of the Dissenters. They were, of course, the objects of much attack; and one of their number, Fowler, bishop of Gloucester, explained their principles in his treatise entitled *The Principles and Practice of certain modern Divines of the Church of England vulgarly called Latitudinarians, truly represented and defended, by way of Dialogue*, 1670. Henry More, and the other Platonizing divines of the time, were sometimes comprehended under this appellation. The word has been since very generally used to designate those who hold opinions at variance with the more rigid interpretation of Scripture and English Church traditions, or merely as a term of party vituperation.

Latitudina'rianism, *n.* Undue freedom or laxness of opinion or belief, particularly in theology.

> "Fierce sectarianism bred fierce *latitudinarianism*." *De Quincey.*

Latitud'inous, *a.* Possessing latitude or wide extent.

Latium, (*lā'shi-um.*) (*Anc. Hist.*) A considerable division of central Italy deriving its name from the city Latium, said to have been founded by King Latinus B. C. 1240. Æneas, according to the legend, settled here with a colony of Trojans B. C. 1181, and the new colonists and aboriginal inhabitants, having united into one nation under his government, were known as the Latins. They formed a confederacy of towns, with Alba Longa at their head; and after the destruction of that town by the Romans, B. C. 665, the whole territory was reduced to subjection. The Latins rebelled B. C. 502, and a treaty was concluded between them and the Romans B. C. 493, by which their independence was acknowledged, and an alliance concluded between the two powers. They joined other states against Rome, and the last war waged against them commenced B. C. 340, and terminated B. C. 338 in the defeat of the Latins, after which time they ceased to exist as an independent people. The Roman franchise was, B. C. 91, bestowed upon all people of Italy who were allies of Rome.

Lato'na. (*Myth.*) The daughter of Cœus the Titan, and Phœbe, or, according to Homer, of Saturn. Jupiter having with his usual fatality fallen in love with Latona, Juno, enraged at this additional proof of his perfidy, sent the horrid monster Typhon to pursue her from place to place, and allow her not an instant's peace from mortal fear in heaven or earth. Neptune, moved with compassion, caused the island of Delos to rise out of the Ægean Sea; Latona there gave birth to Apollo and Diana. Juno obliged her to fly from Delos. After having wandered over the greater part of the earth, and experienced the violence of Niobe and Tityus, she at length, though exposed to the resentment of Juno, became a powerful deity, and saw her children receive divine honors. Her worship was generally established where her children received adoration, particularly at Argos, Delos, and other places where she had temples.

Lato'na, in *California*, a village of Shasta co., on the Sacramento River, about 15 m. S.E. of Shasta.

La Tortue, (*la-tor-tu'*,) a village of Huntingdon co., Lower Canada, abt. 15 m. S. of Montreal; *pop.* 500.

Latour d'Auvergne, THÉOPHILE MALO CORRET DE, a French officer, B. at Carhaix, Finistère, 1743, of an illegitimate branch of the family of the Dukes of Bouillon. On the outbreak of the revolution, he attached himself to the national cause. The army of the Alps, which operated against the Sardinians in 1792, contained no braver officer than Latour. He was the first to enter Chambery, sword in hand, at the head of his company. But he would not hear of advancement in military rank; and in the following year, though placed at the head of a column of 8,000 grenadiers in the army of the Pyrenees, he continued to wear the uniform of a captain. His corps obtained the name of the "infernal column," on account of the dread which its bayonet-charges inspired. When he was subsequently with the army of the Rhine in 1800, as he still refused all promotion, Bonaparte bestowed on him the title of "The First Grenadier of France." He was killed, on 27th June of that year, at Oberhausen, near Neuburg, in Bavaria. The heroism and magnanimity of *L.* were wonderful; and French biographies are full of instances of his daring valor, his Spartan simplicity of life, and his chivalrous affection for his friends.

La Trappe. See TRAPPISTS.

Latreille, PIERRE ANDRÉ, (*la-trail'*,) a French naturalist, born at Brives in 1762. At the age of 16 he was sent to Paris and educated for the Church, but the persecutions of ecclesiastics in the early years of the revolution led him to devote all his time and energies to the study of natural history, and especially of entomology, in which he had long delighted. He had already gained the friendship of many eminent men of science, among whom were the Abbé Haüy, Fabricius, Lacépède, Cuvier, and Geoffroy Saint-Hilaire; and on the death of Lamarck he was appointed to the vacant chair of zoölogy. He was a correspondent of the Institute, member of the Academy of Sciences, and of most of the European academies, and chevalier of the Legion of Honor. Among the most important of his numerous works are *Genera Crustaceorum et Insectorum*, published in 4 vols. in 1808–9; *Histoire Naturelle des Reptiles; Histoire Naturelle des Crustacés et des Insectes*; the entomological portion of Cuvier's *Régne Animal;* and contributions to the *Encyclopédie Méthodique*, and other scientific works. *L.* was also distinguished for his great geographical knowledge. D. 1833.

La'tria, *n.* [Lat.; Gr. *latreia.*] Worship of the Almighty; — in the Roman Catholic Church, used in distinction from *dulia*, or the honors paid to the saints.

Latrobe', in *California*, a post-village of Eldorado co.

Latrobe', in *Pennsylvania*, a post-borough of Westmoreland co., 41 m. E. of Pittsburg. *Pop.* (1897) 3,770.

Lat'robite, *n.* (*Min.*) A variety of amorthite of a pale red color, found in Amitok Island, on the coast of Labrador. It is a hydrated silicate of alumina, peroxide of iron, lime, potash, and magnesia.

Lat'tasburg, in *Ohio*, a post-village of Wayne co.

Lat'ten, *n.* [D. *latoen*, from It. *latta*, tin-plate.] A mixed metal resembling brass, much employed in mediæval church-furniture, monumental brasses, &c. — Tin rolled into sheets; also, iron-plate coated with tin.

Black latten, brazlers' brass, a composition of copper and zinc.

Roll latten, latten burnished on both sides for immediate use.

Shaven latten, a thinner sort of black latten.

Lat'ter, *a.* [An irregular comparative of *late.*] Later; coming or occurring after something else; — correlative of *former;* as, the former and *latter* occasion.

—Mentioned the last of two; as, he chose the *latter* alter-

native. — Modern: recently done or passed; as, in these *latter* days. — Latest; final; ending.

Latter-Day Saints. See MORMONS.

Lat'terly, *adv.* Of late; lately; in time not long ago.

Lat'ter-math, *n.* (*Agric.*) Same as AFTER-MATH, *q. v.*

Lattice, Lat'tice-work, (*lăt'tĭs,*) *n.* [Fr. *latti's,* from *latte,* lath. See LATH.] A network of wood or iron, made by forming open squares of crossed laths, rods, or bars; as, a window-*lattice.* — A reticulated window or window-blind.

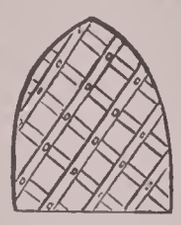
"*Lattice*-windows give the spy
Room but to peep with half an eye." — *Cleveland.*

Lat'tice-bridge, *n.* (*Engineering.*) The wrought-iron tubular bow-bridge, now in very common use in railway construction, being a combination of the tubular and the lattice principle. To avoid repetition, we refer the inquirer to the art. TUBULAR BRIDGE.

—*a.* Furnished with lattice-work; consisting of cross pieces.

—*v. a.* To furnish with a lattice.—To form with cross'bars and open work.

Latticed, (*lăt'tĭst,*) *p. a.* Formed with cross bars or open squares, like net-work.



(*Her.*) Applied to a shield (*Fig.* 1527), covered with a decoration, differing from Fretty only in this respect, that the pieces do not cross over and under each other; these, directed from dexter-chief to sinister base, are placed uppermost and *cloué,* that is, have nails inserted at the joints. Such shield is also called *Treillé.* *Fig.* 1527. — LATTICED.

Lat'ta's, in *Ohio,* a post-village of Ross co., about 15 m. W. of Chillicothe.

Lat'tice-leaf, Lat'tice-plant, *n.* (*Bot.*) See OLYRANDRA.

Latude, HENRI MAZERS DE, (*la-tood',*) a French courtier, B. 1724, was liberated from the Bastile in 1784, after an imprisonment of 35 years, occasioned by his intrigues against Madame Pompadour. He is the author of *Memoirs,* which have made his name celebrated throughout Europe. D. 1804.

Lau'bach, in *Pennsylvania,* a P. O. of Northampton co.

Lauban, or **Lubau,** (*lou'ban,*) a town of Prussia, in Silesia, situated on the Queiss, 40 m. W.S.W. of Liegnitz. *Manuf.* Woollens, cottons, linens, and tobacco. *Pop.* 7,500.

Laud, *n.* [Lat. *laus, laudis;* probably allied to Armor. *louen,* joyous, and to Heb. *alats,* to be joyful.] Commendation; honorable mention; an extolling in words.

'O guest, great *laud* and praise were mine.' — *Pope.*

—Vocal or instrumental melody made in honor of any one.

—*pl.* [Lat. *laudes,* praises.] (*Eccl.*) In the Roman Catholic Church, the prayers formerly used at daybreak, between those of *matins* and *prime.* In later times they have become generally confounded with *matins.*

—*v. a.* [Lat. *laudo.*] To praise in words; to extol with words or music; to celebrate.

"We *laud* and magnify Thy glorious name." — *Bentley.*

Laud, WILLIAM, an English prelate, Archbishop of Canterbury in the reign of Charles I., was born in 1573, at Reading, in Berkshire; was educated at the free school of his native place, and at St. John's College, Oxford; was ordained in 1601; became president of his college in 1611; accompanied James I. to Scotland, as one of his chaplains, in 1617; was installed prebendary of Westminster in 1620; and obtained the see of St. David's in the following year. On the accession of Charles I. his influence became very great; and he was translated to the see of Bath and Wells, and, in 1628, to that of London. In 1630 he was elected chancellor of the university of Oxford; to which he was a great benefactor, and which he enriched with an invaluable collection of manuscripts, in a great number of languages, ancient, modern, and Oriental. In 1633 he attended Charles into Scotland, who went there to be crowned; on his return, he was promoted to the see of Canterbury, and during the same year he was chosen chancellor of the university of Dublin. The zeal which he displayed for conformity to the Church, and his endeavors to introduce the liturgy into Scotland, created him numerous enemies. At the commencement of the Long Parliament, therefore, he was impeached by the Commons, and sent to the Tower. After lying there three years, he was brought to his trial before the Lords, by whom he was acquitted, but the Lower House passed a bill of attainder, declaring him guilty of treason, which they compelled the Peers to pass; and the archbishop was accordingly beheaded on Tower Hill, Jan. 10, 1644–5. He was in the 72d year of his age, and met his fate with great fortitude. The works of Archbishop Laud consist of sermons, the Report of his controversy with the Jesuit Fisher in 1622, his speeches, diary, book of devotions, history of his troubles, and correspondence. His character has been depicted in exaggerated colors by opposite parties; some expressing, like Macaulay, unmitigated contempt, others almost unlimited reverence.

Laud, in *Indiana,* a post-office of Whitley co.

Laudabil'ity, *n.* Laudableness; commendableness.

Laud'able, *a.* [Lat. *laudabilis.*] Meriting laudation; commendable; praiseworthy.

"Affectation . . . has always the *laudable* aim of pleasing." *Locke.*

—Salubrious; healthy; wholesome; as, "*laudable* animal juices."—*Arbuthnot.*

Laud'ableness, *n.* Quality of being laudable, or deserving praise; praiseworthiness; commendableness; as, the *laudableness* of a motive.

Laud'ably, *adv.* In a manner worthy of praise.

Lau'danum, *n.* [Fr.: contracted from Lat. *laudandum,* to be praised, from *laudo,* to praise. Literally, a remedy to be praised.] (*Med.*) Tincture of opium. This, the strongest and most generally used of all the preparations of opium, is a simple spirit solution of the narcotic gum, and prepared by macerating opium, cut into small pieces, for a definite number of days in proof-spirit, in the proportion of 10 drachms of opium to 1 pint of spirits. The properties and uses of *L.* will be fully explained under the head of OPIUM, *q. v.* It will be sufficient to say here that, according to the dose given, *L.* acts as a diffusible stimulant, or antispasmodic, as an expectorant, anodyne, sedative, and narcotic. The full adult dose is from 20 to 25 drops as a sedative; from 7 to 10 drops, repeated every hour or two, as a stimulant; and as an anodyne from 15 to 20. *L.* should never be given to infants unless under the direction of a medical man. —Professional name, *tinctura opii* and *tinctura thebiacæ.*

Laudation, (*-dā'shŭn,*) *n.* [Lat. *laudatio.*] Praise; commendation; honorable mention.

Laud'ator, *n.* [Lat.] One who lauds or praises. — An arbitrator.

Laud'atory, *a.* [Sp. *laudatorio;* L. Lat. *laudatorius.*] Containing, expressing, or tending to convey praise; as, a *laudatory* ode.

—*n.* That which conveys or expresses praise or commendation.

Laud'er, *n.* One who praises; a laudator.

Lau'derdale, a district of Scotland, co. Berwick.

Lau'derdale, in *Alabama,* an extreme N.W. co., adjoining Tennessee on the N., and Mississippi on the W.; *area,* about 682 sq. m. *Rivers.* Tennessee river, and Cyprus, Little Cyprus, Shoal, and Blackwater creeks. *Surface,* hilly; *soil,* fertile. *Min.* Iron and limestone. *Cap.* Florence. *Pop.* (1890) 23,739.

Lau'derdale, in *Mississippi,* an E. co., adjoining Alabama; *area,* about 680 sq. m. *Rivers.* The head-waters of the Chickasawha river, and several smaller streams. *Surface,* generally level; *soil,* fertile. *Cap.* Marion. *Pop.* (1890) 29,661.

Lau'derdale, in *Tennessee,* a W. co., adjoining Arkansas; *area,* about 450 sq. m. *Rivers.* Mississippi, Hatchee, and Forked Deer rivers. *Surface,* generally level; *soil,* fertile. *Cap.* Ripley. *Pop.* (1890) 18,756.

Lauenburg, or **Saxe-Lauenburg,** (*lou'en-boorg,*) a duchy of Prussia, on the right bank of the Elbe. It is bounded on the N. by Lübeck, E. by Mecklenburg-Schwerin, S. by the Elbe, and W. by Holstein; Lat. between 52° 21′ and 53° 48′ N., Lon. between 10° 13′ and 11° 3′ E. *Area,* 455 sq. m. *Surface.* Flat; sandy in the centre, and marshy in the S. There are several lakes, the principal of which are, Ratzeburger See, and Schaal See. *Rivers.* Stecknitz and Delvenaue. *Cap.* Ratzeburg. This duchy, taken from the Wends by Henry the Lion, Duke of Saxony (1139–1180), passed by inheritance in 1689 to the Duke of Brunswick, through whom it descended to Hanover. Seized in 1803 by the French, it was included, in 1810, in the dept. of Bouches-de-l'Elbe. In 1815 it was restored to Hanover, which ceded it to Prussia, and it was given to Denmark in exchange for Pomerania and Rügen, June 4. By the convention of Gastein (*q. v.*), August 14, 1865, it was transferred to Prussia for 2,500,000 Danish dollars. William I. converted the inhabitants into Prussians by patent, Sept. 13, and took formal possession Sept. 15. *Pop.* 50,147.

Lau'enburg, a town of Prussia, in duchy of the same name, on the Elbe, 28 m. S.E. of Hamburg. It carries on a considerable trade with Lübeck.

Lau'enburg, a town of Prussia, in Pomerania, 68 m. from Koslin. *Manuf.* Woollens and linens.

Laugh, (*laf,*) *v. n.* [A.S. and O. Ger. *hlahan;* Sax. *hlihan;* D. and Ger. *lachen;* Goth. *hlahjan;* Sansk. *hlādayāmi,* to exhilarate. See GLAD.] To make the peculiar involuntary noise which sudden merriment excites; to make the noise and exhibit the features which are characteristic of mirth in the human species; to express risible emotions.

"There 's one did *laugh* in 's sleep." — *Shaks.*

—To appear gay, cheerful, pleasant, lively, or brilliant.

"Fair *laughs* the morn, and soft the zephyr blows." — *Gray.*

—To ridicule; to treat with some degree of contempt.

"There was a *laughing* Devil in his sneer." — *Byron.*

To laugh at, to ridicule; to express contempt for.

"No fool to *laugh at,* which he valued more." — *Pope.*

To laugh in one's sleeve, to laugh secretly, while preserving an apparent grave demeanor; to chuckle inwardly.

To laugh out of the other, or *wrong side of, the mouth,* to be made to weep, or exhibit signs of vexation, grief, or disappointment, especially after indulging in unwonted elation.

—*v. a.* To express or signify by laughing or hilarious emotion.

"Achilles . . . *laughs* out a loud applause." — *Dryden.*

—To ridicule; to deride; to scorn; — often before *out* or *down;* as, they *laughed* him *down,* she was *laughed out* of her gravity.

To laugh to scorn, to despise; to treat with derisive contempt or scornful mockery.

"Our castle's strength will *laugh* a siege *to scorn.*" — *Shaks.*

—*n.* The convulsive sound expressive of mirth peculiar to the human species; an explosion of risible emotion.

"The world's dread *laugh,*
Which scarce the firm philosopher can scorn." — *Thomson.*

Laughable, (*laf'a-bl,*) *a.* That may justly excite laughter; causing risibility; — hence, comical; ridiculous; mirthful; droll; ludicrous; as, a *laughable* scene.

Laugh'ableness, *n.* Quality of exciting laughter.

Laugh'ably, *adv.* In a manner to provoke laughter.

Laugher (*laf'ér*), *n.* One who laughs, or is fond of merriment.

Laughery (*loh'her-e*), in *Indiana,* a post-office of Ohio co., 7 m. N.W. of Rising Sun.

—A township of Ripley co.

Laughery Creek, in *Indiana,* enters the Ohio River in Dearborn co.

Laugh'ing, *n.* Act of expressing laughter.

Laugh'ingly, *adv.* In a merry way; with laughter or risibility; as, she spoke *laughingly.*

Laugh'ing-gas, *n.* (*Chem.*) Protoxide of nitrogen; so called from its effects upon the human body. See NITROGEN (PROTOXIDE OF).

Laugh'ing-stock, *n.* An object of ridicule, banter, or contempt; a butt for jokers.

"The *laughing-stock* of fortune's mockery." — *Spenser.*

Laughsome, (*laf'sum,*) *a.* Full of glee; mirthful; merry.

Laughter, (*laf'tĕr,*) *n.* [A.S. *hleahtor;* Icel. *hlātr;* Ger. *gelächter.*] (*Physiol.*) A well-known action, or emotion, peculiar to the human species. It is occasioned physically by a grateful titillation, rising suddenly and irresistibly, and manifests itself principally in the face, but extending also to the throat, thorax, and abdomen. As to the mental course of *L.*, much difference of opinion exists among philosophers. According to Aristotle, "the ridiculous implies something deformed, and consists in those smaller faults which are neither painful nor pernicious, but unbecoming." He is speaking, however, here only of the ridiculous in manners. Cicero says that the seat of *L.* "lies in a certain offensiveness and deformity, for those sayings are laughed at, solely or chiefly, which point out and designate something offensive in an inoffensive manner." Hobbes defines *L.* to be "a sudden glory arising from a sudden conception of some eminency in ourselves by comparison with the infirmity of others or with our own formerly." Dr. Campbell controverts this opinion, and maintains that *L.* "doth not result from the contempt, but solely from the perception of oddity, with which the passion is occasionally, not necessarily, combined;" as is manifest from the following considerations:—1. That "contempt may be raised in a very high degree, both suddenly and unexpectedly, without producing the least tendency to laugh;" and, 2. That "*L.* may be, and often is, produced by the perception of incongruous association, where there is no contempt." The proper object of *L.* is a curious and unexpected affinity, rightly expressed by the word oddity. Kant makes the source of *L.* to be a sudden conversion into nothing of a long-raised and highly-wrought expectation. In oratory, the power of exciting *L.* is often of the greatest advantage, and sometimes more powerful than the strongest arguments. It is resorted to either merely to divert by that grateful titillation which it excites, or to influence the opinions and purposes of the hearers.

Laugh'lintown, in *Pennsylvania,* a post-village of Westmoreland co., about 55 m. E.S.E. of Pittsburgh

Laugh'terless, *a.* Without laughter; mirthless.

Lau'monite, *n.* (*Min.*) A variety of zeolite, named after Gillet-Laumont. It crumbles when exposed to air in consequence of loss of water. It is a silicate of alumina and lime with 16 per cent. of water.

Launce, *n.* (*Zoöl.*) See AMMODYTE.

Launceston, (*lans'ton,*) a borough town of Cornwall, England, on the Attery, 12 m. from Tavistock. *Pop* 6,500.

Laun'ceston, a district of Tasmania or Van Diemen's Land, bordering on Bass's Strait; *area,* 3,800 sq. miles. *Surface.* Mountainous, and watered by the Tamar. *Pop.* 12,000. — The cap., of the same name, is situated at the junction of the Esk with the Tamar, 32 m. S.E of Dalrymple, and is the second town in importance of Tasmania. It has an excellent harbor, and has a considerable trade with S. Australia and Victoria. *Pop.* 6,500

Launch, (*lănsh,*) *v. a.* [Fr. *lancer;* It. *lanciare,* to hurl, to throw; Sp. *lance,* from Lat. *lancia,* a light spear.] To throw or send from the hand; to dart; to let fly; as, to *launch* a spear. (Sometimes written *lanch.*) — To send forth or dispatch; to rove at large.

"He *launched* out into a long oration." — *Broome.*

—To plunge into; to move or cause to slide from the land into the water; as, to *launch* a ship.

—*v. n.* To go forth, as a ship into the water; to rove at large; as, to *launch* into the world. — To expatiate; as, to *launch* into a course of argument.

—*n.* Act of launching; the sliding movement of a ship into the water along two ways. See SHIP-BUILDING.

(*Naut.*) The largest boat belonging to a ship, having double banks of oars.

Launder, (*lăn'dĕr,*) *n.* [From Fr. *lavandier.*] A washerwoman. — See LAUNDRESS.

(*Mining.*) A tube, gutter, or trough used by miners for receiving the ore from the box where it is triturated.

Laun'derer, *n.* A man who follows the occupation of washing linen, &c.

Laundress, (*lăn'drĕs,*) *n.* [Fr. *lavandière.*] A female who washes clothes; a washerwoman; a launder.

Laundry, (*lăn'dry,*) *n.* [Sp. *lavadero.*] A washing-place; the place or room where clothes are washed and linens dried and ironed. — Act or operation of washing.

Lau'ra, *n.* [Gr.] A name applied to the enclosure of a monastery in the Greek Church. The well-known lauras in Palestine, &c., were collections of cells in which hermits lived, in strict seclusion, but without a common monastic rule.

Lau'ra, the name of a most perfect and beautiful woman, who was B. at Avignon in Provence, and lived in a castle not far from the Fountain of Vaucluse (Fig.

1328). She has been immortalized in the verses of Petrarch, who having accidentally seen her at church, became so violently attached to her, that she ever after remained the inspiration of his muse, the idol and sole excellence of his existence — that no indifference on her part, no time, not the searing effects of worldly trials, and the cares and anxieties of a large family, or the

Fig. 1528. — THE FOUNTAIN OF VAUCLUSE, (Francc.)

decadence of her beauty, could ever cool or diminish, but endured with the same truth and fervor for the 21 years of his faithful adoration. *L.* was already a wife when Petrarch first saw her, in her 19th year; and though she could not but be proud to know that the first poetic genius of Europe was rendering her name immortal by the devotion of his poetry, her conduct as a wife and mother was ever irreproachable. *L.* was suddenly seized with the plague, and died after three days' illness, on her birthday, the 6th of April, 1348, when the light of Petrarch's existence may be said to have expired with the idol he had worshipped so long and faithfully.

Lauraceæ, (*law-rā'se-a,*) *n.* [Lat. *laurus*, a laurel.] (*Bot.*) The Laurel family, an order of plants, alliance *Daphnales*. DIAG. Anthers bursting by recurved valves, perfect leaves, and naked fruit. — They are trees or shrubs with exstipulate leaves, usually alternate and dotted. Flowers generally perfect, sometimes imperfectly unisexual; calyx inferior, deeply 4-6-cleft, colored in two whorls; stamens perigynous, definite; some always sterile; ovary superior, with 1 or 2 pendulous ovules. Fruit a herry or a drupe. Seeds exalbuminous; embryo with large cotyledons and a superior radicle. They are chiefly native of tropical regions; but a few

Fig. 1529. — THE CAROLINA LAUREL, OR RED BAY, (*Laurus Carolinensis.*)

occur in N. America, and one (*Laurus nobilis*) in Europe. The possession of aromatic properties, which are due to the presence of volatile oils, characterizes nearly all the plants of this order. Several have edible fruits, and many yield valuable timber. Among the useful products of this order are cinnamon, cassia, camphor, sassafras, and bibiru bark. The order includes 46 genera and 450 species. See LAURUS.

Lauramie (*law'ra-me*), in *Indiana*, a township of Tippecanoe co. *Pop.* (1897) 2,240.

Lau'raville, in *Maryland*, a sub-sta. of Baltimore P. O.

Laureate (*law're-at*), *a.* [Fr. *lauréat;* Lat. *laureatus*, from *laurus*, laurel. See LAUREL.] Crowned, decked, or invested with laurel.

Soft on her lap her *laureate* son reclines."—*Pope.*

—*v. a.* To honor with a wreath of laurel on taking a degree at college;—formerly customary at the great English universities.

Lau'reate, or POET LAUREATE, *n.* In England, an officer of the court whose duty is to compose odes for royal birthdays and state occasions. The present poet laureate is Alfred Austin, appointed Jan. 1, 1896.

Lau'reateship, *n.* Office or dignity of a laureate.

Laurea'tion, *n.* Act of crowning with a wreath of laurel, as, formerly, when conferring degrees at the English universities.

Lau'rel, *n.* [Sp. *laurel;* Fr. *laurier;* Lat. *laurus*, a bay-tree; Ger. *lorbeer;* perhaps connected with Lat. *laus, laudis*, praise—the laurel being the emblem of triumph.] (*Bot.*) The common name for *Laurus*. The Cherry-laurel is the *Cerasus Laurocersus;* the American, or Mountain-laurel, is *Kalmia latifolia*. See CERASUS, KALMIA, LAURUS.

Lau'rel, in *Delaware*, a post-town of Sussex co., about 52 m. S. of Dover. *Pop.* (1897) 2,540.

Lau'rel, in *Indiana*, a post-village and township of Franklin co., about 15 m. W. N.W. of Brookville.

Lau'rel, in *Kentucky*, a S.E. co.; *area*, about 450 sq. m. *Rivers.* Rockcastle river, or several smaller streams. *Surface*, hilly or mountainous; *soil*, generally fertile. *Cap.* London. *Pop.* (1890) 13,747.

Lau'rel, in *Maryland*, a post-village of Prince George's co., 18 m. S.W. of Baltimore. *Pop.* (1897) 2,200.

Lau'rel, in *Ohio*, a post-village of Clermont co., about 25 m. E.S.E. of Cincinnati.

—A township of Hocking co.

Laurel Hill, in *Georgia*, a village of Carroll co., about 15 m. S.W. of Carrolton.

Laurel Hill, in *Illinois*, a post-village of Springfield co., about 60 m. N.W. of Springfield. Its post-office is called TABLE GROVE.

Laurel Hill, in *Louisiana*, a village of W. Feliciana parish.

Laurel Hill, in *North Carolina*, a post-village of Richmond co., about 95 m. W. N.W. of Wilmington.

Laurel Hill, or LAUREL HILL CEMETERY, in *Pennsylvania*. See PHILADELPHIA.

Laurel Hill, in *Tennessee*, a post-office of Dekalb co.

Laurel Hill, in *Virginia*, a post-office of Augusta co.

Laurel Hill Creek, in *Pennsylvania*, enters Castleman's River from Somerset co.

Laurelled, (*-rĕld,*) *a.* Crowned with laurel; wreathed with bays; laureate; as, "*laurell'd* bards." — *Pope.*

Laurel Mountain, or LAUREL RIDGE, (sometimes LAUREL HILL,) in *Pennsylvania*, an elevated ridge beginning in Cambria co., and running S.W. into W. Virginia, where it receives the name of Chestnut Ridge. — Another ridge, called Chestnut Ridge in Pennsylvania, runs parallel to the other, at an average distance of 10 m., and after entering W. Virginia receives there the name of Laurel Ridge.

Lau'relton, in *Pennsylvania*, a post-village of Union co., about 24 m. W. of Sunbury.

Lau'relville, in *Pennsylvania*, a village of Blair co.

—A post-office of Westmoreland co.

Lau'rens, HENRY, an American statesman, born in Charlestou, S. C., in 1724. Descended from a French Huguenot family, the early life of *L.* was passed in mercantile pursuits, from which he ultimately realized an ample fortune. On the outbreak of the American Revolution, *L.*, in 1776, was elected a delegate from his native State to the Continental Congress, and became its president, which office he held till the close of 1778. Next year, being appointed minister-plenipotentiary to Holland, he was captured on his way thither by a British frigate, and taken to London, where he was confined as a prisoner in the Tower; and his papers having proved the complicity of Holland in the colonial revolt, a war between Great Britain and Holland followed. Upon his release, after an imprisonment of 15 months, *L.* was appointed one of the commissioners for negotiating peace, in pursuance of which he proceeded to Paris, where, Nov. 30, 1782, he, conjointly with Franklin and Jay, signed the preliminaries of the treaty. After his return to the U. States, he passed the remainder of his life in privacy, and died at Charleston, 1792.

LAU'RENS, JOHN, an American military officer, son of the preceding, was B. in S. Carolina, in 1756, and after receiving his education in England, joined the American Continental Army, in 1777, becoming aid-de-camp and secretary to General Washington. *L.* so highly distinguished himself in the battles of Germantown and Monmouth, and in other operations of the War of Independence, as to earn for himself the title of the "Bayard of the Revolution." In 1780, he was sent to France to negotiate a loan, and succeeded in obtaining a grant both of money and supplies. Lieut.-Col. *L.* was killed in action at the Combahee River, S. C., in 1782.

Lau'rens, in *Georgia*, a S. E. central co.; *area*, about 761 sq. m. *Rivers.* Oconee and Ohopee rivers, and Palmetto and Okewalkee creeks. *Surface*, undulating; *soil*, generally fertile. *Cap.* Dublin. *Pop.* (1890) 13,347.

Lau'reus, in *New York*, a post-village and township of Otsego co.

Lau'reus, in *South Carolina*, a N.W. central co.; *area*, about 680 sq. m. *Rivers.* Ennoree, Saluda, Reedy, and Little rivers, besides several large creeks. *Surface*, diversified; *soil*, fertile. *Cap.* Laurensville. *Pop.* (1890) 31,610.

Lau'rens Hill, in *Georgia*, a post-village of Laurens co., about 132 m. W. by N. of Savannah.

Lau'reusville, in *New York*, a post-village of Otsego co., about 75 m. W. by S. of Albany. Now LAURENS.

Lau'rensville, sometimes LAURENS COURT HOUSE, in *South Carolina*, a post-village, cap. of Laurcus co., about 75 m. N.W. of Columbia. *Pop.* (1897) 2,390.

Laurentia (*lo-rĕn'shī-a*), *n.* [From *M. de la Laurencie*, a French naturalist.] (*Bot.*) A genus of rose-spored sea-weeds, order *Ceramaiceæ*. *L. pinnatifera*, is sometimes eaten under the name of Pepper Dulce.

Lauren'tian Rocks, *n. pl.* [From the river *St. Lawrence*, near which they are developed.] (*Geol.*) An important group of rocks, anterior to those generally recognized as the oldest Silurian and Cambrian strata. They occur largely in Canada, and to some extent in the U. S., and form the basic series of American stratified rocks. Though no undoubted fossils have been found in this formation, the presence of beds of limestone and graphite has led some geologists to place them within the era of organic existence, on the ground that these formations are ordinarily of organic origin, though it is admitted that they may possibly have been due to chemical causes. The *Eozoön Canadense* (*q. v.*), an assumed fossil Foraminifer of gigantic size, occurs in this formation. This, however, is now generally believed to be of mineral origin, and the *L. R.* are classed with the Azoic strata.

Lau'restine, *n.* (*Bot.*) See VIBERNUM.

Lau'rey's Station, in *Pennsylvania*, a post-village of Lehigh co., about 9 m. N. N.W. of Allentown.

Lauricocha (*law-re-kō'cha*), a lake of Peru, on the E. slope of the Andes, in Lat. 10° 15′ S., Lon. 76° 10′ W. It covers an area of about 35 sq. m., and forms the source of the Tunguragua and Marañon river.

Laurif'erous, *a.* [From Lat. *laurus*, and *ferre*, to bear.] Bearing or bringing laurel.

Lau'riu, in *Montana*, a post-village of Madison co., 10 m. N.W. of Virginia City.

Lau'rine, *n.* [Fr.] (*Chem.*) A fatty matter of an acrid taste, contained in the berries of the common laurel.

Lau'rinburg, in *North Carolina*, a post-town of Richmond co., about 38 m. W. S.W. of Fayetteville.

Laurus, (*law'rus,*) *n.* (*Bot.*) The typical genus of the order *Lauraceæ*. *L. nobilis*, the Sweet Bay or Laurel, is probably the *Egrach*, or green Bay-tree of the Bible. It is a classic shrub, that furnished the heroes of antiquity with their laurel crowns. The fruit is officinal under the name of *bay* or *laurel berries*, and reputed to be aromatic, stimulant, and narcotic. By distillation with water, these berries yield the *volatile oil of sweet bay*. A substance called *expressed oil of bays*, or *laurel fat*, is also obtained from the fruits, both fresh and dry, by pressing them after they have been boiled in water. Laurel-leaves have somewhat similar properties to the fruit. They are used in cookery for flavoring. They must not be confounded with the poisonous Cherry-laurel, (see CERASUS.) *L. Carolinensis*, the Carolina laurel or Red Bay, (Fig. 1529,) found from Virginia to Louisiana, is an evergreen tree, 60 to 70 feet high; leaves oval, lanceolate, slightly glaucous beneath; and whitish flowers in peduncled axillary groups. *L. diospyrus*, the Diospyrus-like laurel, or Bay, found from Virginia to Carolina, in swamps, (Fig. 1530), is an evergreen shrub, 2 to 3 feet high; leaves oblong-oval, and entire, the under side veiny and pubescent, deciduous; flower-buds and pedicels villous; flower greenish-yellow.

Fig. 1530.—LAURUS DIOSPYROS.

Lausanne, (*lō'zann,*) a city of Switzerland, cap. of the canton of Vaud, 480 feet above the level of the lake of Geneva, from the N. shore of which it is about 1 m. distant, and 30 m. N.E. of Geneva. The city is finely situated on three eminences, and their intervening valleys; but, from being an uneven ground, its streets are

Fig. 1531. — LAUSANNE.

steep and irregular. The church, formerly cathedral, a vast Gothic building, founded about A.D. 1000, is the finest religious building in Switzerland. *L.* is famous in literary history, from having been the residence of Haller, Pissot, Voltaire, and Gibbon. Byron wrote his *Prisoner of Chillon* at Ouchy, the port of *L.*, on the lake. *Pop.* 25,320.

Lau'sanne, in *Pennsylvania*, a village and township of Carbon co., on the Lehigh River, about 2½ m. above Mauch Chunk.

Lauskrout, (*lous'krout,*) *n.* [Ger. *läusekraut*, louse-wort.] (*Bot.*) A plant of the genus DELPHINIUM *q. v.*

Lau'ter, a river of Rhenish Bavaria, rising in the Vosges Mountains, and after a course of 45 m., joining the Rhine at the small French town of Lauterburg.

Lautrec', ODET DE FOIX, SEIGNEUR DE, one of the bravest captains of France in the 16th century, D. at the siege of Naples, 1528.

Lau'tu, *n.* [Peruv.] A kind of cotton turban, worn by the ancient incas of Peru, as a regal badge or emblem.

Lauzun, ANTOINE, DUKE DE, (*lo'zu(r)n,*) formerly Count ANTOINE NOMPAR DE CAUMONT, a celebrated courtier of Louis XIV., B. 1632 He is the hero of an intrigue with Mademoiselle de Montpensier, ("La Grande Demoiselle,") the grand-daughter of Henry IV., to whom, it was alleged, he was secretly married; D. after a long imprisonment and exile, 1723. (See *Mémoires de Saint-Simon.*)

La'va, *n.* [Fr. *lave*, from Lat. *lavo*, to wash. See LAVE.] (*Geol.*) A term of a somewhat vague signification, having been applied to all melted matter observed to flow in streams from volcanic vents. When this matter consolidates in the open air, the upper part is usually scoriaceous, and the mass becomes more and more stony as we descend, or in proportion as it has consolidated more slowly and under greater pressure. At the bottom, however, of a stream of lava, a small portion of scoriaceous rock very frequently occurs, formed by the first thin sheet of liquid matter, which often precedes the main current, or by contact with water in or upon the damp soil. The more compact lavas are often porphyritic, but even the scoriaceous parts (Fig. 1532) sometimes contain imperfect crystals, which have been derived from some older rocks, in which the crystals pre-existed, but were not melted, as being more infusible in

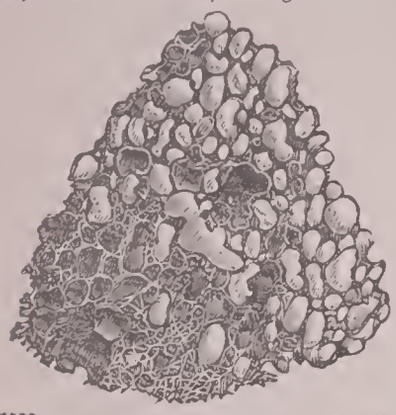


Fig. 1532. — SCORIACEOUS LAVA IN PART CONVERTED INTO AN AMYGDALOID.
(Puy de Dôme, France.)

their nature. Although melted matter rising in a crater, and even that which enters rents on the side of a crater, is called lava, yet this term belongs more properly to that which has flowed either in the open air or on the bed of a lake or sea. If the same fluid has not reached the surface, but has been merely injected into fissures below ground, it is called *trap*. There is every variety of composition of lavas; some are trachytic, as in the Peak of Teneriffe; a great number are basaltic, as in Vesuvius and Auvergne; others are plutonic, as those of Chili; some of the most modern in Vesuvius consist of green augite, and many of those of Ætna of augite and Labrador-spar. — See BASALT; VOLCANO.

Lava'ca, or LAVACCA, formerly LA BACA, in *Texas*, a river rising near the N.W. border of Lavaca co., and flowing S.E. between Jackson and Victoria cos. into Lavaca Bay; *length*, about 70 m.

—A S.E. co.; *area*, about 1,000 sq. m. *Rivers.* Lavaca and Navidad rivers, besides numerous smaller streams. *Surface*, undulating; *soil*, fertile. *Cap.* Hallettsville. *Pop.* (1890) 21,887.

Lava'ca Bay, in *Texas*, an arm of Matagorda Bay, extending into Calhoun co.

La'val, a town of France, cap of dep. Mayenne, on the river Mayenne, 42 m. E. of Rennes. Its linen manufactures are extensively exported. In the vicinity of *L.* the Vendeans, under La Rochejaqueleiu, gained a brilliant victory over the Republicans, who lost 12,000 men and 19 cannon in the engagement.

Lavalle', in *Wisconsin*, a post-village and township of Sauk county, about 20 miles W.N.W. of Baraboo.

La Vallière, LOUISE FRANÇOISE DE, LABAUME LEBLANC DE, DUCHESS DE, (*val'le-air,*) a mistress of Louis XIV. of France, B. at Tours, 1644, of a noble family. At an early age she lost her father, and was brought to court by her mother, who had married a second time. She was not a great beauty, and had a slight lameness; but her amiability and winning manners, and, above all, the extraordinary sweetness and tenderness expressed in her looks, rendered her very attractive. This singular creature was characterized by an extreme, we might almost say a morbid, delicacy and modesty. She really loved Louis, and bore him four children, of whom two died in infancy; but although she and they received wealth and titles of honor, she remained always extremely sensible of the disgrace of their birth. When Madame de Montespan became the royal favorite, she retired into a Carmelite nunnery in Paris, where she took the veil in 1674. D. 1710, after having spent more than 30 years in penances and religious austerities. She wrote a work entitled *Réflexions sur la Miséricorde de Dieu* (Paris, 1680).

Lavaltrie', a village of Berthier co., prov. of Quebec, about 30 m. N. of Montreal

Lavan'dula, *n.* [Lat *lavare*, to wash, because the distilled water of this plant is much used for washing.] (*Bot.*) The Lavender, a genus of plants, order *Lamiaceæ*. They are perennial herbs, native of S. Europe, but cultivated more or less throughout the N. temperate regions. *L. spica* or *latifolia*, the French lavender, or Aspic, is a familiar species in our gardens, distinguished by its linear-oblanceolate leaves, tapering to the base, sessile, revolute at the edge, the upper ones linear-lanceolate; those crowded at the base of the branches, clothed with a whitish down; the highest shorter than the calyx; calyx villose; spike interrupted; bracts subulate: corolla much exserted and of a lilac color. It is well known as an aromatic of delightful fragrance, and yields the volatile oil called *Oil of Spike*, or *Oil of Lavender*. The whole plant possesses stimulant properties, and is used in medicine, but particularly the spikes of the flowers, as a tonic, stomachic, nervous stimulant, &c. They are much used in perfumery, as well as by painters on porcelain, and in the preparations of varnishes.

Fig. 1533.—LAVANDULA SPICA.

La'vansville, in *Pennsylvania*, a post-village of Somerset co., about 144 m. W. of Harrisburg

Lav'aret, *n.* (*Zoöl.*) A species of salmon; the *Salmo lavaretus* of Linnæus.

Lav'ater, JOHN GASPARD, a celebrated physiognomist, B. at Zurich, in 1741. He early devoted himself to the study of theology, and taking holy orders, became a Protestant divine in his native town. From his youth he had accustomed himself to read and speculate on the human face, and in time became so expert in describing the character of any person from the outward marks or features of his countenance, that, having condensed his ideas into form and system, he finally gave to the world his *Essays on Physiognomy*, and the *Art of Knowing Mankind by Physiognomy*, by which he maintained it was *possible* and *easy* to read the disposition of any one from an attentive perusal of the countenance; advancing as a leading position, *that the powers and faculties of the mind have representative signs in the solid marks of the face.* His theory was once very popular, but the modern science of Phrenology has in a great measure superseded the doctrine once so generally appreciated *L.* was likewise the author of some other works; he was a pious man, of brilliant talents, with a considerable share of mysticism. He received a serious wound when the French took Zurich by storm, in 1799, from the effects of which he died about two years after, in 1801.

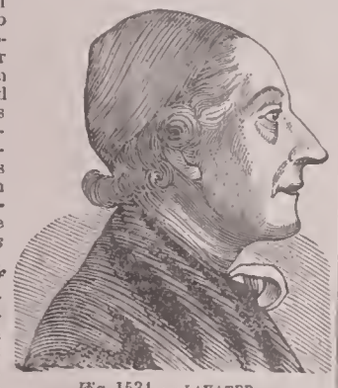


Fig. 1534. — LAVATER.

Lava'tera, *n.* (*Bot.*) A genus of plants, order *Malvaceæ*, chiefly characterized by its calyx being surrounded at base with a 3-cleft involucel. *L. arborea*, the Tree-Mallow, from Europe, 6 ft. high, leaves 7-angled, flowers purple, is a splendid plant for borders or shrubberies.

Lavat'ic, La'vic, *a.* Resembling lava; consisting of lava.

Lav'atory, *n.* [L. Lat. *lavatorium.*] A place for washing.

(*Med.*) A wash or lotion for an inflamed or diseased part.

"*Lavatories* to wash the temples . . . and keep off the venom." *Harvey.*

—A place where gold is washed.

—*a.* Washing; cleansing by ablutionary process.

Lavaur, (*la-vōr',*) a town of France, dep. of Tarn, on the Agont, 20 m. N.E. of Toulouse. *Manuf.* Silks, chiefly for furniture. In the 13th century *L.* was the stronghold of the Albigenses. *Pop.* 8,000.

Lave, *v. a.* [Fr. *laver*; Lat. *lavo*, to wash, to bathe; akin to Gr. *louō*, to wash.] To wash; to bathe. (Used principally in composition.)

"Her roomy decks . . . each mounting billow *laves.*" — *Dryden.*

—*v. n.* To bathe; to wash one's self.

"In her chaste current oft the goddess *laves.*" — *Pope.*

—*n.* [A. S. *lâf*, the remainder.] The rest; the residue; the remainder; the others. (Scottish.)

Laveer', *v. a.* [Ger. *laviren.*] (*Naut.*) To tack; to sail backward and forward. (R.)

Lave'ment, *n.* [Fr., from Lat. *laver*, to wash.] Ablution; a washing or bathing.

(*Med.*) A clyster.

La Vendée. See VENDEE.

Lav'ender, *n.* (*Bot.*) See LAVANDULA.

Lavender color, a grayish-blue color, resembling that of lavender, much affected by the members of the Society of Friends.

Lav'ender-water, *n.* (*Pharm.*) A perfume composed of the essential oil of lavender (see LAVANDULA), alcohol, and ambergris.

To lay in lavender, to pawn; hence, to carefully stow away anything. (O.)

La'ver, *n.* [Fr. *lavoir*, from Lat. *lavo*, to wash.] A large basin or other vessel used for washing. — "... nectar'd *lavers* strew'd with asphodel." (*Milton.*) — The edible fronds of certain marine plants.

(*Script.*) A basin to contain the water used by the priests in their ablutions during their sacred ministrations. There was one of brass (fabricated out of the metal mirrors which the women brought from Egypt, *Exod.* xxxviii. 8). It had a "foot" or base, which, from the manner in which "the laver *and* its foot" are mentioned, must have been a conspicuous feature, and was, perhaps, separable from the basin itself for the purpose of removal. We are not informed of the size or shape of this laver; but it appears to have been large. It stood between the altar of burnt-offerings and the door of the tabernacle (*Exod.* xxx. 18–21; xl. 30–32). The water of this laver seems to have served the double purpose of washing the parts of the sacrifices, and the hands and feet of the priests. But in the temple of Solomon, when the number of both priests and victims had greatly increased, ten lavers were used for the sacrifices, and the molten sea for the personal ablutions of the priests (2 *Chron.* iv. 6). These lavers are more minutely described than that of the tabernacle. So far as can be made out from the description, they consisted of a square base or stand mounted upon rollers or wheels, and adorned with figures of palm-trees, cherubim, lions, and oxen (Fig. 1446). The stand doubtless formed a hollow basin for receiving the water which fell from the laver itself, and which appears to have been drawn from it by means of cocks (1 *Kings* vii. 27–39). Each of the lavers contained forty baths, or, according to the usual computation, about 300 English gallons. In the second temple there appears to have been only one laver.

La Vergne, (*la-vērn',*) in *Tennessee*, a post-village of Rutherford co., abt. 16 m. S.E. of Nashville.

Laver'na, (*Myth.*) Among the Romans and Latins, *L.* was the patron goddess of thieves. A grove on the Via Salaria at Rome was sacred to her. The origin of the name is doubtful.

Lav'erock, *n.* See LAVROCK.

La'vic, *n.* Same as LAVATIC.

Lav'ish, *a.* [Formed from *lave*, to empty, to exhaust; from Fr. *lever*, Lat. *lēvo*, to raise, to lift up.] Exhausting; expending or bestowing with profusion; profuse; as, *lavish* of flattery.

"The dame has been too *lavish* of her feast." — *Rowe.*

—Prodigal; expending foolishly or without need or necessity; liberal to a fault; wasteful; extravagant.

"His jolly brother, . . . *lavish* of expense." — *Dryden.*

—Exuberant; wild; unrestrained; as, "his *lavish* spirit." *Shaks.*

—*v. a.* To expend or bestow with profusion; as, to *lavish* compliments.—To squander; to expend without need or necessity; as, to *lavish* money on dress.

Lav'isher, *n.* A prodigal; one who lavishes.

Lav'ishly, *adv.* Wastefully; prodigally; with needless expense; as, he scatters his money *lavishly.*

Lav'ishment, *n.* Prodigality; profuse and needless expenditure.

Lav'ishness, *n.* State or quality of being lavish; prodigality; lavishment.

"Got with guile, and spent with *lavishness.*" — *Spenser.*

Lavoisier, (*là'vwa'zher,*) ANTOINE LAURENT, a celebrated French chemist, B. at Paris, in 1743, was educated at the Mazarin College, and, on quitting it, devoted himself wholly to the sciences, but more particularly to chemistry. To obtain the means of more fully prosecuting which, he accepted, in 1769, the office of farmer-general. In 1768, he was made an academician; in 1776, discovered a way of greatly improving the quality of gunpowder; and made other beneficial discoveries in economics, and in the application of chemistry to agriculture. Availing himself of the discoveries of Black, Priestley, and Cavendish, and making many experiments and discoveries himself, he was led to connect the recently discovered gas, oxygen, with the phenomena of combustion and of acidity; and in 1783, he proved that water can be formed by burning oxygen and hydrogen together, and that it can be decomposed into the same elements. Another great contribution to science by *L.* was the chemical nomenclature which he is understood to have invented, and which is still retained, having served as the basis of all subsequent improvements in this important branch of the literature of the science in general; but notwithstanding his talents and virtues, he was condemned to death by the revolutionary tribunal of Paris, on the frivolous charge of having adulterated the tobacco with ingredients obnoxious to the health of the citizens, and was guillotined, 1794. His principal work is his *Traité Élémentaire de Chimie* (2 vols., Paris, 1789).

Lavolt', Lavolt'a, *n.* [It. *lavolta*] (*Dancing.*) A dance formerly in vogue, and resembling the modern waltz.

"I cannot sing, nor heel the high *lavolt.*" — *Shaks.*

Lavras-de-Funil, (*la-vras-da-foo-neel',*) a town of Brazil, abt. 100 m. W.S.W. of Ouro-Preto.

Lav'rock, Lav'erock, *n.* A Scotticism for the lark.

"Nae *lavrock* sang on hillock green." — *Burns.*

Law, JOHN, a celebrated financial projector, was B. at Edinburgh, son of a banking goldsmith there, about 1670; and being a clever mathematician and accountant,

was employed by his government to bring the accounts of the revenue into order. Thus initiated into the knowledge of finances and of public business, and possessing a reckless, schemiug disposition, it appeared to him that the industry of the country was languishing for want of money to employ it. This led to his famous project for a *Land Bank*. A vicious commercial theory prevailed at that time, which took its rise from the recent introduction of bank-notes, and the supposition that a large currency constitutes the wealth of a couutry without regard to its commercial wants. The Bank of England, and the British banks generally, had acted upon this mistaken notion, and created great disappointments and irritation, by suddenly limiting their loans when they discovered the drain of gold that it created. It was at this juncture that *L.* came forward with his scheme for issuing paper money equal to the value of all the lands in the kingdom; and on his proposal being rejected by the parliameut of Scotland, carried it to the Continent, and finally procured its adoption by the Duke of Orleans, regent for Louis XV., then in his minority. Hitherto bank-notes had not been seen in France. *L.* commenced his operations in 1717, and between that period and 1720, when the bubble burst, France was converted into one vast Stock Exchange, and at last covered with ruin. Our limits do not admit of particulars in matters so difficult of explanation as financial operations, but the basis of *L.*'s project was the idea that paper money may be multiplied to any extent, provided there be security in fixed stock; while the truth is, if the hulk of a currency is increased beyond the actual wants of commerce, all its parts or separate coins and notes, must depreciate in proportion. In the working out of *L.*'s scheme, a trading company was created which had conveyed to it the whole province of Louisiana, and the possessions of France on the banks of the Mississippi, which, besides, obtained by purchase the charters and property of the Senegal Company, the India Company, and the China Company, and became the sole public creditor by farming the whole of the taxes and revenues of the kingdom. The ruin of this vast machinery at that particular moment, and with the suddenness that it occurred, was produced by an edict of the regent, May 21, 1720, reducing the value of the notes, in defiance of *L.*'s protestations, to an equality with that of the Freuch coinage, which, in former times, had frequently been altered by the government to suit its convenience. This edict instantly stopped the circulation of the billets, the deplorable result of which went nigh to produce an insurrection of the people. *L.* became an exile, and after wandering in England, Holland, and Germany, at last D. at Venice, fully convinced of the validity of his system, 1729.

Law, William, an influential English divine, B. at King's Cliffe, Northamptonshire, in 1686; was educated at Emmanuel College, Cambridge; and lived for the most part a retired life at the house of Mrs. Hester Gibbon, aunt of the celebrated historian to whom he had been tutor. He wrote against Bishop Hoadley, and was also the author of some valuable practical books, as, *A Serious Call to a Devout and Holy Life*; *A Treatise on Christian Perfection*, &c. In his latter days he fell into the mystic reveries of Jacob Behmen, whose works he intended to publish. D. 1761.

Law, *n.* [A. S. *lagu, lah;* Swed. *lag;* Icel. *lög;* Belg. *lauwe.* Akin to Gael, *lagh*, a law, *leag*, to place, to lay; and to Lat. *lex*, a law, from *lēgo* = Gr. *legō*, to lay.] In its most general and comprehensive signification, the word law denotes a rule of action, and is applied indiscriminately to all kinds of action, whether animate or inanimate, rational or irrational. Thus we speak of the laws of *motion* or of *gravitation*, as well as that of *nature* and of *nations*. — It is, further, a rule of action, prescribed by some superior, and which some inferior is bound to obey. — In a more restricted sense, it is applied, not to rules of action in general, bnt of human action or conduct. Laws of human action are divided into divine and human — the *laws of God*, and the *laws of man*. The laws of God are either natural or revealed. The natural laws are such as God has implanted in the nature of man; the revealed laws, such as He has revealed to us in the sacred Scriptures. In the Bible, it often includes the whole of revelation, doctrinal as well as perceptive; but it is often also used, in a more restricted and somewhat conventional sense, to signify the books of Moses, — the whole Jewish Scriptures being comprehended under the twofold designation of "the law and the prophets." A very natural and common use of the term law is to denote the perceptive part of revelation, in contradistinction to the doctrinal, the one being designated as *the law*, and the other as *the gospel*. — If man were to live in a state of nature, unconnected with other individuals, there would be no occasion for any other laws than those of nature and of revelation. But man was formed for society; and hence the necessity for having another class of laws for his guidance, — the human. These are of various kinds, which are treated in the articles Civil Law and Roman Law; Code; Canon Law; Common Law; Merchant (or commercial) Law; Law (Criminal); Law (Positive or Municipal); Law of Nations; Martial Law, &c.

Law, (Criminal.) A crime or misdemeanor is an act committed or omitted, in violation of a public law either forbidding or commanding it. Crime and misdemeanor are, strictly speaking, synonymous terms, though in common usage the former is applied to greater offences; the latter to such as are of less consequence. All crimes ought to be estimated merely according to the mischief they produce in civil society; for human laws ought only to concern themselves with social and relative duties, being intended only to regulate the conduct of man, considered under various relations as a member of civil society. Hence, private vices, or breaches of mere absolute duties which man is bound to perform, considered only as an individual, cannot be the proper object of any municipal law, any further than their evil example or other pernicious effects may be prejudicial to the community. There are, however, some misdemeanors which are punished by the municipal law, that have in themselves nothing criminal, but are made unlawful by the positive constitution of the state, for public convenience. The offences which are either directly, or by consequence, injurious to civil society, and, therefore, punishable at common law, or by the select laws of the several states, are divided into the several classes: — 1st, such as violate or transgress the law of nations; 2d, such as more especially affect the sovereign executive power of the state; 3d, such as more directly infringe the rights of the public or commonwealth; 4th, such as derogate from those rights and duties which are owing to particular persons, and in the preservation and vindication of which the community is deeply interested. The principal offences against the law of nations are of four kinds: — 1st, violation of safe-conducts; 2d, infriugements of the rights of ambassadors; 3d, piracy; 4th, offences connected with the prohibition of the slave-trade. The crime more especially affecting the supreme power of the U. States, or of the several states, is treason. Of crimes affecting the commouwealth there are: — 1st, offences against public justice, as falsifying records, perjury, bribery, and the like; 2d, offences against the public peace; 3d, offences against public trade; 4th, offences against public health; 5th, offences against the public police and economy. Of those crimes which in a more particular manner affect and injure private individuals, there are three classes, viz.: against their persons, their habitations, and their property. Of crimes against the persons of private individuals, are homicide, in its several kinds of justifiable, excusable, and felonious; mayhem, or the violent depriving another of the use of such of his members as may render him the less able in fighting, either to defend himself or to annoy his adversary; the forcible abduction of an heiress: rape; sodomy, &c.; abortion, assaults, batteries, wounding, false imprisonment, kidnapping. The offences against the habitations of individnals are arsou and burglary. Against private property the offences are larceny, simple and compound, or petty and grand; malicious mischief and forgery. Crimes are further, as regards the mode of proceeding peculiar to each, divisible into 2 great classes, 1st, such as are punishable on indictment or information (the common-law methods of proceeding); and 2d, such as are punishable on summary conviction before a justice or justices of the peace, or other authorized persons, with the intervention of a jury. Indictable offences are distributed into 3 classes, viz.: treason, felonies, misdemeanors. Offences punishable on summary conviction are principally such as are against the laws of the excise, or other branches of the revenue; disorderly offences aud petty assaults; petty thefts, not amounting to larceuy; injuries to property, &c.

Law of Nations, or **International Law,** is defined "as consisting of those rules of conduct which reason deduces as consonant to justice from the nature of society existing among independent nations, with such modifications and deviations as may be established by general consent." (*Wheaton*). It depends entirely upon the rules of natural law, or upon mutnal compacts, treaties, or leagues between communities, In the construction of which compacts, also, there is no other rule to resort to than the law of nature. International law is a science of modern origin. Among the Romans the *jus gentium* generally signified what is commonly called natural law; viz., the principles of right which are dictated by reason, and are common to all men. The *jus fetiale*, which regulated the ceremonies attending a declaration of war, or the mode of arranging terms of peace, &c., was of this nature, but under the emperors it fell into disuse. The first systematic treatise upon the practice of nations in the conduct of war was the *De Jure et Officiis Bellicis*, of Balthasar Ayala, which appeared In 1581. In 1625 appeared at Paris the celebrated treatise *De Jure Belli et Pacis*, by Hugo Grotius, who, according to Sir James Mackintosh, "was, without dispute, the first to give a new form to the law of nations, or rather to create a science, of which only rude sketches and undigested materials were scattered over the writings of those that had gone before him." This treatise is not limited to the law of war and of peace, hnt embraces, also, a view of the general principles which should govern the intercourse of nations. The sources of international law are, according to Grotius, natural law, divine law, customs, and compacts. The law of nations may, therefore, be divided into two great classes or principles, viz., those which arise from natural or nniversal law, and those which are of mere human institution, — the former being the universal, the latter the positive law of nations. The latter is again divisible into the customary law, or that which arises from the silent consent of nations, as evidenced by general usages and customs, and habits of intercourse; and the conventional law, which arises from express compacts or treatises between nations. Another division of international law is into the public and private law of nations, — the former regulating the rights, intercourse, and obligations of nations, as such, with each other, the latter regulating the rights and obligations more particularly belonging to their respective citizens; as the rights of the subjects of one state to property situated within the territory of another. States, then, are the proper and immediate subjects of this national law. To every state are ascribed the attributes of sovereignty, — independence, and equality with every other. Every nation which governs itself independently of any other nation is deemed a sovereign state. In respect to each other, nations possessed of sovereignty are deemed equals, and are entitled to the same general rights and privileges, whatever may be their relative strength or weakness. Every sovereign state may adopt whatever form of goverument and whatever political institutions it may prefer, free from the control of any foreign power. It may also form alliances, provide land and sea forces, build fortifications, or employ any other usual means for its defence. It is possessed of exclusive jurisdiction within its own territory over all persons and things therein. It possesses the power, in virtue of its sovereignty, to punish all crimes committed against it, and to enforce all civil obligations due to it from persons subjected to its authority. Among the duties incumbent upon a state are to provide for the safety, peace, and happiness of its own subjects; to redress wrongs; to promote industry and commerce. The basis on which all the rights and duties of nations in their intercourse with each other rests, is the fundamental maxims that they are all moral persons, aud that each has a perfect equality in sovereignty and social rights with every other. They are regarded as moral persons possessed of a sense of right and wrong, and responsible to God for a proper discharge of their duties. They are thus bound not only to do justice, hut to perform the offices of humanity, and to render mutual assistance to each other upon the same principles that individuals are bonnd to the like duties. Hence it is the duty of every state to cherish, as far as may be, an honest and frank intercourse with all others upon principles of reciprocal benevolence, to abstain from doing injury and wrong to others, and to succor aud assist such as may be suffering from famine, pestilence, or other calamity. The rights and duties of nations towards each other may be divided into those which belong to a state of peace, and those which belong to a state of war. Among the rights which belong to a state of peace is that of the exclusive power of every state within its own domain; and consequently no nation can rightfully exercise any jurisdiction or sovereignty within the territories of another, either over persons or things, for, in respect to foreign nations, not only the public domain, but all the private property of the subjects of a nation situated within its limits is deemed the property of the nation. The state's exclusive jurisdiction extends, of course, over all rivers and lakes which are entirely within its own territory. Where a river forms the limit of contcrminous states, the presumption is that both have the right of navigation of the whole river, though, according to the Roman law, the middle line of the river forms the strict limit between the two. By the general law of nations, a state's rights over the waters which wash its coasts extend to a marine league, or the distance measured by a cannon-shot from the shore at low water. The open ocean is the common territory of all nations. Though a sovereign state concedes no proper force to foreign laws, yet, upon the principles of reciprocity, complete or partial, or upon considerations of equity or international comity, they may be recognized and allowed their effect. But in no case will a state admit the operation of other laws than its own when that would prejudice the rights or interests of its citizens, or in any degree infringe its own sovereign authority. The jurisdiction of a state also extends so far as to exempt its ambassador, or its fleets and armies, from the operation of the laws of a country where they may be. Special conventions may also concede to consuls a certain authority over their countrymen residing in a foreign state. The judicial power of a state reaches all offences committed against its laws, whether by its own subjects or by aliens. If an offender against the laws of one state has escaped within the jurisdiction of another, the former may demand the surrender of the criminal. Murder, rape, arson, perjury, embezzlement by public officers, and the fabrication and circulation of counterfeit money, are usually enumerated as causes of extradition. In most of the European states, fraudulent bankruptcy is also included. Neither the United States nor England admit of the extension of this law to political refugees. Every nation has a right to regulate its own commerce and intercourse with other nations in such a manner as is most conducive to its own prosperity and interests, without depriving others of their just rights. The property held by foreigners within a country according to the laws ought to be protected in the same manner as that of natives. It is a general rule among nations to regulate the descent, distribution, and alienation of immovable property exclusively by the laws of the country wherein it lies. As to movable property, it is now a common custom, and seems most reasonable and just, to allow foreigners the liberty of disposing of it, by will or otherwise, according to the laws of their own country or of their permanent domicil. In order that the intercourse between nations may be beneficially carried on, public functionaries are necessary to represent a state at foreign courts, to promote its interests and adjust disputes. Hence the right of every nation to send and receive ambassadors and other public ministers. The privilege of continuous residence, however, rests in comity, and is not matter of right. The law regarding ambassadors occupies an important place in the law of nations. (See Ambassador.) Treaties and compacts are not generally deemed final till they have received the sanction of their respective governments. Treaties are to be understood and construed according to their obvious meaning and the intention of the contracting parties. Treaties may be

dissolved in various ways: as, 1. By the voluntary assent of the parties, or by their express limitation; 2. By a formal dissolution pronounced by one of the parties, acting upon its own responsibility, in the exercise of sovereign authority; 3. By operation of law, as in cases where the contracting parties lose their distinct sovereignty; 4. By implication, as where new treaties are formed between the parties upon the same subject, or where circumstances so change as to make the treaty utterly foreign to the existing state of things. Sovereign states being equal, it follows that there can be no supreme tribunal of appeal. Except, therefore, by submission of their wrongs to arbitration, nations can have no redress for them except by resorting to force. When these differences have arisen, and they cannot be composed by negotiation, or other peaceful means, the injured state may employ the forcible measures of retaliation, reprisals, embargo, or the sequestration of the goods of the offending party, or finally, of war. Embargoes or sequestrations are often declared, as preliminary measures to active hostilities. A declaration of war has a retroactive effect, and the property already seized is placed upon the same footing as that taken during the war. Reprisals are general or special. They are general when a state authorizes its subjects to capture the goods and attack the subjects of the offending power wherever they may be found. In modern practice, general reprisals are deemed synonymous with war, and are, indeed, the initiative step to hostilities. When wrong is done to particular individuals in time of peace, and justice is refused, or unreasonably withheld, letters of marque may be issued to the parties, or a public ship commissioned to avenge their wrongs. These are instances of special reprisals. The debt having been satisfied, or the injury compensated for, the surplus must be restored to the government of the subject against whom the right has been exercised. As to the mode of declaring war, it may be formal, as by public declaration, or informal, as by actual hostilities. In modern times, nations are accustomed generally to make a public declaration, and to justify themselves before the world by a manifesto of their reasons. A declaration of war puts the subjects of each of the states in a state of hostility to each other, and all public and private social intercourse are suspended between them. They are not at liberty to engage in trade or commerce, or contract with each other; yet, for good reasons, either power may, by express license, permit a partial intercourse. Forthwith all the enemy's property is, by the law of war, subject to confiscation; thus debts due from one state to the other may be sequestered, or property lying within the territory of the one may be seized by the other as prize of war. But, in the exercise of international comity, these rights are not usually enforced. The obligation of debt is, as it were, suspended during the war, but the right of recovery revives with the peace. The wanton destruction of the enemy's property, or the lives of his subjects, is, in the modern practice of nations, unjustifiable and illegal; and generally all those who are engaged in the merely civil duties of life are exempted from the direct effects of war. Property at sea, however, makes an exception to the usual indulgence shown to the goods of an enemy, and ships and their cargoes upon the ocean are liable, without exception, to seizure and confiscation. In general, each nation restrains the right to make captures and to carry on hostilities to such persons as are in the public employment, or to such as receive a public commission for that purpose. Mere private warfare is seldom allowed. Thus, the usual modes of carrying on war are by armies, navies, and privateers, acting under the immediate authority of the government. Privateering is held by some nations to be contrary to correct and liberal notions of modern warfare, but the U. States maintain the right of commissioning private armed vessels, and justify it by the necessity of utilizing her large mercantile fleet against an enemy possessed of a naval force superior to hers. The validity of all claims of prize and capture is determined by the prize courts of the captor's country. These exercise jurisdiction over captured property lying either in their own ports or in those of an ally or neutral. They adjudicate on all captures made by subjects of their sovereign exclusive of the tribunals of all other nations, excepting only in cases where the capture was made upon the territory of a neutral, or by vessels fitted out within a neutral's limits. These cases involve an invasion of the neutral's sovereignty, and must be adjudicated in his court. The decisions of the prize courts are final and conclusive upon the rights of property involved: and if their judgments work injustice to the subjects of other powers, their claims must be adjusted between the sovereigns of their respective states. The belligerent powers may enter into general or special conventions, either for the general conduct of the war, or for lightening its rigors. The former are often made at the beginning of a war, and may regard the abstaining from certain modes of warfare, the exchange or redemption of prisoners, passports, safe-conducts, and such like. Particular conventions are made during war, and concern either truces or partial suspensions of hostilities, or capitulations, that is, surrenders of particular forces or places. The power of concluding a truce is generally implied in the character of every high officer, as a general or admiral. While a truce lasts, all warlike acts and preparations must entirely cease, though it does not hinder acts which are allowable in time of peace. Though no state is bound to take part in the wars in which other states may be engaged, yet no independent state can retain the same complete independence which it enjoys in a time of general peace. Belligerents have a right to insist that neutrals shall conduct themselves with good faith towards both parties, and abstain from all interference in the contest. In matters which do not directly concern the war, a neutral must not refuse to one belligerent what it grants to the other. General trade with belligerents is not interdicted by war; but a neutral must not send his ships to blockaded ports, for that would be interfering directly with the measures of the belligerents. But, to subject a neutral to its operation, the blockade must exist in point of fact; there must be a squadron present, and strong enough to constitute an actual blockade of the port. A neutral must not carry goods contraband of war, as arms, ammunition, or the like; nor bear despatches, nor transport troops to either party, unless, indeed, it be bound to do so by previous stipulations. Contraband property is subject to confiscation by the captor. By a declaration, signed at Paris by the representatives of the chief European powers, in 1856, the principle that neutral ships may carry enemy's goods has been established. The same declaration sanctions the rule that neutral property, except contraband, is not subject to capture though laden in an enemy's ships, two measures whose adoption had been previously strongly advocated by the United States. The persons and property of enemies within the jurisdiction of a neutral are deemed inviolable, and entitled to neutral protection. The right of search exercised by belligerents over the vessels of neutrals for articles contraband of war is strictly confined to merchant-ships, and is never extended to ships of war belonging to the state. In the case of civil war, neutrals are bound to abstain from all active interference, either on the one side or the other; but if it gives rise to the formation of a new government it is not an act of hostility to recognize it as an independent state, though to do so would be regarded as such, so long as the contest was dubious. When the objects of war are accomplished, peace has to be concluded. Generally a formal treaty of peace is entered into between the two parties, which takes effect from the day on which it is ratified. The treaty puts an end to the war, and puts at rest forever the debated matters which were the cause of it; conquered lands and fortresses remain with the conqueror, unless otherwise stipulated. The violation of one article is a breaking of the whole treaty, and ends the peace.

Law, (POSITIVE or MUNICIPAL,) is the rule by which particular districts, communities, or nations, are governed. Municipal law, strictly speaking, denotes only the laws of a single *municipium*, or free town, yet, in common language, it is applied to the laws of a state or nation. It is defined to be "a rule of civil conduct, prescribed by the supreme power in a state." The sovereign power is the power of making laws, which is sometimes vested in an aggregate assembly, consisting of all the free members of a community, when it is called a *democracy;* sometimes in a council composed of select members, when it is styled an *aristocracy;* and sometimes it is in the hands of a single individual, when it is termed a *monarchy*. All other species of government are either corruptions of, or reducible to these three. It is in the power of the legislature at any time to alter the law. The proper function of the executive is to administer the law, not to make it; to act upon its true construction, not to fix it. The legislative power of a government is generally employed in mere acts of amendment and supplement. Its office is not so much to create systems of laws as to supply defects and cure mischiefs in systems already existing. Frequent experiments have shown that laws at variance with the manners and religious views of a people cannot be forced upon them, however well meant, and however beneficial may have been their influence upon other people; and that by means of laws a legislator can no more elevate his countrymen to a higher degree of refinement, without passing through the intervening steps, than he can reduce them again to a condition above which they have risen in the natural course of events. The legislation of no country probably ever gave origin to its whole body of laws. In the very formation of society, the principles of natural justice and the obligations of good faith must have been recognized before any common legislature was acknowledged. Wherever we trace positive laws in the early stages of society, they are few, and not of any wide extent. The formation of codes or systems of general law for the government of a people, and adapted to their wants, is a business which takes place only in advanced stages of society. The Institutes, Pandects, and Code of Justinian were made in the latter ages of Roman grandeur, not by instituting a new system, but by embodying the maxims, the rules, and the principles which the ablest jurists had collected in different ages, and from the various lights of reason, experience, and juridical decision. Laws may be divided into declaratory, directory, remedial, and prohibitory or penal. *Declaratory* laws are such as declare what the law is or shall be. *Directory* laws are such as prescribe rules of conduct, or limit or enlarge rights, or point out modes of remedy. *Remedial* laws are those whose object is to redress some private injury or some public inconvenience. *Prohibitory* and *penal* laws are those which forbid certain things to be done or omitted, under a penalty or vindicatory sanction. Municipal law is also divided into *written* and *unwritten*, or *statute* and *common* law. *Statute-law* is the express written will of the legislature, rendered authentic by certain prescribed forms and solemnities. The *common law* includes those principles, usages, and rules of action, applicable to the government and security of person and property, which do not rest for their authority upon any express and positive declaration of the will of the legislature, but which have come into use by gradual adoption, and received from time to time the sanction of the courts of justice, without any legislative act or interference. The best evidence of the common law is to be found in the decisions of the courts of justice, and in the treatises and digests of learned men. This distinction between written and unwritten law is of great antiquity, having been in use among the ancient Greeks and Romans, though it does not seem to have been regularly made by the jurists.

Law-binding, Law'-calf, *n.* A plain style of leather binding, employed almost entirely for law-books.

Law'-book, *n.* A book which treats of a law or laws.

Law'-breaker, (*-brāk'er.*) *n.* A transgressor or violator of the law.

Law'-calf, *n.* Same as LAW-BINDING, *q. v.*

Law'-day, *n.* A day on which open court is holden.
—A court-leet. (England.)

Lawe, *v. a.* To deprive of the claws and balls of a dog's fore-feet.

Law'ful, *a.* Conformable to law; allowed by, or agreeable to, legal enactment; legitimate; legal; constitutional. — Rightful; constituted and maintained by law; as, the *lawful* holder of property.

Law'fully, *adv.* Legally; agreeably to law; without violating law.

Law'fulness, *n.* Quality of being lawful or conformable to law; legality.

Law'giver, *n.* A legislator; one who makes a law or laws.

"Solomon we esteem as the *lawgiver* of our nation." — *Bacon.*

Law'giving, *a.* Legislative; making or enacting laws.

Law'ing, *n.* (*Eng. Forest Law.*) Same as EXPEDITATION, *q. v.*
—In Scotland, a tavern-reckoning; payment for liquor.

"Landlady, count the *lawin'*." — *Burns.*

Law'less, *a.* Unrestrained by law; not subject to law.

"Men as *lawless*, and as wild as they." — *Roscommon.*
—Contrary to the civil or municipal law; illegal; unauthorized. — Not subject to the ordinary laws of nations; wild; uncontrolled.

"He, meteor-like, flames *lawless* through the void."—*Pope.*

Law'lessly, *adv.* In a manner contrary to, or defiant of, law.

Law'lessness, *n.* Quality or state of being unrestrained by law; disorder.

Law'-lore, *n.* Knowledge of law and legal history.

Law'-maker, *n.* A legislator; a law-giver; one who makes, enacts, or decrees laws.

Law'-making, *n.* Enacting or ordaining laws.

Law'-monger, (*-mŭng'gŭr,*) *n.* A pettifogger; a low-class lawyer.

Lawn, *n.* [W. *llan*, a clear open place, an area. See LANN.] A piece of plain land; a clear place, area, or spot of ground; an open space between woods; a space of smooth level ground covered with grass, generally in front of or around a house or mansion.
—[Fr. *linon*, from *lin*, lint, flax; Lat. *linum* = Gr. *linon*, flax. See LINEN.] A soft kind of fine linen or cambric, used in the sleeves of bishops' robes, and for other purposes; also, an imitation fabric of cotton.

"A saint in crape is twice a saint in *lawn*." — *Pope.*
—*a.* Made of lawn; as, a *lawn* sleeve.

Lawn, in *Pennsylvania*, a post-office of Lebanon co.

Lawn, in *Texas*, a post-office of Taylor co.

Lawn'dale, in *Illinois*, a post-village of Logan co.

Lawn Tennis. See SECTION II.

Lawn'y, *a.* Resembling a lawn; — hence, smooth; grassy; level, like a lawn. — Made of lawn.

Law'-officer, *n.* A functionary who is appointed to assist in the execution or administration of the law; one who is empowered by legal authority.

Law'rence, JAMES, an American naval officer, b. in Burlington, N. J., in 1781. He entered the U. States navy as midshipman in 1798, and after passing his lieutenancy highly distinguished himself in the operations at Tripoli, in 1804. In 1810, *L.* was promoted to the command of the *Hornet* (18 guns), in which vessel he, in Feb., 1811, fought a severe action, off Demerara, with the British 18-gun sloop-of-war *Peacock*, ending with the sinking of the latter. In 1813, *L.* was made captain, and appointed to the command of the *Chesapeake* frigate, then lying in Boston harbor, ready for sea. June 1st, the British frigate *Shannon*, Capt. P. Vere Broke, appeared in the offing, and waited for the *Chesapeake's* leaving the harbor, to engage her. Each ship possessed an armament of 48 guns, and about an equal complement of men. At noon the *Chesapeake* weighed and stood out to sea, while the *Shannon* hove-to, waiting her coming up. At 5.30 P. M., the two frigates were about 30 m. from Boston light-house, and in a quarter of an hour afterwards the *Shannon* opened fire upon the American. The latter promptly responded, and for several minutes both vessels kept up a furious succession of broadsides, in which the *Chesapeake's* rigging was so badly cut up that she fell foul of the *Shannon*. The latter, grappling her antagonist, swept her decks by repeated rakings with grape and canister. In a few moments all was over. Capt. *L.* fell mortally wounded, and the *Chesapeake* surrendered, after a sanguinary action of 15 minutes. The American loss was 48 killed, and 98 wounded; that of the British 23 killed, and 56 wounded. Nearly the whole of the officers on both sides were either killed or wounded; among the latter, Capt. Broke had one of his legs shot away. Capt. *L.* lingered for four days, when he D., June 5. Every respect was paid by the British authorities at Halifax (whither both vessels had proceeded) to the remains of their gallant adversary, and he was interred with military honors, his pall-bearers being English officers.

Law'rence, ABBOTT, an American statesman and diplomatist, B. at Groton, Mass., 1792. In 1814, he engaged in business with his brother Amos, at Boston, and, in the course of years, amassed a considerable fortune. In 1834, he was returned to Congress, and, in 1848, was put forward as a candidate for vice-president by the Whig national convention, but failed to get his nomination by 6 votes. In 1850, he proceeded to England as U. States minister, representing his native country abroad till 1852, when he was recalled at his own request. Mr. *L.* won a high reputation by his extensive charities and genial disposition. D. in Boston, 1855.

Law'rence, SIR THOMAS, R. A., a celebrated English portrait-painter, B. at Bristol, 1769. He obtained an early reputation at Bath as a portrait-painter in crayons, and as early as 1787 established himself as a portrait-painter in oils in London, where, four years afterwards, 1791, he was elected an associate of the Royal Academy, and in 1795 an academician; he had previously succeeded Sir Joshua Reynolds as painter to the king. He was knighted by the Prince Regent in 1815, and in 1820 succeeded West as the president of the Royal Academy. He d. in London, 7th Jan., 1830. — Sir Thomas had perhaps, since the days of Vandyck, an unrivalled career as a portrait-painter; he, however, owed his chief success to the skilful flattery of his female portraits, the complexions of which left nothing to be desired; his male pictures, as a rule, bear no comparison with his female; besides being ill-proportioned, they are wanting in manly character; still his portraits of the emperor Francis, of Pius VII., and of the Cardinal Gonsalvi, are among the masterpieces of the art extant.

Law'rence, in *Alabama*, a N.N.W. co.; *area*, about 768 sq. m. *Rivers*, Tennessee river and several of its small affluents. *Surface*, diversified, in some parts mountainous, the Allegheny Mountains forming the S. boundary; *soil*, in the valleys fertile. *Cap.* Moulton. *Pop.* (1890) 20,725.

Law'rence, in *Arkansas*, a N.N.E. co.; *area*, about 574 sq. m. *Rivers*, Black, Spring, and Cache rivers. *Surface*, diversified; *soil*, fertile. *Caps.* Powhatan and Walnut Ridge. *Pop.* (1890) 12,984.

Law'rence, in *Illinois*, a S.E. co.; *area*, about 360 sq. m. *Rivers*, Embarras and Wabash rivers. *Surface*, uneven; *soil*, in some parts fertile. *Cap.* Lawrenceville. *Pop.* (1890) 14,693.

—A post-vill. of McHenry co., abt. 65 m. N.W. of Chicago.

Law'rence, in *Indiana*, a S. central co.; *area*, about 452 sq. m. *Rivers*, E. Fork of White river, and some smaller streams. *Surface*, undulating; *soil*, fertile. *Cap.* Bedford. *Pop.* (1890) 19,792.

—A village of De Kalb co., about 6 m. N. by W. of Auburn.

—A post-township of Marion co.

Law'rence, in *Kansas*, a city, cap. of Douglas co., on the Kansas river, about 32 m. S.S.W. of Leavenworth; Lat. 38° 56′ N., Lon. 95° 15′ W. It was founded in 1854, and for several years subsequent it was the scene of many of those conflicts between the parties opposed to, and those advocating slavery, which disturbed the early settlers of Kansas. On the 21st of Aug., 1863, the town was surprised by a party of guerillas under Quantrell, when about 150 persons were massacred, and nearly 200 houses and stores burned. *Pop.* (1895) 10,084.

Law'rence, in *Kentucky*, an E. by N. co., adjoining West Virginia; *area*, about 465 sq. m. *Rivers*, Big Sandy, W. Fork of Big Sandy, and Little Sandy rivers. *Surface*, uneven; *soil*, generally fertile. *Min.* Coal and iron in abundance. *Cap.* Louisa. *Pop.* (1890) 7,702.

Law'rence, in *Massachusetts*, a thriving city, semi-capital of Essex co., on the Merrimac river, about 26 m. N. of Boston. *L.* was remarkable for its rapid growth. In 1845 this vicinity was almost without inhabitants. A dam was built across the river by a private company; factories were established, dwelling-houses sprang up; and, in an almost incredibly short period, it became a populous and flourishing city. *Manuf.* Chiefly cotton and woollen goods. *Pop.* (1895) 52,164.

Law'rence, in *Michigan*, a post-village and township of Van Buren co., about 79 m. W.S.W. of Lansing. *Pop.* (1894) 557.

Law'rence, in *Minnesota*, a township of Grant co.

Law'rence, in *Mississippi*, a S.S.W. central co.; *area*, about 630 sq. m. *Rivers*, Pearl river, and some smaller streams. *Surface*, generally level; *soil*, in some parts fertile. *Cap.* Monticello. *Pop.* (1890) 12,318.

—A post-village of Newton co.

Law'rence, in *Missouri*, a S.W. co.; *area*, about 606 sq. m. *Rivers*, Sac and Spring rivers. *Surface*, diversified; *soil*, fertile. *Cap.* Mount Vernon. *Pop.* (1890) 26,228.

Law'rence, in *New Jersey*, a township of Mercer co.

Law'rence, in *New York*, a township of St. Lawrence county.

—A post-village of Schuyler co.

Law'rence, in *Ohio*, an extreme S. co., adjoining West Virginia on the S.E., and Kentucky on the S.W.; *area*, about 430 sq. m. *Rivers*, Ohio river, Symmes', Hale's, and other creeks. *Surface*, broken and hilly; *soil*, in some places fertile. *Min.* Iron ore and coal. *Cap.* Ironton. *Pop.* (1897) about 42,500.

—A village of Clarke co., about 7 m N. of Springfield.

—A township of Lawrence co.

—A township of Stark co.

—A township of Tuscarawas co.

—A post-township of Washington co.

Law'rence, in *Pennsylvania*, a W. co., adjoining Ohio; *area*, about 370 sq. m. *Rivers*, Mahoning, Shenango, and Beaver rivers, besides several considerable creeks. *Surface*, undulating; *soil*, fertile. *Min.* Iron, coal, and limestone. *Cap.* New Castle. *Pop.* (1897) 43,000.

—A township of Clearfield co.

—A township of Tioga co.

Law'rence, in *Tennessee*, a S. co., adjoining Alabama; *area*, about 676 sq. m. *Rivers*, Shoal and Sugar creeks. *Surface*, elevated table-land; *soil*, fertile. *Min.* Iron. *Cap.* Lawrenceburg. *Pop.* (1897) about 13,350.

Law'rence, in *Wisconsin*, a township of Brown co.

—A village of Marquette co., about 27 m. N. by W. of Portage City.

Law'renceburg, in *Indiana*, a city, cap. of Dearborn co., on the Ohio river, about 88 m. S.E. of Indianapolis. *Pop.* (1897) 4,350.

Law'renceburg, in *Iowa*, a village of Warren co.

Law'renceburg, in *Kentucky*, a post-village, cap. of Anderson co., about 12 m. S.W. of Frankfort. *Pop.* (1897) 1,450.

Law'rencebnrg, in *Pennsylvania*, the former name of PARKER'S LANDING, in Armstrong co.

Law'rencebnrg, in *Tennessee*, a post-village, cap. of Lawrence co., about 75 m. S.S.W. of Nashville. *Pop.* 710.

Law'rence Creek, in *New Jersey*, enters the Raritan River from Middlesex co.

Law'renceport, in *Indiana*, a village of Lawrence co., abt. 86 m. S. by W. of Indianapolis.

Lawrence, (St.,) a Christian martyr, was one of the deacons of Rome, in the pontificate of Sixtus I. (3d c.), and as such was especially charged with the care of the poor, and the orphans and widows. In the persecution of Valerian, being summoned, according to the legend, before the prætor as a Christian, and being called on to deliver up the treasures of the church, he mockingly produced the poor and the sick of his charge, declaring that "those were his treasures;" and on his persisting in his refusal to sacrifice, being condemned to be roasted on a gridiron, he continued throughout his tortures to mock his persecutors. He suffered martyrdom A. D. 258. His feast is celebrated on the 10th August.

Law'rence, (St.,) one of the principal rivers of N. America, and when considered, as it should be, in connection with the chain of great lakes or inland seas, of which it is the outlet, it is one of the largest rivers in the world, extending from W. to E. through about 27° of Lon., and abt. 8° of Lat. Regarding the *St. L.* from this point of view, or as a general name for the connecting line of that great water-system that unites with the Atlantic in the Gulf of St. Lawrence, its remotest source will be found to be the St. Louis, an affluent of Lake Superior, rising in the table-land of the Huron country, near the sources of the Mississippi, flowing S., and the Red River, flowing N. It receives different names in different parts of its course, being at first the *St. Louis*; between Lakes Superior and Huron, the *St. Mary*; between Lakes Huron and Erie, the *St. Clair* and *Detroit*; between Lakes Erie and Ontario, the *Niagara*, and from Ontario to Montreal, it is sometimes called the *Cataraqui* or *Iroquois*, its course from Montreal to the sea being the *St. Lawrence*, properly so called; but the latter is generally now given to it from Lake Ontario to the Atlantic. Considered in this point of view, its entire course from its source to its mouth in the Gulf of St. Lawrence, in about Lon. 64° 30′ W., may be estimated at upwards of 2,000 m. Besides traversing Lakes Superior, Huron, Erie, and Ontario, the Lake St. Clair, and some smaller sheets of water, are mere enlargements of its bed. Lake Michigan also is included in its basin, which is roughly estimated to comprise an area of upwards of 500,000 sq. m.; including the largest collection of fresh water to be found on the surface of the globe. For considerably more than half its extent the *St. L.* forms the boundary-line between the U. States and the British N. American territories. This river varies greatly in breadth, in the middle part of its course inclosing a great many islands, and forming numerous rapids. In those parts of St. Mary, St. Clair, Detroit, and Niagara rivers, where no large islands are met with, the breadth of the stream is usually from ½ m. to 2 or 3 m. At the Sault of St. Louis, 5 m. above Montreal, the river narrows to 5 furlongs; and at Quebec it is not more than 1,314 yards across; but between those cities its average width is 2 m. From Quebec the width of the *St. L.* begins to increase rapidly. Immediately beyond the island of Orleans it is 11 m. broad; where the Saguenay joins it, 18 m.; at Point Pelee, upwards of 30 m.; at the Bay of Seven Islands, 70 m.; and at the island of Anticosti, abt. 350 m. From Quebec, it rolls a flood into the ocean nearly 100 m. across. The source of the St. Lawrence (St. Louis) being 1,192 ft. above sea-level, the average fall of the river will perhaps be somewhat more than 6 inches per mile. But this fall is very unequally distributed, on account of the many, and in one instance stupendous, cataracts, rapids, &c., interspersed along the river's course. The Niagara, between Lakes Erie and Ontario, has, within the short distance of 35 miles, a descent of at least 334 ft., and the rapids are so numerous and dangerous between Kingston and Montreal, that an extensive line of canal navigation has been cut, at a vast expense, to connect Lake Ontario with the Ottawa, and enable ships to avoid this portion of the river. (For a more detailed description of the water-system of the *St. L.* basin, see NIAGARA, LAKES SUPERIOR, HURON, ERIE, &c., and WELLAND CANAL.) The principal affluents of the *St. L.* are the Ottawa on the N., uniting with it near Montreal, and the Saguenay, also from the N., emptying into it 120 m. below Quebec. The *St. L.* is the great commercial thoroughfare of both the N. States of the American Union, and the Canadian provs. Its banks, and those of its lower lakes, are studded with flourishing cities and towns, as Quebec, Montreal, Trois Rivières, Ogdensburg, Prescott, Cape Vincent, Kingston, Toronto, Buffalo, Oswego, &c. The rise of the tide is perceptible as high as Three Rivers (Trois Rivières), 432 m. up the *St. L.* and nearly midway between Quebec and Montreal. The river is navigable for ships of the line to Quebec, and for ships of 600 tons to Montreal, 580 m. from the sea, though the navigation is in some places obstructed by rocks and shoals. Beyond the latter point, however, a succession of rapids, particularly between Cornwall and Johnston, unfits it for the navigation of other than flat-bottomed boats of from 10 to 15 tons. A continued navigation for vessels of medium burden exists, via the portage of St. Mary, Detroit River, and the Welland Canal, from the head of Lake Huron to Kingston on Lake Ontario, and from Montreal to the mouth of the *St. L.* The water-communication between Kingston and Montreal is effected chiefly by a chain of canals, the principal being the Rideau Canal, constructed by the English govt., to connect Lake Ontario with the Ottawa. On the U. States side, the Erie, Oswego, and Champlain canals, unite the basin of the *St. L.* with those of the Hudson and Susquehanna. Strong tides prevent the *St. L.* being covered with compact ice below Quebec; but the enormous masses driven in every direction by the winds and currents render that portion of the river unnavigable for nearly half the year. Between Quebec and Montreal the water-traffic is totally suspended by the frost from the beginning of Dec. to the middle of April. The navigation of Ontario closes in Oct.

Law'rence, (St.,) or CLARK ISLAND, an island in Behring Sea; Lat. 63° N., Lon. 170° W.; *length*, E. to W., 80 m.; *breadth*, 30 m.

Law'rence, (St.,) in *Minnesota*, a village and township of Scott co., on the Minnesota river, about 40 m S.W. of St. Paul.

—A post-office of Otter Tail co.

Law'rence, (St.,) in *New York*, a N.N.E. co., and the largest in the State. It is bounded on the N.W. by the river St. Lawrence. *Area*, 2,000 sq. m. *Rivers*, Oswegatchie, St. Regis, Grass, &c. Several small lakes are also met with. *Surface*, for the most part hilly and heavily timbered; *soil*, fertile. *Prod.* Maple-sugar. *Min.* Iron ore, lead, and marble. *Cap.* Canton. *Pop.* (1890) 85,048.

—A post-village of Jefferson co. *Pop.* (1897) 186.

Lawrence, (St.,) in *N. Carolina*, a post-village of Chatham co., abt. 50 m. W. of Raleigh.

Lawrence, (St.,) in *Wisconsin*, a township of Waupaca co.

Lawrence, (Gulf of St.,) a great bay of the Atlantic Ocean, chiefly bet. 46° and 51° N. Lat., and 57° and 65° W. Lon.; bounded N. by Lower Canada and Labrador, E. by Newfoundland, S. by Nova Scotia and Cape Breton, and W. by New Brunswick and the peninsula of Gaspé (Lower Canada). At its N.W. extremity it receives the River St. Lawrence; and it communicates with the ocean on the N.E. by the Strait of Belleisle, between Labrador and Newfoundland; on the S.E. by its principal outlet, the channel called St. Paul's, between Newfoundland and Cape Breton; and on the S. by the Gut of Canso, between Cape Breton and Nova Scotia. It contains the large islands of Prince Edward and Anticosti, and the Magdalen Islands, a group in about 47° 30′ N. Lat., and between 61° 27′ and 62° W. Lon. The shores of the gulf are generally precipitous, barren, and inhospitable; and dense fogs are very prevalent. A powerful current sets continually from Hudson's Strait into the gulf, through the Strait of Belleisle, and meeting the stream from the estuary of the St. Lawrence, forms a dangerous race off the S. coast of Newfoundland.

Law'reneeville, a village of Shefford co., prov. Quebec, abt. 21 m. S. of Melbourne.

Law'renceville, in *Alabama*, a post-village of Henry co., abt. 7 m. N. of Abbeville.

Law'renceville, in *Arkansas*, a village of Monroe co., abt. 80 m. E.S.E. of Little Rock.

Law'reneeville, in *Georgia*, a post-village, cap. of Gwinnett co., about 70 m. N.N.W. of Milledgeville.

Law'reneeville, in *Illinois*, a post-village cap. of Lawrence co., about 10 m. W. of Vincennes, Indiana. *Pop.* (1897) 950.

Law'reneeville, in *Indiana*, a post-village of Dearborn co., about 90 m. S.E. of Indianapolis.

Law'renceville, in *New Jersey*, a post-village of Mercer co., about 5 m. N.E. of Trenton.

—A village of Gloucester co.

Law'renceville, in *New York*, a post-village of St. Lawrence co., about 40 m. E. of Ogdensburg.

Law'renceville, in *Pennsylvania*, a borough of Allegheny co., on the Allegheny river, about 2 m. above Pittsburg.

—A village of Chester co., about 35 m. W. of Philadelphia.

—A post-borough of Tioga co., about 158 m. N. by W. of Harrisburg and 7 m. from Tioga; in a farming and tobacco raising region. *Pop.* (1897) about 520.

Law'reneeville, in *Virginia*, a post-village, capital of Brunswick co., on the A. & D. R.R., 65 m. S.S.W. of Richmond.

Law'sonham, in *Pennsylvania*, a post-village of Clarion co., about 15 m. N. of Kittanning.

Lawso'nia, *n.* (*Bot.*) A genus of plants, order *Lythraceæ*. *L. inermis* is the plant from which the *henna* or *alkanna* of Egypt, &c., is derived. It is used by the women of the East to dye the nails, palms of the hands, and soles of the feet an orange-brown color. It is likewise employed for dyeing skins and Morocco leather.

Law'-suit, *n.* A suit in law for the recovery of a supposed right: a process instituted by a party to compel another to do him justice; an action at law.

Laws'ville Centre, in *Pennsylvania*, a post-office of Susquehanna co.

Law'ton, in *Michigan*, a post-village of Van Buren co., about 16 m. S.W. of Kalamazoo.

Law'ton, in *New York*, a post-village of Orange co.

Law'tonville, in *Georgia*, a post-village of Burke co., on Central Railroad of Georgia.

Law'yer, *n.* [Properly, *lawer*, contracted from *lawwer*, law-man.] One versed or skilled in knowledge of the laws, or a practitioner of law; one whose profession is to institute and conduct suits in courts of law, and to prosecute or defend the cause of clients;—a generic term, including attorneys or solicitors, barristers, special pleaders, counsellors or advocates, sergeants at law, &c.

Law'yer-like, Law'yerly, *a.* After the manner of a lawyer; resembling or becoming a professor of the law; as, *lawyer-like* effrontery or astuteness.

Law'yersville, in *New York*, a post-village of Schoharie co., about 45 m. W. of Albany.

Lax, (*laks,*) *a.* (*Comp.* LAXER, *super.* LAXEST.) [Lat. *laxus.*] Loose; wide; open; flabby; soft; not tense, firm, or rigid; as, a *lax* membrane, *lax* flesh. — Slack; not tight; without tension; as, a *lax* rope. — Not rigidly exact; vague; not strict; unconfined; unrestrained; dissolute; licentious; as, a person of *lax* morals.

"Dialogues were only *lax* and moral discourses." — *Baker.*

—Thinly scattered; not crowded; as, *lax* vegetation. — Not firmly united or combined; of loose texture; as, "Gravel and the like *laxer* matter." — *Woodward.*

—Loose in the bowels, and having too frequent evacuations; — opposed to *costive.*

—*n.* A looseness of the bowels; diarrhœa.

Laxa, or LAJA, (*la'ha,*) a river of Chili, enters the Biobio a few miles below Leon.

Laxas, or LAJAS, (*la'has,*) a river of Central America, enters Lake Nicaragua about 16 m. S.E. of Nicaragua.

Laxation, (*-ā'shun,*) *n.* [Lat. *laxatio.*] Act of loosening or slackening; also, the state of being loose or slackened.

Lax'ative, *a.* [Fr. *laxatif.*] (*Med.*) Having the power of loosening the bowels, and relieving from costiveness.

—*n.* (*Med.*) One of a class of medicines which act mildly on the bowels; stronger than aperients, and less active than purgatives. Aperients and purgatives may be made laxatives by enlarging or modifying the dose. Treacle, honey, manna, and confection of senna, or the lenitive electuary, are among a few of the simple laxatives.

Lax'ativeness, *n.* Quality of loosening or relaxing.

Lax'ity, Lax'ness, *n.* [Fr. *laxité;* Lat. *laxitas.*] State or quality of being lax; — heuce, openness; looseness, as of texture. — Want of exactness or precision; as, *laxity* of speech.—Defect of exactitude; as, *laxity* of morals.—Slackness, as of a cord or binding.—Looseness, as of the bowels.

Lax'ly, *adv.* Slackly; loosely; in a lax manner.

Lax'ness, *n.* See LAXITY.

Lay, *imp.* of LIE, *q. v.*

Lay, *v. a.* (*imp.* and *pp.* LAID.) [A. S. *lecgan, legan;* D. *leggen;* Ger. *legen.*] To cause to lie flat; to put or place down on a low surface; to deposit; as, to *lay* one's pen down; — also, to prostrate; to beat down; as, the heavy rain *laid* the crops. — To spread or set; to spread superficially; as, to *lay* mortar. — To settle; to fix and keep from rising; to still; to calm; to allay; to quiet; as, to *lay* the dust. — To place in order; to dispose with regularity; to arrange in proper rank or position; as, to *lay* a table-cloth.

"I *lay* the deep foundations of a wall." — *Dryden.*

—To spread and set in order; to prepare; to make ready; to station; to contrive, scheme, or plan; to set, as an ambuscade or snare.

"Yet still fresh projects *laid* the grey-ey'd dame."—*Chapman.*

—To place at hazard; to wager; to stake; to risk; as, to *lay* a bet.

"I dare *lay* mine honour he will remain so."—*Shaks.*

—To restrain from visible manifestation, as a spirit; to cause to vanish.

"The husband found no charm to *lay* the devil under his wife's petticoat." — *L'Estrange.*

—To put; to apply; to administer; as, to *lay* one's hands to anything.

—To exclude and deposit, as eggs.

—To impose, as a burden or penalty; to assess or charge, as a tax; as, to *lay* a duty on spirits.

"They *lay* the blame on the poor little ones." — *Locke.*

—To impute, or fix the responsibility for; to ascribe the origin or cause of.

"They *lay* want of invention to his charge." — *Dryden.*

—To enjoin, as a duty; to prescribe, as a rule of action; as, to *lay* commands on a person.

"Neglects the rules each verbal critic *lays.*" — *Pope.*

—To exhibit, present, or offer.

"He *lays* his indictment in some certain country." — *Atterbury.*

(*Naut.*) To lose sight of by sailing from; as, the ship *laid* the land at sundown.

(*Law.*) To assert; to state; to allege; as, to *lay* damages.

To lay a rope or *cable.* (*Naut.*) To twist the strands; as, *to lay cordage.*

To lay down, to give up; to relinquish; to resign; as, *to lay down* a commission.

"The story of the tragedy . . . I take up where the history has *laid* it down." — *Dryden.*

To advance or put forward, as a proposition or argument.

"Plato *lays* it down as a principle."—*Addison.*

To quit; to give up the use of; to surrender; as, the rebels *laid down* their arms. — To deposit, as a pledge, surety, equivalent, or satisfaction.

"For her, my lord, I dare my life *lay down.*" — *Shaks.*

To lay one's self down. To retire to rest; to commit to repose.

"We *lay us down,* to sleep away our cares." — *Granville.*

To lay along. To make to fall from the ground; to prostrate. — *To lay apart.* To put away; to reject.

"*Lay apart* all filthiness."—*James* i. 21.

To lay by. To put aside for future use; to hoard. — To put away; to renounce; to dismiss.

"Dismiss your rage, and *lay* your weapons *by.*"—*Dryden.*

To put off; to remove.

"Dædalus his borrowed wings *laid by.*"—*Dryden.*

To lay aside. To put away; not to retain.

"*Lay aside* the greatness of your crown."—*Waller.*

To cease to use; to discontinue; as, to *lay* one's pen *aside.*

To lay away. To reserve for future use or need; to put from one temporarily for preservation; as, his Sunday clothes are carefully *laid away.*

To lay bare. To denude; to expose; to open.

"And *laid* those proud roofs *bare* to summer's rains."—*Byron.*

To lay one's self out. To employ one's best efforts; to strive with earnest endeavor. — *To lay out.* To expend; to apply, as money in purchasing; as, to *lay out* one's spare cash

"Nature has *laid out* all her art in beautifying the face." *Addison.*

To plan; to make orderly disposition or arrangement; as, to *lay out* a flower-garden. — To attire in cerements for the grave; as, to *lay out* a corpse. — To put forth; to exert; to exercise; as, to *lay out* all one's energies. — *To lay before.* To show; to display; to present or expose to view.

"That treaty hath been *laid before* the Commons."—*Swift.*

To lay damages. (*Law.*) To assess or fix the amount of damages; as, *damages* were *laid* at ten thousand dollars.

To lay heads together. To deliberate; to confer together; to compare opinions. — *To lay hold of* or *on.* To catch; to capture; to seize.

"Let seasons of aptitude and inclination be heedfully *laid hold of.*"—*Locke.*

To lay together. To collect; to bring in one place or view.

"Useful hints *laid together* in a clear and concise manner." *Addison.*

To lay siege to. To besiege; to surround or beleaguer with an army; as, to *lay siege to* a fortified place.

"Cares . . . *lay siege* to my distracted soul."—*Philips.*

To address or court with pertinacity; to pester or bore with importunate solicitations or unwelcome attentions.

"Hearing that the lady's father was a nabob, Dick *laid siege* to her."—*Fielding.*

To lay in. To store in anticipation; to treasure; to make previous provision.

"An equal stock of wit and valour,
He had *laid in,* although a tailor."—*Hudibras.*

To lay on. To administer or apply forcibly or with violence, as blows. — *To lay open.* To discover; to expose; to reveal; as, to *lay open* the designs of conspirators. — To open; to uncover; to strip of mystery. — *To lay over.* To incrust; to spread over the surface; to ornament with an outside coating; as, to *lay over* with gold. — *To lay the course.* (*Naut.*) To sail for the destined port without gybing.

To lay to. To impute; to charge upon. — To apply with vigor or energy; as, to *lay* one's self to a good dinner. — (*Naut.*) To retard the motion of a ship, and cause her to become stationary; as, she was signalled to back her topsail and *lay to.* — *To lay to heart.* To feel poignantly; to allow to touch the feelings acutely: as, she *laid* the loss of her child *to heart.* — *To lay under.* To subject to; as, to *lay* one *under* an obligation. — *To lay up.* To store for future use; to hoard; to treasure.

"The king must *lay up* treasures . . . against a time of extremity." *Bacon.*

To confine to the bed or private chamber; as, our friend is *laid up* with the gout. — (*Naut.*) To dock and dismantle a ship of her masts, rigging, and tackle; as, to *lay up* a ship in ordinary.

To lay upon. To solicit importunately; to lay siege to. — *To lay wait for.* To lurk in ambush for; to be in a position to attack by sudden surprise; as, the brigands *lay wait for* them. — *To lay waste.* To desolate; to ravage with fire and sword; to devastate.

"The wars have *laid* whole countries *waste.*"—*Addison.*

Lay, *v. n.* To incubate, or bring forth eggs, as hens.

—To contrive; to devise a scheme.

(*Naut.*) To move in a certain direction; as, to *lay* aft.

To lay about. To strike on all sides; to act with celerity and vigor.

"He *laid about* in fight more busily
Than the Amazonian dame Penthesile."—*Hudibras.*

To lay at. To strike; to endeavor to strike or wound.

"Fiercely the good man did *at* him *lay.*"—*Spenser.*

To lay in for. To make overtures; to endeavor to secure the possession of.

"I have *laid in for* these by rehating the satire."—*Dryden.*

To lay on. To strike; to deliver a succession of vigorous blows. — To act with vehemence; — used of expenses. — To overcharge; to exact more than the proper value. — *To lay out.* To take measures.

"I *laid out* for intelligence of all places."—*Woodward.*

To intend; to design; to purpose. — *To lay upon.* To bet upon; to wager; as, he *laid* five to two *upon* the favorite.

Lay, *n.* That which lies or is laid; a row; a layer; a stratum; one rank in a series reckoned upwards; as, "a *lay* of wood." (*Mortimer.*) — A moiety of the net proceeds of work, &c., entered into upon shares; as, to agree for a *lay.*

—[A. S. *leag.*] A meadow; a tract of grass-land; a place for the grazing of cattle.

"A tuft of daisies on a flowery *lay.*"—*Dryden.*

—[A. S. *legh,* or *ley;* Ger. *lied,* song.] A song; an air or tune, accompanied with words.

"Sung . . . . well attuned, . . . a joyous *lay.*"—*Spenser.*

—A kind of narrative poem or metrical romance, among the ancient bards and troubadours; as, "the *Lay* of the Last Minstrel." — *Sir W. Scott.*

(*Weaving.*) See BATTEN.

Lay, *a.* [Fr. *lai;* Lat. *laicus;* Gr. *laïkos,* from *laos,* the people; A. S. *leod.*] Belonging or having reference to the laity, or general body of the people, as distinguished from the clergy; laic; not clerical; as, a *lay* preacher.

Lay'ard, AUSTEN HENRY, D.C.L., an English archæologist and author, B. 1817. In 1845, he undertook the excavations at Nimroud, which resulted in the numerous wonderful specimens of Assyrian art which enrich the British Museum; and in 1848–9, published *Nineveh and its Remains,* of which a second part appeared in 1853. This work was supplemented by *Monuments of Nineveh,* in 1849–53. In 1870, L. was appointed British ambassador to Madrid, and was ambassador to the Sublime Porte from 1877 to 1880. Died July 5, 1894.

Laybach, or **Laibach** (*lī'bak*), a town of Austria, province Carniola, on the river Laybach, 28 m. N.E. of Trieste; Lat. 46° 1′ 48″ N., Lon. 14° 30′ E. *Manuf.* Linen fabrics, porcelain, paper, and refined sugar.

Laybach, a river of Austria, rising near Adelsberg, under the name of Poik, and losing itself in the grotto of Adelsberg. It afterwards reappears, but is lost again until it arrives at Upper Laybach, where it becomes navigable.

Lay-brother, *n.* (*Eccl.*) In the Roman Catholic Church, one of the pious but illiterate persons who, in convents, devote themselves to the service of the monks. The institution of lay brothers began in the 11th century. They wear a different habit from the monks, and never enter the choir, nor are present at the chapters The only vow they take is of obedience and constancy. There are also lay-sisters in the nunneries, who are retained for the service of the nuns.

Lay-clerk, *n.* (*Eccl.*) A layman appointed to lead the responses of the congregation in a cathedral, and otherwise to assist in the services of the church.

Lay'-days. (*Mar. Law.*) A term of days allowed to the owner, charterer, or broker of a ship, in which to load or discharge cargo.

Lay-elder, *n.* (*Presbyterian Church.*) See ELDER.

Lay'er, *n.* [From *lay.*] The person who, or thing which, lays, particularly, a hen which lays eggs. — One body laid or spread over the surface of another; a bed; a stratum; as, a *layer* of mould. — (*Building.*) A course, as of bricks, stones, &c. — (*Gardening*) A twig or shoot of a plant, not detached from the stock, laid under ground for growth or propagation; as, to give *layers* of fresh earth.

Lay'ering, *n.* (*Gardening.*) A mode of propagating plants by laying down shoots, and covering a portion of them with soil, so that the extremity of the shoot is left above ground, and the shoot itself not detached from the plant In order to facilitate the rooting of such shoots, called *layers,* the portion buried in the soil is fractured by twisting or bruising, or cut with a knife immediately under a bud. This operation, by obstructing the return of the sap from the leaves, occasions its accumulation at the wounded part, when roots are there produced from the effort of nature to perpetuate life.

Lay'er-out, *n.* A disburser of money; a factor; a steward.

Lay'er-up, *n.* A cofferer; one who hoards money for future use.

Lay'-fig'ure. (*Painting.*) A figure made of wood or cork in imitation of the human body. It can be placed in any position or attitude, and moves at every joint, on the principle of the ball and socket. It serves, when clothed, as a model, to painters, for drapery and for foreshortening. The dress of the person is generally placed on the lay-figure after the head is taken, by which means the artist finishes his entire portrait at leisure, without requiring further sittings from the original. (Sometimes called *layman.*)

Lay'ing, *n.* (*Building.*) The first coat spread by plasterers upon a framework of laths. — Time or operation of laying eggs; also, the number of eggs laid at once.

Lay'land, *n.* Meadow-land; fallow ground. See LAY.

Lay'man, *n.*; *pl.* LAYMEN. A man who is not a clergyman; one of the laity or people, as distinguished from the clerical body. — A figure used by painters; a lay figure. — See LAY.

Lay'man, in *Ohio,* a post-office of Washington co.

Lay'-race, *n.* (*Weaving.*) Same as SHUTTLE-RACE, *q. v.*

Lay'-stall, *n.* A place of deposit for dung, rubbish, &c. — In London, a shippen for milch-cows.

Lay'ton, in *New Jersey,* a post-village of Sussex co.

Layton, in *Pennsylvania,* a post-office of Fayette co.

Lay'tonsville, in *Md.,* a post-vill. of Montgomery co.

Laz'ar, *n.* [From *Lazarus,* in the parable.] One sick or afflicted with bodily sores; a person infected with a nauseous and pestilential disease.

Lazaret', Lazaret'to, *n.* [Fr. *lazaret;* It. *lazzeretto.*] A name given in Italy, and other parts of southern Europe, to certain public buildings for the reception of the poor, and such as are afflicted with contagious disorders. The name is derived from St. Lazarus, who is the patron saint of lepers; and during the Middle Ages, when leprosy was common in Italy and other parts, the hospitals in which the lepers were confined

received that name, and the lepers themselves were called *lazzari*. Howard wrote *An Account of the Principal Lazarettos in Europe*, 1789. — Those buildings and inclosures attaching to seaport-towns chiefly on the Mediterranean, where the crews and passengers of ships from places where contagious disease is known to prevail, are also called *lazarettos*. These lazarettos consist generally of various detached buildings, with courts between, the whole being surrounded by a wall, and placed in an airy situation outside the town, or sometimes on a small island near the coast.—See QUARANTINE.

Lazaret'to, in *Penna.*, a village of Delaware co.

Laz'ar-house, *n.* Same as LAZARET (*q. v.*).

Laz'arists, *n. pl.* (*Eccl. Hist.*) See PRIESTS OF THE MISSION.

Laz'arly, *a.* Leprous; resembling a lazar.

Laz'arus, (styled *St. Lazarus* by the Roman Catholics,) a friend and disciple of Christ, brother of Martha and Mary, with whom he resided at Bethany near Jerusalem. Our Saviour had a high regard for the family, and often visited them; and when Lazarus was dangerously ill, word was sent to Christ, "Lord, behold, he whom thou lovest is sick." The Saviour reached Bethany after he had lain four days in his grave, and restored him to life by a word, "Lazarus, come forth." — *L.* is also the name of the helpless beggar who lay at the rich man's gate, in one of Christ's most solemn and instructive parables.

Laz'arus, (St.) (*Eccl. Hist.*) A military and religious order, established by the Crusaders at Jerusalem, for the purpose of affording relief to lepers, in 1119, and confirmed by Pope Alexander IV., in 1255. Louis VII. (1137–80) introduced the order into France, and it declined as leprosy disappeared. The Italian order was united with the Hospitallers in 1484, the Savoy branch with that of St. Maurice in 1572, and the French branch with the order of St. Michael in 1693.

Laz'ar-wort, *n.* (*Bot.*) Same as LASER-WORT. *q. v.*

Laze, *v. n.* To loaf about; to pass one's time in idleness; to dawdle. (Used colloquially.)

—*v. a.* To waste in idleness, as time; as, he *lazes* away the greater part of his life. (Colloq.)

La'zily, *a.* In a lazy manner; idly; sluggishly; indolently.

"He *lazily* and listlessly dreams away his time." — *Locke.*

La'ziness, *n.* State or quality of being lazy; indolence; sluggishness; habitual sloth; indisposition to labor or active exertion; slowness; tardiness; heaviness with regard to motion or action.

Laz'ing, *a.* Idling; wasting time in inaction and indolence.

"The sot lay *lazing* or lolling upon his couch." — *South.*

Laz'uli, or LAPIS LAZULI, *n.* (*Min.*) See LAPIS.

Lazu'lite, *n.* [Ar. *azul*, heaven, and Gr. *lithos*, stone.] (*Min.*) The name applied by Haüy and some other mineralogists to *Lapis lazuli*, q. v. By Werner, Dana, and others, the term is applied to a hydrous phosphate of alumina and magnesia from Styria and the Tyrol. It generally occurs granular or massive, of various shades of azure-blue, including to green or white, and is distinguished from lapis lazuli by never being accompanied by iron pyrites. It is also known as *azurile*, and *prismatic azure-spar*.

La'zy, *a.* [Ger. *lass*, weary; *lässig*, indolent.] Indisposed to action; disinclined to work or exertion; naturally slow; habitually slothful; averse to labor: heavy in motion. — Slow; sluggish; tedious; tardy; moving with apparent effort or difficulty; as, "a dull and *lazy* expedient." — *Clarendon.*

"The *lazy* waters without motion lay." — *Roscommon.*

Lazy weight, short weight.

Lazzaro'ni, Lazaro'ni, *n. pl.* [Pl. of It. *lazzarone*, from Lazarus, the sick man mentioned in the Gospel.] A name used to designate the lower orders of the people in Naples. The hospital of St. Lazarus is devoted to the service of the poorer classes or lazzaroni. They aided Masaniello in the revolution of 1647. They used to elect yearly a head or chief *lazzaro*, who was formally acknowledged by the government, which, by this means, was better able to control and wield at will his turbulent adherents, 50,000 or 60,000 in number.

Le, or **Leh,** (*lā*,) a city of Central Asia, cap. of Ladakh, or Little Thibet, on the right bank of the Upper Indus, 10,000 feet above the sea; Lat. 34° 10′ N., Lon. 77° 40′ E. It is the great entrepôt between Chinese Tartary and the Punjab, and is the chief mart for the famous shawl-wool of Thibet. *Pop.* 4,500.

Lea, Ley, *n.* A.S. *leag.*] (*Agric.*) A term applied to lands which are kept under grass or pasturage for a short period. For example, in a rotation of fallow, wheat, clover and rye-grass, for three years. The ground, when under clover and rye-grass, is said to be in *lea*.

—Any meadow or sward land.

Lea, (*le*,) a river of England, rising near Luton, in Bedford co., and after a course of 40 m., joins the Thames at Blackwall.

Leach, *v. a.* (Sometimes written *leech* and *letch*.) To wash, by allowing water to percolate through, as ashes.

—*v. n.* To pass through by percolation.

—*n.* (Written also *letch*.) Wood-ashes through which water percolates to imbibe the alkali.

—A leach-tub.

Leach, *n.* (*Naut.*) See LEECH, the more correct spelling.

Leach'-tub, *n.* A wooden tub in which ashes are leached, a leach.

Leach'y, *a.* Permitting fluids to pass by percolation; as, a *leachy* soil.

Leach'man, in *Missouri*, a village of Buchanan co., about 50 m. N.W. of Independence.

Lea'cock, in *Penna.*, a post-village of Lancaster co.

Lead (*led*), *n.* [A. S.; Du. *lood*; Ger. *loth*, lead, also a weight.] (*Chem.* and *Min.*) A bluish-gray metal of considerable importance. *Sp. gr.*, 11·44. *Equiv.*, 207. *Symbol.* Pb, (from Lat. *plumbum*.) Lead owes its usefulness in the metallic state chiefly to its softness and fusibility. The former quality allows it to be easily rolled into thin sheets, and to be drawn into the form of tubes or pipes; it is indeed the softest of the metals in common use, and at the same time the least tenacious, so that it can only be drawn with difficulty into thin wire, and is then very easily broken. The ease with which it makes a dark streak upon paper shows how readily minute particles of the metal may be abraded. In fusibility it surpasses all the other metals commonly employed in the metallic state, except tin, for it melts at 617° F.; and this circumstance, taken in conjunction with its high sp. gr., particularly adapts it for the manufacture of shot and bullets. For one of its extensive uses, however, as a covering for roofs, it would be better suited if it were lighter and less fusible, for in case of fire in houses so roofed, the fall of the molten lead frequently aggravates the calamity. The chief ore of lead is *galena*, a sulphide of lead (PbS). This ore might, at the first glance, be mistaken for the metal itself, from its high specific gravity and metallic lustre. It is found forming extensive veins in Cumberland, Derbyshire, and Cornwall (England), traversing a limestone rock in the two first cos., and a clay-slate in the last. Spain also furnishes large supplies of this important ore. Galena presents a beautiful crystalline appearance, being often found in large isolated cubes, which readily cleave or split up in directions parallel to their faces. Blende (sulphide of zinc) and copper pyrites (sulphide of copper and iron) are frequently found in the same vein with galena, and it is usually associated with quartz (silica), heavy-spar (sulphate of baryta), or fluor-spar (fluoride of calcium). Considerable quantities of sulphide of silver are often present in galena, and in many specimens the sulphide of bismuth and antimony are found. Though the sulphide is the most abundant natural combination of lead, it is by no means the only form in which this metal is found. The metal itself is occasionally met with, though in very small quantity, and the carbonate of lead ($PbO.CO_2$), *white lead ore*, forms an important ore in the United States and in Spain. The sulphate of lead ($PbO.SO_3$) is also found in Australia, and is largely imported into England to be smelted. — "Extensive deposits of galena in the U. States exist in Missouri, Illinois, Iowa, and Wisconsin. The ores occur in stratified limestone, associated with blende, smithsonite, calcite, pyrite, and often an ore of copper and cobalt. Of the Upper Missouri lead region, five-ninths belong to Wisconsin, and the richest portion is in that part of the State adjoining Illinois and Iowa. The occurrence of calc-spar in the soil, or sink-holes in lines, are considered indications of lead. From a single spot, not exceeding 50 yards square, 1,500 tons of ore have been raised. Galena occurs also in Illinois, associated with fluoride; in New York, at Rossie, St. Lawrence co., and in Sullivan, Columbia, and Ulster cos.; in Maine, veins of considerable extent exist at Lubeck Bay, Bingham, and Parsonville; in New Hampshire, at Eaton, Haverhill, Bath, and Tamworth; in Vermont, at Thetford; in Connecticut, at Middletown; in Massachusetts, at Southampton, Leverett, and Sterling; in Pennsylvania at Phœnixville and elsewhere; in Virginia, in Wythe co., Louisa co., and other places; in Michigan, in the region of Chocolate river and elsewhere, and Lake Superior copper districts; in California and territories E. of the Rocky Mountains, and many of the gold mines." The product of Galena, Ill., has greatly decreased, but lead abounds in the silver districts of Colorado, Idaho, Montana and Utah, frequently associated with silver, the production of which yields such large quantities of lead that the U. S. is now the largest lead-producing country of the world.

(*Metall.*) The extraction of lead from galena is effected by taking advantage of the circumstance, that when a combination of a metal with oxygen is raised to a high temperature in contact with a sulphide of the same metal, the oxygen and sulphur unite, and the metal is liberated. The ore, having been separated by mechanical treatment as far as possible from the foreign matters associated with it, is mixed with a small proportion of lime, and spread over the hearth of a reverberatory furnace, the sides of which are considerably inclined towards the centre, so as to form a hollow for the reception of molten lead. During the first stage of the smelting process, the object is to roast the ore with free access of air, exposing as large a surface as possible, on which account the heat is kept below that at which galena fuses; indeed, during the first two hours, no fuel is thrown into the grate, sufficient heat being radiated from the sides of the furnace, which have become red-hot during the smelting of the previous charge of ore. The ore is stirred from time to time, to expose fresh surfaces to the action of the atmospheric oxygen. The effect of this roasting is to convert a portion of the sulphide of lead (PbS) into sulphate of lead ($PbO.SO_3$), while another portion loses its sulphur, which is evolved as sulphurous acid (SO_2), and acquires oxygen in its stead, becoming converted into oxide of lead (PbO). A large proportion of the galena, however, remains unoxidized. When the roasting is sufficiently advanced, some fuel is thrown into the grate, some rich slags from previous smeltings are thrown on to the hearth, the damper is slightly raised, and the doors of the furnace are closed, so that the charge may be heated to the temperature at which the oxide and sulphate of lead act upon the unaltered sulphide, furnishing metallic lead, while the sulphur is expelled in the form of sulphurous acid. During this part of the operation, the contents of the hearth are constantly raked up towards the fire-bridge, so as to facilitate the separation of the lead, and to cause it to run down into the hollow provided for its reception. It is also found that the separation of the lead from the slags is much assisted by occasionally throwing open the doors to chill the furnace. After about 4 hours, the charge is reduced to a pretty fluid condition, the lead having accumulated at the bottom of the depressed portion of the hearth with the slag above it; this slag consists chiefly of the silicates of lime and oxide of lead, and would have contained a larger proportion of the latter, if the lime had not been added as a flux at the commencement of the operation. In order still further to reduce the quantity of lead in the slag, a few more shovelfuls of lime are now thrown into the hearth, together with a little small coal, the latter serving to reduce to the metallic state the oxide of lead displaced by the lime from its combination with the silicic acid. But since silicate of lime is far less fusible than silicate of oxide of lead, the effect of this addition of lime is to *dry up* the slags to a semi-solid mass, and it will now be seen that if the whole of the lime had been added at the commencement of the smelting, the diminished fusibility of the slag would have opposed an obstacle to the separation of the metallic lead. During the last hour or so, the temperature is very considerably raised, and at the expiration of about six hours, when the greater portion of the lead is thought to have separated, the slag is raked out through one of the doors of the furnace, and the melted metal allowed to run out through a tap-hole in front of the lowest portion of the hearth, into an iron basin, from which it is ladled into pig-moulds. The rich slags, together with the layer of subsulphide of lead (Pb_2S) which forms over the surface of the metal, are worked up again with a fresh charge of ore. In the smelting of galena a very considerable quantity of lead is carried in the form of vapor; and in order to condense this, the gases from the furnace are made to pass through flues, the aggregate length of which is sometimes 3 or 4 miles, before being allowed to escape up the chimney. When these flues are swept, many tons of lead are recovered in the forms of oxide and sulphide. In the N. of England, the smelting of lead ores is now generally conducted in an *economico-furnace* (Fig. 1535), or small blast-furnace, instead of in the reverberatory furnace described above. Air is supplied to the furnace through 3 blast-pipes, A, and the lead ore and fuel being charged in at B, the lead runs into a cavity, C, at the bottom of the furnace, while the slag flows over into a reservoir, D, outside the furnace. The charge is sprinkled with water through the rose, E, fixed just above the opening into the chimney, F, to prevent it from being blown away by the current of air.

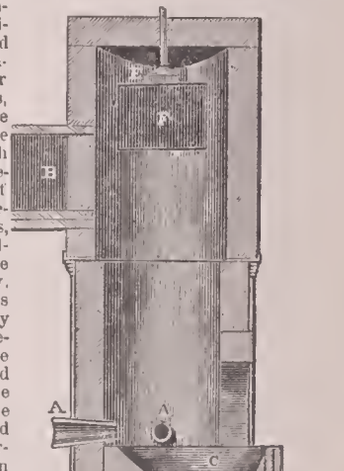


Fig. 1535.

Extraction of silver from lead. — The lead extracted from galena often contains a sufficient quantity of silver to allow of its being profitably extracted. Previously to the year 1829 this was practicable only when the lead contained more than 11 oz. of silver per ton; for the only process then known for effecting the separation of the two metals was that of cupellation, which necessitates the conversion of the whole of the lead into oxide, which has then to be separated from the silver and again reduced to the metallic state, thus consuming so large an amount of labor, that a considerable yield of silver must be obtained to pay for it. By the simple and ingenious operation known as *Pattinson's desilvering process*, a very large amount of the lead can be at once separated in the metallic state with little expenditure of labor, thus leaving the remainder sufficiently rich in the more precious metal to defray the cost of the far more expensive process of cupellation, so that 3 or 4 oz. of silver per ton can be extracted with profit. Pattinson founded his process upon the observation that when lead containing a small proportion of silver is melted and allowed to cool, being constantly stirred, a considerable quantity of the lead separates in the form of crystals containing a very minute proportion of silver, almost the whole of this metal being left behind in the portion still remaining liquid. 8 or 10 cast-iron pots, set in brickwork, each capable of holding abt. 6 tons of *L.*, are placed in a row, with a fire-place underneath each of them. Suppose that there are 10 pots numbered consecutively that on the extreme left of the workman being No. 1, and that on his extreme right No. 10. About 3 tons of the lead containing silver are melted in pot No. 5, the metal skimmed, and the fire raked out from beneath so that the pot may gradually cool, its liquid contents being constantly agitated with a long iron stirrer. As the

crystals of lead form, they are well drained in a perforated ladle (about 10 inches wide and 5 inches deep) and transferred to pot No. 4. When about 4-5ths of the metal have thus been removed in the crystals, the portion still remaining liquid, which retains the silver, is ladled into pot No. 6, and the pot No. 5, which is now empty, is charged with fresh argentiferous lead, to be treated in the same manner. When pots Nos 4 and 6 have received, respectively, a sufficient quantity of the crystals of lead and of the liquid part rich in silver, their contents are subjected to a perfectly similar process, the crystals of lead being always passed to the left, and the rich argentiferous alloy to the right. As the final result of these operations, the pot No. 10, to the extreme right, becomes filled with a rich alloy of lead and silver, sometimes containing 300 ounces of silver to the ton, while pot No. 1, to the extreme left, contains lead in which there is not more than ½ ounce of silver to the ton. This lead is cast into pigs for the market. The ladle used in the above operation is kept hot by a small *temper pot* containing melted lead. A fulcrum is provided at the edge of each pot, for resting the ladle during the shaking of the crystals to drain off the liquid metal. Any copper present in the lead is also left with the silver in the liquid portion. In order to extract the silver from the rich alloy, it is subjected to a process of refining, or *cupellation*, which is founded upon the oxidation suffered by lead when heated in air, and upon the absence of any tendency on the part of silver to combine directly with oxygen. The refinery, or cupelling furnace (Fig. 1536), in which this operation is performed, is a reverberatory furnace, the hearth of which

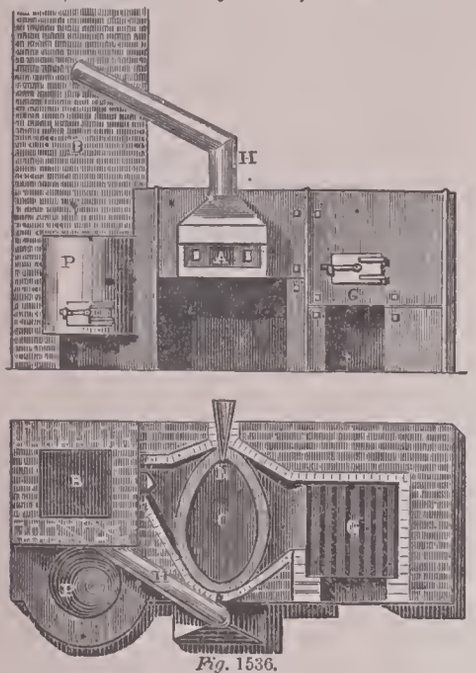


Fig. 1536.

consists of a *cupel* (C), made by ramming moist powdered bone-ashes mixed with a little wood-ash into an oval iron frame about 4 inches deep, and provided with four cross-bars at the bottom, each about 4 inches wide. When this frame has been well filled with bone-ash, part of it is scooped out, so as to leave the sides about 2 inches thick at the top, and 3 inches at the bottom, the bone-ash being left about 1 inch thick above the iron cross-bars. The cupel, which is about 4 ft. long by 2½ feet wide, is fixed so that the flame from the grate (G) passes across it into the chimney (B), and at one end, the nozzle (N) of a blowing apparatus directs a blast of air over the surface of the contents of the cupel. The latter is carefully dried by a gradually increasing heat, and is then heated to redness; the alloy of lead and silver, having been previously melted in an iron pot (P) fixed by the side of the furnace, is ladled through a gutter until the cupel is nearly filled with it; a film of oxide soon makes its appearance upon the surface of the lead, and is fused by the high temperature. When the blast is directed upon the surface, it blows off this film of oxide, and supplies the oxygen for the formation of another film upon the clean metallic surface thus exposed. A part of the oxide of lead, or litharge, thus formed is at first absorbed by the porous material of the cupel, but the chief part of it is forced by the blast through a channel cut for the purpose in the opposite end to that at which the blast enters, and is received, as it issues from A, in an iron vessel placed beneath the furnace. In proportion as the lead is in this manner removed from the cupel, fresh portions are supplied from the adjoining melting-pot, and the process is continued until about 5 tons of the alloy have been added. The cupellation is not continued until the whole of the lead has been removed, but until only 2 or 3 cwts. of that metal are left in combination with the whole of the silver (say 1,000 ounces) contained in the 5 tons of alloy. The metal is run out through a hole made in the bottom of the cupel, which is then again stopped up so that a fresh charge may be introduced. The fumes of oxide of lead, which are freely evolved during this process, are carried off by a hood and chimney (H) situated opposite to the blast of air. When 3 or 4 charges have been cupelled, so as to yield from 3,000 to 5,000 ounces of silver, alloyed with 6 or 8 cwts. of lead, the removal of the latter metal is completed in another cupel, since some of the silver is carried off with the last portions of the litharge. The appearances indicating the removal of the last portion of lead are very striking: the surface of the molten metal, which has been hitherto tarnished, becomes iridescent as the film of oxide of lead thins off, and afterwards resplendently bright; and when the cake of refined silver is allowed to cool, it throws up from its surface a variety of fantastic arborescent excrescences, caused by the escape of oxygen which has been mechanically absorbed by the fused silver, and is given off during solidification. The litharge obtained from the cupelling furnaces is reduced to the metallic state by mixing it with small coal, and heating it in a furnace similar to that employed in smelting galena. A new process of *extracting silver from lead by zinc*, patented in 1867, by Flack, of Prussia, is substantially as follows: The lead is placed in a pot furnished at the bottom with tube and cock, and heated to the temperature of 600° to 700° C., after which from ¾ to 1 per cent. of zinc, according to the amount of silver in the lead, is put in, and the metals are thoroughly incorporated by stirring. After three hours rest, and cooling, the alloy of lead, zinc, and silver floating on the top is taken off, and the operation is repeated two or three times, with the addition of a small amount of zinc. The following are the proportions of the total quantities of zinc used:

	Per cent. zinc.
1,000 grains silver in a ton of lead, ...	1½
1,500 " "	1¾
3,000 " "	1⅞
5,000 " "	1⅞
6,000 " "	2

If the alloy has been carefully taken off, the remaining lead will be entirely free from silver. The desilvered lead is then run down in a blast-furnace, with a silicious slag containing about 33 per cent. of silicious earth, after which it is melted in a pot, and green wood placed in it, whereby the last remaining trace of zinc and iron is removed. The alloy of lead, zinc, and silver is likewise run down in a small blast-furnace, with slag containing about 36 per cent. of silicious earth. The rich lead obtained is then, as usual, refined in the cupel, and the zinc oxide taken off by a comb or water apparatus. The separation of metal alloy may be accomplished in the wet way by means of sulphuric or muriatic acid, but the blast furnace process is considered preferable.—*In the laboratory*, lead may easily be extracted from galena by mixing 300 grains with 450 grains of dried carbonate of soda and 20 grains of charcoal, introducing the mixture into a crucible, and placing in it two tenpenny nails, head downwards. The crucible is covered and heated in a moderate fire for about half an hour. The remainder of the nails is carefully removed from the liquid mass, which is then allowed to cool, the crucible broken, and the lead extracted and weighed. To ascertain if it contains silver, the button is placed in a small bone-ash cupel (Fig. 1537) heated in a muffle, until the whole of the lead is oxidized, and absorbed by the bone-ash of the cupel, leaving the minute globules of silver. Small globules of lead may be conveniently cupelled on charcoal before the blowpipe, by pressing some bone-ash into a cavity scooped in the charcoal, placing the lead upon its surface, and exposing it to a good oxidizing flame, as long as it decreases in size. If any copper be present, the bone-ash will show a green stain after cooling. Pure lead gives a yellow stain. In the above process the sulphur of the galena is removed, partly by the sodium of the carbonate, and partly by the iron of the nails, the excess of carbonate of soda serving to flux any silica with which the galena may be mixed.—*Use of lead.* The employment of this metal for roofing, &c., has been already noticed. Its fusibility adapts it for casting type for printing, but it would be far too soft for this purpose; accordingly, *type-metal* consists of an alloy of 4 parts of lead with 1 of antimony. A similar alloy is used for the bullets contained in shrapnel shells, since bullets of soft lead would be liable to be jammed together, and would not scatter so well on the explosion of the shell. On the other hand, rifle-bullets are made of very pure soft lead, in order that they may more easily take the grooves of the rifle. *Small shot* are made of lead to which about 40 lbs. of arsenic per ton has been added. The arsenic dissolves in the lead, hardening it and causing it to form spherical drops when chilled. The fluid metal is poured through a sort of colander fixed at the top of a lofty tower (or at the mouth of a deserted coal-shaft), and the minute drops into which it is thus divided are allowed to fall into a vessel of water, after having been chilled by the air in their descent. They are afterwards sorted, and polished in revolving barrels containing plumbago. If too little arsenic is employed, the shot are elongated or pyriform; and if the due proportion has been exceeded, their form is flattened or lenticular.—*Common solder* is an alloy of equal weights of lead and tin, which is more fusible than either metal separately. Other alloys containing lead will be noticed in their proper places. Leaden vessels are much used in manufacturing chemistry, on account of the resistance of this metal to the action of acids. Neither concentrated sulphuric, hydrochloric, nitric, nor hydrofluoric acid will act upon lead at the ordinary temperature. The best solvent for the metal is nitric acid of sp. gr. 1·2, since the nitrate of lead, being insoluble in an acid of greater strength, would be deposited upon the metal, which it would protect from further action. Lead is easily corroded in situations where it is brought in contact with air highly charged with carbonic acid, when it absorbs oxygen, forming oxide of lead, which combines with carbonic acid and water to produce the basic carbonate of lead ($PbO.CO_2,PbO.H_2O$. The lead of old coffins is often found converted into a white earthy-looking brittle mass of basic carbonate, with a very thin film of metallic lead inside it. When lead is exposed to the joint action of air and the acetic acid contained in beer, wine, cider, &c., it becomes converted into acetate of lead or sugar of lead, which is very poisonous. Hence the accidents arising from the reprehensible practice of sweetening cider by keeping it in contact with lead, and from the accidental presence, in beer and wine bottles, of shot which have been employed in cleaning them. The action of water upon leaden cisterns has already been noticed. Contact with air and sea-water soon converts lead into oxide and chloride.

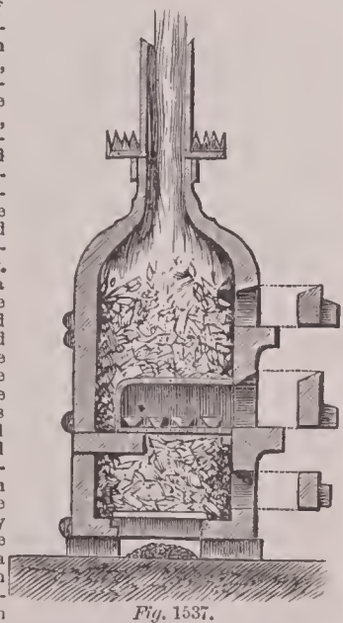


Fig. 1537.

(*Med.*) Though one of the most useful of all the metals in the arts, and forming, with the acids, preparations and pigments of the most opposite colors and properties, only one of its compounds is used in medicine, namely, the acetate (*acetas plumbi*, or sugar of lead), formerly called *saccharum saturni*, or the sugar of saturn, the alchemists giving the name of saturn to lead from its gravity, as that of mercury to quicksilver for its subtle properties. All the preparations of lead are active poisons, producing paralysis, and affecting even those who work in the mines, or are employed in smelting its ores, causing a nodding palsy, or constant tremor of the limbs or hands.—See PAINTERS' COLIC; SUGAR OF LEAD; POISONS.

Acetates of L. Acetic acid forms at least four compounds with lead; viz., the

Neutral acetate ....$PbO.C_4H_6O_3 3Aq.$
Subsesquiacetate.....$3PbO.2C_4H_6O_3Aq.$
Tribasic acetate.....$3PbO.C_4H_6O_3Aq.$
Hexacetate.....$6PbO.C_4H_6O_3Aq.$

The most important of these are the neutral acetate and the tribasic acetate. The former is made by dissolving litharge in excess of acetic acid and evaporating. With care it may be made to crystallize in fine right rhombic prisms; but its most usual form is a mass of confused crystals resembling loaf-sugar: from which circumstance, joined to its sweetish metallic taste, it has received the name of *sugar of lead*. It dissolves readily in water and alcohol. Exposed to the air it effloresces, and heated, it becomes anhydrous, and fuses into a clear liquid. Heated further, it gives off carbonic acid, acetone being formed. In this form it consists of the *subsesquiacetate of lead*, a salt having a distinct alkaline reaction, and crystallizing in pearly scales. *Triacetate of lead*, which forms the basis of *Goulard's water*, is prepared by digesting 7 parts of finely-powdered litharge with 6 parts of the neutral acetate dissolved in 30 parts of water. It has a strong alkaline reaction, and crystallizes in opaque needles.

Borate of L. Boracic acid unites mechanically when fused with oxide of lead, in all proportions. But little is known of the chemical borate of lead. It enters into the composition of Faraday's optical glass.

Carbonate of L. This salt, commonly known as *white lead*, forms, when ground with oil, one of our most important white pigments. The most usual method of manufacturing it in this country is that known as the Dutch method. It consists in exposing lead cast in thin gratings to the combined action of acetic acid vapor, moist air, and carbonic acid gas. The gratings are supported a little above the bottom of earthen pots, similar to flower-pots, in each of which a small quantity of weak acetic acid is placed. The pots are built up in alternate layers with spent tanner's bark, until a stack is formed, each layer of pots being covered with a board. Fermentation soon takes place in the tan, and serves the double purpose of generating heat and furnishing carbonic acid. After the lapse of six or eight weeks, the metallic lead is found converted into white masses of carbonate, mixed with hydrated oxide. It is then levigated, washed, dried, and ground with oil. About 16,000 tons of white lead are annually made in England by this process. Pure carbonate of lead, for chemical purposes, may be precipitated from pure nitrate of lead by an alkaline carbonate. *Form.* $PbOCO_2$.

Chlorides of L. Lead forms with chlorine a sparingly soluble white precipitate when a soluble chloride is mixed with a soluble salt of lead. It fuses into a semi-transparent horny mass, which may be volatilized

high temperatures. Chloride of lead combines with the oxide to form oxychloride in several proportions. The most important of these ($PbCl_2PbO$) is used as a white pigment, under the name of Pattinson's white. Another ($PbCl_2 7PbO$), known as patent yellow, or Turner's yellow, is also much used for the same purpose.

Chromates of L. Lead forms with chromic acid two chromates, — the neutral chromate, $PbOCrO_3$, and the dichromate, $2PbOCrO_3$. The former is the well-known, brilliant, yellow pigment chrome yellow, and is made by precipitating a solution of acetate or nitrate of lead with chromate or bichromate of potash. It is extensively used in the arts both as a pigment and in calico-printing. The dichromate is of a splendid scarlet color, and is made by adding to a solution of nitrate or acetate of lead a solution of chromate of potash, to which an equivalent of hydrate of potash has been added. It is much used as a pigment.

Iodide of L. This compound is easily obtained by throwing down the nitrate or acetate of lead by iodide of potassium. It is sparingly soluble in cold water, but more so in hot, from which it is deposited in brilliant yellow spangles. Iodide of lead forms double salts with the alkaline iodides and cyanides. *Form.* PbI.

Nitrates of L. Of these there are four, of which three are basic, containing one equivalent of nitric acid united to 2, 4, and 6 equivalents of oxide of lead. The neutral nitrate, which is an important salt used extensively in calico-printing, is prepared by dissolving the metal, its oxide or carbonate, in nitric acid, and crystallizing. Nitrate of lead crystallizes in hard anhydrous octahedra, which are sometimes opaque and sometimes transparent. It is somewhat sparingly soluble in water, requiring seven parts of cold water for solution.

Nitrites of L. There are several nitrites of lead. Basic nitrite of lead is prepared by boiling metallic lead in the solution of its nitrate. This gives rise to a pink basic nitrate containing four equivalents of base, from which a yellow neutral nitrate may be prepared by passing through it a current of carbonic acid.

Oxides of L. The principal oxides are the *suboxide*, Pb_2O; the *oxide*, PbO; and the *binoxide*, PbO_2. Several intermediate oxides also exist. Suboxide of lead is made by heating oxalate of lead in an oil-bath to 572° Fahr. as long as any gas is eliminated. It is a black powder, convertible by heat into the oxide. The oxide is known in commerce as *litharge* when obtained by fusion, and as *massicot* when amorphous. It is manufactured in very large quantities by exposing metallic lead to a current of heated air. It varies from the well-known brownish-red of litharge to a pure white, according to the state of aggregation of its particles. It forms numerous salts with the acids. It also forms compounds with the alkalies, which are regarded by some chemists as *plumbites*. It is slightly soluble in pure water. A solution of sugar is capable of dissolving a large quantity. It is employed commercially in the manufacture of white and red lead, in making glass, in assaying, and in glazing certain kinds of earthenware. The binoxide, peroxide, or plumbic acid, is of a dark purplish-brown, and is formed by heating the protoxide with some powerful oxidizing agent, such as chlorate of potash or nitric acid. It is, in itself, a powerful oxidizing agent, and has been much employed in making certain of the aniline colors. It acts as a true acid, forming a distinct plumbate with potash, crystallizing in colorless cubes. Red lead, or minium, is somewhat uncertain in its composition, but it is now generally regarded as a plumbate of oxide of lead. It is largely used in glass-making, and is one of the commonest of our mineral pigments. It is made by heating litharge, or massicot, in a reverberatory furnace. Miniums containing one equivalent of plumbic acid united with one, two, and three equivalents of oxide of lead, have been analyzed. They differ but slightly in color and physical properties.

Sulphate of L. This salt occurs in nature as *lead vitriol*, which is found crystallized in transparent octahedra. It is obtained in the laboratory as a white precipitate, by adding dilute sulphuric acid to a solution of a soluble salt of lead. It is very sparingly soluble in water and in dilute sulphuric acid. It is, however, soluble to a much greater extent in concentrated sulphuric acid; hence the chloride of sulphate of lead is thrown down when water is added to the ordinary oil of vitriol made in leaden chambers. It is obtained in large quantities as a by-product in the preparation of acetate of alumina for dyeing, by decomposing sulphate of alumina with acetate of lead.

Sulphide of L. The sulphide of lead occurs abundantly in nature, in the form of galena, which is the principal ore from which this metal is obtained. It may be obtained artificially by fusing sulphur with metallic lead, or by passing sulphuretted hydrogen through a solution of the metal.

Tartrate of L. This salt is principally remarkable for forming the *lead pyrophoras* of the old chemists. Tartrate of lead is made by precipitating acetate of lead by tartrate of ammonia, washing and drying. If a little of the dry tartrate is heated in a test-tube until it is decomposed into finely-divided lead and carbon, and scattered on a piece of paper, it burns with a red flash.

Lead-tree. A piece of zinc twisted into a fanciful form, and suspended in a bottle containing a solution of acetate of lead, precipitates the metal in arborescent crystals, forming the well-known lead-tree, or Saturn's tree.

Lead, *n.* (*Printing.*) A thin plate of type-metal, used to form a division between printed lines.

(*Naut.*) A plummet or leaden weight, used in taking soundings at sea. See DEEP-SEA LINE.

—A slender cylindrical piece of black lead used in pencils.

(*Arch.*) Leaden sheets used as a covering for roofs of houses; — hence, a roof so covered; as, to walk upon the *leads*.

—*v. a.* To cover with lead; to supply and fit with lead.

"A carved window of glass *leaded* with gold." — *Bacon.*

(*Printing.*) To widen the space between the printed lines, by inserting a lead or leads.

Lead, (*lēd,*) *v. a.*, (*imp.* and *pp.* LED.) [A. S. *lædan*; D. *leiden*; Ger. *leiten.*] To guide or conduct by showing the way; to direct.

"Saints who taught and *led* the way to Heaven." — *Tickell.*

—To guide by the hand; to conduct to any place.

"*Led* by my hand, he sauuter'd Europe round." — *Pope.*

—To conduct, as a chief or commander; to direct and govern; as, the general *led* his troops to victory.

"He *led* me on to mightiest deeds." — *Milton.*

—To precede; to introduce by going first.

"Hesperus *leads* the sun his way." — *Fairfax.*

—To guide to the attainment of any object; as, conscience *leads* him to make restitution.

—To allure; to entice; to draw; to induce; to prevail on; to bias or incline; to influence.

"What I say will have little influence on those whose ends *lead* them to wish the continuance of the war." — *Swift.*

—To pass; to spend; as, he and his wife *lead* a cat-and-dog life together.

—To cause to pass or spend; as, he *leads* others to follow his example.

To lead astray, to seduce from the ways of truth and rectitude; to guide or conduct into error; also, to direct in a wrong way; as, to *lead* a woman *astray*, to *lead* a traveller *astray*.—*To lead captive*, to conduct into captivity.

"*Led captive* by thy glorious eyes." — *Prince.*

To lead the way, to act as guide; to show the way by going in advance.

—*v. n.* To go in advance and show the way. — To conduct, as a chief or commander. — To draw on; to have a tendency; to exercise dominion over; as, women often *lead* men to make fools of themselves.

To lead off or *out*, to go first; to act as leader.

Lead, *n.* Guidance; precedence; state of going before or in advance. — A navigable passage through a field of ice.

(*Mining.*) See LODE.

(*Mach.*) The width of aperture of the steam part of an engine for the evolving or admission of steam at the commencement of the piston stroke. When employed alone, it is understood to denote lead on the steam side, or *outside-lead*, in distinction from *inside-lead*, or lead on the exhaust side.

Leaded, (*lĕd'ed,*) *a.* Set in lead; fixed or fitted in lead; as, a *leaded* casement.

(*Printing.*) Divided by leads, as lines of printed matter.

Leaden, (*lĕd'n,*) *a.* Made of lead; containing lead; as, a *leaden* bullet.

—Heavy; torpid; dull; sluggish; averse to action.

"I'll take a nap; lest *leaden* slumber poise me down to-morrow." *Sh.*

Lead'en-hearted, *a.* Insensate; without liveliness of feeling.

Lead'en-heeled, Lead'en-stepping, *a.* Moving tardily or sluggishly.

Leader, (*lēd'er,*) *n.* One who leads or conducts; a guide; a conductor.—A chief; a commander; a captain; as, the *leader* of a forlorn-hope.— One who goes first, or in advance; as, the *leader* of the van.

—The ruling head or chief of a party, faction, clique, or cabal; as, the *leader* of the opposition, a *leader* of fashion. — The chief editorial article in the columns of a newspaper; as, the "Times" has a smart *leader* to-day. — One of the forward pair of horses in a four-in-hand team; the leading horse when driving tandem; as, he touched up the *leader* on his flank.

(*Mus.*) That performer who, in concerted music, plays on the principal violin, and receives the time and style of the various movements from the conductor, and communicates them to the rest of the band. After the conductor, the leader holds the most important place in the orchestra, as all the other performers look to him for direction in the execution of the music, and the entire effect depends in a great measure upon his skill and judgment.

(*Mach.*) The chief wheel in any body of machinery.

(*Mining.*) A branch, rib, or string of ore, leading along to the lode.

—*pl.* (*Printing.*) A row of periods—sometimes of hyphens, —employed in tables of contents, indices, &c., for the guidance of the eye to the end of a line for the termination of the sense.

Lead'ership, *n.* State or condition of a leader.

Lead Hill, in *N. Carolina*, a village of Davidson co.

Leading, (*lēd'ing,*) *p. a.* Principal; chief; capital; most prominent, important, or influential; as, a *leading* impulse, a *leading* politician, a *leading* characteristic.— Pointing out the way by going forward in advance; as, a *leading* example.

L. note. (*Mus.*) The sharp seventh of the diatonic scale, or the semitone below the octave, to which it leads. The majority of the German theorists have now relinquished the term *leading note*, as every note, when it is felt that another immediately above or below it should follow, may be said to be a leading note.

L. question. (*Law.*) A question so put to a witness as to suggest the answer that is desired or expected. Thus, if a witness is asked, "Was he dressed in a black coat?" it is supposed the witness will answer, yes; whereas the proper way of putting the question is, "How was he dressed?" or, "What kind of coat?" &c. The rule established in courts of justice as to the correct practice in such matters, is, that when a witness is examined in chief, *i. e.*, by the party who adduces such witness, leading questions are not allowed, except in one or two rare cases; whereas, when the witness is cross-examined, *i. e.*, by the opposing party, leading questions may be put; for the object is to make the witness contradict and stultify himself, so that the jury will disbelieve him. The above rule, however, only applies to material questions, for in immaterial questions leading questions may be put, so as to save time.

L. springs. (*Mach.*) The springs fixed upon the leading axle-box of a locomotive engine, bearing the weight above.

L. wheels. (*Mach.*) The small wheels placed in advance of the driving-wheels of a steam locomotive.

Leading, (*lēd'ing,*) *n.* Lead; leaden articles taken collectively.

Leadingly, (*leed'-*) *adv.* By leading or conducting.

Leading-strings, (*leed'-*) *n. pl.* Strings by which children are kept from falling when learning to walk.

To be in leading-strings, to be in a condition of subservience to the will of another; to be as a puppet in the hands of others; as, his mother still holds him in *leading-strings*.

Lead'ing-wind. (*Naut.*) A full fair wind.

Lead'ing Creek, in *Ohio*, enters the Ohio River from Meigs co.

Leading Creek, in *West Virginia*, a post-office of Lewis co., about 18 m. W. of Weston.

Lead-pencil, (*led'pĕn-sil,*) *n.* An instrument conveying lead for writing or drawing lines.

Lead'-plant, *n.* (*Bot.*) A shrub of the genus Amorpha. *A. canescens*, 2 to 4 feet high, found in dry, sandy soil, from Wisconsin to Louisiana and Rocky Mountains; — so called because it is supposed to prefer localities of lead ore.

Lead-screw, (*leed'skru,*) *n.* (*Mach.*) The principal screw in a lathe.

Leadsman, (*lĕdz'man,*) *n.*; *pl.* LEADSMEN. (*Naut.*) One who heaves the lead on board ship.

Lead-wort, (*lĕd'wart,*) *n.* (*Bot.*) See PLUMBAGO.

Leady, (*lĕd'e,*) *a.* Of the color of lead; partaking of the properties of lead.

Leaf, (*lēf.*) *n.*; *pl.* LEAVES, (*lēvz.*) [A. S.; Du. *loof*; Ger. *laub.*] The thin, expanded, deciduous part of a plant or flower. — See below.

(*Bot.*) An organ which, in the higher orders of plants, is specially concerned in the elaboration of the various vegetable secretions. It invariably grows from the stem, and is generally a flat, expanded body, formed of *parenchyma*, or vegetable tissue, strengthened by a woody framework or skeleton. (Fig. 1538.) The parts of the stem from which the leaves spring are called *nodes*, and the spaces between such parts *internodes*. The leaf usually grows horizontally, so that one surface looks to the earth, and the other to the sky; but in some plants the leaves are placed vertically, with their edges directed to those points. The latter mode of growth is rare; and the terms *upper* and *lower* are generally applied to the two surfaces.

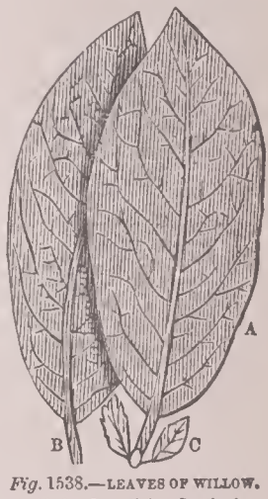


Fig. 1538.—LEAVES OF WILLOW. A, blade; B, petiole; C, stipule.

The part of the leaf next the stem is called the *base*, the opposite extremity the *apex*, and the lines connecting these two points the *margins* or *edges*. The angle formed by the upper surface of the leaf with the stem is styled the *axil*; and everything which springs from this angle is said to be axillary. The leaf is sometimes articulated with the stem; and when it falls off, a scar remains. At other times, it is continuous with it, and then decays gradually, without dropping off. When leaves fall off annually, they are said to be *deciduous*; when they remain for two or more years, they are *persistent* or *evergreen*. A *L.* usually consists of 2 distinct parts (Fig. 1539)—a flat, expanded portion, called the *blade*, *lamina*, or *limb*, and a narrower portion, which joins it to the stem, and which is termed the *petiole* or *leaf-stalk*. The apex of the blade is the oldest part of such a leaf, and the base of the stalk the youngest. When a leaf has no distinct stalk, but consists of the flat portion only, it is said

Fig. 1539. SESSILE LEAVES OF THE STRAWBERRY-BUSH. (*Euonyma Americanus.*)

to be *sessile*. (Fig. 1539.) The occurrence of two little organs at the base of the leaf-stalk is frequent; and as these usually resemble the expanded part of the leaf, they have been termed *stipules* (C, Fig. 1539), or little blades. But though commonly of a leafy character, stipules sometimes take such curious forms that they can only be identified by their position at the base of the petiole, or the blade, if the leaf be sessile. In the rose, the stipules appear as little membranous parts adhering to the base of the leaf-stalk. In the common mallow, and in the geranium, they take the form of little leaves, and proceed, not from the leaf-stalk, but from the stem of the plant at either side of the base of the leaf-stalk. In the wild heart's-ease, they are extremely large, and are divided into several segments. In the robinia, they occur as sharp prickles, and in the smilax as delicate tendrils. Stipules, when present, whatever their form, are to be regarded as portions of the leaf, and not as distinct orgaus. They appear at a somewhat late period of the development of the leaf; but their growth is exceedingly rapid, owing to their close proximity to the stem. Leaves generally consist of vascular tissue in the form of *veins*, *ribs*, or *nerves*, and of soft cellular tissue, or *parenchyma*, filling up the interstices between the veins. The term *venation* has been applied to the distribution of the veins. In most leaves this can be easily traced; but in the case of some succulent plants the veins are obscure, and the leaves are said to be *hidden-veined*. Again, in the lower tribes of plants, as the mosses and sea-weeds, the leaves are not strengthened by vascular tissue; and from being destitute of true veins, they have been termed *veinless*. In an ordinary leaf, there may be observed a central vein larger than the rest, which is called the *midrib*. This gives off veins laterally, which either end in curvatures within the margin, as in the leaf of the lilac, or proceed directly to the edges, as in the oak-leaf. The veins give origin to smaller ramifications, which are distinguished by the term *veinlets*. Some leaves, as those of the common sycamore, have, in place of a midrib, three or more large veins, which proceed from the base to different parts of the margin, such veins being simply termed *ribs*. Leaves in which the veins form a sort of network are said to have a *reticulated* (Fig. 1540), or *netted venation*. The leaves of all our forest-trees, and most of our herbs, are examples.

Fig. 1540.
RETICULATED LEAF OF OAK.

Fig. 1541. — PARALLEL-VEINED LEAF OF THE BANANA.

Those leaves in which the main veins are more or less parallel, and simply connected by unbranched veinlets (Fig. 1541), are said to have a *parallel venation*. The grasses, lilies, palms, and most monocotyledonous plants, furnish examples. Leaves have been divided into *simple* and *compound*. A leaf is simple if it has only one blade, however much this may be divided. The pear, the oak, the lilac, and the cabbage, have simple leaves. A leaf is compound when the blade is separated into two or more distinct portions, each of which bears the same relation to the petiole as the petiole itself bears to the stem from which it arises. The separate portions of a compound leaf are called *leaflets*; and these may either be sessile or furnished with stalks, called *petiolules*, or *partial petioles*; the main axis which supports them being termed the *rachis* or *common petiole*. The leaflets of a compound leaf may be distinguished at once from the separate leaves of a branch by their being all situated on the same plane; moreover, the entire leaf, when it dies, commonly falls off the stem in one piece, and not leaflet by leaflet. The leaves of the rose, clover, elder, and horse-chestnut are familiar examples. The margins of leaves are sometimes smooth and undivided, but more frequently indented or scalloped. A leaf is said to be *entire* when its margins are smooth, as in the garden-nasturtium and the whole orchis tribe. Of the *indented* or *toothed* leaves, botanists name several varieties, the following being the principal: — *Serrate*. Having teeth, like those of a saw, directed towards the apex, as in the common nettle and in the rose. (Fig. 1542.) — *Biserrate*. With teeth which are themselves serrate, as in the nettle-leaved bell-flower. — *Serrulate*. Minutely serrate; that is, having very small teeth. — *Dentate*. With large, sharp teeth, not pointing in any particular direction. — *Crenate*. Having rounded projections in place of angular teeth, as in the ground-ivy and the horse-radish. — *Bicrenate*. With rounded projections which are themselves scalloped. — *Crenulated*. Minutely scalloped. — A simple leaf is sometimes more divided than in the above instances; and the segments produced receive different names, according to their nature. If the incisions reach about midway between the margin and midrib, or petiole, the leaf is said to be *cleft*; and its divisions are called *lobes*. If they extend almost as far as the midrib, or base, the leaf is *partite*; and the divisions are then called *partitions*. And if they quite reach the midrib, or base, *segments* are formed; and the leaf is said to be *dissected*. These segments differ from the leaflets of a compound leaf in never being articulated, and also in each being united to the midrib or petiole by a broad base. In describing incised leaves, such terms as *bifid*, or two-cleft, *trifid*, three-cleft, *multifid*, many-cleft, *tripartite*, *trisected*, and so on, are generally used. Special terms are applied to the various modifications of the compound leaf. It is *pinnate* when the leaflets, or *pinnæ*, as they are sometimes called, are arranged along the rachis in pairs. It is *abruptly pinnate* (Fig. 1543), when it ends with a pair of leaflets; and *unequally pinnate* when there is a single terminal leaflet. Sometimes the leaflets of a pinnate leaf are themselves so divided as to appear pinnate. Such a leaf is *bipinnate*. The secondary leaflets, or *pinnules*, as they are termed, may in like manner become pinnate, and so produce a *tripinnate* leaf. When the division extends beyond this point, a *decompound* leaf is the result. Examples are afforded by many umbelliferous plants. In many compound leaves, the leaflets proceed from the same point, instead of being arranged along each side of a common stalk. If such a leaf consists of three leaflets, it is *ternate*, as in the strawberry; *quadrinate*, if there are four, as in herb-paris; *quinate*, if there are five; *septernate*, if there are seven, as in the horse-chestnut; and *multifoliate*, if there are more than seven, as in lupin. These leaves, like those which are pinnate, may be again divided and subdivided. Thus, the common petiole may divide at its apex into three partial ones, each of which bears three leaflets, such an arrangement producing a *biternate* leaf. — For further information on leaves, see BOTANY, PHYLLOTAXIS, VERNATION, &c.

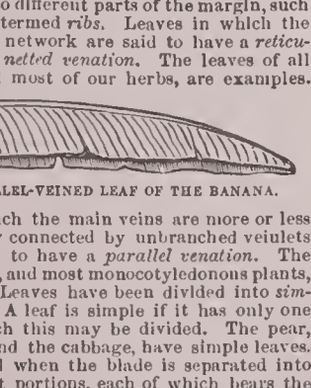


Fig. 1542.—THE CAUCASIAN DOG-ROSE, (*Rosa Indica.*)

Fig. 1543.
ABRUPTLY PINNATE LEAF.

Fig. 1544.
TERNATE LEAF OF STRAWBERRY.

—A part of a book, containing two pages.
—A side or part of a window-shutter or folding-door; — generally in the plural. — The movable side of a table.
—Something resembling a leaf in thinness and extension; a very thin plate; as, gold or silver *leaf*. — A quantity of fat, lying in a separate fold or layer; as, a *leaf* of lard. — One of the small teeth of a pinion.
(*Arch.*) A foliated ornament.

Leaf, *v. n.* To shoot out, or produce leaves; as, the trees begin to *leaf*.

Leafage, (*lēf'āj,*) *n.* Leaves taken collectively; a plenty of leaves.

Leaf-bridge, *n.* A drawbridge with a movable leaf or platform on each side.

Leaf-bud, *n.* (*Bot.*) A rudiment of young branches made up of scales imbricated over each other, the outermost being the hardest and thickest, and surrounding a minute axis, which is in direct communication with the woody and cellular tissue of the stem. When stimulated by light and heat it extends into branches; or if artificially removed from the plant that bears it, it is capable of multiplying the individual from which it has been taken.

Leaf-crowned, *a.* Covered with foliage; crowned with leaves.

Leaf-cutting Bee, *n.* (*Zoöl.*) See APIDÆ.

Leafed, (*lēf'd.*) *a.* Bearing leaves.

Leaf-fat, *n.* The fat distributed in layers in an animal body.

Leafiness, *n.* State or condition of being leafy.

Leaf-lard, *n.* Refined lard made of leaf-fat of hogs.

Leafless, *a.* Denuded of leaves; without foliage; as, a *leafless* tree.

Leaflessness, *n.* Want of leaves.

Leaflet, *n.* (*Bot.*) A small leaf formed by the petiole of a leaf branching out, and separating the cellular tissue of the lamina into more than one distinct portion, each of which forms a perfect lamina in itself.

Leaf-stalk, (*-stawk,*) *n.* (*Bot.*) The petiole sustaining a leaf.

Leafy, *a.* [*Comp.* LEAFIER; *super* LEAFIEST.] Abounding with leaves; as, "the *leafy* mouth of June."
Coleridge.

Leaf River, in *Illinois*, a township of Ogle co.; *pop.* about 1,400.

Leaf River, in *Mississippi*, rises in the S. central part of the State, and flowing a general S.E. course, joins the Chickasawha River in Greene co. to form the Pascagoula River.

League, (*leeg,*) *n.* [Fr. *ligue*, from Lat. *ligo*, to bind; Sansk. *lag*, to stick, to cleave.] A compact combination, or union between princes or states for purposes of mutual aid or defence, or for mutual aggression, termed, respectively, a *league* defensive or offensive. — An alliance; a confederacy; a combination; a compact; a covenant; any union of two or more parties carrying out designs of friendship or interest in concert.

"Let there be 'twixt us and them no *league* nor amity." *Denham.*

—*v. n.* To form a league; to unite as princes or states in a contract of amity for mutual aid, aggression, or defence; to confederate; to unite or combine, as private persons for mutual support.

League, (*leeg,*) *n.* [Sp. *legua*; Fr. *lieue*, from L. Lat. *leuca*, or *leuga*; Gael. *leac*, a flat stone; W. *llech*, a tablet. Originally, a stone erected on the public roads, at certain distances, in the manner of the modern milestone.] A measure of distance equal to three geographical miles, in Great Britain and the U. States; — used principally in noting distance at sea.

(*French Hist.*) A political association formed by the Roman Catholic party in France during the reign of Henry III., the object of which was at first only the overthrow of the Protestant power; but the princes of the house of Guise soon placed themselves at its head, and the leaders of the party were not slow in adopting the project of changing the succession, and placing the duke of Guise on the throne. In 1588, the citizens, under the impulse of the League, drove Henry III. from Paris on the Day of the Barricades, and formed the revolutionary government of "the Sixteen." But after the death both of the duke and the king, much division arose in the headquarters of the League at Paris as to the choice of a successor to the duke; and in 1591, the popular party, or that of the Sixteen, was put down by the citizens; which event in effect destroyed the power of this great association, although it still continued to exist even after the abjuration of of Henry IV. See LAND LEAGUE, in SECTION II.

Leaguer, (*leeg'er,*) *n.* A confederate; an ally; one who unites in a league.

Leag'uer, *n.* [D. *leger*; Ger. *lager*.] The camp of a beleaguering army; sometimes, a camp in general.

"I have it in charge to go to the *leaguer* of our army." *W. Scott.*

—A siege; a beleaguering or investment of a defended place.

Leag'uerer, *n.* One who belongs to, or carries on, a leaguer; as, "Roman *leaguerers*." — *J. Webster.*

Le'ah. (*Script.*) The elder daughter of Laban, and the first wife of Jacob, though less beloved than her sister Rachel. She had through life the remembrance of the deceit by which her father had imposed her upon Jacob. She was the mother of seven children, among whom were Reuben — Jacob's first-born — and Judah, the ancestor of the leading tribe among the Jews, of the royal line, and of our Lord, (*Gen.* xxxi. 16–35; xxx. 1–21.) She is supposed to have died before the removal of the family into Egypt, (*Gen.* xxxix. 31.)

Leak, (*leek,*) *n.* [D. *lek*, a leak, *lekken*, to leak; Ger. *leck*, a leak; Icel. *lakr*, a dropping. Akin to Gr. *lakis*, a rent.] A crack, rent, crevice, fissure, interstice, or hole that admits water or permits fluid contents to ooze out. — The oozing, dropping, or passing of water or other fluid or liquor through a crack, fissure, or aperture in any vessel, whether *into* it, as into a ship, or *out of* it, as out of a barrel.

"The masts were gone, the *leak* increased." — *Byron.*

To spring a leak. (*Naut.*) To begin to let in water through a hole, crack, or crevice; as, the ship has *sprung a leak*.

—*v. n.* To let water or other fluid into or out of a vessel, through a hole, crevice, or other aperture.

"His shoes *leak*, and let in water." — *Locke.*

To leak out, to escape from secrecy; to find disclosure in an irregular manner; as, the truth is beginning *to leak out*.

Leakage, (*leek'aj,*) *n.* A leaking, or admitting or shedding water; the quantity of any liquid that enters or oozes out by leaking.

(*Com.*) An allowance made of a certain rate per cent. for the leaking of casks, and the waste of contents caused thereby; as, *leakage* on a hogshead of molasses.

Leak'iness, *n.* State or condition of being leaky.

Leak'ing, *n.* The oozing or passing of a liquid through an aperture; as, the *leaking* of the vessel continued.

Leak'y, *a.* Having a leak or leaks, that admits water or other fluid to pass in or out; as, a *leaky* ship, a *leaky* tub.

"Life sunk through you like a *leaky* sieve." — *Dryden.*

—Babbling; loquacious; tattling; apt to divulge secrets not reticent or close.

"Women are so *leaky* that I have hardly met with one that could keep a secret." — *L'Estrange.*

Leake (*leek*), in *Mississippi*, a central co.; *area*, about 560 sq. m. *Rivers*, Pearl River and its branches. *Surface*, mostly level; *soil*, moderately fertile. *Cap.* Carthage. *Pop.* (1890) 14,803.

Leakes'ville, in *Georgia*, a village of Jasper co., 16 m. N.W. of Monticello.

Leakes'ville, in *Mississippi*, a post-village, cap. of Greene co., on the Chickasawha River, about 50 m. N.W. of Mobile, Alabama.

Leaks'ville, in *N. Carolina*, a post-village of Rockingham co., about 110 m. N.W. of Raleigh.

Leaks'ville, in *Virginia*, a post-office of Page co.

Leal, *a.* [O. Fr. and Scot. See LOYAL.] In Scotland, loyal; true; faithful; devoted.

"All men true and *leal*, all women pure." — *Tennyson.*

Land of the leal, a Scotticism for heaven; and sometimes applied by patriotic Scotsmen to their own country.

Leam, *n.* [Fr. *lien*, from Lat. *ligare*, to bind.] A leading-string or leash for a hound.

Lea'man Place, in *Pennsylvania*, a post-village of Lancaster co. *Pop.* (1897) 350.

Leam'er, *n.* [Fr. *limier.*] A dog or hound held by a leam.

Leam'ington, (*lēm'ming-ton,*) or **Leamington Priors,** a town of England, co. Warwick, 2 m. from Warwick. It is a fashionable watering-place, and noted for its mineral springs.

Lean, (*leen,*) *v. n.* [A. S. *hlynian*; D. *leunen*; Ger. *lehnen*; O Ger. *hlinen*, to heal. Akin to Gr. *klinō*, to make to bend, and to Lat. *inclino*, to bend in or on.] To slope; to slant: to dsviate or move, more or less, from a straight or perpendicular line; to be in a position or condition exhibiting such deviation; as, a *leaning* wall. — To incline; to tend toward; to conform in couduct; to have a propendency; — before *to* or *into*.

"A desire *leaning to* either side, biasses the judgment." — *Watts.*

—To bend or incline so as to rest on somsthing; to be in a bending posture.

"The gods . . . came *leaning* from their stars." — *Dryden.*

—To depend or rely on for support, sustentation, and the like; — preceding *on* or *upon*; as, be *leaned upon* a mind stronger than his own.

—*v. a.* To incline; to cause to lean; to support or rest.

"And e'en his failings *lean'd* to virtue's side." — *Goldsmith.*

Lean, *a.* [A. S. *læne*, fragile; Du. *klein*, tiny, small; Ger. *klein*, small, mean.] Thin; slender: meagre; spare; lank; wanting flesh; — opposed to *fat* or *stout*; as, a *lean* woman.

"He was one of a *lean* body and visage." — *Fuller.*

—Bare; barren; sterils; weak and poor in good or substantial qualities.

"Yond' Cassius hath a *lean* and hungry look." — *Shaks.*

—Barren of thought; jejune; destitute of improving or instructive matter; as, a *lean* sermon. — Low; poor; mean; — in contradistinction to *rich* or *great*. (R.)

—*n.* That part of flesb which consists of muscle without the fat.

"We cut . . . through rills of fat, and deluges of *lean*." *Farquhar.*

Lean'der, a young Greek of Abydos, who was drowned while swimming across ths Hellespont to meet his mistress Hero.

Leander, (*le-an'der,*) in *Missouri*, a village of Gasconade co., abont 70 m. W.S.W. of St. Louis.

Lean'-faced, (*-fāst,*) *a.* Having a thin, weazened visage.

(*Printing.*) Narrow; slender; teuuous; — said of some kinds of letter-type.

Lean'ly, *a.* Meagrely; sparely; without fat or plumpness.

Lean'ness, *n.* Stats of being lean; want of flesh; destitution of fat; meagreness; — opposed to *plumpness*; hence, want of solid matter; poverty; emptiness; insignificance.

"The poor king's style agrees not with the *leanness* of his purse." *Shaks.*

(*Script.*) Want of spiritual endowments; lack of faith or good conscience.

"He . . . sent *leanness* into their soul." — *Ps.* cvi. 16.

Le Anse, in *Michigan*. See L'ANCE.

Lean'-to, *n.* (*Arch.*) A structure whose roof leans against another for aupport.

Lean'-witted, *a.* Scant of wit or intelligence; possessing little sense or mental capacity.

Leap, (*leep,*) *v. n.* (*Imp.* and *pp.* LEAPED, sometimes LEAPT.) [A. S. *hleapan*, to leap; D. *loopen*, to run; Ger. *laufen*, to run.] To spring or rise from the ground with both feet, as man, or with all tbe feet, as other animals; to jump; to vault.

"Look before yon ere you *leap*." — *Hudibras.*

—To move quickly; to rush with violence; to spring; to akip; to bound.

"From peak to peak, the rattling crags among,
Leaps the live thunder." — *Byron.*

—To experience a tumultuous feeling ofjoy or exhilaration.

"My heart *leaps* at the trumpet's voice." — *Addison.*

—*v. a.* To pass over by leaping; to spring or bound from one side to the other; as, to *leap* a fence. — To cover; to practise coition; — said of the male of certain animals.

—*n.* A jump; a spring; a skip; a bound; act or practice of leaping. — Space passed by leaping; a sudden transition or passing.

"They have carried their riders safe over all *leaps*." — *L'Estrange.*

—A risky step; a hazardous or rash proceeding; as, to take a *leap* in the dark. — Covering of a female animal.

"The rushing *leap*, the doubtful progeny." — *Dryden.*

(*Mining.*) A sudden turn or shift in the course of a mineral lode.

(*Mus.*) Any disjunct degree; — generally used to signify a diatone composed of several intermediate intervals. — *Worcester.*

Leap, *n.* [A. S.] In some parts of England, a creel, or wicker-net for catching or carrying fish.

Leap'er, *n.* One who, or that which, leaps; as, that young horse is a good *leaper*.

Leap'-frog, *n.* A boy's play, in which one stoops down to allow others to jump over him.

"If I could win a lady at *leap-frog*,
I should quickly leap into a wife." — *Shaks.*

Leap'ing, *n.* Act of jumping or passing by a leap.

Leap'ingly, *adv.* Performed by leaping.

Leap'-year, *n.* (*Chron.*) A year containing 366 days; every fourth year which leaps ovsr a day mors tban the ordinary year; the same as BISSEXTILE.

Lear, *a.* [Ger. *leer*, empty.] Vacant; empty; hollow; as, a *lear* belly. (Used as an English provincialism.)

Learn, (*lērn,*) *v. a.* (*Imp.* and *pp.* LEARNED, or LEARNT.) [A. S. *læran*, *gelæran*, to teach, from *lar*, lore; Ger. *lehren*; Du *leeren*, to learn.] To be instructed in; to gain knowledge of; to acquire knowledge and ideas, as of something before unknown; to acquire skill in anything; to gain by application and practice a faculty of performing. — To teach; to impart knowledge to; — an improper application of *learn*, yet found in some good writers; which, while still frequently used in the sense of *teach*, is both erroneous and inelegant

"Hast thou not *learn'd* me how to make perfumes?" — *Shaks*

—*v. n.* To gain or receive knowledge; to derivs instruction; to imitate, as a model; to take pattern; — followed by *of*.

"Birds will *learn* of one another." — *Bacon.*

—To receive intelligence, to acquire information: as, I *learned* ths news yesterday. — To acquire a skilled knowledge of anything; to acquirs, by practical application, a faculty of performiug; as, to *learn* the sword-exercise.

Learn'able, *a.* That may be learned.

Learned, Learnt, *pp.* of LEARN. *q. v.*

—*a.* Versed in learuing; skilled in literature or sciencs; literate; as, a *learned* man.

—Versed in scholastic lore, as apart from other knowledge; as, a *learned* pundit. — Skilled; skilfal; knowing; expert; — often with *in*; as, *learned in* diplomacy.

"The vulgar boil, the *learned* roast an egg." — *Pope.*

—Containing or revealing learning; as, "loads of *learned* lumber." — *Pope.*

The learned, erudite or learned men; literatl; cognoscenti.

Learn'edly, *adv.* With erudition or learning; skilfully; expertly.

Learn'edness, *n.* State or condition of being learned or possessing erudition.

Learn'er, *n.* One who learns: one who is gaining learning or knowledge from instruction, from reading or study, or by other means; one who is in the rudiments of any scisnce or art.

Learning, (*lērn'ing.*) *n.* The knowledge of principles, ideas, or facts acqnired by rudimentary instruction aud studious application; derived knowledge or ideas in any branch of literature, science, or art; erudition; scholarship.

—Knowledge obtained by experience, experiment, study, or observation. — Skill in anything, good or evil.

(*Lit. Hist.*) The golden period of Grecian learning was ths age of Pericles, who n. B. C. 429. In Rome the reigu of the emperor Augustus was so distingnished for learned men and great authors, that it is usnal to cbaracterize the æras most remarkable for learning as "Augustan Ages." During the 6th century, after ths destruction of the Western empire, learning declined, and was restricted to ecclesiastics. Classical learuing was revived in the Anglo-Saxon Church about 668. The 10th century is usually considered the darkest period of human history. The revival of learning after the period of depression known as tbe "Dark Ages," took place in the 15th century.

Leasable, (*lēs'abl,*) *a.* Suscsptible of being leased; as, *leasable* land.

Leas'burg, or LEESBURG, in *Missouri*, a post-village of Crawford co., about 85 m. W. of St. Louis.

Leasburg, in *N. Carolina*, a post-village of Caswell co., about 70 m. N.W. of Raleigh.

Lease, *n.* [O. Fr. *leez*, a lease; L. Lat. *lessa*, from Fr. *laisser*, to leave, to let out = It. *lasciare*, to leave, from Lat. *laxare*, to relax; akin to Ger. *lassen* = Eng. *let*, to permit.] (*Law.*) A conveyance of lands and tenements (usually in consideration of rent or other annual recompense), made for life, for years, or at will, but always tor a less time than the lessor, or party letting, bas in the premises. The usual words of operation are, "demise, grant. and to farm let." The conveyance by a lessee of part of his interest is properly an under-lease; of tbs whole, an assignment.

—The contract legalizing such letting. — Any tenure by grant or implied permission.

—In some parts of England, a common, or lea of pasture.

Lease and release. (*Eng. Law.*) An obsolete mode of conveyance.

—*v. a.* To let; to demise; to grant, as the temporary possession of lands, tenements, or hereditaments to another for a rent or compensation reserved; as, to *lease* a house or farm.

Lease'hold, *a.* Held by the tennre of a lease; as, *leasehold* property.

—*n.* A tenure of property beld by lease.

Lease'holder, *n.* A tenant who holds under a lease.

Leas'er, *n.* A gleauer; one who gathers after a reaper.

Leash, (*leesh,*) *n.* [Fr. *laisse*; O. Fr. *lesse*, a tbong to couple dogs together; It. *lascio*, from Lat. *laxare*, to open, prolong, extend.] A thong of leather, or long line with a slip-noose, by which a falconer holds his hawk, or a courser bis dog. — A band wherewith to tie anything.

(*Sports.*) A brace and balf; three game animals of any kind, particularly foxes, bucks, and hares; also, greybounds; hence, tiercs. — Three things generally; as "a *leash* of languages." — *Hudibras.*

—*v. a.* To bind by a leasb; to hold by a string; as, "*leash'd* in like honnds." — *Shaks.*

Least, (*leest,*) *a.* [Super. of A. S. *læs*, less, contracted from *læsest.*] Smallest; little beyond others, either in size or dsgree.

"Of two evils I have chose the *least*." — *Prior.*

—Of ths most insignificance; of ths smallest value or importance.

(NOTE. *Least* is frequently employed without ths noun to which it is subjective, particularly in the exprssions, *the least*, *in the least*; i. e., *in the least measure*, or *degree*, &c.; as, he was not *in the least* afraid.)

At least, or *at the least*, at tbs lowest degree; to say, ask, or claim no more; at the smallest estimats.

"He . . . *at least* on her bestow'd too much of ornament." — *Milton.*

Least, *adv.* In the smallest or lowest degree: in a degree below all others: as, he *least* deserves forgiveness.

Least'ways, Least'wise, *adv.* At least; at all events; however; nevertheless.

Leas'ureville, in *Pennsylvania*, a P.O. of Butler co.

Leat, *n.* [A. S. *lædan*, to lead.] A watercourse, or level trench, for the conveyance of water to or from a mill.

Leather, (*leth'er,*) *n.* A. S. *lether*; Ger. *leder*; Dan. *læder*; Icel. *ledr*, skin, hide; akin to W. *lledr*, and Armor. *lezr*, leather. See LIN.] The skin or integument of an animal dressed and prepared for uss.

"As proper men as ever trod upon *leather*." — *Shaks.*

—Dressed hides in general. — Undressed skin; — hence, skin, as a general term. (Used ironically.)

(*Manuf.*) The process by which the skin of any animal is rendered fit for making various articles of common use, snch as boots, shoes, gloves, saddles, harness, coverings for books, belts for machinery, buckets, hose for fire-engines, &c. The skins of the larger animals, such as oxen, horses, and buffaloes, are called *hides*, whils the skins of pigs, sheep, calves, lambs, goats, dogs, rats, and seals, are known in the leather-trade by the unaltered name. The hides whicb furnish the thickest *L.* in ordinary use ars principally received from the West, and from South America, where they are taken from the cattle that roam in vast herds, and in an almost wild state, over tbe vast *pampas* of that continent. The hides of bulls are thicker than those of oxen, which are, in their turn, stouter and stronger than the hides of cows. Ths leather made from these hides is used for the soles of boots and shoes, soldiers' belts, and all purposes for which leather of a thick and durable kind is required. The hide of the American buffalo makes *L.* of inferior quality. The hides of horses are generally used for making harness. Calves' skins are used for ths upper *L.* of boots and shoes, being thinner and more supple; they are also used in book-binding. The skins of sheep afford a still tbinner and cheaper kind of *L.*, which is useful for a variety of purposes, snch as *L.* aprons, the coverings of chairs, shoes, whiplashes, bags, &c. Wash-*L.* is also made from the skins of sheep, aud leather for the inferior kinds of book-binding. The skins of dogs, lambs, goats, kids, and rats are chiefly used in glove-making; some furnishing materials for the finer kinds of ladies' shoes. Seal-skins supply a soft and durable *L.* for boots and shoes, and pig-skins are used entirely for making saddles. The appearance of the skins of various animals, when converted into *L.*, is widely different; but this is entirely due to the difference in the processes to which they have been subjected. There are three methods of preparing hides and skins for the uses above enumerated, which are known as tanning, tawing, and shamoying. Either operation prevents tbe decay of the skins, whicb would be a natural consequence if they were left in the state in which they have been stripped from the carcass. In *tanning*, tbe change is due to the chemical action of an astringent matter contained in many vegetable substances, but principally in the bark of ths hemlock (*Abies Canadensis*) in this country, and of the oak, larch, and willow, in Europe; which barks convert the soluble skin, that consists entirely of gelatine after tbe hair and scarf-skin have been removed, into the hard and insoluble substance which is called *L.* When foreign hides are brought to the tanner, they require to be soaked and beaten, to make them as supple as possible, since they must necessarily be salted or dried previous to exportation, which renders them stiff and bard, and unfit to be subjected to the tanning process without the preliminary treatment that has been mentioned. Fresh hides are merely scraped to remove any pieces of fat or flesh that may still adhere to the inner side, and the horns and hoofs are removed. The hair and scarf-skin, a thin cuticle which covers the skin itself, are then loosened by soaking the hides in lime-water, or by suspending them in a place called the smoke-chamber, where they are subjected for some time to the constant action of moderate heat. After this the hair is easily removed by scraping, and the hides are next plunged into a weak solution of sulphnric acid and water, which has the effect of thickening the hide and opening the pores for the reception of the tannin. This part of the process is technically termed *raising*. All that now remains to be done is to soak the hides in a mixture of hemlock-bark, ground to small fragments in a bark-mill, and water, until they are found to be thoroughly impregnated with tannin, after which the hides are dried slowly, and subjected to heavy pressure by passing them through heavy rollers, or by beating, in order to give substance and firmness to the *L.* There are many different methods of applying the astringent solution that converts the hides into *L.*; but the process of soak-

ing the hides in an infusion of bark and water, which must be renewed as soon as the bark is found to have lost its strength, is considered to be the best. The time in which the process is effected varies considerably; ordinary leather, that is used for the soles of boots and shoes, requiring to be soaked for not less than six months, while thicker leather cannot be produced in less time than a year or eighteen months. Many processes have been invented for making *L.* more rapidly by filling the pores of the hide with the astringent solution hy means of mechanical and hydrostatic pressure. Among other methods, and still one of the best, is the one invented by Prof. A. R. Eaton, of New York, consisting in the use of sulphate of potash, not as a substitute for tannin, but as a means of facilitating its combination with the gelatine. It is used with any of the ordiuary tanning solutions, and so hastens the process that calf-skins, which by the old methods required from three to four months for their treatment, can be well tanned in ten days. The inner side of calf-skins, and all thin hides that are used for the upper leathers of boots and shoes, is always pared before they are immersed in the tanning solution, to render them thinner in substance, and better fitted for the purpose for which they are intended, and they are curried hy the currier after they leave the hands of the tanner, to render them soft and supple. Thin skins, used for covering chairs, book-binding, and other ornamental purposes, are tanned with an infusion of sumach. Among these the most valuable is that which is known as *Morocco-L.*, which is made from goat-skins. In the manufacture of what is termed *sumached L.*, care is taken to remove the lime which has entered the skin while it has been soaking in lime-water, by plunging the skins in an alkaline solution, which acts in much the same way as the solutiou of sulphuric acid iu which hides are plunged previously to their immersion in the mixture of bark and water. The skins are then sewn together so as to form bags, which are filled with a mixture of sumach and water, and distended as much as possible by the injection of air. After the opening has been secured, they are thrown into a shallow vessel containing sumach soaked in hot water, in which they float. When the process of tanning is complete, which is generally effected in a few hours, the skins are unsewn, and washed and dried, after which they are dyed, and the peculiar grain by which Morocco *L.* is distingulshed, is produced on the surface by means of an instrument, the surface of which is furrowed by numerous grooves. The process by which skins are made into soft leather, chiefly for gloves, is called *tawing*. The skins are prepared in the same manner as those which are to be tanned; hut instead of being lmmersed in the tanning liquid, they are put iuto a solution of alum and salt, flour and the yolk of eggs being added to this solution to prepare the skins whicb afford the better and more delicate kinds of leather. The skins and a quantity of the mixture are put into a cylinder, which is made to revolve with great rapidity, and this causes the skins to become thoroughly impregnated with the preparation in a short space of time. After this they are cleaned, dried, dyed, and worked by the hand over a piece of iron to render them soft and fit for use. Skins that are to be dressed with the wool or hair still on them, are prepared with a solution of paste, in which alum is the chief ingredient. The process of preparing *L.* which is termed *shamoying*, and by which chamois or *shamoy L.* is made, consists in impregnating the pores of the skin thoroughly with oil or grease. The grain surface, or the surface of the side from which the hair has been removed, is entirely taken off by rubbing it with pumice-stone. The skins are then soaked, first in lime-water and next in an infusion of bran and water, or very weak sulphuric acid and water, after which they are beaten in a mill with heavy hammers until no moisture whatever remains in them. Fish-oil is then poured on the skins, which are again subjected to the action of the hammers until the oil has been thoroughly heaten into them. This is repeated until the skins have imhibed a sufficient quantity of oil, after which they are hung for some time in a heated room to cause the oil to act completely in every part of the skin. The process is concluded by washing them in a solution of potash, which removes any superabundance of oil that may still remain about the *L.* Before any *L.*, except stiff hard *L.* for the soles of boots and shoes, can be used, it passes through the hands of the currier, who first soaks it in water and beats it to render it supple. It is then scraped on the inside with a two-handled knife something like a spoke-shave, and the grain on the outer side is rubbed with pumice-stone, the *L.* being frequently wetted during this part of the process. After this it is rubbed on both sides with a flat block called a *pommel*, the surface of which is cut into ridges. This has the effect of making the *L.* still more supple. It is finally dressed with a circular knife resembling a very flat bowl or saucer, with a hole in the centre, through which the currier inserts his hand in order to grasp the instrument; and with this the skin is pared and brought to a uniform thickness all over. *L.* intended for the upper-*L.* of boots and shoes is dressed with *dubbing*, a composition of a greasy nature. Among other kinds of *L.* used in the present day, and held in great estimation in times past, those known as *buff*, *Cordwan*, *Russia*, *shagreen*, and *patent* or *enamelled L.*, deserve notice. The buff *L.*, formerly used for military purposes, was very thick, and pistol-proof. It was made from the hide of the urus, which was common in Western Europe. This animal was called the *buffe*,—whence the name of the leather, which in turn gave its appellation to the color so called, from the tawny yellow hue which it always presented when new. The *Cordovan L.* was first made at Cordova, in Spain, from the hides of horses which were dressed to be used with the grain side outwards. The shoemaker derived his old title of *cordwainer* from this *L.* Russia *L.* is tanned with an infusion of willow-bark, and derives its peculiar odor from the aromatic sanders-wood with which it is dyed. *Shagreen*, which is not so much used now as formerly, is prepared hy pressing the hard globular seeds of a plant called goose-foot into the *L.*, which causes it to become very hard and pitted all over with hemispherical indentations. The surface is then scraped until the holes have nearly disappeared, after which the *L.* is soaked, which causes the indentations to rise again and produce a rough granular surface. After this, the *L.* is dyed and dressed with oil. Shagreen was formerly much used for mathematical instrument-cases and the cases of watches. Patent *L.* and enamelled *L.* are prepared by covering the surface with a kind of japan, in which boiled linseed-oil and vegetable-black are the chief ingredients. The latter is the most pliant, and as it may be folded without cracking the surface that is put upon it. it is used for belts, boots, and various articles of dress. Although machinery cannot be made available to any great extent in tanning and currying *L.*, yet a machine has been contrived by which thin skins can be split into three parts, each of which is available for a different purpose; whereas, prior to its invention, a skin could only be reduced hy pariug, and as what was taken away by the knife was all in little pieces, it was only fit for making glue. The skin is passed through rollers, the upper one of which consists of a number of narrow discs arranged on an iron rod, that it may adapt itself to the varying thickness of the skin passing under it. It is split by the action of a very sharp horizontal knife, which oscillates backward and forward, through a short space, with great rapidity, and divides the skin which meets the edge as it emerges from between the rollers. There are many substitutes for *L.*, among which are the American *L.*-cloth and vegetable *L.* Both are formed by spreading a preparation of India-rubber upon some textile fabric. *L.* is often used for forming imitation carving in wood, hy embossing, or hy pressing it when moist into moulds; many pretty articles of ornamental furniture are made of *L.*, such as flower-stands, vases, tables, and picture-frames. Stamped *L.* was frequently used for the hanglngs of apartments in the Middle Ages. Of late years, the manufacture of *L.* has become very important in the U. S. Excellent imitation of the French calfskin is made, and also Americau imitation Turkey leather. The exports of leather and manufactures of leather from the U. S. for the year 1902 amounted to $29,798,323. For the same year the imports of similar goods were valued at $11,317,785.

Leath'er, *v. a.* To flog; to thrash as with a leathern thong.

Leath'er-coat, *n.* The golden-russet apple.

Leath'er-dresser, *n.* One who dresses or prepares leather for use; a currier.

Leath'er-mouthed, *a.* Having a smooth mouth, or one without teeth; as "a *leather-mouthed* fish."

Leathern (*lĕth'ern*), *a.* Made of leather; consisting of leather; as, a *leathern* flask.

Leather'er-seller, *n.* One who vends or deals in leather.

Leathersville, in *Georgia*, a post-village of Lincoln co., about 10 m. S. of Lincolnton.

Leath'er-winged (*-wingd*), *a.* Possessing wings like leather, as a bat.

Leath'er-wood, *n.* (*Bot.*) See DIRCA.

Leatherwood, in *Ohio*, a village of Guernsey co.

Leatherwood, in *Pennsylvania*, a post-village of Clarion co. *Pop.* (1897) 259.

Leath'ery, *a.* Tough; resembling leather; as, a *leathery* beef-steak.

Leathes, STANLEY, an English theologian, b. at Ellesborough, Buckinghamshire, 1830. He was ordered in 1856, became minister of St. Philip's, London, 1867, is celebrated as a lecturer, and was prominent in the conference of the Evangelical alliance in New York in 1873. He contributed to the revision of the Authorized Version of the Old Testament, and is author of several theological works.

Leave, (*leev,*) *n.* [A. S. *leaf*, *leova*, leave; *lyfan*, to permit; Low Ger. *lof*, *löve*; Icel. *lof*, permission; *leyfa*, to permit; Ger. *erlauben*; Sansk. *li*, to loose.] Permission; allowance; license; liberty granted; removal of restriction or illegality; as, he left his duties without *leave*, absence on *leave*, &c.

—Farewell; adieu; a formal parting of friends; ceremony of departure; as, to take *leave* of one's family circle.

—*v. a.* (*imp.* and *pp.* LEFT.) [A. S. *loefan*; O. Ger. *leiba*; Gr. *leipō*, to leave; Lat. *linquo*, to depart from.] To withdraw or depart from; to quit for a longer or shorter time indefinitely, or for perpetuity.

"Must I thus *leave* thee, Paradise? thus *leave* thee, native soil?" *Milton.*

—To forsake; to desert; to abandon; to relinquish.

"*Leave* meaner things to low ambition, and the pride of kings." *Pope.*

—To suffer to remain; not to remove or carry away.—To have in one's possession at time of death; as, to *leave* a good reputation;—hence, by implication, to give by will or bequest; to bequeath; as, to *leave* a legacy to a friend.

"That peace thou *leav'st* to thy imperial line." — *Dryden.*

—To intrust or commit to, as a deposit; or, to suffer to remain; as, he *left* the papers in the hands of his lawyer.—To forhear; to desist from; to cease from; as, to *leave* work.

—To refer; to commit for decision; to permit; to allow; as, I *leave* the matter entirely in your hands.

To leave off, to forbear; to quit; to cease from; as, to *leave off* drinking.

"As old age came on, he *left off* fox-hunting." — *Addison.*

To forsake; to abjure; as, "He began to *leave off* some of his old acquaintance." (*Arbuthnot.*)—To give up wearing; as, to *leave off* a coat.—To *be left to one's self*, to be permitted to act according to the bent of one's inclination; to be forsaken or deserted; to be allowed full personal liberty of thought and action.—*To leave out*, to omit; to ignore; to neglect to mention; as, to *leave* one's name *out* in a will, or record.

—*v. n.* To cease; to desist.

"Let us not *leave* till all our own be won." — *Shaks.*

To leave off, to stop; to desist; to cease.

"*Leave off*, and for another summons wait." — *Roscommon.*

Leave, *v. n.* To leaf; to throw forth, as leaves;—often preceding *out*.

Leaved, (*lēēvd,*) *a.* [From *leaf.*] Furnished with leaves or foliage.—Having a leaf or fold; as, a double-*leaved* table.

Leaven, (*lev'n,*) *n.* [Fr. *levain*, from *lever*, to raise, Lat. *levo.*] A piece of sour dough used for fermenting bread. By the law of Moses, leaven was strictly forbidden to the Jews during the Passover; hence, in a figurative sense, it is applied to anything that powerfully, but gradually, undermines right principles of heart and life, in opposition to the *unleavened*, denoting sincerity and truth. "The *leaven* of malice and wickedness." "The *unleavened* bread of sincerity and truth."

—*v. a.* To raise and make light, as dough or paste in the sponge; to excite fermentation in.—To taint; to imbue.

Leav'ening, *n.* Act of leavening or making light hy process of fermentation.—That which leavens.

Leavenous, (*lĕv'n-us,*) *a.* Containing or consisting of leaven; tainted.

Leav'enworth, in *Kansas*, an E. by N. co., adjoining Missouri; *area*, about 455 sq. m. *Rivers*, Missouri and Kansas rivers. *Surface*, undulating; *soil*, very fertile. *Cap.* Leavenworth. *Pop.* (1895) 34,621.

—A city, cap. of the above co., on the Missouri river, about 30 m. S. of St. Joseph, Missouri; Lat. 39° 16′ N., Lon 95° W. *L.* was for some years the largest city of the State, and still has a considerable trade, with important manuf. Here is a Soldiers' Home with nearly 3,000 inmates. *Pop.* (1895) 20,822.

Leav'enworth, or LEVENWORTH, in *Indiana*, a post-village, cap. of Crawford co., on the Ohio river, about 125 m. S. of Indianapolis.

Lea'venworth, in *Minnesota*, a post-office of Brown co., about 42 m. W. by N. of Mankato.

Leaver, (*leev'er,*) *n.* [From *leave.*] One who leaves, discards, or relinquishes.

Leaves, (*leevz,*) *n. pl.* (*Arch.*) Foliated work introduced into ornamental capitals.

Leave'-taking, *n.* Taking leave; adieux; compliments at parting.

Leav'iness, *n.* Leafiness; abundance of leaves.

Leav'ings, *n. pl.* Remnants; relics; things left.—Refuse; debris; offal; garbage.

"With scraps and *leavings* to be fed." — *Swift.*

Leav'itt, or LEAVITTSVILLE, in *Ohio*, a post-village of Carroll co., about 8 m. S. W. of Carrollton.

Leav'ittsburg, in *Ohio*, a post-village of Trumbull co., about 50 m. E.S.E. of Cleveland.

Le'ban, Leb'ban, *n.* Sour milk in an inspissated state, diluted with water. It forms a favorite beverage with the Arabs, and some nomad Eastern tribes.

Leb'anon, an extensive and very celebrated range of mountains in W. Asia, connected northward with the table-land of Anatolia, thence running S.S.W. in two nearly parallel chains through Syria and Palestine, and finally connecting itself with mounts Horeb and Sinai near the Gulf of Suez. The W. chain, called Djebel-Liban, the *Libanus* proper of antiquity, detaches itself from the mountains of Asia Minor at the Gulf of Iskanderoon; it is cut through by the deep channel of the Orontes, in Lat. 37° 7′, and as it proceeds southward, at an average distance of 24 m. from the Mediterranean, it increases in height, till, in Lat. 34° 12′, the culminating point of the chain, Djebel-Makmel, attains an elevation of 12,000 ft. above the sea. Many summits in this part rise considerably above the limits of perpetual snow; and even in Lat. 32° 50′ the ancient *Carmel* and the twin summits of *Ebal* and *Gerizim*, so famous in the history of the Israelites (*Deut.* xi. 29), are conspicuous from their towering height; but more southward the mountains sink much lower, and are traced with some difficulty S. of Gaza. The E. chain, now called Dejebel-es-Sheikh, and identical with the *Anti-Libanus* of Strabo (lib xvi.), detaches itself from the range of Taurus, abt. 60 m. E. of that last mentioned; it attains the extreme altitude of about 5,000 ft. in Lat. 33° 20′, under the ancient name of *Mount Hermon*, and after maintaining a considerable elevation as far S. as the 32d parallel, becomes lower and less regular as it skirts the Dead Sea on its E. side, and finally is connected with the sandy hills of Arabia: this chain, indeed, is much less defined throughout its course, and inferior in proportion to the chain running along the coast. The valley of Bakaah (anc. *Cœlo-Syria*), which separates these chains, is about 100 m. long, and varies from 10 to 20 m. in breadth, having an elevation near the sources of the Orontes exceeding 2,000 ft. above the sea; and southward is the valley of the Jordan, which may be traced through Arabia to the Gulf of Akabah. Besides the Orontes and Jordan, which are the two great rivers of this mountain system, a smaller stream, called the Leittanie rises near Baal-

bec, and flows S.W. into the Mediterranean, a few miles N. of Tyre. The culminating peak is Jeb-el-Makhmel, 12,000 ft. above the level of the sea. The general formation of Mount *L.* consists of carboniferous and mountain-limestone, with greywacke and slate rising to the surface in the higher parts. The limestone in many parts is very porous, easily acted on by air and water, and rapidly worn into hollows of various shapes and sizes, which have been formed into sepulchres and caves, formerly the hiding-places of the persecuted Jews and Christians. Basalt, and other igneous rocks appear E. and S. of Lake Tiberias, and the heights skirting the Dead Sea present granite, gneiss, and dolomite. Iron and coal are abundant in some parts of the range. The former is worked in two districts; but, owing to the distance from which the fuel has to be brought for smelting the ore, the produce of the mines is scarcely sufficient for the consumption of the pashalic. The coal-mines which, during several years, have been worked by the government, are situated about 8 hours' distance from Beyrout, at an elevation of about 2,500 ft. above the sea. The seams vary from 3 ft. to 4½ ft. in thickness; but the coal, though abundant, is rather sulphurous. Iron pyrites are found mixed with the coal, and smelting-furnaces have been erected near the pits; but the returns are quite insignificant.—The *L.* is described by travellers as nearly barren. "From the sea," says Elliot, "the range forms a noble object for the eye to rest on; but when once the ascent is begun, few of the component elements of a beautiful prospect are discernible. Deep ravines, indeed, and rugged beetling precipices meet one at every turn, and render travelling both painful and hazardous; but there are neither glaciers nor waterfalls, neither lakes nor rivers, no verdant fields nor smiling valleys, no extensive forests, no floral richness, and no rural villages: even the cedars, once 'the glory of Lebanon' (*Isa.* lx. 13), have deserted it, and are replaced by the umbrella-topped fir. In one spot only called Bissharri, nearly opposite Tripoli, eight gigantic cedars, and a few of inferior size, attest the splendor of their by-gone race." (*Elliot's Travels*, vol. ii. p. 255.) "In fact," says another traveller, "it is impossible to view these patriarchs of the vegetable world, the remains of vast forests that once supplied Jerusalem with its finest timber and its choicest incense, without feeling the truth, aptness, and precision of the prophecies concerning them:—'The rest of the trees of his forest shall be few, that a child may write them. Lebanon is ashamed and hewn down. The high ones of stature shall be hewn down: Lebanon shall fall by the mighty one.'" (*Isaiah* x. 19, 33, 34; and xxxiii. 9.) It must not be supposed, however, from these sketches, that the *whole* mountain region is barren and uninteresting; for there are many fertile and well-peopled valleys, inhabited by an industrious people, occupied in the silk and dyeing trades, and in raising wine, corn, tobacco, and cotton.—See DRUSES, and MARONITES.

Leb'anon, in *Alabama*, a post-village, the former cap. of De Kalb co., about 160 m. N. of Montgomery.

Leb'anon, in *Arkansas*, a village, the former cap. of Searcy co., about 100 m. N.N.W. of Little Rock.

Leb'anon, in *Connecticut*, a post-town of New London co., about 27 m. E.S.E. of Hartford. *Pop.* (1897) 1,720.

Leb'anon, in *Delaware*, a post-village of Kent co.

Leb'anon, in *Georgia*, a village of Cherokee co., about 10 S. of Canton.

—A village of Milton co., about 24 m. N. by E. of Atlanta.

Leb'anon, in *Illinois*, a city of St. Clair co., on the B. & O. S. W. R.R., 20 m. E. of St. Louis. In a farming and coal-mining region; seat of McKendree College (Methodist), founded in 1828. *Pop.* (1897) 1,750.

Leb'anon, in *Indiana*, a city, cap. of Boone co., on the C., C., C. & St. L. R.R.; is the trade center of a rich agricultural region, and has extensive manuf. of furniture, cooperage, &c. *Pop.* (1897) 4,080.

Leb'anon, in *Iowa*, a post-office of Van Buren co.

Leb'anon, in *Kentucky*, a post-village, cap. of Marion co., about 60 m. S. by W. of Frankford, on the Louisv. & Nash. R.R. *Pop.* (1897) 2,950.

Leb'anon, in *Maine*, a post-township of York co. *Pop.* (1897) 1,292.

Leb'anon, in *Michigan*, a township of Clinton co.

Leb'anon, in *Minnesota*, a township of Dakota co.

Leb'anon, in *Missouri*, a village of Cooper co., about 60 m. N.W. of Jefferson City.

—A post-village, cap. of Laclede co., about 80 m. S.S.W. of Jefferson City. *Pop.* (1897) 2,350.

Leb'anon, in *New Hampshire*, a post-town and township of Grafton co., about 65 m. N.W. of Concord. *Pop.* (1897) 3,820.

Leb'anon, in *New Jersey*, a post-village and township of Hunterdon co., about 12 m. N. of Flemington.

Leb'anon, in *New York*, a post-township of Madison co. *Pop.* (1897) 1,320.

Leb'anon, in *Ohio*, a township of Meigs co.

—A village of Meigs co., 13 m. E. of Pomeroy.

—A village of Monroe co., about 18 m. N.N.E. of Marietta.

—A post-village, cap. of Warren co., about 30 m. N.N.E. of Cincinnati. *Pop.* (1897) 3,120.

Leb'anon, in *Oregon*, a post-village of Linn co., about 12 m. S.E. of Albany. *Pop.* (1897) 1,010.

Leb'anon, in *Pennsylvania*, a S.E. central co.; *area*, about 360 sq. m. *Rivers.* Swatara river, and Little Swatara, Quitapahilla, Tulpehocken, and Indian creeks. *Surface*, diversified, the Kittatinny or Blue Mountains, and South Mountain or Conewago Hill, forming the N. W. and S.E. boundaries respectively; *soil*, in the valley exceedingly fertile. *Min.* Iron, copper, and a fine variety of gray marble. *Cap.* Lebanon. *Pop.* (1890) 48,131.

—A fine city, cap. of the above co., about 25 m. E. of Harrisburg. It is a place of considerable importance, and contains many extensive industrial establishments; has a large local trade. *Pop.* (1897) about 18,000.

Leb'anon, in *South Carolina*, a post-village of Abbeville county.

Leb'anon, in *Tennessee*, a post-town, cap. of Wilson co., about 30 m. E. of Nashville. *Pop.* (1897) 1,975.

Leb'anon, in *Virginia*, a post-village, cap. of Russell co., about 325 m. W. by S. of Richmond. Nearest railroad station is Clevelaud, on the Norfolk & Western R.R.

Leb'anon, in *Wisconsin*, a township of Dodge co.

—A township of Waupaca co.

Leb'anon Church, in *Virginia*, a post-village of Shenandoah co.

Le Bœuf (*la-bŭf'*), EDMOND, a Marshal of France. See SECTION II.

Le Bœuf, in *Pennsylvania*, a post-township of Erie co.

Lebong', a mountain of India, a ridge of the main range of the Himalayas, in the district of Kumaon, Lat. 30° 20′ N., Lon. 80° 39′ E. The summit is nearly 19,000 feet above the level of the sea.

Lebrija (*la bree'ha*), or LEBRIXA, a river in the Republic of Colombia, enters the Magdelena about 120 m. N.W. from Pamplona.

Lebrun', CHARLES, a celebrated painter, was B. at Paris in 1618. He studied under Vouet and Poussin, and, after his return from Rome, was made president of the new Royal Academy of Painting and Sculpture. From 1661 he was principally employed in embellishing the residences of Louis XIV. and his nobles, with works of art, and in superintending the brilliant spectacles of the court. He D. in 1690. *L.* possessed a comprehensive genius, which was cultivated by the incessant study of history and national costumes. He wrote a treatise on the passions, and another on physiognomy.

Lebrun', CHARLES FRANÇOIS, duke of Placentia, B. at Contances, 1739; came at an early age to Paris; and being nominated deputy to the states-general in 1789, he occupied himself, during the session, with affairs of police, finance, and domestic administration. In 1795 he was elected to the council of elders, and became president in 1796. He was appointed third consul in December, 1799; nominated arch-treasurer of the empire in 1804; and, in 1805, governor-general of Liguria and duke of Placentia. Having signed the constitution that recalled the house of Bourbon to the throne, he was created a peer of France by the king, and, in the beginning of July, was appointed president of the first bureau of the Chamber of Peers. After the return of Napoleon, he accepted the peerage from him, and likewise the place of grand-master of the university, a proceeding which rendered him incapable of sitting in the new Chamber of Peers, formed in August, 1815. In the early part of his life he translated the *Iliad* and *Odyssey*, and Tasso's *Jerusalem*. D. 1824.

Lebrun', PIGAULT, a French novelist, B. 1742, who for humor, truth to nature, and graphic powers of description, particularly in scenes of low life, may be regarded as the Fielding of France. D. 1835.

Lecano'ra, *n.* [From Gr. *lekane*, a basin, in allusion to the form of the shields.] (*Bot.*) A genus of *lichens*. The species *L. tartarea* is the principal lichen used in the preparation of the dye called *cudbear*. *L. esculenta* and *affinis* form important articles of food to man and the lower animals in Persia, Armenia, Tartary, &c. They sometimes appear in such enormous quantities as to cover the ground to the depth of several inches. Dr. O'Rourke has endeavored to prove that *L. esculenta* formed the true *manna of the Hebrews*—that which supported them in the wilderness.

Lecanor'ic Acid, *n.* (*Chem.*) An acid obtained by digesting the lichen *Lecanora* for some hours with lime and water, and neutralizing the filtered solution with hydrochloric acid. *Form.* $C_{32}H_{14}O_{14}$.

Lec'ca Gum, *n.* [From *Lecca*, a place in Calabria.] A kind of gum which exudes from the olive-tree.

Lecce, (*letch'ā,*) a city of Italy, cap. of prov. of Terra di Otranto, 10 miles from the Adriatic, and 55 S.S.E. of Brindisi. *Manuf.* Woollens, cottons, silks, lace, thread, and has a large trade in olive-oil. *Pop.* 21,306.

Lech, (*lek,*) a river of Germany, rising in the Voralberg, and after a course of 150 m. falling into the Danube, 25 m. from Augsburg.

Lechea, *n.* (*Bot.*) The Pin-weed, a gen. of suffruticose, branching plants, order *Cistaceæ*.

Lech'er, *n.* [O. Fr. *lecheor*, a glutton; It. *leccare;* Provençal, *lechar* Fr. *lécher*, to lick. See LICK. Originally, one who licks up greedily anything nice, dainty, or delicate.] A man given to excessive lewdness; a debauchee. (Sometimes written *lecherer.*)

—*v. n.* To practise lewdness, to grovel in lust.

"Gut eats all day, and *lechers* all the night."—*Ben Jonson.*

Lech'erous, *a.* Like a lecher; lustful; lascivious; lewd; addicted to debauched practices.—Exciting lust.

Lech'erously, *adv.* In a lecherous manner; lustfully; libidinously.

Lech'erousness, *n.* Lust, or ungovernable propensity to indulge the appetite for sexual commerce; lewdness.

Lech'ery, *n.* Lustfulness; lewdness.

Le Claire, in *Iowa*, a post-village and township of Scott co., on the Mississippi river, about 15 m. above Davenport.

Lecomp'ton, in *Kansas*, a post-village and township of Douglas co., on the Kansas River, about 12 m. above Lawrence. *Pop.* of village (1895) 450.

Lecomp'ton, in *Ohio*, a village of Monroe co.

Leconte's Mills, in *Pennsylvania*, a post-village of Clearfield co. *Pop.* (1897) 195.

Lec'tern, Lec'turn, or **Let'tern,** *n.* (*Eccl.*) The desk or stand on which the larger books used in the services of the Roman Catholic Church are placed. They are often very ornamental in appearance. *L.* are made sometimes of stone or marble, but usually of wood or brass, and generally are tastefully and extremely well executed. They are now often used in Protestant churches.

Lecti'ca, *n.* (*Rom. Antiq.*) Among the Romans, a kind of litter or couch. They were of two kinds, the one for carrying living persons, the other for bearing dead bodies to the funeral pile. The bearers were called *lecticarii.*

Lection, (*lĕk'shon,*) *n.* [Lat. *lectio*, from *lego*, *lectus*, to read.] A reading; a different or varied assortment in copies of a manuscript, book, &c.

(*Eccl.*) A portion of Scripture read in divine service.

Lec'tionary, *n.* [L. Lat. *lectionarium;* Fr. *lectionaire.*] The Roman Catholic Church rubric, or book of lections for divine service.

Lec'tor, *n.* [Lat.] In the early Christian churches, a Scripture-reader.

Lectoure, (*lek-toor',*) a town of France, dep. of Gers, on the river Gers, 20 m. from Auch. *Manuf.* Serges and coarse woollens. *Pop.* 7,000.

Lec'tual, *a.* [From Lat. *lectus*, bed.] (*Med.*) Causing confinement to the bed; as, a *lectual* sickness.

Lecture, (*lĕkt'yur,*) *n.* [Fr.; Lat. *lectura*, from *lego*, *lectus*, to read.] A discourse read or pronounced on any subject; usually, a formal or methodical discourse or dissertation intended for instruction; as, a *lecture* on anatomy;—sometimes, a familiar and extemporized discourse, in distinction from a sermon or set homily.—A magisterial exordium; a formal or judicial reproof; as, his father gave him a *lecture* on the impropriety of his conduct. (See CURTAIN-LECTURE.)—In the English universities, a rehearsal of a lesson or thesis.

—*v. a.* To read or deliver a lecture to; to instruct by discourses.—To instruct dogmatically or authoritatively; to rebuke; to reprove;—generally with *for.*

—*v. n.* To read or deliver extemporaneously a formal discourse or dissertation.—To pursue the practice of delivering lectures for instruction; as, he *lectures* on chemistry to-night.

Lect'urer, *n.* One who lectures, or who reads or delivers lectures; a professor, or other instructor, who utters formal discourses for the mental enlightenment of others; as, a *lecturer* on history.

—A preacher in a church, hired by the parochial authorities to assist the rector, vicar, incumbent, or curate.

Lect'ureship, *n.* The office or vocation of a lecturer.

"He got a *lectureship* in town of sixty pounds a year."—*Swift.*

Lec'turn, *n.* (*Eccl.*) See LECTERN.

Lecythida'ceæ, *n.* (*Bot.*) The Brazil-nut or Monkey-pot order; alliance *Lecythidaceæ*. DIAG. Plurilocular ovary, polypetalous flowers, a valvate or imbricated calyx, 00 stamens in part collected into a fleshy hood, oblong anthers, and dotless leaves.—They consist of large trees, with small deciduous stipules. Flowers large and showy; calyx superior; petals 6, imbricated, distinct, or sometimes united at the base; ovary inferior, 2- to 6-celled; placentas axile. Fruit woody, either indehiscent or opening in a circumscissile manner. Seeds several, large, and without albumen. The *L.* are principally natives of Guiana and Brazil. They are remarkable for their large, woody fruits, the pericarps of which are used as drinking-vessels, &c. Their seeds are frequently eaten.—See BERTHOLLETIA; LECYTHIS.

Lecythis, (*les'e-this.*) [From Gr. *lecuthas*, an oil-jar.] In Bot., the typical genus of the natural order *Lecythidaceæ*. The fruits of *L. ollaria* and other species are termed *monkey-pots*, and contain large edible seeds, some of which have lately been imported under the name of *Sapucaya nuts*. The bark of some species of lecythis separates into thin papery layers, which are used as wrappers for cigarettes by the Indians.

Led, *imp.* and *pp.* of LEAD, *q. v.*

Le'da, (*Myth.*) Daughter of king Thestius, and wife of Tyndarus, king of Sparta. Being seen bathing in the river Eurotas by Jupiter, the god, struck with her beauty, resolved to deceive her. He persuaded Venus to change herself into an eagle, while he assumed the form of a swan, and, after this metamorphosis, Jupiter, as if fearful of the cruelty of the bird of prey, fled to the arms of Leda, who willingly sheltered the trembling swan. The caresses with which Leda received the swan enabled Jupiter to avail himself of his situation, and, in nine months after, she brought forth two eggs, from one of which sprang Pollux and Helena, and from the other Castor and Clytemnestra. The two former were deemed the offspring of Jupiter, and the others claimed Tyndarus for their father.

Ledbury, (*led'ber-re,*) a town of England, co. Hereford, 14 m. E.S.E. of Hereford. *Manuf.* Ropes, and sacks, and has also large marble quarries in the vicinity. *Pop.* 5,500.

Led'-captain, *n.* [*Led* and *captain.*] An obsequious follower or attendant; a toad-eater.

Led'erachsville, or LENEROCKSVILLE, in *Pennsylvania*, a post-village of Montgomery co., about 10 m. N. by W. of Norristown.

Ledge, (*lej,*) *n.* [A. S. *leger*, from *lecgan*, to lay.] A layer; a stratum; a row; as, a *ledge* of bricks.—A prominent row or ridge, as of rocks; a regular part rising or projecting beyond the rest.

"Beneath the *ledge* of rocks his fleet he hides."—*Dryden.*

—A shelf or projecting cornice; as, a window *ledge*.—A small moulding.

—A cross-bar for securing a gate. (Used in some of the English counties.)

(*Naut.*) A cross-piece of timber placed under the deck of a ship athwartwise under the beams.

Ledge Dale, in *Pennsylvania*, a P. O. of Wayne co.

Ledge'ment, Ledg'ment, *n.* (*Arch.*) A string-course or horizontal suit of mouldings, such as the base-mouldings of a building.

Ledger, (*lej'er,*) *n.* [Same derivation as *ledge*, q. v.] (*Com.*) The principal book of accounts kept by merchants and traders; the book into which the journal-entries are carried in a summarized form. — See BOOK-KEEPING.

—A title sometimes given to newspapers; as, the Philadelphia Public *Ledger*.

(*Arch.*) A large flat stone laid over a tomb. — An horizontal timber used in constructing a scaffolding.

Ledg'er-line, *n.* (*Mus.*) See LEGER.

Ledg'ment, *n.* (*Arch.*) See LEDGEMENT.

Ledg'y, *a.* Characterized by ledges; as, a *ledgy* cliff.

Led'-horse, *n.* A sumpter-horse; a pack-horse.

Led'ru Rol'lin, ALEXANDRE AUGUSTE, minister of the interior in the French provisional government of 1848, and one of the leaders of the ultra-democratic movement in Europe, was B. of good parentage at Paris, Feb. 2, 1808. He was educated carefully, and with a view to the Bar, becoming an advocate in 1830. An ardent liberal from early youth, after the émeutes of 1832, which made the government declare a state of siege in Paris, *L. R.* published a spirited *Consultation* against the supersession of the ordinary legal by military tribunals, and the protest which it made was confirmed by the *cour de cassation*. A still bolder pamphlet, which he published after the insurrection of April, 1834, secured him popularity with the advanced liberal party. For many years afterwards he was constantly retained as counsel for the defence of newspaper editors and agitators compromised by their revolutionary zeal. Among the accused of 1834 was Canssidière, whom *L. R.* defended before the Chamber of Peers, and who was one of his colleagues in the provisional govt. of 1848. In the meantime, *L. R.* published some works on jurisprudence, and edited more than one legal periodical. After an unsuccessful attempt to enter the Chamber of Deputies, he was elected in 1841, and reëlected in 1842 and 1846. In the Chamber of Deputies *L. R.* was one of the very small minority who advocated with persistent fervor, not only the most extensive political reforms, but broached new social theories, and proclaimed themselves the friends of the working-class. On the breaking out of the revolution of 1848, he, and the more moderate Lamartine, *q. v.*, were foremost in proclaiming the new republic, of which *L. R.* became at once Minister of the Interior. In this position he sent his revolutionary emissaries through the length and breadth of the land, supporting them by the issue of his famous terrorist circulars and the *Journal-Placard*, also, the *Bulletin de la Republique*, the editorship of which he intrusted to George Sand. Yet as Lamartine lost caste by his junction with *L. R.*, so did the latter wane in popularity after his association with Lamartine. By his vehement opposition to the policy of the prince-president, now emperor of the French, especially by his denunciation of the expedition to Rome, he regained, however, some of his old popularity, and five departments returned him to the Legislative Assembly. He was one of the promoters of the unsuccessful attempt at insurrection on the 13th of June, 1849; when it failed, he escaped to England. In 1850 he published his *Décadence de l'Angleterre*, predicting and attempting to trace the fall of a country which clung to monarchic and aristocratic institutions. With Kossuth, Mazzini, and Rugé, he founded the revolutionary committee sitting in London to direct the ultra-democratic party throughout Europe, whose cause he had endeavored during his residence in England to promote, by writing and action. In 1857, for alleged complicity in the affair of Orsini, he was condemned in his absence, by the French tribunals, to transportation for life. After the general amnesty of 1870, his political friends urged him to avail himself of it and return to his country, to take his share in the republican agitation against Napoleon III., but *L. R.*, who had the eloquence but not the courage of a tribune, did not return to France till after the fall of the empire. He D. in Paris, Dec., 1874.

Le'dum, *n.* (*Bot.*) A genus of plants, order *Ericaceæ*, characterized by having leaves alternate, evergreen, entire, ferruginous-tomentose beneath, coriaceous; white flowers, in terminal corymbs. *L. palustre*, the Labrador tea, found from Penn. to Labrador, possesses narcotic properties, and has been sometimes used as a substitute for China tea.

Led'yard, JOHN, a celebrated American traveller, B. in 1751, at Groton, in Connecticut. He lost his father at an early age, and had considerable difficulty to obtain the means of education. He was originally intended for the law, but abandoned that pursuit, and at the age of 19 entered Dartmouth College in order to qualify himself to become a missionary among the Indians. His restless disposition, however, made him suddenly quit college and spend several months among the Red Indians — a good school of training for his future career. On quitting these savages he returned to college and resumed his studies, but soon grew weary of his quiet life; and on receiving a rebuke for his unsettled habits, he returned home in a canoe, which, with the help of some fellow-students, he had fashioned out of a large tree. He made several hair-breadth escapes in the course of his voyage of 150 m., but ultimately reached Hartford in safety. *L.* next became a student of divinity, then a common sailor on board a vessel bound for Gibraltar, where he enlisted in a British regiment, but was released at the entreaty of his captain, who was an old friend of his father. He returned home, but could not settle, and in 1771 worked his passage from New York to London, in the hope that some wealthy relatives there would extend to him their patronage. They received him, however, so coldly that he quitted them in indignation, and would never after accept of any assistance from them. In 1770, he sailed with Capt. Cook on his third voyage, as corporal of marines, and was with him when he was murdered at Owhyhee. After planning several daring, but abortive projects, he resolved to explore the unknown regions of America from Nootka Sound to the E. coast, and about the close of 1786 he set out from England with only one guinea in his pocket. He reached Stockholm about the end of Jan.; and as the Gulf of Bothnia could not at that time be crossed either by ships or sledges, he was forced to march 1,200 m. by land over trackless snows, and to encounter the most dreadful hardships, in order to reach St. Petersburg, where he arrived on the 20th of March. After remaining there nearly three months before he could obtain a passport, he commenced his journey to Siberia, in company with a Scotch physician. Through innumerable difficulties he succeeded in reaching Yakutsk; but there, under some frivolous pretext, he was arrested by order of the Empress Catharine, in Jan., 1788, and conducted with all speed to the frontiers of Poland, with the intimation that he would be hanged if he ventured to re-enter Russia. After suffering dreadful hardships, he found his way back to England, "again disappointed, ragged, and penniless, but with a whole heart," and at once eagerly accepted an offer from the African Association to explore the interior of Africa, expressing his readiness to start next day. He set out in high spirits, and with the fairest prospects, 30th June; but on reaching Cairo, his active and enterprising career was cut short by a bilious disorder, aggravated by an overdose of vitriolic acid, 17th Jan., 1789, in the 38th year of his age. Ledyard's extraordinary enthusiasm, keenness of observation, indomitable resolution, and power of endurance, had excited great expectations as to the result of his explorations, and his premature death caused a strong feeling of regret. He kept a private journal of his voyage with Capt. Cook, which, in accordance with a general order of the govt., was taken from him on the return of the expedition to England. Subsequently he wrote out from recollection, assisted by a brief sketch issued under the sanction of the Admiralty, an account of the expedition, which was published in Hartford, in 1783. For capacity of endurance, resolution, and physical vigor, he was one of the most remarkable of modern travellers.

Led'yard, in *Connecticut*, a post-village and township of New London co., on the Thames River, abt. 45 m. S.E. of Hartford.

Led'yard, in *New York*, a post-township of Cayuga co., abt. 160 m. W. of Albany.

Lee, *n.* See the plural, LEES.

Lee, *n.* [A. S. *hleo*, a shade, a shelter; D. *lawte*, a sheltered place; Scot. *lythe*, a calm and warm shelter.] (*Naut.*) A calm place; a place sheltered or defended from the wind; — hence, the side of the hemisphere opposite to the wind, as opposed to that from which it blows.

"If we, in the Bay of Biscay, had had a port under our *lee* . . . we had taken the Indian fleet."—*Raleigh.*

By the lee. (*Naut.*) Having a vessel's course so much altered that the wind takes the sails aback from windward.

Under the lee of. (*Naut.*) On the side opposite to that from which the wind blows; sheltered from the wind by; as, to be *under the lee of* the land; — said of a ship.

Lee, *n.* Same as LYE, *q. v.*

Lee, *a.* (*Naut.*) Lying under, or to the lee of a ship: — opposed to *weather*; as, the *lee* side. — *Lee-board*, a framework of planking fastened to the side of a flat-bottomed vessel, as a preventive to its falling to leeward, when close-hauled. — *Lee gage*, a term denoting a greater distance from the point whence the wind blows than is possessed by another vessel. — *Lee lurch*, a lurch to leeward in a heavy sea. — *Lee shore*, the land under a ship's lee, or that toward which the wind blows.

"The Hollanders were before Dunkerque with the wind at north-west, making a *lee shore* in all weathers."—*Raleigh.*

Lee tide, a tide running in the same direction that the wind blows. — *On the lee beam*, due to the leeward, or in a line at right angles to the vessel's length, and to the leeward. — *Tide under the lee*, a tide running dead against the wind.

Lee, RICHARD, the ancestor of a distinguished Virginian family holding an historical position in the annals of the United States, was the representative of an old English cavalier race. Emigrating to Virginia in the reign of Charles I., he settled in Northumberland co., between the Rappahannock and Potomac rivers, and remained a steadfast adherent of the royal cause. He, in fact, displayed such resolute opposition to the Protectorate of Cromwell, as to secure for the colony of Virginia her status as an "independent dominion" under English protection. *L.* took a prominent part in the restoration of Charles II., and proclaimed him king in Virginia two years before his triumphal entry into London. Charles showed his gratitude to Virginian loyalty by ordering the arms of the colony to be quartered on the armorial bearings of England. *L.* died just as his commission as governor was being made out, leaving five sons, all of whom achieved distinction.

L., RICHARD HENRY, an American patriot and statesman, great-grandson of the foregoing, was B. in Westmoreland co., Va., in 1732. After an education acquired partly at home, and partly in England, he commenced the practice of the Law. This he pursued with much success, and, in his 25th year, was appointed President of the Court of Justices. He soon after became a member of the House of Burgesses, and, in conjunction with Patrick Henry, became the centre of opposition to the obnoxious British Stamp Acts of 1764–5. In 1774 *L.* was appointed delegate from Va. to the first American Congress, holden at Philadelphia, where he speedily became one of the acknowledged leaders in the cause of American rights, and secured the passing of the Militia Bill. As chairman of the Committee of Defence, *L.* drew up the commission and instructions of Gen. Washington as commander-in-chief. He next signalized himself by writing his famous address of the American colonists to the British nation. In June, 1776, *L.* introduced in Congress, during a brilliant exordium, a resolution declaring that the "United Colonies shall be free and independent States, and absolved from all allegiance to the British Crown." This resolution, after a stormy debate, was referred to a committee, of which Mr. Jefferson was appointed chairman. Ultimately, owing to his being called away from his public duties by sickness in his family circle, *L.* lost the honor of the authorship of the Declaration of American Independence. In 1784, Mr. *L.* was elected President of Congress, and, upon the establishment of the Federal Constitution, he was returned to the U. S. Senate as representative of Va., where he gave Gen. Washington's administration a steady and active support. In 1792 he retired into private life, and D. in 1794.

L., ARTHUR, an American diplomatist, and younger brother of the preceding, B. in Va., 1740. He was educated in England for the medical profession, which he practised for some time after his return home. In 1766, he again went to England, where he, this time, studied law. In 1776, he was appointed one of the commissioners sent to France to act as agents for the American Congress. He successively held similar appointments in Spain and Prussia, and returned to the U. States in 1780. Two years afterwards, he was elected to Congress from his native State, from which position he retired in 1785, and D. in 1792.

L., HENRY, a distinguished American general, second cousin of the two preceding members of his house, was B. in Va., in 1756. He early embarked upon a brilliant military career, as captain of one of the 6 companies of light cavalry raised in Va., after the inauguration of the War of Independence. In this capacity he showed such dashing courage, skill, and energy, as to acquire the soubriquet of "Light-Horse Harry," together with the rank of major, and the command of an independent corps. In Gen. Greene's famous retreat into Va., before the advance of Cornwallis, *L.*'s legion of light-horse formed the American rear-guard, and continually presented such a front to the enemy as to keep the latter at proper distance. Gen. *L.*'s services throughout the war — too numerous for detail here — were of the most brilliant and valuable character. On the establishment of his country's independence, *L.* was appointed governor of Virginia in 1792, and in 1799, member of Congress; retaining his seat until Mr. Jefferson's accession to the presidency, when he retired into private life. D. 1818.

L., ROBERT EDWARD, an American Confederate general, commander-in-chief of the Southern forces in the field, and the son of the preceding, was B. in Va., in 1808. After receiving a liberal education, he graduated at West Point in 1829, and entered the U. S. army as 2d lieut., becoming 1st lieut. in 1836, and captain two years later. In 1846 *L.* was appointed engineer-in-chief to the U. S. army in Mexico; was brevetted major in April of that year for "gallant conduct at the battle of Cerro Gordo"; lieut.-colonel in Aug., 1847 for distinguished bravery in the actions of Contreras and Cherubusco; and colonel (Sept. 13, 1847,) for eminent services at Chapultepec. After the close of the war, Col. *L.* was re-appointed a member of the U. S. Board of Engineers, and, in 1852, was made superintendent of West Point Military Academy, which he held till March, 1855, when he was appointed lieut.-colonel of cavalry. In 1861 he received his colonelcy, but resigned his commission within a month afterward, and offered his sword to his native State, Va., which had just seceded from the Union, and was then threatened by the National forces. His offer being promptly accepted, Col. *L.* was appointed commander-in-chief of the Virginia troops, with the rank of general in the Confederate army. He occupied himself with the placing of his troops in a state of perfect organization and equipment, until May, 1862, when he superseded Gen. J. E. Johnston in the command of the army intrusted with the defence of Richmond, at that time threatened by a formidable Union army under the command of Gen. McClellan, his old companion-in-arms, and co-associate in the commission sent by the U. S. government, in 1854, to the Crimea, to report on the Allies operations there. In the sanguinary campaign that ensued, the object of which was on one side the capture and on the other the defence of the Confederate capital, Gen. *L.*, aided by "Stonewall" Jackson, made a vigorous assault upon McClellan's army, and succeeded, in a series of severe battles, known as the "Seven Day's Fight," in forcing it back from its position in front of Richmond. In August of the same year, Gen. *L.* forced the Union army under Gen. Pope to fall precipitately back upon Washington. The campaigns he conducted in Maryland and Pennsylvania in 1862–1863, were, however, not so fortunate. After fighting a hotly-contested and drawn battle at Antietam, Sept. 17, 1862, *L.* was obliged to retreat across the Potomac; and although victorious in the first day's battle at Gettysburg (July 1, 1863), he met with a disastrous repulse two days afterward, and was again compelled to retire across the Potomac. Previous to this, however, Gen. *L.* had signally defeated Gen. Burnside's army at Fredericksburg, Dec. 12–16, 1862, and also defeated Gen. Hooker, at Chancellorsville, May 1–4, 1863. From Aug.,

Robert E. Lee

1808–1870

1863, till May, 1864, Gen. *L.* was engaged in operations along the line of the Rappahannock, and fought a successiou of desperate battles in the Wilderness, and from there southward to his old position before Richmond, during May, 1864. On Feb. 5, 1865, Gen. *L.* was appointed commander-in-chief of all the Confederate armies in the field, and until April, in that year, held the defences of Petersburg and Richmond, fighting several battles to retain them. On the 2d of April, he was at last dislodged from his intrenchments by superior forces, compelled to retreat from Petersburg, and eventually to surrender himself and army to Gen. Grant, April 9, after a long and gallant contest with his resolute and able adversary. Gen. *L.* was installed president of Washington College, Va., Oct. 2, 1865. Judging of acts from a military point of view, it must be admitted that during this campaign Gen. *L.* had earned a foremost place among the first captains of the age; and to have compelled such an opponent to surrender, will be perhaps the best title of Gen. Grant to glory as a commander. Died Oct. 12, 1870.

L., Fitzhugh, nephew of Gen. Robert E. Lee, was b. in Fairfax Co., Va., Nov. 19, 1835, graduated at West Point in 1856, and served in the cavalry against the Indians until laid up with a severe wound. He joined the cavalry service of the Confederacy in 1861, was made lieutenant-colonel in March, 1862; brigadier-general in July, 1862; and major-general in August, 1863. He took an active part in many of the engagements of the war, and was a daring and successful cavalry leader. He was severely wounded at Winchester in September, 1864, but recovered to command the cavalry in the last month of the war. Subsequently he became active in politics, and was made governor of Virginia in 1885. In the latter part of 1896 he was appointed by President Cleveland consul-general of the United States at Havana, with the purpose of observing and reporting upon the state of affairs in Cuba, whose people were then in insurrection against Spain. He protested strongly against the unwarranted and severe imprisonment of American citizens, and subsequently all Americans arrested were delivered to him, and sent by him to the United States. He was very efficient in protecting American interests until April, 1898, when the near approach of war made his position unsafe. After his return home he was appointed major-general of volunteers, in command of the 7th corps, stationed at Tampa, Fla. His command took no part in the war, but after peace was declared he returned to Cuba as military governor of Havana. Died April 28, 1905.

Lee, Anne. See Shakers.

Lee, a river of Lugland, co. of Chester, which flows into the Weaver.

Lee, a river of Ireland, in Munster, rises in Lake Gouganc-Barra, and flows E. into Cork harbor.

Lee, in *Florida*, a S. co., bordering on the Gulf of Mexico; *area*, about 4,000 sq. m.; watered by the Fahkahnatchee and other streams. *Surface*, low and swampy. *Cap.* Myers. *Pop.* (1897) 2,350.

Lee, in *Georgia*, a S.W. cent. co.; *area*, about 360 sq. m. *Rivers.* Flint and Muckalee rivers. *Surface*, generally level; *soil*, in parts fertile. *Cap.* Leesburg. *Pop.* (1890) 9,074.

Lee, in *Illinois*, a N. co.; *area*, about 740 sq. m. *Rivers*, Rock and Green rivers, and Bureau creek. *Surface*, level; *soil*, very fertile. *Cap.* Dixon. *Pop.* (1897) 26,950.

—A township of Fulton co.

Lee, in *Indiana*, a post-village of White co.

Lee, in *Iowa*, an extreme S.E. co., adjoining Illinois on the S.E. and Missouri on the S.W.; *area*, about 486 sq. m. *Rivers.* Mississippi, Des Moines, and Skunk rivers. *Surface*, undulating; *soil*, very fertile. *Cap.* Fort Madison. *Pop.* (1895) 39,528.

—A township of Madison co.

Lee, in *Maine*, a post-town and township of Penobscot co. *Pop.* (1897) 986.

Lee, in *Massachusetts*, a post-town and township of Berkshire co., about 11 m. S. of Pittsfield. *Pop.* (1895) 3,785.

Lee, in *Michigan*, a township of Allegan co.

—A township of Calhoun co.

Lee, in *Minnesota*, a township of Norman co.

Lee, in *Missouri*, a township of Platte co.

Lee, in *New Hampshire*, a post-town and township of Strafford co. *Pop.* (1897) 625.

Lee, in *New York*, a post-town and township of Oneida co., about 20 m. N.W. of Utica. *Pop.* (1897) 1,950.

Lee, in *Ohio*, a post-township of Athens co., about 68 m. S.E. of Columbus.

—A township of Carroll co.

Lee, in *Virginia*, an extreme S.W. co., adjoining Kentucky on the N.W. and Tennessee on the S.; *area*, about 429 sq. m. *Rivers.* Powell's river, and some smaller streams. *Surface*, diversified, Cumberland Mountain forming the N.W. boundary; *soil*, in the valleys fertile. *Min.* Iron, saltpeter, and limestone. *Cap.* Jonesville. *Pop.* (1890) 18,216.

Lee Center, in *Illinois*, a post-town and township of Lee co., about 100 m. W. of Chicago.

Lee Center, in *New York*, a post-village of Oneida co.

Leech, Leach, *n.* [L Ger. *leik.*] (*Naut.*) The border or hem of a sail.

Leech-line. (*Naut.*) A line belonging to the leech-ropes, and passing through yard-blocks to haul the leeches by.

Leech-rope. (*Naut.*) That part of a bolt-rope to which the leech or border of a sail is secured.

Leech, *v. a.* See Leach.

Leech, *v. a.* To heal; to treat medicinally; as, *to leech* wounds.—To practise phlebotomy.

Leech, *n.* [A. S. *læce, læce*; Lat. *hirudo*, from *haurio*, I draw.] (*Zoöl.*) A family (*Hirudinidæ*) of red-blooded worms, order of *Thematods.* They are of aquatic habits, and provided with a sucker at both ends of the body: the greater part are inhabitants of fresh water; some, however, are only found in the sea; while others live in moist situations near stagnant water, pursuing earthworms, &c. Many of them accumulate their eggs into cocoons, enveloped by a fibrous excretion, at first sight so closely resembling sponge in structure as to have been once mistaken by a distinguished naturalist for a new genus of that family. The species which principally deserves our attention is the common *L.* (the *Hirudo medicinalis* of Linnæus.) This species, which is usually about the length of the middle finger, bears a considerable resemblance to the earth-worm in its general structure, but differs as to the conformation of its mouth and digestive apparatus. Its skin is composed of from ninety to a hundred or more soft rings, by means of which it acquires its agility, and swims in the water. It has a small head; a black skin, edged with a yellow line on each side, and some yellowish spots on the back; and the belly, which is of a reddish color, is marked with pale-yellow spots. But the most remarkable part is the mouth, which is situated in the middle of the cavity of the anterior sucker; and three little cartilaginous bodies, or jaws, are seen to be disposed around it, in such a manner that the three edges form three radii of a circle. Each of these has two rows of minute teeth at its edge, so that it resembles a small semicircular saw. It is imbedded at its base in a bed of muscle, by the action of which it is worked, in such a manner as to cut into the skin—a sawing movement being given to each piece separately. It is in this manner that the tri-radiate form of the leech-bite is occasioned; each ray being a separate little saw, this apparatus enabling the leech to penetrate the skin without causing a dangerous wound. The lacerated character of the wound is very favorable to the flow of blood; which is further promoted by the vacuum created by the action of the sucker. The alimentary canal consists of an œsophagus, a long stomach, with cæcal sacs, and an intestine. The operation of digestion is extremely slow, notwithstanding the rapid and excessive manner in which the *L.* fills its stomach; a single meal of blood will suffice for many months; nay, more than a year will sometimes elapse before the blood has passed through the alimentary canal in the ordinary manner, during all which period so much of the blood as remains undigested in the stomach continues in a fluid state. This accounts for the reluctance of the *L.*, after being used to abstract blood, to repeat the operation; it not only being gorged at the time, but provided with a sufficient supply for so much longer. Indeed, the true medicinal *L.* does not seem to take any solid aliment, but subsists on the fluids of frogs, fish, &c. *L.* are furnished with 8 or 10 simple eyes, which may be detected with a magnifying-glass as a semicircular row of black points, situated above the mouth upon the sucking surface of the oval disc; and to these visual specks it is supposed they are indebted for whatever sight they possess. *L.* derive their principal interest from the use that is made of them as a remedial agent; but it should be observed that there are only two species so employed, and these are principally derived from the south of France, Sweden, Poland, and Hungary. The Swedish *L.* are now generally considered the best. The American species *Hirudo decora* (Say), especially abundant in Pennsylvania, is extensively used in the Middle States. It is common for the leech-dealers to drive horses and cows into the ponds, that the *L.* may fatten and propagate more abundantly by sucking their blood. Children are also employed to catch them by the hand; and grown persons wade into the shallow waters in the spring of the year, and catch the *L.* that adhere to their naked legs. In summer, when they have retired to deeper waters, a sort of raft is constructed of twigs and rushes by which a few are entangled. They are also taken by laying baits of liver, to which the *L.* resort, and are then caught; but this last method is thought to make them sickly. A *L.* may be known to be in good health if it be active in the water, and plump when taken out. The most certain method of inducing *L.* to bite, is to cleanse the skin thoroughly; and they should be exposed to the air for a short time previous to their application, as by this means they will bite more freely. If they are voracious, they may be applied to the part by being held lightly in the fingers, or they may be placed in a leech-glass, which is a preferable mode.—The Horse-leech (*Hæmopis sanguisorba*) is much larger than the medicinal species, but its teeth are comparatively blunt, and it is little of a blood-sucker—notwithstanding the popular notion—and useless for medicinal purposes. It feeds greedily on earthworms, which issue from the banks of the ponds or sluggish streams which it inhabits. In many parts of India, as in the warm valleys of the Himalayas, the moist grass swarms with *L.*, some of them very small, but very troublesome to cattle and to men who have occasion to walk through the grass. The land-leech of Ceylon, as described by Tennent, is about an inch in length, and as fine as a common knitting-needle, but capable of distention to the thickness of a quill, and a length of nearly two inches. It can insinuate itself through the meshes of the finest stocking. It is always ready to assail a passing traveller or quadruped. Horses are driven wild by these pests, "and stamp the ground in fury, to shake them from their fetlocks, to which they hang in bloody tassels." Their numbers have often occasioned the death of men compelled to spend days where they abound. The moist valleys of Java, Sumatra, Chili, and other tropical countries, swarm with land-leeches as much as those of India and Ceylon.

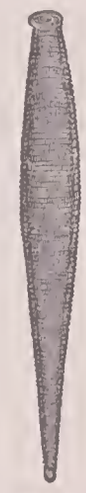


Fig. 1546. Hirudo decora.

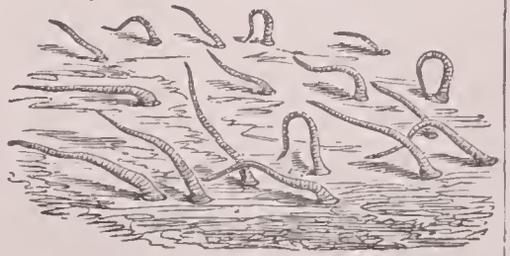


Fig. 1547. — land-leeches. (From Tennent's *Ceylon.*)

Leech'burg, in *Pennsylvania*, a post-borough of Armstrong co., 35 m. N.E. of Pittsburg. *Pop.* (1897) 2,150.

Leech's Corners, in *Pennsylvania*, a post-village of Mercer co. *Pop.* (1897) 195.

Leech'-craft, *n.* The art of healing. (o.)

Leech'ville, in *North Carolina*, a post-village of Beaufort co., about 120 m. E. by S. of Raleigh.

Leeds, a large and important manufacturing town and borough of England, W. Riding of co. of York, on the Aire, 23 m. W.S.W. of the city of York, and 170 W. by N. of London. This is a finely-built place, containing many handsome public buildings. *Manuf. L.* is one of the principal centers of the English woollen manufacture; the spinning of flax and worsted is also a leading branch of industry. Machinery, chemicals, glass, pottery, soap, and tobacco are also manufactured on an extensive scale. *Pop.* (1901) 428,953.

Leeds, an E. co. of prov. of Ontario; *area*, about 800 sq. m. *Rivers.* St. Lawrence river, and some smaller streams, besides numerous lakes. *Cap.* Brockville. *Pop.* (1897) 22,451.

Leeds, in *Maine*, a post-town and township of Androscoggin co. *Pop.* (1897) 1,100.

Leeds, in *Massachusetts*, a post-office of Hampshire co.

Leeds, in *New York*, a post-village of Greene co., about 33 m. S. by W. of Albany.

Leeds, in *Wisconsin*, a post-township of Columbia co.

Leeds Center, in *Maine*, a village of Androscoggin co., about 20 m. S.W. of Augusta.

Leeds Center, in *Wisconsin*, a post-village of Columbia co.

Leeds Point, in *New Jersey*, a village of Atlantic co., about 15 m. S.E. of May's Landing.

Leeds'ton, in *Virginia*, a post-vill. of Westmoreland co.

Leeds'ville, in *New Jersey*, a village of Atlantic co., about 11 m. S.E. of May's Landing.

—A village of Monmouth co.

Leeds'ville, in *New York*, a post-village of Dutchess co., about 60 m. S. by E. of Albany.;

Leehall', in *Virginia*, a post-village of Warwick co., on the C. & O. R.R.

Leek, *n.* [A. S. *leac*; Ger. *lauch*; Icel. *lauhr*; probably allied to Gr. *lachānon*, green herbs, and to Heb. *lach*, green.] (*Bot.*) A species of plants, genus *Allium*, the *Allium porrum*, a native of Europe. Although the leek attains perfection in size and for culinary purposes in the first year, it does not run to seed until the second, the perfecting of which it also survives. The whole of the plant is eaten, being used in soups, &c., and by some persons is boiled and eaten with meat. This vegetable is not extensively used in America.

To eat the leek, to be compelled to retract or swallow one's own words; applied in a contemptuous sense.

Leek, a town of England, in Straffordshire, 12 m. from Macclesfield. *Manuf.* Silks and ribbons. *Pop.* 14,500.

Lee'lanaw, in *Michigan*, a N.W. co. of the lower peninsula, bordering on Lake Michigan and Grand Traverse Bay; *area*, about 344 sq. m. *Rivers.* Carp and Platte rivers, besides several lakes. *Surface*, diversified; *soil*, fertile. *Cap.* Leland. *Pop.* (1894) 9,572.

Lee'lite, *n.* (*Min.*) A silicate of alumina, colored of a deep flesh-red by a percentage of manganese. It occurs compact and massive, with a peculiar wax-like texture, and a lustre and translucency like that of horn, at Gryphythan, in Sweden.

Lee'man, in *Wisconsin*, a post-office of Outagamie co.

Lee'mon, in *Missouri*, a post-office of Girardeau Cape co.

Leer, *n.* [A. S. *hleor*, a face or countenance.] An oblique or askant view.

"I spy entertainment . . . she gives the *leer* of invitation."—*Shaks.*

—A smirking, affected look, or cast of countenance.

"With shameless visage, and perfidious *leer*."—*Swift.*

—An annealing oven in a glass-works.

—*v. n.* To look with the cheek presented at the object; to glance obliquely; to look archly or smirkingly, as in solicitation or affectation.

"I wonder whether you do not sometimes *leer* upon the court." *Swift.*

—*v. a.* To attract with smiles or blandishments.

"Gild a face with smiles, and *leer* a man to ruin."—*Dryden.*

Leer, *a.* [A. S. *gebær.*] Empty; vacant; wanting sense or substance; as, *leer* words, a *leer* stomach.

Leer, a town of Hanover, on the Leda, 18 m. from Aurich. *Manuf.* Hosiery, linens, iron wares, tobacco, &c. *Pop.* 7,500.

Leer'ingly, *adv.* With an arch, askant look.

Leer'sia, *n.* (*Bot.*) A genus of rough grasses, 7-5 feet high, common in swamps, damp woods, &c., belonging to the order *Graminaceæ*. The American species are the cut grass, *L. oryzoides*; the white grass, *L. virginica*; and the catch-fly grass, *L. lenticularis*.

Lees, *n. pl.* [Fr. *lie*, from Lat. *limus*, slime, mud.] The slime or sediment of liquor; the grosser parts of any liquid, which have settled on the bottom of the vessel; dregs.

Lees'burg, in *Alabama*, a post-village of Cherokee co., about 150 m. N. of Montgomery.

Lees'burg, in *Indiana*, a post-town of Kosciusko co., about 116 m. N. by E. of Indianapolis. *Pop.* (1897) 420.

Lees'burg, in *Kentucky*, a post-village of Harrison co., about 27 m. E.N.E. of Frankfort.

Lees'burg, in *Michigan*, a post-office of St. Joseph co., 20 m. S. of Kalamazoo.

Lees'burg, in *Missouri*. See LEASBURG.

Lees'burg, in *New Jersey*, a post-village of Cumberland co., about 11 m. S. of Millville. *Pop.* (1897) 550.

Lees'burg, in *Ohio*, a village of Carroll co., about 12 m. S.W. of Carrollt·n.

—A post-village of Highland co., about 11 m. N. of Hillsborough. *Pop.* (1897) 680.

—A township of Union co.

Lees'burg, in *Pennsylvania*, a village of Cumberland co., about 17 m. S.W. of Carlisle.

—A village of Lancaster co., abt. 10 m. S.S.E. of Lancaster.

—A post-village of Mercer co., about 8 m. S. of Mercer.

Lees'burg, in *Tennessee*, a post-village of Washington co., about 270 m. E. by N. of Nashville.

Lees'burg, in *Virginia*, a post-borough, cap. of Loudoun co., 150 m. N. of Richmond. *Pop.* (1897) 1,720.

Lees'burg Heights, Battle of. Same as BALL'S BLUFF (*q. v.*).

Lee's Creek, in *Louisiana*, a post-office of Washington parish.

Lee's Creek, in *Ohio*, a post-village of Clinton co.

Lee's Cross Roads, in *Pennsylvania*, a post-village of Cumberland co., about 16 m. S.W. of Carlisle.

Lees'port, in *Pennsylvania*, a post-village of Berks co., about 8 m. N. of Reading, on Penna. R.R. *Pop.* (1897) 640.

Lees'ville, in *California*, a post-village of Colusa co.

Lees'ville, in *Connecticut*, a village of Middlesex co.

Lees'ville, in *Indiana*, a post-village of Lawrence co., about 12 m. E. of Bedford.

Lees'ville, in *Louisiana*, a post-village, cap. of Vernon parish.

Lees'ville, in *Mississippi*, a village of Sunflower co., 6 m. S.E. of Indianola.

Lees'ville, in *Missouri*, a post-village of Henry co., about 65 m. S. S.W. of Boonville.

Lees'ville, in *North Carolina*, a post-office of Robeson co., about 100 m. S. S.W. of Raleigh.

Lees'ville, in *New York*, a village of Schoharie co.

Lees'ville, in *Ohio*, a post-village of Carroll co.

—A village of Crawford co., abt. 10 m. E. of Bucyrus.

Leesville, in *S. Carolina*, a post-village of Lexington dist., abt. 30 m. W. by S. of Columbia.

Leesville, in *Virginia*, a post-village of Campbell co., about 110 m. W.S.W. of Richmond.

Leesville Cross Roads, in *Ohio*, a post-village of Crawford co., abont 70 m. N. by E. of Columbus.

Leet, *n.* [L. Lat. *leta*; It., Sp., and Pg. *lita*.] A denomination given to the fish called whiting. (Used in the N. of England.)

(*Eng. Law.*) The court-leet, or view of frank-pledge, was an ancient Anglo-Saxon institution answering a double purpose: 1. The administration of justice in the trial of offences and the abatement of nuisances. 2. The preservation of the peace, and the prevention of crime, by the reception and enrolment of the pledge which each man was obliged to give by becoming a member of some tything. The possession of a court-leet was the characteristic of the hundred, of which the proper leet was distinct from, and subordinate to, that which was held by the sheriff on his tourn. The court-leet of the hundred was usually held by a bailiff or steward of the sheriff; but it was sometimes granted, as well as the leet of a smaller jurisdiction, to private lords. A court-leet also properly belonged to a borough, which ranked as a hundred; but such private and borough leets were, like the leet of the hundred, subordinate to the county leet of the tourn.

Leet'-man, *n.*; *pl.* LEET-MEN. One who is subject to the jurisdiction of a court-leet.

Lee'town, in *West Virginia*, a post-village of Jefferson co., about 165 m. N. of Richmond.

Leets'dale, in *Penna.*, a post-village of Allegheny co.

Leeuwarden, (*loi-var'den,*) a town of the Netherlands, cap. of prov. of Friesland, on the Ee, 28 m. from Gröningen. *Manuf.* Linen, paper, and it has several printing establishments. *Pop.* 30,800.

Lee Valley, in *Tennessee*, a post-village of Hawkins co., about 256 m. E. of Nashville.

Leeward, (pron. *lu'ard.*) *a.* (*Naut.*) Pertaining or having reference to the quarter toward which the wind blows; — as, a *leeward* ship.

—*adv.* Toward the lee, or that part toward which the wind blows; — opposed to *windward*; as, to fall to *leeward*, said of a ship.

Lee'ward Islands, a name applied to those W. India islands of the Caribbee group lying N. of Lat. 15° N. They consist of the islands of Dominica, Montserrat, Antigua, St. Christopher, Anguilla, and the Virgin group belonging to Great Britain; and Guadaloupe and Marie Galante, belonging to France; together with all the Danish, Swedish, and most of the Dutch possessions in this Archipelago. Those N. of Lat. 15° N. are called the WINDWARD ISLANDS. The terms Leeward and Windward, applied to the W. India islands, were given them from their situation, in a voyage from the ports of Spain to Carthagena, or Porto Bello.

Lee'way, *n.* (*Naut.*) The lateral drifting of a ship to the leeward of her course, or the angle which the line of her way makes with her keel when she is close-hauled.

Lefebvre, FRANÇOIS JOSEPH, (*le(r)faib'r,*) Duke of Dantzic, a French marshal, B. at Rufach, dep. of Haut-Rhin, 1755. He entered, when young, into the French guards; was a sergeant at the beginning of the revolution, reached the rank of adjutant-general in 1793, and in 1794 was a general of division. In June, the same year, he distinguished himself at the battle of Fleurus; and, after the death of Hoche, was raised to the command of the Meuse and Sambre. Being wounded at the battle of Stockach, in 1799, he retired to Paris, where he assisted Napoleon in seizing the supreme power, and was rewarded by him with the dignities of senator, marshal of the empire, and grand cross of the Legion of Honor. At the battle of Jena he commanded the imperial guard; but his greatest exploit was the taking of Dantzic, May 24, 1807; after which he was raised to the dignity of a duke. He subsequently commanded in Spain and Germany, where he contributed greatly to the success of the French at Eckmühl and Wagram. After the restoration of the Bourbons he was made a peer. D. 1820.

Le Fe'vre, in *Indiana*, a village of Bartholomew co., about 5 m. W. of Columbus.

Lefko'sia, the capital city of the island of Cyprus. *Manuf.* Carpets and red leather. Called by the English, Nikosia.

Leflore, in *Miss.*, a village of Carroll co.

Lefort, FRANÇOIS, (*le(r)-for',*) noted as the favorite of Peter the Great, was the son of a merchant of Geneva, where he was born in 1656. Having an inclination for a military life, he entered the French army when a mere boy, and afterwards went into that of Holland; which he left to go to Moscow, by the way of Archangel, in 1675. Here he became secretary to the Danish ambassador; and a fortunate accident gave him an opportunity to gain the favor of the young czar, which he retained till his death. Peter felt that he needed an instructor and assistant, and *L.* possessed talents fitted for both offices. The first great service which he rendered the czar was in a rebellion of the Strelitzes (1688). *L.* quelled the insurrection, and saved the prince from the danger which threatened his life. This exploit gained for him the unbounded confidence of the czar, who was now become the absolute master of Russia. *L.*'s influence increased daily. He established the military system of Russia, and laid the foundation of her navy, which Peter afterwards carried to such a degree of perfection. *L.* had a comprehensive and cultivated mind, a penetrating judgment, much courage, and an uncommon knowledge of the resources of the Russian empire. D. 1699.

Left, *imp.* and *pp.* of LEAVE, *q. v.*

Left, *a.* [Lat. *lævus*; Gr. *loios*, left; probably from the root of *leave*, Gr. *leipō*.] Denoting the part opposed to the *right* of the body; being on the left hand; sinistrous; as, the *left* arm.

Left bank of a river or *stream*, that bank lying on the *left* hand of a person looking down, or towards the mouth of the river, &c.

—*n.* That part of a body which is on the left side; — correlative of *right*.

(*Polit.*) That part of a legislative assembly situated at the left side of the speaker, where the opposition ordinarily sits; hence, the opposition or radical element or wing of a political body or party. — *Webster*.

Over the left, a cant colloquialism for *on the contrary*; on the other hand; the other way about. (Used expressive of derision or disbelief.)

Left'-hand, *n.* The hand on the left-side; the hand sinister.

—*a.* Relating to the left hand; left-handed; sinistrous.

Left'-handed, *a.* Having more power or dexterity in the left hand or arm than the right; using the left hand or arm with more ease and facility than the right; sinister; sinistrous; — hence, awkward; clumsy; ungraceful; as, a *left-handed* blow, a *left-handed* howler, a *left-handed* penman. — Inauspicious; unpromising; unseasonable; also, deceptive: sinister; perfidious; as, "*left-handed* commendations." — *Landor*.

Left-handed marriage. See MORGANATIC.

Left-handed screw. (*Mech.*) A screw whose convolutions wind from left to right.

Left'-handedness, Left'-handiness, *n.* State or quality of being left-handed; habitual use of the left hand, or rather the ability to use the left hand with more ease, strength, and dexterity than the right; — hence, clumsiness; awkwardness.

Left'-off, *a.* That which is thrown aside as done with; as, *left-off* garments.

Left'ward, *a.* On the left hand or side; toward the left.

"Rightward and *leftward* rise the rocks."—*Southey*.

Leg, *n.* [Probably from A. S. *underlec-gan*, to support; Swed., Goth. *lägg*, a stalk, a stem, a leg; Icel. *leggr*, a stalk, a stem, a leg.] The name commonly applied to the whole of the lower limb from the hip to the ankle, but which properly belongs to that portion which extends from the knee to the ankle, the upper portion being the thigh. The leg proper is formed of two bones, —the *tibia* and *fibula*. The former of these is the larger, and articulates above with the os femur, or thigh-bone, presenting for that purpose two articulating surfaces,—an external and internal, known as the *condyles* of the tibia, and separated from each other by a large bony prominence termed the *spine*, and two rough surfaces, one in front the other behind the spine. Below the articulating surface, and in front, is a large eminence termed the *tubercle*, which gives insertion to the *ligamentum patellæ*. On the outer side of the tibia is a projection marked inferiorly by a smooth surface for articulation with the upper extremity of the fibula. The body or shaft of the tibia is large and triangular above, but becomes smaller and more circular inferiorly to the inferior or tarsal extremity, where it expands and assumes a quadrilateral form. Internally it descends farther than in any other direction, forming a projection termed the internal malleolus; externally is a rough triangular surface which gives lodgment to the fibula and attachment to the ligaments which connect these bones together. It articulates below with the *astragalus*. The superior extremity, or head of the fibula, is round and irregular, and presents, on its inner side, a smooth cartilaginous surface for articulation with the tibia. The *tarsal* extremity is large, and more prominent than the superior, and forms a large irregular projection of a triangular shape, termed the external malleolus. It articulates with the astragalus. The principal muscles of the leg are the tibialis anticus, extensor digitorum longus, extensor pollicis proprius, peroneus tertius, peroneus longus, peroneus brevis, gastrocnemius, plantaris, soleus, popliteus, flexor longus digitorum perforans, tibialis posticus, flexor pollicis longus. Anything which resembles a leg in form or application; particularly, the long or slender support on which any object rests; as, the *leg* of a chair. — *To make a leg*, to bow; to make an obeisance by bending the head forward, and drawing back the leg. (R.)

"He *made his leg* and went away." — *Swift*.

On one's legs, standing in an attitude to speak: as, we left the honorable member *on his legs*. — *To stand on one's own legs*, to support one's self; to act without aid or assistance.

"Persons of their fortune and quality could well have *stood upon their own legs*." — *Collier*.

Legs of a triangle. (*Math.*) The sides of a triangle. (R.)

Leg, *v. a.* (*Games.*) In cricket, to strike in the leg with the ball.

Legacy, (*leg'a-se,*) *n.* [Sp. *legado*; Lat. *legatum*, from *lego*, *legatus*, to leave or bequeath.] (*Law.*) A gift by will of personal property, as goods and chattels; a testamentary gift of real property being called a *devise*. Legacies are *general*, such as a gift of a sum of money out of the general estate of the deceased; or *specific*, as a gift of a particular bank-note or coin, or of any other individual chattel, as a horse or a jewel; or *residuary*, as a gift of the residue of the estate remaining after all the debts of the deceased and general and specific legacies have been satisfied. General legacies are subject to an equal ratable abatement, if the estate is not sufficient for payment of them in full; but a specific legacy is not subject to abatement, unless it be necessary for the payment of debts. A specific legacy is, however, subject to what is called *ademption*, which is the consequence of the subject-matter of the legacy being one identical thing in specie: thus, if a testator bequeath a particular horse, which he afterwards disposes of in his lifetime, the legacy is said to be adempt, or taken away, because the horse bequeathed has no longer any existence as part of his property, and the legatee will not be entitled to another horse of the testator's in lieu of it. This identity of corpus is so inherent in the notion of a specific legacy, that if £100 in consols were bequeathed, and the same sum were afterwards transferred by the testator to another stock, the transfer of itself would adeem the legacy. The mode of compelling executors to pay a legacy is by suit in equity for the administration of the testator's assets: courts of common law have not, in general, any jurisdiction over such matters. Executors cannot be compelled to pay a legacy until the expiration of a year after the testator's death: they are allowed that period for ascertaining and discharging his debts; and even after a legacy has been paid, the legatee must refund if it should be necessary for the payment of creditors who come in, although after the period above mentioned. The party to whom a legacy is bequeathed is termed *legatee*.

Leg'acy-hunter, *n.* One who courts or toadies in the hope of receiving a legacy.

Le'gal, *a.* [Fr.; Lat. *legalis*, from *lex*, *legis*, a law. See LAW.] According or pertaining to, created by, or in conformity with, law; as, a *legal* procedure, a *legal* enactment, the *legal* profession. — Lawful; legitimate; permitted or authorized by law: as, a *legal* transaction.

(*Law.*) Controlled or adjudicated by the rules of law, as distinguished from the rules of equity; as, *legal* assets.

L. fiction. (*Law.*) See FICTION.

Le'galism, *n.* Rigid adherence to law; as, the spirit of *legalism*.

Le'galist, *n.* One who adheres to the true spirit of law.

(*Theol.*) One who esteems salvation attainable by conformity to law.

Legal'ity, *n.* [Fr. *legalité*.] Lawfulness: conformity to law. —Status or condition of a *legalis homo*.

(*Theol.*) A reposing of faith in the letter of the law, while ignoring its spirit.

Legaliza'tion, *n.* Act or process of making legal. — Also, the acts by which a judge or competent officer authenticates a record, or other matter, in order that the same may be lawfully read in evidence.

Le'galize, *v. a.* [Fr. *légaliser*.] To make legal or lawful; to render conformable to law; to authorize by legislative process. — To sanction by posteriority of legal authorization; as, to *legalize* an informal marriage.

(*Theol.*) To interpret in a legal sense or spirit.

Le'gally, *adv.* Lawfully; according or conformably to law; in a manner sanctioned by law.

Le'gal Ten'der, *n.* (*Law.*) That currency which has been made suitable by law for the purposes of a tender in the payment of debts. The following descriptions of currency are *L. T.* in the U. States:—*all the gold coins, the silver dollar,* and the *silver coins* below the denomination of the dollar coined prior to 1854, are *L. T.* to their nominal value, for all sums whatever. The *silver coins below the dollar,* of the date of 1854, and of subsequent years, are a *L. T.* in sums not exceeding five dollars. The *three-cent silver coins* of the date of 1851, 1852, and 1853 are a tender in sums not exceeding 30 cents. Those of subsequent dates are a tender in sums not exceeding five dollars. The *cent* is not a *L. T.* The Treasury notes issued from 1862 are *L. T.* for all debts public and private, except duties on imports and interest on the public debt. The law at one time in force making certain coins a *L. T.* was repealed by the Act of Feb. 21, 1857.

Legaré, Hugh Swinton, an American statesman and literateur, b. in Charleston, S. C., 1797. He graduated at the college of S. Carolina, in 1814, with the highest honors, and, in 1818, proceeded to Europe, where he went through a course of studies at Edinburgh University. After a tour in Europe he returned home, was returned to the S. Carolinian Assembly in 1820, and two years later entered upon the practice of law. In 1821, he represented his native city in the State legislature, and in 1830, was elected attorney-general. He shortly afterwards established the *Southern Review* in conjunction with Stephen Elliott. His forensic talents having attracted the notice of the govt., Mr. *L.* was, in 1832, appointed charge d'affaires at Brussels. In 1836, he returned to America, and was at once elected to the lower house of Congress, but while there he failed to please his constituents, and was not re-elected. In 1840, Mr. *L.* was appointed attorney-general of the U. States, and d. 1843. A selection of his principal works, embracing essays, orations, and sketches of foreign life and travel, was published at Charleston, in 1846, in 2 vols. 8vo.

Leg'atary, *n.* A legatee. (R.)

Leg'ate, *n.* [It. *leguto;* Fr. *légat;* Lat. *legatus,* from *lego, legatus,* to send with a commission.] Roman ambassadors were so called, and the term was also applied to officers who accompanied the Roman generals in their expeditions to render advice and assistance. After the division of the provinces of the empire by Augustus, B. C. 27, the imperial provinces were governed by legates. During the Middle Ages the term was applied to ambassadors of the popes being cardinals. Other papal ambassadors of high rank were called nuncios. In the latter constitution of the Church, three classes of legates are distinguished: 1. *Legati a latere,* "legates dispatched from the side" of the pontiff, who are commonly cardinals; 2. *Legati missi,* called also "apostolic nuncios," and including a lower grade called "internuncioe;" 3. *Legati nati,* "legates born," whose office is not personal, but is attached by ancient institution or usage to the see or other ecclesiastical dignity which they hold. The legate, in the modern Church, is little other than the ambassador, mainly for spiritual purposes, of the Pope. He is held as belonging to the diplomatic body, and by the usage of Catholic courts enjoys precedence of all other ambassadors. The legates at the second-rate courts have the title of *internuncio.* Legates are commonly bishops or archbishops, in *partibus infidelium.* The establishment of a nunciature at Munich, in 1785, led to an animated controversy.

Legatee', *n.* [See Legacy.] (*Law.*) The recipient of a legacy; one to whom a bequest is left by will or testament; a legatary; ae, a residuary *legatee.*

Leg'ateship, *n.* Rank, office, or dignity of a legate.

Leg'atine, *a.* Relating or pertaining to a legato; as, *legatine* power. — Made by a legate; as, a *legatine* constitution.

Legation, (*-gā'shun,*) *n.* [Fr.; Lat. *legatio.*] The sending forth of an envoy, ambassador, legate, or commissioner; as, "the Divine *Legation* of Moses." (*Bp. Warburton.*) — An embassy; a deputation; the person or persons sent as envoys or ambassadors; a minister-plenipotentiary and suite. — The official residence of a minister accredited to a foreign court, as the American *Legation,* London. — A Roman province, governed by a legate.

Lega'to, *a.* [It., from Lat. *ligare,* to bind.] (*Mus.*) A term denoting that the movement is to be performed in a close, smooth, and gliding manner; — represented by a slur under or over the notes; — opposed to *staccato.*

Legator', *n.* [O. Fr *legateur,* from Lat. *legare.* See Legacy.] A testator; one who makes a bequest; the bequeather of a legacy.

Legatu'ra, *n.* [It.] (*Mus.*) A binding note.

Leg'-bail, *n.* A colloquialism for flight; fleeing; running away; skedaddling. — *To give leg-bail,* to escape from custody by running away and evading pursuit; as, to *give* a sheriff's officer *leg-bail.*

Lege, (*lej,*) *v. a.* [Contracted from Allege, *q. v.*] To allege; to assert. (R.)

Lege'ment, *n.* (*Arch.*) Same as Ledgement, *q. v.*

Legend, (*lej'end,*) *n.* [It. *leggenda;* Lat. *legendum,* from *lego,* to read.] (*Lit.*) A book originally used at divine service. In it were recorded the lives of saints and martyrs, portions of which were selected and read for the edification of the people. These legends were studiously perused in the refectories of cloisters, and were earnestly recommended to the perusal of the laity, as so many evidences of the truth of the Roman Catholic faith. Among these the *Golden Legend* (q. v.), which is a collection of the lives of the saints, maintained its ground in the Church for two hundred years. But although many of the legends consist of tasteless and unmeaning fictions, some are of a highly poetical and striking character, and throw much light on the diffusion of myths.

—Any story or narrative handed down from past times, which partakes of the marvellous and incredible; a tradition.

"*Legends* that record mere idle tales." — *Blackmore.*

—The motto or words inscribed round the edge of a coin medal, coat of arms, or piece of blazonry.

Legend, Golden. (*Lit.*) See Golden Legend.

Leg'endary, *a.* Consisting of, or characterized by legends; strange; marvellous; fabulous. — Resembling a legend; false; extravagant; problematical.

—*n.* A book of legends; a mythical tale or narrative.

—A relater of legends or marvellous stories.

Legendre, Adrien Marie, a French mathematician, b. in Paris, 1752, obtained, in 1774, a professorship of mathematics in the military school at Paris, and in 1783 was admitted a member of the Academy. In 1787, he was employed by the French government, along with Cassini and Mechain, in measuring a degree of latitude, and was chosen to perform the calculations after the work of observation had been finished. In 1808, he was appointed by the imperial government president for life of the university, and after the second Restoration, an honorary member of the Commission for Public Education, and chief of the committee of Weights and Measures. But because in an election to a place in the Academy he did not vote for the ministerial candidate, he was deprived, in 1824, of his pension of 3,000 francs. He died 9th January, 1833. *L.* is the author of *Théorie des Nombres* and *Eléments de Géométrie,* and particularly distinguished himself by his investigation of the difficult subject of the attraction of the elliptic spheroïd, and of a method for determining the paths of comets.

Leger, Lieger, (*lēj'ŭr, lē'jŭr,*) *n.* A minister resident at a foreign court. (R.) "Thou art Heaven's *lieger* here." (*Herbert.*) — A leger. See Ledger.

—*a.* [Fr.] Slim; slender; buoyant; — hence, airy; trifling; immomentous. — Fixed or resident in a place.

Leger ambassador, or *minister.* See the noun.

Leger line. (*Mus.*) One of those short lines above or below the staff which are used to express those notes which extend beyond the five lines of the staff.

Legerdemain', *n.* [Fr. *léger,* light, nimble, active, from Lat. *levis,* and *de main* — *de,* of, and *main* = Lat. *manus,* hand.] Sleight of hand; a deceptive act of manipulative skill performed with dexterity of illusion; a trick of manual art, done so adroitly that the manner or mode of performance eludes perception; jugglery; prestidigitation.

Legerdemain'ist, *n.* One who practises or professes the art of legerdemain; a prestidigitator; a juggler; a conjurer.

Legged, (*lĕgd,*) *a.* [From *leg.*] Having legs: — employed in composition; as, a three-*legged* stool, a one-*legged* veteran.

Leg'giadro, (*lej-jī-ä'dro.*) [It.] (*Mus.*) In a rattling, lively manner.

Leg'gins, Leg'gings, *n. pl.* A garment to enclose the legs; gaiters; spatterdashes; knickerbockers; as, *leggings* of deerskin.

Leg'horn. [It. *Livorno;* Fr. *Livourne.*] A walled city and sea-port of Italy, prov. Pisa, on the Mediterranean Sea, 62 m. W.S.W. of Florence. It is, in general, a neat, clean, and well-built place; the N. part of the city, called *Venezia Nova,* is intersected by canals, and comprises wharves, warehouses, and other commercial edifices. *L.* has an outer and inner harbor, and a good roadstead. The outer harbor, protected by a fine mole, is unfit for vessels of more than 400 tons burden, and the inner is only adaptable to still smaller craft. The roadstead outside is, however, suited to the anchorage of large ships, although exposed to heavy seas during winds from the south. A light-house, 170 ft. above sea-level, commands the harbor. Among the chief articles of manufacturing industry are woollen cape, straw hats, glass, paper, soap, starch, rope, leather, &c. Ship-building is extensively engaged in. It has besides a large export and import trade with the principal commercial countries of Europe. *L.* was made a free port about the middle of the 16th cent., and owes much of its eminence and prosperity to the fostering care of the Medici family, and the subsequent rulers of Tuscany. *Pop.* (1897) about 106,500.

Leg'horn-fowl', *n.* An elegant and useful variety of fowl, developed by American breeders, and much resembling the Hamburg. — See Fowl.

Leg'horn-plait', *n.* A kind of straw plait used in the making of hats and bonnets; — originally made at Leghorn, Italy.

Legibility, (*lej-i-bil'i-te,*) *n.* Legibleness; state or quality of being legible.

Leg'ible, *a.* [Lat. *legibilis,* from *lego,* to read.] That may be read; possessing letters or figures that may be distinguished by the eye; as, a *legible* handwriting. — That may be deciphered or comprehended by apparent marks or indications.

"People's opinions of themselves are *legible* in their countenances." — *Collier.*

Leg'ibleness, *n.* Legibility; state or quality of being legible.

Leg'ibly, *adv.* In such a manner as may be read; as, a letter *legibly* written.

Legion, (*lē'jun,*) *n.* [Fr.; Lat. *legio, legionis,* from *lego,* to gather, to select, to choose from.] (*Roman Hist.*) The name given to a division of the Roman army, which corresponded, to a great extent, both in numbers and constitution, to a brigade of the American army. The legion was first instituted by Romulus, shortly after the foundation of Rome. As the rising State was chiefly composed of fugitives from various parts of Italy, and men who were proscribed in their own country for criminal and political offences, and as its rapid growth soon provoked the jealousy of the surrounding States, it was necessary to give a military organization to the inhabitants of the new city, and Romulus accordingly enrolled three bodies of 3,000 men each for active service, each of which was levied from one of the three tribes to which he had divided his people. These bodies he called legions, and each was commanded by an officer of high rank, styled a *prefect* (from *præficere,* to set before or over) or *tribune,* whose rank may be considered as equivalent to that of a general officer in our own service. The legion was originally divided into smaller bodies of 100 men each, called *manipuli,* or maniples; but, subsequently when the strength of the legion was increased, each legion was divided into ten cohorts, each cohort into three maniples, and each maniple into two *centuriæ,* or centuries. Considering a Roman legion to correspond to a brigade in our own army, each cohort would be equivalent to a regiment, though not equal to it in point of numbers, and each century would be equivalent to a company. Each century, which varied in numbers at different times, but which consisted of 100 men, like the original maniple, when at its maximum strength, was commanded by a centurion, who had under him two sub-centurions and a standard-

Fig. 1548. — A ROMAN LEGIONARY.

bearer, besides decurions. In these we find the equivalents to our own captain, lieutenants, and non-commissioned officers of a company. Two centuries composed a maniple, and the senior centurion of the maniple, styled *centurio prior,* probably took command of the entire body, as the senior captain takes the command of two or three companies of volunteers enrolled in the same town, whose complement is not sufficient to entitle them to have a major in command, under the title of captain-commandant. Three maniples composed a cohort. Thus, a legion consisted of ten cohorts, which were divided into thirty maniples, and again subdivided into sixty centuries; and as each century consisted of 100 men, the maximum strength of a legion was 6,000. Each centurion carried a vine rod as the emblem of his authority, and the senior centurion of the entire legion was called *centurio primi pili,* and took rank as a knight, or one of the *equites* (see Equites), in virtue of his position. To his care the principal standard, or eagle of the legion, was confided. In addition to the main body of infantry, about 300 horse-soldiers were attached to each legion, who were drawn up on the wings when the legion was about to enter into action. These were divided into ten *turmæ,* or troops of thirty men each. The foot-soldiers composing a legion were also distinguished as *hastati, principes,* and *triarii,* of which the last named were veteran troops. When the legion was drawn up in order of battle, the hastati occupied the first rank, in ten bodies, each consisting of ten ranks of sixteen men each. The principes were drawn up in rear of the hastati, in bodies of similar extent, the triarii being in the rear of the principes, but in six ranks of ten men each. Thus, the hastati were first engaged in the battle, the principes forming, as it were, the supports, and the triarii the reserves. Each cohort had its regular number of these three classes of troops. When in battle-array, the Roman soldiers were drawn up in open order, that each man might have room to use his weapons. Besides these, who were armed with sword and javeline, a long buckler, helmet, cuirass, and greaves, each cohort had a certain number of *velites,* or light-armed troops, who had no particular station, but acted as skirmishers, being sent in any direction whence they might harass the enemy during his advance. These were armed with slings, light darts, short swords, and circular bucklers. The number of men comprising a legion seems to have varied at different times, but its strength appears to have been as mentioned above, dur-

ing the most famous wars of the Roman empire. Up to the time of Marius, service in a legiou was sought as an honorable occupation, and men of some means were alouo eligible; but Marius enlisted slaves, and turned the legious into corps of a purely mercenary army. At the same period, the manipular formation was aholished, the three lines were assimilated, and the legion was divided into 10 cohorts, each of 3 maniples. Soon the cohorts were raised to 600 men, making the legion 6,000 infantry, besides cavalry and velites. It was ranged in 2 lines of 5 cohorts each; but Cæsar altered the formation to 3 lines, of respectively 4, 3, and 3 cohorts each. During the latter empire, the legion became complex and unmanageable; many sorts of arms being thrown together, and balistæ, catapults, and onagers added by way of artillery. Having so degenerated from its pristine simplicity and completeness, the legionary formation was soon overthrown amid the incursions of the victorious barbarians.

—A military force; military bands.—A multitude; a great number.

Legion of Honor. (*Her.*) An order instituted by Napoleon I., when First Cousul of France, for merit, both military and civil. The order cousisted, under the empire, of grand crosses, grand-officers, commanders, officers, and legionaries. They were divided into sixteen cohorts, each of 407 members; but the total number was afterwards much increased. Pensions, from 250 to 5,000 francs per annum, were attached to these distinctions. After the restoration of Louis XVIII., the order underwent some modificatious in its constitution, and its members were reduced to a smaller scale. But among the first acts of Napoleon III. was the reconstitution of this celebrated Order on an extended basis. The legion now consists (beginning with the lowest grade) of knights or chevaliers, 25,000 in number; officers, of whom there are 4,000; commanders, 1,000; grand-officers, 200; and grand-crosses, 70. To attain to the higher grades it is necessary, at least to natives of France, to pass through the lower. A fixed number of years are required for each promotion, a campaign year counting for two. The highest functionary is the grand chancellor. Each of the military members receives a pension; these are now respectively 250, 500, 1,000, 2,000 and 3,000 francs for the five grades. Foreigners are eligible to membership, but they are not counted in their respective classes. Three-fifths of the members of each class must be soldiers or sailors. The decoration at present is a white enamelled cross, hearing on its obverse a woman's head, with the words *République Française*; on the reverse, two cross flags, and the motto, *Honneur et Patrie*. The cross is suspended by a wreath composed of oak and laurel leaves. The ribbon of the order is of watered silk.

Fig. 1549.

Le'gionary, *a.* [Fr. *légionnaire.*] Relating to a legion or legions; comprising a legion or legions; as, a *legionary* force.—Containing a great or indefinite number.

"Too many . . . make up the *legionary* body of error."
Sir T. Browne.

Le'gionary, *n.* One who belongs to a legion.

Le'gionry, *n.* A force or body of legions. (R.)

Legislate, (*lĕj'is-lāt,*) *v. n.* [Lat. *lex, legis,* a law, and *fero, latum,* to bear, to carry, to bring, to produce.] To make, enact, or pass a law or laws.

Legisla'tion, *n.* [Fr.] Act of legislating; act of making or passing a law or laws; the enactiug of laws.

Leg'islative, *a.* [Fr. *législatif.*] Making, giving, or enacting laws; as, a *legislative* body or assembly.—Relating or pertaining to the passing of laws; suitable to laws.

"The poet is a kind of law-giver, and those qualities are proper to the *legislative* style."—*Dryden.*

—Performed by enacting; as, a *legislative* decree.

Leg'islatively, *adv.* In a legislative or law-giving manner.

Legislative Assembly, *n.* (*French Hist.*) See NATIONAL ASSEMBLY.

Leg'islator, *n.* [Lat.; Fr. *législateur.*] A law-giver; the law-maker of a sovereign state or kingdom; one who makes and passes laws for a state or community.—A member of a legislature.

Legislato'rial, *a.* Having reference or pertaining to a legislature.

Leg'islatress, Leg'islatrix, *n.* A female law-maker.

Legislature, (*lĕj'is-lāt-yur,* *n.* [Fr.; Sp. *legislatura.*] The legislative body forming the supreme power of a constitutional state; the body or assembly of men in a state or kingdom invested with power to enact and repeal laws.—By the Constitution of the U. States, art. i., § 1, all legislative powers granted by it are vested in a National Congress, consisting of a Senate and House of Representatives. It requires the consent of a majority of each branch of the legislature in order to enact a law, and then it must be approved by the President of the United States, or, in case of his refnsal, by two-thirds of each House.

Le'gist, *n.* [Fr. *légiste.*] One skilled in the laws.

Legitimacy, (*le-jĭt'i-ma-se,*) *n.* [Fr. *légitimité.*] Conformity to or accordance with law.—Lawfulness of birth; —in contradistinction from *bastardy* or *illegitimacy.*—Genuineness; reality; purity; —opposed to *spuriousness*; as, "the *legitimacy* of marine bodies." (*Woodward.*)—Logical sequence; necessary or natural deduction; as, the *legitimacy* of an inference.—Conformableness of an object, action, or institution with established laws; as, the *legitimacy* of a government.

Legit'imate, *a.* [Fr. *légitime;* Lat. *legitimus,* from *lex, legis,* a law.] Conformable to, or accordant with, law.—In accordance with established law; as, a *legitimate* treaty.—Real; genuine; veritable; not false or spurious; as, a *legitimate* line of succession.—Born in wedlock; lawfully begotten; as, a *legitimate* heir, a *legitimate* child; —in contradistinction to *bastard* or *illegitimate.*—Followed by logical deduction or regular sequence; as, a *legitimate* effect.—Accepted and established as in accordance with rule or custom; as, a *legitimate* dogma.

—*v. a.* [Fr. *légitimer.*] To render legitimate; to invest any one with the rights of a lawful heir; to legitimize; also, to convey the rights of a legitimate child to one that was not born in wedlock.—To legalize; to make lawful.

Legit'imately, *adv.* In a lawful or legitimate manner; genuinely.

"Difficulties prove a soul *legitimately* great."—*Dryden.*

Legit'imateness, *n.* State or quality of being legitimate; legality; lawfulness.

Legitima'tion, *n.* [Fr.; L. Lat. *legitimatio.*] Act of rendering legitimate, or of investing an illegitimate child with the rights of one born in wedlock.—Legitimate birth. (R.)

Legit'imatist, *n.* See LEGITIMIST.

Legit'imist, *n.* [Fr. *légitimiste.*] An upholder of legitimate power or authority; a supporter of divine or hereditary right.

(*French Hist.*) In France, an adherent of the legitimate line of kings, represented by the elder branch of the Bourbons, dethroned in the person of Charles X., in 1830, and whose present heir-male is the Duc de Bordeaux, (*q. v.*)

Legit'imize, *v. a.* To make lawful; to render legitimate.

Leg'less, *a.* Having no legs.

Le'go-lit'erary, *a.* Having reference to the literature of law.

Le Grand, in *Iowa,* a post-township of Marshall co.; *pop.* 1,540.

Legule'ian, *a.* [Lat. *leguleius,* lawyer, from *lex,* law.] Legal; lawyer-like; as, "*leguleian* barbarism."—*De Quincey.*

Legume', Legu'men, *n.* [Fr.; Lat. *legumen,* from *lego,* to gather.] (*Bot.*) A one-celled, one- or many-seeded, two-valved, superior fruit, dehiscing by a suture along both its face and its back, and bearing its seeds on the ventral suture only. It differs from the follicle only in dehiscing by two valves. Sometimes it is indehiscent, as in *Cassia fistula,* &c.; but the line of dehiscence is in such species indicated by the presence of sutures. Fig. 1550 represents a legume of a Sweet Pea, already dehiscent.

Fig. 1550.

—*pl.* Pulse; peas: beans, &c.

Legu'men, *n.;* Lat. *pl.* LEGUMINA; Eng. *pl.* LEGUMENS. [Lat.] See LEGUME.

Legu'mine, *n.* [Fr., from Lat. *legumen.*] (*Chem.*) An albuminoid matter existing in leguminous plants. It is an important flesh-forming constituent of peas, beans, and other leguminous or *pod* vegetables.

Legu'minous, *a.* [Fr. *légumineux.*] Pertaining to legumes or pulse; consisting of pulse.

(*Bot.*) Applied to plants bearing legumes or pods.

Legu'minosæ, *n. pl.* (*Bot.*) The name given by de Jussieu to the order of plants called *Fabaceæ* by Lindley.—See FABACEÆ.

Lehi. (*Script.*) A place in Judah, where Samson was enabled to slay one thousand Philistines with the jawbone of an ass, and where, in answer to his petition, a fountain sprung up to relieve his thirst. (*Judg.* xv. 9–19.)

Lehi City, in *Utah,* a post-village of Utah co., on the Union Pacific R. R. *Pop.* (1897) 1,150.

Lehigh (*lee'hī*), in *Pennsylvania,* a river formed by several branches rising in Monroe, Pike, and Luzerne cos., and flowing a general S. and S.E. course, enters the Delaware river at Easton. Its Indian name was *Lechay. Length,* about 90 m.

—An E. co.; *area,* about 350 sq. m. *Rivers.* Lehigh river, and Little Lehigh, Jordan, Copley, and Sancon creeks. *Surface,* finely diversified; *soil,* in the valleys fertile. *Min.* Iron and coal. *Cap.* Allentown. *Pop.* (1890) 76,631.

—A township of Northampton co. *Pop.* 4,000.

Lehigh Gap, in *Pennsylvania,* a post-village of Carbon co., about 80 m. E.N.E. of Harrisburg.

Lehighton (*le-hī'tŭn*), in *Pennsylvania,* a post-borough of Carbon co., on Leh. Valley R. R. *Pop.* (1897) 3,150.

Lehman (*lee'man*), in *Pennsylvania,* a post-township of Luzerne co. *Pop.* (1897) 1,120.

Lehunt'ite, *n.* [From Capt. *Lehunt,* the discoverer.] (*Min.*) A compact variety of Natrolite, found at Gleuarm, in Antrim.

Leib'nitz, GOTTFRIED WILHELM, BARON VON, an eminent German philosopher, theologian, and mathematician, B. at Leipsic, in 1646. He was educated at the university of that city, and early gave evidence of that genius which was to render him so distinguished. His studies were very varied, law and mathematics for a time holding the chief place; but philosophy and theology gradually attracted him, and engaged his most earnest attention. He first appeared as an author at the age of 18, and two years later graduated LL.D. at Altdorf, where he refused the offer of a professorship. He then lived for a short time at Nürnberg, and was secretary to a society of alchemists. He then removed to Frankfort on being appointed councillor to the elector of Mentz, a post which he held till 1676. Visiting Paris and London in 1672, he became acquainted with the leading men of science of the age, among them Sir Isaac Newton, Robert Boyle, Henry Oldenburg, Huyghens, Malebranche, and Cassini. In 1676 he was appointed aulic councillor and librarian to the duke of Brunswick-Lüneburg. About this period he invented an arithmetical machine, and made the discovery of the Differential Calculus; Newton at the same period inventing his similar method of Fluxions. Having undertaken to write the history of the House of Brunswick, he made extensive travels for the purpose of collecting materials, and soon after published several historical and political works. In 1692 *L.* took a leading part in a project of union of the Catholic and Protestant churches, and had a correspondence with Bossuet respecting it. But the scheme was found impracticable. Some years later he was called to Berlin, and named president of the newly founded Academy of Sciences. He was consulted by Peter the Great on his plans for the advancement of civilization in his empire, and received from him a pension with the title of councillor of state. Similar honors were bestowed upon him by the German emperor Charles VI. *L.* passed the last years of his life at Hanover. The writings of *L.* are very numerous, and treat of a wide variety of subjects. The most important are, in mathematics—*Theoria Motus Abstracti et Motus Concreti,* which was written against the views of Descartes; *Régles du Calcul Differentiel,* published in 1684; in philosophy—*De Arte Combinatoria;* the *Essai de Theodicée,* in which he builds up his system of Optimism, maintaining that the world as it is constituted is the best of all possible worlds; the *Monadologie,* or exposition of his original theory of MONADS, *q. v.,* the central point of his system of philosophy; *Principia Philosophica; Harmonie Pre-établie; Nouveaux Essais sur l'Entendement Humain,* his answer to Locke's essay on the same subject; and *Meditationes de Cognitione, Veritate et Ideis;* and in history and law —*Quæstiones Philosophicæ ex Jure Collectæ; Nova Methodus docendi discendique Juris; Scriptores rerum Brunsvicensium,* and *Codex Juris Gentium Diplomaticus.* There are also large collections of letters of *L.,* who carried on a very extensive correspondence. Among these are his letters to John Bernonilli, in 2 vols. 4to., and his correspondence with Dr. Clarke on the principles of Natural Philosophy and Religion. The aim of *L.* was to apply to philosophy the method of demonstration, and to reconcile philosophy and theology; he maintained the existence of innate ideas and necessary truths, and our capacity of discovering them; and though he did not present his system as a whole, he became the founder of a new school of philosophy, and gave an extraordinary stimulus to metaphysical studies by "the infinitude of bright ideas, hints, and conjectures which were perpetually scintillating from his brilliant mind." He D. at Hanover in 1716, and was buried at Leipsic, his monument there bearing the inscription—"Ossa Leibnitii."

Leicester, (*lĕs'ter,*) ROBERT DUDLEY, EARL OF, an English noble and favorite of Queen Elizabeth, B. 1531. On the accession of Elizabeth to the throne, Dudley met with rapid preferment, winning the queen's regard by his courtly address and handsome person. In 1560, his first wife, Amy Robsart, died, not without suspicion of violence. (See Sir W. Scott's *Kenilworth.*) In 1564 Dudley became Chancellor of Oxford University and Earl of Leicester. In 1575 he entertained Elizabeth at his castle of Kenilworth (*q. v.*) with almost royal magnificence. In the year following *L.* secretly married the widow of the earl of Essex, a step never forgiven by Elizabeth. In 1588, on the threatened invasion of the Spanish Armada, *L.* was appointed lieuteuant-general of the kingdom. D. in the same year.

Leicester, (*les'ter,*) a co. of England, nearly in its centre, immediately S. of cos. Derby and Nottingham; *area,* 803 sq. m., or 514,164 acres, of which about 480,000 are arable, meadow, and pasture. It is noted for its breed of cattle, sheep, and horses. It also produces extensive crops of barley, wheat, and oats. *Manuf.* Consists principally of wool, which is converted into hosiery, shirts, &c. *Min.* Iron, lead, coal, and lime. Principal towns, Leicester, Loughborough, Hinckley. *Rivers.* Trent and Soar. *Pop.* (1897) 377,250.

LEICESTER, a town of England, cap. of the above co., on the Soar, 100 m. N.N.W. of London. It is the center of the finest wool district in England. *Manuf.* Woollens, hosiery, laces, boots and shoes. *Pop.* (1897) 181,100.

Leicester (*les'ter*), in *Massachusetts,* a post-town and township of Worcester co., about 54 miles W. by S. of Boston. *Pop.* (1895) 3,239.

Leicester, in *New York,* a thriving township of Livingston co.

Leicester, in *Vermont,* a post-township of Addison co. *Pop.* (1897) 600.

Leichlingen (*lĭshe'ling-en*), a village and district of Rhenish Prussia, on the Wupper, 12 m. S.E. of Dussel-

dorf. *Manuf.* Cutlery and woollen cloths. *Pop.* (1897) about 13,000.

Leidy, Joseph, M.D., LL.D., physician, naturalist, and teacher of anatomy, was born in Philadelphia, Pa., Sept. 9, 1823. He studied medicine, and graduated in the University of Pennsylvania in 1844. In 1853 he was appointed professor of Anatomy in that institution; and he also held the professorship of Natural History at Swarthmore College, near Philadelphia. For many years he took an active interest in the Academy of Natural Sciences, of his native city, and after 1846 held the position of its chairman of curators; being its president from 1883 until his death in 1891. Prof. Leidy's investigations were mainly in the departments of anatomy, zoölogy, and palæontology. The catalogue published by the Royal Society of London gives a list of 777 of his scientific papers up to 1860, after which he largely added to the number. Most of them were published in the *Contributions to the Knowledge of the Smithsonian Institution*, the *Journal and Proceedings of the Academy of Natural Sciences*, and the *Transactions of the American Philosophical Society*. The most important of his works are: *A Flora and Fauna within Living Animals; Memories of the Extinct Sloth, Ox, and Peccary Tribes of North America; The Ancient Fauna of Nebraska; The Cretaceous Reptiles of the United States; The Extinct Mammalian Fauna of Dakota and Nebraska, together with a Synopsis of all the Extinct Mammals of North America* (a quarto of 472 pages accompanied with 30 plates), and *Fresh-Water Rhizopods of North America*. Died April 30, 1891.

Leidy (*lī'dee*), in *Pennsylvania*, a post-township of Clinton co. *Pop.* (1897) 700.

Leigh (*lā*), a town of England, Lancaster co., 13 m. W. of Manchester. *Manuf.* Fustians, cambrics, and muslins. There are also extensive coal mines, and flour mills in the vicinity. *Pop.* (1897) 29,200.

Leighton Buzzard (*lai'ton buz'zard*), or, more properly, Leighton-Beau-desert, a town of England, co. Bedford, near the Ouse, 35 m. N.N.W. of London. *Manuf.* Lace and straw-plait, and it has considerable trade in corn and timber. *Pop.* (1897) 6,750.

Leighton (*lā'-tŏn*), in *Alabama*, a P. O. of Colbert co.

Leighton, in *Iowa*, a post-village of Mahaska co., about 50 m. E.S.E. of Des Moines.

Leighton, in *Michigan*, a township of Allegan co. *Pop.* (1897) 1,260.

Leighton, in *Minnesota*, a village of Ilennepin co., about 20 m. W. by N. of St. Paul.

Lein'bach's, in *Penna.*, a post-village of Berks co.

Leinster (*lens'ter*), the E. prov. of Ireland, bordering on the St. George's Channel and the Irish Sea. *Area*, 4,876,211 acres. At the period of the invasion by England (in 1170) this prov. formed the kingdoms of *L.* and Meath. It now comprises the cos. of Carlow, Dublin, Kildare, Kilkenny, King's and Queen's, Longford, Louth, Meath, Westmeath, Wicklow and Wexford. The country is generally level, but in some places along the coast rugged and craggy. The best harbors are Dublin, Drogheda, Dundalk, and Carlingford. *Rivers.* Shannon, Barrow, Nore, Boyne, Liffy, and Slaney. It contains also large tracts or peat fields, the principal being known as the Bog of Allen. The soil, which is considered the most fertile in Ireland, produces the usual cereals, also flax. *Min.* Copper, lead, sulphur, and coal; also some silver and gold. *Pop.* (1897) about 1,175,000.

Leinster, Mount, a mountain of Ireland in Leinster, about 5 m. S.W. of Newtonbarry. *Height*, 2,610 ft.

Leiophyl'lum, *n.* [Gr. *leios*, smooth and *phyllon*, leaf.] (*Bot.*) A genus of plants, order *Ericaceæ*. They are small, smooth shrubs with erect branches; leaves alternate, entire, oval, coriaceous; corymbs terminal; flowers white.

Lei'perville, in *Pennsylvania*, a village of Delaware co., about 12 m. S.E. of Philadelphia.

Leipo'a, *n.* (*Zoöl.*) A genus of Rasores birds, family *Megapodidæ*, the only known species of which is *Leipoa Ocellata*, the "Native Pheasant" of the colonists of Western Australia; which in its habits is very like the domestic fowl. It deposits its eggs in a mound of sand about three feet high, the inside being lined with layers of dried leaves, grasses, &c. The bird never sits on the eggs, but leaves them to be hatched by the heat of the sun's rays. The natives are very fond of the eggs, and rob the mounds twice or thrice in a season. These mounds resemble ant-hills; and, indeed, ants often abound in them. Captain Grey observes that the nests are at least nine feet in diameter and three feet high. By the natives this bird is named *Ngowee*.

Fig. 1551.
OCELLATED LEIPOA, (*L. ocellata.*)

Leipothym'ic, *a.* See Lipothymic.

Leippa, or **Leipa,** (*lipe'pa,*) a town of Austria, in Bohemia, on the Polzen, 24 m. E.N.E. of Leitmeritz. *Manuf.* Woollens, cottons, glass, and earthenware. *Pop.* 7,500.

Leipsic, (*lip'zik.*) [Ger. *Leipzig.*] A celebrated commercial city of N. Germany, kingdom of Saxony, on the White Elster (a tributary of the Saale), 60 m. W.N.W. of Dresden, and 20 S.E. of Halle. The appearance of the city at a distance is not imposing; it stands in a wide plain, which, though fertile, is unvaried by a single eminence to relieve its sameness. It occupies but a small extent of ground compared with its population, the houses being very lofty; many of them six stories high, independent of three or four additional in the pyramidal roof. Few cities exhibit so much of the carved masonry which characterized the old German style of building, joined with so much stateliness. The streets are narrow, but the environs markets and squares are large, clean, and neat. *L.* is far inferior in elegance and beauty to Dresden; but is better built than Frankfort, and has a decided air of comfort and respectability. The great market-place, in the centre of the city, is rendered one of the most striking squares in Europe, by the quaint architecture of its surroundings. *L.* is preeminently a literary centre; besides possessing a noble university and various fine libraries and scientific institutions, it is the grand emporium of the German book-trade. It is the custom for every European house dealing in German books to have its agent at *L.* The great sale of new works takes place at the Easter fair. *L.* is the great mart of Central Europe for all kinds of merchandise. Among its chief manufactures are silk goods, stockings, leather, hats, playing-cards, paper hangings, tallow-chandlery, gold and silver wares, liqueurs, &c. *Pop.* (1891) 357,147. *L.* and vicinity was, in Oct., 1813, the scene of one of the most tremendous battles of modern times. Napoleon I. having concentrated at this point an army of about 135,000 men, was attacked on the 16th by the allies under Prince Schwartzenberg, Blücher, and other generals, accompanied by the emperors of Russia and Austria and the king of Prussia. The allied force amounted to at least 250,000 men. The struggle, which was fierce, obstinate, and bloody, terminated at nightfall without advantage to either party. The next day passed over with the same results. On the 18th, shortly after the renewal of the fighting, a Saxon brigade deserted the French, and went over to the allies, which, combined with their superior force, gave the latter an advantage that all the genius of Napoleon, seconded by the valor and devotion of his troops, could not counteract. Though the French maintained their ground during the day, a retreat became indispensable; and owing to the accidental blowing up of the bridge, a part of the French army was cut off; thus, Napoleon lost 25,000 men, who fell into the hands of the allies as prisoners, exclusive of the far greater number who fell in the previous battles. Prince Poniatowski ("the last of the Poles"), after displaying prodigies of valor, lost his life in the retreat on the 19th, having been drowned in attempting to cross the Elster. This great battle completely emancipated Germany from the French yoke.

Leipsic, (*leep'sek,*) in *Delaware*, a post-village of Kent co., about 8 m. N.N.E. of Dover.

Leipsic, in *Indiana*, a post-office of Orange co.

Leipsic, in *Ohio*, a post-village of Putnam co., about 45 m. S.S.W. of Toledo.

Leipzig, in Saxony. See Leipsic.

Leisure, (*lē'zhur,* or *lēzh'ur,*) *n.* [Fr. *loisir*, from O Fr. *loist*, it is allowed, from Lat. *licet*, it is permitted.] Freedom from labor, occupation, or business; time free from employment; spare or vacant time.

"You enjoy your quiet in a garden, where you have the *leisure* of thinking."—*Dryden.*

—Time which may be employed in any specific manner; opportune convenience; ease.

At leisure, not busy; having one's time unoccupied; as, he is *at leisure* always in the afternoons.—In a leisurely manner; opportunely.

"Married in haste, we may repent at *leisure*."—*Congreve.*

Leis'urely, *a.* Done at leisure; not hasty; deliberate; slow; as, a *leisurely* walk.

—*adv.* At leisure; not in haste or hurry; slowly; deliberately; as, to move *leisurely*.

Lei'tersburg, in *Maryland*, a post-village of Washington co., about 107 m. N.W. of Annapolis.

Leith, (*leeth,*) a seaport-town of Scotland, co. of Edinburgh, on the Frith of Forth, at the mouth of the river Leith, 2 m. N. of Edinburgh; Lat. 55° 58′ 9″ N., Lon. 3° 10′ 5″ W. *L.* is one of the most important seaports of Scotland. It carries on an extensive trade with the Baltic, and other countries of Europe; also with the W. Indies and America. Ship-building is carried on to a considerable extent.

Leiths'ville, in *Pennsylvania*, a post-office of Northampton co.

Leit'meritz, a town of Austria, in Bohemia, on the Elbe, 34 m. N.N.E. of Prague; *pop.* 8,200.

Leitrim, (*lē'trim,*) a co. of Ireland, prov. of Connaught, bordering on the Bay of Donegal; *area*, 613 sq. m., or 392,363 acres, of which about 25,000 acres are covered with water, including Lough Allen near the source of the Shannon. *L.* is wild, and generally mountainous, but in the valleys and low lands the soil is very fertile. *Rivers.* Shannon, Blackwater, and Bonnet. *Lakes.* Allen, Melvin, and Gill. *Prod.* The usual cereals, especially oats. *Min.* Iron, lead, and copper.

—A village of Ireland, in the above co., on the Shannon, about 3 m. N.E. of Carrick; *pop.* 406.

Lekain, (*leh-kān',*) Henri Louis Cain, a French tragedian, b. in Paris, 1728, was the son of a goldsmith, and studied in the College Magazin, where he imbibed a taste for the dramatic art. Voltaire aided him liberally with money and advice, and he appeared on the stage of the *Théatre Français*, where he secured such a popularity that his death was looked on by the patrons of the drama as a public calamity. His *Mémoires* were published by his son in 1801, and reprinted in 1825 under the supervision of Taima. D. 1778.

Le'land, Charles Godfrey, an American literateur, b. in Philadelphia, 1824. After graduating at Princeton Coll., N. J., and subsequently studying at the European universities of Heidelberg, Munich, and Paris, Mr. *L.* studied law in his native city, a pursuit which he soon relinquished for that of literature. He contributed largely to modern American journalism and serial literature, and made a decided hit, in 1869, with the series of grotesque (or, rather, burlesque) *Hans Breitmann Ballads*; the earlier instalments of which proved highly successful. Died March 20 1903.

Le'land, in *Illinois*, a post-village of La Salle co., abt. 68 miles W.S.W. of Chicago. *Pop.* (1897) 620.

Leland, in *Michigan*, a post-village of Leelanaw co., about 22 m. N. by W. of Traverse City. *Pop.* 475.

Leland, in *Oregon*, a post-village of Josephine co., about 40 m. N.N.E. of Kerby.

Lely, Sir Peter, a painter, b. at Soest, Westphalia, 1617. He studied under Grebber, at Haarlem, after which he went to England, where he, at first, painted landscapes and historical subjects; but, finding more encouragement given to portrait-painting, he turned his attention to that branch of his art, and became unrivalled in the graceful rendering of heads; the hands of his portraits were remarkably fine and elegantly turned. He was in great favor with Charles I. and Charles II., by the latter of whom he was knighted, and for whom he painted the voluptuous beauties of his court. D. in England, 1680.

Le Maire, a strait of S. America, separating Staten Island from Terra del Fuego. It is 20 m. wide, and free from obstructions. Discovered in 1616, by Le Maire, a Dutch navigator.

Le'man, *n.* [O. Eng. *levemon.*] A sweetheart of either sex; a gallant, but more frequently, a mistress;—generally used in a bad sense.

Le'man, (Lake of.) See Geneva, (Lake of.)

Lem'berg, a city of Austria, cap. of prov. of Galicia, on the Peltew, 185 m. S.E. of Cracow; Lat. 49° 50′ N., Lon. 24° E. It is one of the finest towns of Austria, and contains many beautiful churches and buildings, besides a university, with a library of 40,000 vols. Here is also another institute founded by Ossolinski, containing a library of 60,000 vols., and 1,200 MSS., chiefly of Polish literature. *Manuf.* Cotton and woollen stuffs, with dye-works, jewelry, &c. It is the chief trading-town of Galicia, and its position renders it the emporium for much of the produce of S. Russia, Moldavia, and Wallachia, in its transit to central Europe.

Lem'go, a town of Prussia, in Westphalia, on the Bega, 16 m. N.E. of Minden. *Manuf.* Woollens, linens, and meerschaum pipes. *Pop.* 4,900.

Lem'ing, *n.* (*Zoöl.*) Same as Lemming.

Lem'ington, in *Vermont*, a post-township of Essex co.; *pop.* about 300

Lem'ma, *n.* [Gr., a thing taken or assumed.] (*Math.*) A term used to denote a preliminary proposition taken as demonstrated for the purpose of being used in the demonstration of a subsequent proposition. Thus propositions in geometry may be taken as lemmas to prove some proposition in mechanics. In logic, a premise taken for granted is sometimes called a lemma.

Lem'ming, *n.* (*Zoöl.*) The *Myodes Norvegiens*, is a native of Norway and Finland. It belongs to the *Muridæ*, or Rat family (Fig. 1552). It is about five inches in length, with a tail about half an inch long, and is of a tawny color, variegated with black. In its habits the *L.* is extremely peculiar. It subsists entirely on vegetable food, and lives in shallow burrows under ground, in summer, and makes long passages under the snow in winter. In Baird's "Cyclopædia of the Natural Sciences," its peculiar habits are thus described:—"The most remarkable feature in the history of the *L.* is the periodical emigration the animals make from one part of the country to another. They descend in great bands from the mountains which divide Norland and Finmark, eating up everything before them. They pursue their course in a straight line, climbing walls and houses, and not avoiding man himself, should he stand in the way, but attempting to climb over him. Rivers and lakes are swum across, the band forming again on the other side, and corn and hay stacks are gnawn through. Like an army of locusts, they pass on, leaving a desolate track behind them, nor do they stop till they reach the sea, where thousands are drowned. During their march great numbers are destroyed by hawks, owls, weasels, &c.; and so great is the havoc thus committed, and by their being swept away in crossing rivers, and by similar casualties, that but few ever reach their native haunts again. The cause of these migrations is not well known, but it is supposed to arise from want of food. They appear to take place at irregular intervals; but, upon an average, about once in ten years. In former times, the lemmings were superstitiously regarded by the peasants of the countries they went over, the popular belief being that they fell from the clouds; and in such dread were they held, that it used to be the custom for priests to exorcise them with bell, book, and candle."

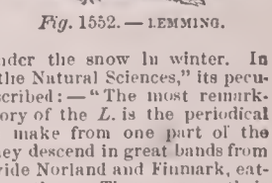


Fig. 1552.—Lemming.

Lem'na, *n.* (*Bot.*) The typical genus of the order Pistiaceæ, *q. v.*

Lemnian Earth, or **Sphragide,** (*lem'ne-an.*) a species of bole, or kind of earth, found in the island of Lemnos, in the Ægean Sea. Among the ancients this substance was celebrated as a sovereign remedy against poisons and the bites of venomous reptiles. It was also much used in medicine, not only as an alexipharmic, but also as an astringent, sudorific, vulnerary, &c. There were three varieties of Lemnian earth,—the white, the red, and the yellow; of which the two former were considered the most valuable. They were brought

from the Levant, mostly in the shape of small cakes, bearing the impression of a seal, from which circumstance it gained the name of *terra sigillata*. In external appearance it resembles a clay, with a smooth surface like agate, especially in recent fractures. It is of a fatty consistence, and has a soapy feel, adheres slightly to the tongue, and falls to pieces when immersed in water. When analyzed, it is found to consist of silica 66, alumina 14·5, soda 3·5, oxide of iron 6, water 8·5, with slight traces of magnesia and lime. Till within the present century, the Turks and Greeks believed that the Lemnian earth was possessed of imaginary virtues. The cups and goblets used by the sultan and chiefs were invariably made of this substance. The alexipharmic and astringent properties of this and other boles are now held in little or no esteem; but, used in the same manner as soap, it is still employed in order to remove impurities.

Lemnisca'ta of Bernoni'li, *n.* [Lat. *lemniscatus.*] (*Math.*) In geometry, a curve in the form of the figure 8, with both parts symmetrical, generated by the point in which a tangent to an equilateral hyperbola meets the perpendicular on it drawn from the centre.

Lem'nos, Stalimene, or **Limye,** an island of European Turkey, in the Grecian Archipelago, 40 m. W of the entrance of the Hellespont; Lat. 39° 53′ 46″ N., Lon. 25° 8′ 32″ E. *Area*, 150 sq. m. It is of an irregular quadrilateral shape, being nearly divided into two peninsulas by two deep bays or indentations of the sea. Port Paradise on its N., and Port St. Antonio on its S. side. The latter is a capacious harbor for the largest vessels. *Surf.* Irregular, and bears the strongest marks of volcanic action at an early period, which probably gave rise to the ancient pagan myth of Vulcan falling upon this island when hurled from heaven by Jupiter. The principal product of *L.* is the *Lemnian earth*, q. v. It is also fertile in oil, wine, corn, and fruit. *Pop.* estimated 13,500. *L.* is said to have been peopled by a Thracian tribe, whose descendants were expelled by the Tyrrhenian Pelasgians. It fell under the Persian yoke B. C. 505, and was subjected to Athens by Miltiades, B. C. 489. The Macedonians obtained possession for a short time, and it again passed under the Athenian yoke. It was celebrated for its labyrinth. See STALIMENE.

Lem'on, *n.* (*Bot.*) See CITRUS.

Lemonade', *n.* [Fr. *lemonade.*] A beverage consisting of lemon-juice mixed with water and sweetened.

Lem'on, in *Ohio*, a post-township of Butler co. *Pop.* (1897) about 11,000.

Lem'on, or **Lemond',** in *Pennsylvania*, a post-village and township of Wyoming co., about 6 m. N. of Tunkhannock. *Pop.* (1897) 640.

Lemond', in *Minnesota*, a post-township of Steele co. *Pop.* (1897) 750.

Lem'onfair River, in *Vermont*, a small stream flowing into Otter creek in Addison co.

Lem'on-grass, *n.* (*Bot.*) See ANDROPOGON.

Lem'on Grove, in *California*, a post-office of San Diego co., on S. D., C. & E. R. R.

Lemont', in *Illinois*, a post-village and township of Cook co., about 20 m. S.W. of the city of Chicago.

Lemont', in *Pennsylvania*, a post-village of Center co., on Penna. R.R. *Pop.* (1897) 350.

Lemonwier, (*lem'on-weer,*) in *Wisconsin*, a small river flowing into Wisconsin River in Juneau co.

—A post-village and township of Juneau co., about 3 m. S.E. of Manston.

Lem'on-yel'low, *n.* (*Painting.*) A beautiful light and vivid color. In body and opacity it is nearly equal to Naples yellow and masticot, but much more pure and lucid in color and tint, and, at the same time, not liable to change by damp, sulphurous, or impure air, or by the action of light, or by the steel paletto-knife, or by mixture of white lead or other pigments, either in water or oil.

Lem'pa, a river of Central America, enters the Pacific Ocean abt. 35 m. S.E. of San Salvador.

Lemp'ster, in *New Hampshire*, a post-township of Sullivan co.

Le'mur, Lemu'ridæ, *n. pl.* (*Zoöl.*) A genus and family including several of the lower quadrumanous animals of different structure and habits. However, it is now restricted to such as have the inferior incisors long, compressed, and sloping forward, and the lower canines approximated and of similar form and direction. "Each of the four extremities is provided with an opposable thumb; but the index digit of the hinder hand has its nail developed into a long, curved, sharp-pointed claw." The lemurs are natives of Madagascar.

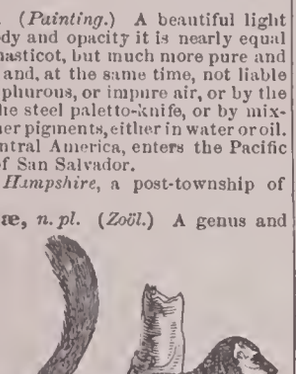


Fig. 1553. — LEMUR, (*L. catta.*)

Lemures, (*lĕm'yu-reez,*) *n. pl.* (*Roman Myth.*) A term applied to the ghostly souls of the dead, that tormented men in the night-time; whence they are also called *nocturnal* or *black*. A ceremony, called indifferently either *lemuria*, *lemuralia*, or *remuria*, used to be observed on the 9th, 11th, and 13th of May; and was thus celebrated on account of its supposed efficacy in laying the souls of the departed. The ceremony of the lemuralia is thus described in the "Popular Encyclopædia:" — "About midnight, when everybody was asleep, the head of the house arose, and went, barefooted, softly, and in silence, to a fountain; with a snap of the fingers, still keeping silent, he protected himself from the spectres. Having washed his hands at the fountain, he returned, took some black beans in his mouth, and, without looking round threw them nine times over his head, repeating each time — *Hæc ego mitto; his fabis me meosque redimo*, (These I send; with these beans I redeem me and mine.) He then washed his hands again, struck a hollow copper vessel, saying nine times, during the operation, in a supplicating tone — *Manes, exite, paterni*, (Ye souls of my ancestors, depart.) He now looked round, and the ceremony was finished. It was believed that the spirits came and collected the beans."

Lena, (*le-na',*) a river of Russia, in Siberia, rising in the mountains N.W. of Lake Baikal, govt. of Irkutsk; Lat. 42° 30′ N., Lon. 106° E. It flows first in a N.E. direction to the town of Yakootsk then N. to the Arctic Ocean. The entire length of the *L.* is 2,100 m., and it is the principal artery of trade of E. Siberia. Russian and Chinese goods, as well as Siberian furs, are exported from this river. Navigation is open on the *L.* from May till November. Near the town of Jakutsk its breadth is 6½ m. Its tributaries are the Kirenga, Vitirn, Olemkn, Aldan, and Bilui.

Le'na, in *Illinois*, a post-town of Stephenson co., about 13 m. N.W. of Freeport, on Ill. Cent. R.R. *Pop.* 1,350.

Len'apes, LENNI-LENAPES, or DELAWARES, one of the Algonquin tribes of American Indians, which about the early part of the 16th century occupied the valleys of the Delaware and Schuylkill. From a very early date, they were, according to tradition, preëminent for wisdom and valor, exerting a powerful influence over the neighboring tribes from the Hudson to the Chesapeake. This influence and power they upheld, till, by the rise of the Iroquois power, they lost their ascendency, and in a manner their independence; and at an assembly of the tribes, in 1774, near Lancaster, the Iroquois denied them the right to alienate their lands. They soon after removed to the banks of the Susquehanna. In 1751, they are found at Shamokin and Wyalusing, on the Susquehanna, where they became exposed to the violence both of the Iroquois and the whites. The English disregarded their peaceful attitude (they having been taught the principles of peace and non-resistance by Penn and Zinzendorf), considering them under French influence; and the Iroquois, offended at their neutrality, plundered their crops and devastated their villages. In 1781, nearly 400 Moravian Delawares, being driven from their settlement on the Muskingum by hostile Indians, were permitted to return the following year, when, their movements being considered hostile by the British frontiersmen, about 100 of them were massacred. In 1778, they made a treaty of amity with the U. States at Fort Pitt, in which the latter agreed to build a fort for their protection, which is the origin of Fort McIntosh. In 1795, they were parties, with the Wyandots, Shawnees, and other W. tribes, in the general pacification of Fort Grenville. These were further strengthened by the treaties of Fort Wayne, in 1803, and Vincennes, in 1804; and the frontiers were unmolested until the movement of Tecumseh, in 1811. They gradually continued westward, stopping for a time at White River, Indiana, and afterwards crossing the Mississippi, finally settled on fertile tracts in Kansas, where they possessed a large tract of land on Kansas river, cultivating the soil, raising horses, cattle, &c., and dressing in many respects in civilized costume, the U. S. holding in trust for them a considerable fund. Difficulties arising with the incoming emigrants to Kansas, due to the aggressions of the whites on the Indian lands, they were removed in 1870 to a reservation in the Indian Territory, where they are now incorporated with the Cherokees.

Len'awee, in *Michigan*, a S.E. co., adjoining Ohio; *area*, about 750 sq. m. *Rivers.* Raisin and Little Raisin rivers, and Tiffin's creek. *Cap.* Adrian. *Pop.* (1894) 48,541.

L'Enclos, (*lăng'klo,*) NINON DE, a celebrated French beauty, B. at Paris, 1615. *N.* lost her parents at the age of 15, and possessing great charms and a lively temper, she was followed by some of the greatest men, but would never unite herself in marriage. She was the friend of Molière and Fontenelle, and had a fine understanding; but it was truly observed of her, that, though she thought like Epicurus, she lived like Lais. She is, however, represented to have been perfectly unmercenary in her amours; and her wit and behavior were such, and so low the moral tone of the time, that even virtuous ladies courted her acquaintance. The rigid Mme. Scarron (afterwards Mme. de Maintenon) was her constant friend, and the queen Christina of Sweden, during her stay in Paris, was warmly attached to her, and wished her to take a place in her little court, but Ninon preferred independence. She was held in great respect by men of genius, who consulted her upon their works. There are a few genuine letters by her in the works of St. Evremond, but those under her name, addressed to Villarceaux, De Sévigné, &c., are fictitious. She had the extraordinary good fortune of retaining her beauty till the most advanced age. D. 1705.

Lend, *v. a.* (*imp.* and *pp.* LENT.) [A. S. *lænan*, to lend; Ger. *leihen*, to lend, to borrow; Icel. *lâna*. Akin to Heb. *lâvâ*, to borrow.] To grant to another for temporary use, on the express or implied condition that the thing shall be returned; to grant a thing to be used, on the condition that its equivalent in kind shall be returned; as, to *lend* money.

"They dare not give, and e'en refuse to *lend*." — *Dryden.*

—To afford; to grant; to furnish, in general, as aid; to permit to use for another's benefit, as one's name on a note.

"Cato, *lend* me for a while thy patience."—*Addison.*

—To let out on hire; to grant for temporary use, on condition of receiving a compensation at certain periods for the use of the thing, and an ultimate return of the thing, or its full value.

Lend'able, *a.* That may be lent.

Lend'er, *n.* One who lends, or lets out on hire; one who makes a trade of putting money to interest; — correlative of *borrower*.

"Neither a borrower nor a *lender* be."—*Shaks.*

Lend'ing, *n.* Act of lending.— That which is lent or supplied.

Le'ne, *a.* [From Lat. *lenis*, smooth.] (*Gram.*) Applied to a consonant of which it is not possible to prolong the sound.

—*n.* (*Gram.*) A name given to the consonants *p*, *b*, *t*, *d*, *k*, *g*, *s*, *z*, in contradistinction to *aspirate*, because their sound cannot be prolonged.

Length, *n.* [A. S. *lengthe*, from *leng*, long. See LONG.] Longitude; the extent of anything material from end to end; the longest line which can be drawn through a body, parallel to its sides; as, the *length* of a ship. — A superficial measure; a certain extent; extension; as, the horse won by three *lengths*. — Duration or space of time; long or indefinite continuance of time.

"May Heaven augment your bliss with *length* of days."—*Dryden.*

—Reach or extent; distance; as, to walk the *length* of a city. — Detail; full extent; amplification; as, he carries his spite to great *lengths*.—*At length*, in complete extent; diffused; as, to insert a notice *at length*; at last; in conclusion; finally.

Length'en, *v. a.* To elongate; to extend in length; to make longer; as, to *lengthen* a garment. — To draw out or extend in time; to protract; to continue in duration.

"Mirth and merriment *lengthens* life."—*Shaks.*

—To expand; to extend in amplitude; as, to *lengthen* a paragraph. — To protract or draw out in pronunciation; as, to *lengthen* a syllable; — sometimes preceding *out*.

—*v. n.* To grow longer; to extend in length.

"Life . . . drags at each remove a *lengthening* chain." *Goldsmith.*

Length'ily, *adv.* In a lengthy manner; at great length or diffused extent.

Length'iness, *n.* State or condition of being lengthy; prolixness.

Length'ways, Length'wise, *adv.* In a longitudinal direction; in the direction of the length.

Length'y, *a.* (*Comp.* LENGTHIER; *super.* LENGTHIEST.) Being long or immoderately long; prolix; not short.

Len'hartsville, in *Pennsylvania*, a post-borough of Berks co. *Pop.* (1897) 200.

Le'nience, Le'niency, *n.* State or quality of being lenient; gentleness; mildness; clemency; lenity.

Le'nient, *a.* [Lat. *leniens*, from *lenio*, to make smooth, soft, or mild, from *lenis*, akin to Gr. *leios*, smooth.] Softening; mollifying; mitigating; assuasive; — sometimes before *of*.

"*Lenient of* grief and anxious thought."—*Milton.*

—Laxative; emollient.

"Oils . . . are *lenient*, balsamic, and abate acrimony in the blood."—*Arbuthnot.*

—Clement; merciful; mild; gentle; as, a *lenient* master.

—*n.* (*Med.*) An emollient; an assuasive medicine.

Le'niently, *adv.* In a lenient manner; mildly; assuasively.

Len'itive, *n.* [Fr. *lénitif.*] That which softens or mitigates; a palliative; that which abates or assuages passion.

(*Med.*) A medicine or application that has the quality of easing or mollifying pain.

Len'ity, *n.* [Lat. *lenitas.*] Mildness of temper: tenderness; kindness; merciful treatment; — opposed to *severity*.

Lenkeran', Lankeran, or **Lenkoran,** a seaport-town of Russia, on the Caspian Sea, govt. of Baku. It is a town of considerable commercial importance for the trade between Russia and Persia, but the harbor is somewhat defective. *Pop.* 6,500.

Lenni Mills, in *Pennsylvania*, a post-village of Delaware co.

Lenoir (*le-nore'*), in *North Carolina*, an E. by S. county; *area*, about 408 sq. m. *Rivers.* Neuse river, and numerous smaller streams. *Surface*, nearly level; *soil*, not very fertile. *Cap.* Kinston. *Pop.* (1890) 14,879.

—A post-village, cap. of Caldwell co., about 180 m. W. of Raleigh. *Pop.* (1897) 740.

Lenoir's, in *Tennessee*, a post-village of Loudon co., 20 m. S. W. of Knoxville. Its post-office is LENOIR CITY.

Leno'ra, in *Minnesota*, a post-village of Fillmore co., 13 m. S. E. of Preston.

Len'nox, a S.E. co. of prov. of Ontario, bordering on Lake Ontario; *area*, about 170 sq. m.

Len'ox, in *Illinois*, a township of Warren co.

Lenox, in *Iowa*, a township of Iowa co.

Lenox, in *Massachusetts*, a post-town and township, cap. of Berkshire co., about 6 m. S. of Pittsfield. *Pop.* (1897) 2,950.

Lenox, in *Michigan*, a post-township of Macomb county.

Lenox, in *New York*, a post-township of Madison county.

Lenox, in *Ohio*, a post-township of Ashtabula co.

Lenox, in *Pennsylvania*, a post-township of Susquehanna co.

Lenox Ba'sin, in *New York*, a village of Madison co., about 120 m. W. by N. of Albany.

Len'ox Furnace, in *Massachusetts*, a village of Berkshire co.

Len'noxville, a village of Sherbrook co., province of Quebec, about 98 m. S.E. of Montreal.

Len'oxville, in *Pennsylvania*, a post-village of Susquehanna co.

Lens, (*lĕnz,*) *n.; pl.* LENSES. [Lat. *lens*, a lentil.] (*Opt.*) The name given to a piece of glass, or other transparent medium, which, from the curvature of their surfaces, have the property of causing the luminous rays which traverse them either to converge or diverge. According to their curvature, they are either spherical, cylindrical, elliptical, or parabolic. Those used in optics are always spherical. They are usually made either of *crown-glass*, which is free from lead, or of *flint-glass*, which contains lead, and is more refractive than crown-glass. The combination of spherical surfaces, either with each other or with plane surfaces, gives rise to 6 kinds of lenses, sections of which are represented in Fig. 1554. 4 are formed by 2 spherical surfaces, and 2 by a plane and a spherical surface. In Fig. 1554, A is a *double-convex*, B is a *plano-convex*, C is a *converging concavo-convex*, D is a *double-concave*, E is a *plano-concave*, and F is a *diverging concavo-convex*. The lens C is also called the *converging meniscus*, and the lens F the *diverging meniscus*. The arrow shows the direction in which the light is supposed to fall upon the lenses. The first 3, which are thicker at the centre than at the borders, are *converging;* the others, which are thinner in the centre, are *diverging*. In the first group, the double-convex

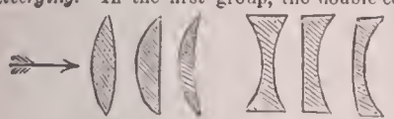


Fig. 1554.

lens only need be considered, and in the second the double-concave, as the properties of each of these lenses apply to all those of the same group. In lenses whose two surfaces are spherical, the centres for these surfaces are called *centres of curvature*, and the right line which passes through these two centres the *principal axis*. In the plano-concave or plano-convex lens, the principal axis is in the perpendicular let fall from the centre of the spherical face on the plane face. It was observed at an early period, that a transparent body of a spherical form had the property of collecting at the focus the parallel rays of light which fall on its surface. But it was remarked, at the same time, that the illumination at these foci was extremely feeble, in consequence of the thickness of the glass through which the light had to pass. This inconvenience is removed by taking only two small segments instead of the entire sphere; by which means, as the refraction takes place only at the surfaces, and not in the interior of the glass, the very same refraction of the rays is produced as when the whole sphere is used; and the thickness of the glass being greatly diminished, the rays pass through it in much greater number; and the intensity of the light in the focus is much more considerable. The rules for finding the focal distances of the different sorts of lenses

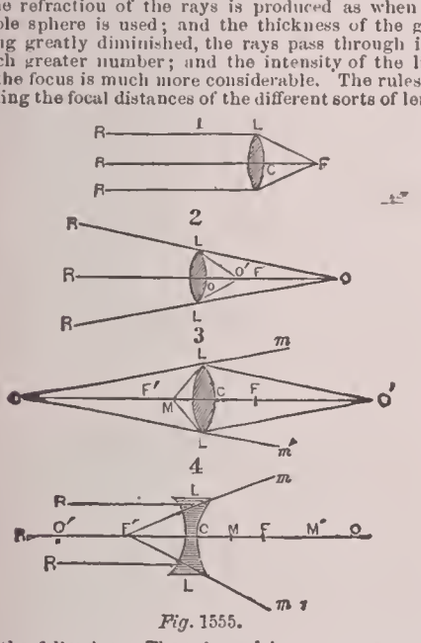


Fig. 1555.

are the following. They depend in some measure on the refracting power of the glass. We shall here suppose the index of refraction to be 1·500.—1. Rays of light R L, R L (1, Fig. 1555), falling on a convex lens in directions parallel to the axis, are refracted to the point F, which is called the principal focus. In a *double* and *equally* convex lens, the distance of F from C, the centre of the lens, is equal to the radius of the spherical surface. If the lens is *plano-convex*, the focal distance is equal to twice the radius of the spherical surface. If the lens is unequally convex, its focal distance is found by this rule:—Multiply the two radii of its surfaces, and divide twice that product by the sum of the radii. The quotient will be the focal distance required.—2. When the rays falling on a convex lens (2, Fig. 1555), whose principal focus is F, converge towards a point, O, their convergency will be hastened, and they will be refracted to a point, O', which is nearer the lens than the principal focus, F. The two points O and O' are called *conjugate foci;* and they are related to each other in such a manner that CO' is a fourth proportional to CO + CF, CO, and CF. Hence, when the point O is given, the conjugate focus O' will be found by this rule:—Multiply the principal focal distance CF by CO, and divide the product by the sum of those numbers. It is obvious, that, as the distance of O becomes greater, O' approaches to F; and when O is at an infinite distance, O' coincides with F.—3. Suppose diverging rays, issuing from a point O (3, Fig. 1555), to fall on a double-convex lens, of which the principal focus is F. In this case, they will be refracted to a point O'; and the conjugate foci O and O' are so related that CO' is a fourth proportional to CO—CF, CO, and CF. Hence, O' is found by the following rule:—Multiply the principal focal distance CF by CO, and divide the product by the difference between CO and CF. As the point of divergence O recedes from the lens, the point O' approaches nearer to F; and when O is at an infinite distance, O' coincides with F. As O approaches the lens, O' recedes from it. When O is at F', the focal distance, the refracted rays become parallel to the axis; and when O is between F' and C, as at M, the refracted rays diverge in the directions Lm Lm'.—4. The focal distance of a concave lens is the same as that of a convex one whose surfaces have the same curvature; and the rules for finding the conjugate foci are precisely the same. But the rays, instead of being collected, are scattered by passing through a concave lens; and the principal focus is on the same side as the point from which the rays proceed. Parallel rays R L, R C, R L (4, Fig. 1555), falling on the concave lens L L in the direction of the axis, become divergent, as if they proceeded from F', the principal focus. When the rays which fall on a concave lens converge towards the point F, they are refracted in the direction parallel to the axis. When the incident rays converge to a point O, beyond F, the refracted rays diverge as if they proceeded from a conjugate point O', also further from the lens than F'. And when the incident rays converge towards a point *m*, between C and F, the refracted rays will be convergent, and meet in a conjugate point M', on the same side of the lens with M. These conjugate foci are determined by the rules which have been given for convex lenses. Lastly, when incident rays diverge from a point, O', further from the lens than the principal focus, the refracted rays will be more divergent, and proceed as if they emanated from a point between the principal focus and the lens. The rule is, in this case, also the same as for convex lenses. The effect of a meniscus is the same as that of a convex lens of the same focal distance; and that of a concavo-convex lens, the same as that of a concave lens of the same focal distance. The principal focal distance is found by this rule:—Divide twice the product of the two radii by the difference of the radii. In deducing the above rules, it has been assumed that the focus into which the rays are refracted is a mathematical point; but this is not strictly true, unless the rays only fall on the lens very near its centre, by reason of the *spherical aberration*.—See ABERRATION, ACHROMATISM, LIGHT, OPTICS, and REFRACTION.

Lens, a town of France, dept. of Pas-de-Calais, 9 m. N.E. of Arras; *pop.* abt. 11,000. Near this town the Austrians and Spaniards were defeated by a French army under Condé, Aug. 20, 1648. The French captured 100 colors and 38 pieces of cannon.

Lent, *imp.* and *pp.* of LEND, *q. v.*

Lent, *n.* [A.S. *lænten*, spring, *lencten fæster*, spring fast; D. *lente*; Ger. *lenz*. Perhaps allied to Sansk. *lî*, to melt, to dissolve.] (*Eccl.*) The fast of forty days, observed by the Roman Catholic and other churches before Easter, in commemoration of our Saviour's fasting in the Wilderness. The name is derived from the Saxon *leng*, spring, from the time of the year in which it is observed. It is used as a preparation for Easter, and begins on Ash-Wednesday. The observance of Lent is of great antiquity, for from the first ages of Christianity it was usual to set aside some time for humiliation and special exercises immediately before Easter. At first this fast extended only to forty hours, then to thirty-six days; and four additional days were added in the 9th century.

Lent, Lentement. (*Mus.*) Same as LENTE, *q. v.*

Lentan'do. [It.] (*Mus.*) The same as *rallentando* or *ritardando*, meaning a gradual decrease in the speed of the movement.

Lente, Lento, Lentamenta. [It.] (*Mus.*) Slow; gentle.—According to the best authorities, the movement implied by one of these terms is quicker than *adagio*, or between it and *andante*.

Lent'en, *a.* Used in or pertaining to Lent; hence, spare: poor; lean; not rich or abundant.

"She . . . with a *lenten* salad cooled her blood."—*Dryden.*

Lentibularia'ceæ, *n. pl.* (*Bot.*) The Butterwort family, a small order of plants, alliance *Bignoniales*. DIAG. Free central placenta, minute seeds without albumen, and cotyledons much smaller than the radicle.—They consist of herbs growing in water, marshes, or wet places. The leaves are radical, entire, or divided into thread-like filaments, bearing little pouches or air-vesicles. The flowers are irregular, with persistent 2-lipped calyx, and a 2-lipped corolla. The species *Pinguicula vulgaris* is termed butterwort, from the property its leaves possess of coagulating milk.

Len'ticel, Len'ticelle, *n.* [Fr. *lenticelle*, from dim. of Lat. *lentis*.] (*Bot.*) A small lens-shaped spot on the back of many plants.—*Brande.*

Lentic'ula, .. [Lat. dim. of *lentis*, lentil.] (*Bot.*) Same as lenticel.—(*Bot.*) A small lens.—(*Med.*) A freckle; lentigo.

Lentic'ular, *a.* [Lat. *lenticularis*, from *lens, lentis*, a lentil.] Resembling a lentil.—Lentiform; having the form of a double convex lens; as, a *lenticular* figure.

Lentic'ularly, *adv.* With a curve; in a lenticular manner.

Len'tiform, *a.* Lenticular.

Lentiginous, (*len-tig'i-nus,*) *a.* [Lat. *lentiginosus.*] Relating or pertaining to lentigo; furfuraceous; freckly; scurfy.

Len'tigo, *n.* [Lat.] (*Med.*) A freckly or scurfy eruption upon the skin;—so called from its resemblance to lentil-seeds.

Len'til, *n.* [Fr. *lentille*; Lat. *lens, lentis.*] (*Bot.*) See ERVUM.

Lentini, (*len-te'ne,*) a town of Italy, in Sicily, near a lake of the same name, 15 m. S.S.W. of Catania. It contains a gunpowder-mill, and derives a considerable revenue from the fisheries of Lake *L. Pop.* 5,700.

Lentis'cus, or LENTISK, *n.* (*Bot.*) See PISTACIA.

Len'to, *n.* (*Mus.*) Same as LENTE, *q. v.*

Len'tor, *n.* [Fr. *lenteur*, from Lat. *lentus.*] Viscosity; tenacity.—Slowness; tardiness; sluggishness; as, the "*lentor* of eruptions."—*Arbuthnot.*

Len'tous, *a.* [Lat. *lentus.*] Viscous; tenacious; ropy; as, "*syrup* of a lentous and transparent body."—*Browne.*

Len'tulus, the surname of a branch of the famous Cornelian family of Rome, the principal of whom are:—PUBLIUS CORNELIUS LENTULUS, an accomplice of Catiline, consul 71 B. C., strangled in prison 66.—LENTULUS SPINTHERUS, a friend of Cicero, and a partisan of Pompey.—CNEIUS COANELIUS LENTULUS, surnamed Gætulicus, consul A D. 26.—LUCIUS, son of the latter, put to death for conspiracy in the reign of Caligula.—LENTULUS, a supposed proconsul of Judæa, to whom a letter, describing the Saviour, has been attributed, but which is pronounced a fabrication.

L'envoi, L'envoy, (*long-woh',*) *n.* [Fr. *le*, the, and *envoi*, a sending, from *envoyer*, to send, to dispatch.] A finale; a result; an end; a conclusion.

Len'zinite, *n.* (*Min.*) A hydrous silicate of alumina, allied to Halloysite. There are two kinds, found at St. Gall in the Eifel (the opaline and the argillaceous), both of which are white, and translucent, and fall into small hard grains when put into water.

Le'o, *n.* [Lat. *leo*, the lion.] (*Astron.*) A constellation of the northern hemisphere, which gives its name to the fifth sign of the zodiac. It is situated between the constellations Ursa Major, or the Great Bear Virgo, and Cancer. The most conspicuous stars in this group are Regulus, or *a* Leonis, of the first magnitude, and Denep, or β Leonis, of a magnitude midway between the first and second, which is intersected by a straight line drawn through the polar star and the star γ in Ursa Major.

LEO MINOR. [Lat., the little lion.] (*Astron.*) A constellation of the northern hemisphere, formed and named by Helvetius, lying immediately to the south of the Great Bear, and between Lynx, Leo, and Cancer. It is composed of small stars, all of them being less in apparent size than stars of the fourth magnitude.

Leo I., or *the Elder*, emperor of Constantinople, ascended the throne in 457. He was a Thracian of obscure birth, but attained the highest military rank, and was proclaimed emperor by the soldiers in succession to Marcianus. He confirmed the decrees of the Council of Chalcedon against the Eutychians, and renewed the war against the Vandals; but was unfortunate, through the treachery of his general Aspar, whom he put to death with his family in 471. The Goths, to revenge the fate of Aspar, poured into the empire, which they ravaged to the walls of Constantinople. D 474.

LEO II., or the *Younger*, was the son of Zeno and of Ariadne, daughter of Leo I. He succeeded his grandfather in 474, under the guardianship of his father, who caused himself to be proclaimed emperor a few months afterwards. *L. II.* is said to have been put to death by his own father, after reigning only 10 months.

LEO III., called the *Isaurian*, from the country of his birth, where his parents were poor mechanics. *L.* entered into the army, and became general-in-chief of the army of Asia, under Justinian II. In 716 he marched against Theodosius III., who had been proclaimed emperor on the deposition of Justinian II; and Theodosius resigned his crown to him in the following year. The Saracens, having ravaged Thrace, laid siege to Constantinople, which was bravely defended by *L.*, who compelled them to retire. His reign, however, was tyrannical, and he drove the patriarch Germanus from his seat, in which he placed Anastasius. He was also guilty of burning the library at Constantinople, containing a quantity of medals and above 30,000 volumes. The popes Gregory II. and Gregory III. having excommunicated him, he prepared an armament to invade Italy; but the ships were destroyed by a storm. D. 741

LEO IV., the son of Constantine Copronymus, and grandson of Leo III., B. 751, and succeeded his father in 775. In his time the controversy raged between the Iconoclasts, or image-breakers, and their adversaries, both of whom he protected by turns. He repulsed the Saracens in Asia. D. 780.

LEO V., or the *Armenian*, from the country of which he was a native. He rose to the rank of general by his valor: but, being accused of treason, the emperor Nicephorus disgraced him, and imprisoned him in a convent. Michael Rhangabus, on ascending the throne, in 811, restored him to his rank; but *L.*, profiting by the misfortunes of his master, headed a military revolt, and was elected emperor by the troops in 813. He was one of the most violent of the Iconoclastic princes. Assassinated, 820.

LEO VI., styled the *Philosopher*, B. 865, was the son and successor of Basilius, the Macedonian, and ascended the throne in 886. The Hungarians, Saracens, and Bulgarians, having united against the empire, he called to his assistance the Turks, who entered Bulgaria, which

they ravaged with fire and sword. *L.* drove the patriarch Photius from his seat; and Nicholas, one of the successors of Photius, excommunicated the emperor; for which *L.* deposed him. He wrote some books, the most interesting of which is a treatise on Tactics, printed at Leyden in 1612. D. 911.

Leo I., (St.,) surnamed *The Great*, Pope, succeeded Sextus III. in 440. He took a very decided part against the Manichæans and other schismatics, held a council at Rome against Eutyches in 449, and presided by his legates at the General Council of Chalcedon 2 years later. When Attila invaded Italy, *L.* was sent by the Emperor Valentinian to dissuade him from his threatened march on Rome, and Rome was saved. *L.* afterwards saved the city from being burned by Genseric. *L.* is the first pope of whom we possess any written works. D. 461.

Leo II., a native of Sicily, succeeded Agathon in 682. He pretended to have authority over the Eastern Church, and was succeeded by Benedict III. D. 683.

Leo III., Pope, b. at Rome, succeeded Adrian I. in 795. His first act was to acknowledge the suzerainty of Charles the Great (Charlemagne) by sending him the keys of St. Peter's, and the standard of the city of Rome. In 799 a conspiracy was formed against him by two of the Roman clergy, and he was attacked and shamefully treated while assisting at the procession of St. Mark. Through the aid of some faithful attendants, he escaped to Paderborn, to seek the protection of Charles, who, the same year, sent him back with a powerful escort to Rome. In the following year, 800, Charles visited Rome, and was there crowned by the Pope emperor of the Romans. A fresh conspiracy against *L.* was discovered in 815, the authors of which were among the leading citizens of Rome, and were condemned to death. *L.* d. the following year.

Leo IV., Pope, a Roman, succeeded Sergius II. in 847. The Saracens having invaded the Ecclesiastical States, he marched against them, and obtained a complete victory; after which he put the city of Rome in a state of defence, and founded the town of Leopolis. D. 855.

Leo V., Pope, a Benedictine monk, who, in 903, succeeded Benedict IV., but was deposed by his chaplain Christopher. The annals of the papacy during the 10th cent. are very confused, and there is no mention of *L.*'s subsequent life.

Leo VI., Pope, succeeded John X. in 928. He is said to have been put to death by Marozia, *q. v.*

Leo VII., Pope, was elected in succession to John XI., son of Marozia. He negotiated a peace between Hugo, king of Italy, and Alberic, duke of Rome, the son of the celebrated Marozia. He is said to have been an irreproachable man and zealous ecclesiastic, and was succeeded by Stephen VIII. D. 959.

Leo VIII., Pope, was elected to the papal chair on the deposition of John XII., in 963, under the patronage of Otho I. On Otho's withdrawal, John re-entered Rome, and drove away *L.*, but John dying soon afterwards, Benedict V. was chosen pope. The emperor Otho subsequently took Rome, and exiling Benedict, reinstated *L.*, who d. about 965.

Leo IX., Pope, previously named *Bruno*, was b. in Alsace, 1002. He was cousin to the Emperor Conrad the Salic, and was made bishop of Toul at the age of 22. Through the influence of the Emperor Henry III., son of Conrad, and also by the counsel of the monk Hildebrand, he was elected at the Diet of Worms, in 1048, to succeed Damasus II. as pope. Well received at Rome, he applied himself zealously to the reform of discipline in the Church, visiting France, Italy, and Germany, and holding several councils against simony and concubinage. In 1058, he led an army against the Normans in Italy, but was defeated and taken prisoner by their leader, Robert Guiscard, at the battle of Civitella. He was confined at Benevento about ten months, and falling ill, was allowed to return to Rome, where he d. in 1064. During his pontificate, the schism between the Greek and Latin churches was widened by the writings of Michael Cerularius, patriarch of Constantinople. The pope and patriarch excommunicated each other.

Leo X., (*Giovanni de Medici*,) Pope, son of Lorenzo the Magnificent, sovereign of Florence, was b. at Florence in 1475, eight years before the birth of Luther. His father had him dedicated to the Church, and made a cardinal by Innocent VIII. at the age of 13 years. Exiled from Florence, with the rest of his family, in 1494, he spent some years in travel in Germany, France, and Flanders, and made acquaintance with many eminent men. In 1503 he returned to Rome, and applied himself to the cultivation of science and the fine arts. He was appointed by Julius II. legate with the Papal army, and on the 11th of April, 1512, he was taken prisoner by the French at the battle of Ravenna, and only regained his liberty after the evacuation of Milan by the French. The Medici were restored to their supremacy at Florence by the arms of the Spaniards. In the following year, 1513, Cardinal de Medici was elected pope on the death of Julius II., and made his entry into Rome on April 11, the anniversary of his capture at Ravenna. His pontificate of nine years is one of the most momentous of modern history, in relation to great political changes, to the revival of literature and art, and, above all, to the Reformation. *L. X.* succeeded in terminating the disputes between Louis XII. and the court of Rome; he continued and brought to a close the Council of the Lateran; and, at a conference held at Bologna, concluded a concordat with Francis I. of France. In 1517, he discovered a conspiracy formed against him by two cardinals, one of whom was hung, and the other imprisoned for life. The same year, he created the unexampled number of 31 cardinals, among whom were Cajetan, Campeggio, Trivulzio, and other learned and eminent men. He formed the project of a great war against the Turks, and resolved about the same time to complete the church of St. Peter at Rome. To raise the necessary money for these schemes he resorted to the sale of indulgences, the preaching of which in Saxony became the occasion of Luther's great enterprise. *L.* published

Fig. 1556. — Leo X.

his first bull against Luther in June, 1520; Luther appealed to a general council, and publicly burned the bull at Wittenberg. A second bull appeared against the great heretic in January, 1521, and the papal anathema was echoed by the doctors of Sorbonne. At the same epoch, war broke out afresh between the Emperor Charles V. and Francis I., the pope allying himself first with Francis, and soon after with Charles. In the midst of these political and religious agitations, *L.* d. 1521. The patron of literature and the fine arts, he was surrounded with many of the most distinguished men of his time; encouraged the study of Greek and the collection of ancient manuscripts; restored the Roman University and the great Laurentian Library of Florence; and gained the name, universally conceded, of "Restorator of Letters."—Roscoe's *Life and Pontificate of Leo X.*

Leo XI., Pope, of the Medici family, elected pope 1605, at a very advanced age, and d. in less than a month.

Leo XII., (Annibale della Genoa,) Pope, b. at Genoa, 1760, succeeded Pius VII. in 1823. He is noted for his benevolent character, and his attempts to suppress banditti and the remains of Carbonarism. D. 1829.—Pius n. Dec., 1830; succeeded by Cardinal Capellari as Gregory XVI.

Leo XIII., (Joachim Pecci,) Pope, succeeding Pius IX., b. at Carpiento, abt. 40 m. S. of Rome, March 2d, 1810; was attached to the household of Popo Gregory XVI.; in 1837, was Nuncio to Brussels; Archbishop of Perugia in 1853; made Cardinal by Pope Pius IX., Dec. 19th, 1853, but through the influence of Antonelli, remaining at Perugia; appointed Chamberlain to Pius IX. in 1877; elected Pope Feb. 20th, 1878, on the third ballot. In person, Leo XIII. was tall and thin, distinguished in bearing, and mild and courteous in manner. D. July 20, 1903.

Leo I., prince or king of the Armenians, established in Cilicia, began reign 1123; taken prisoner by John Comnenus in 1137, d. in prison 1141.—Leo II., called *The Great*, grandson of the preceding, obtained permission of the emperor, Henry VI., and the pope, Celestine III., to take the title of king; reigned 1185–1219.—Leo III., greatly aggrandized his kingdom; reigned 1269–1289. —Leo IV., succeeded 1305, dethroned and slain by a Mongul general 1308.—Leo V., his reign was devastated by civil wars, and the invasion of the Mamelukes and Turcomans; reigned 1320–42. — Leo VI., proclaimed king 1361, was driven from his kingdom by the sultan of Egypt, 1375, retiring to France; d. there, 1393.

Leogane', a town of Hayti, on the W. coast.

Leo'la, in *Wisconsin*, a township of Adams co.

Leominster. (*lem'ster.*) a town of England, co. of Hereford, on the Lug, 12 m. N. of the city of Hereford. The immediate vicinity of *L.* is one of the finest cattle-breeding districts in the world. *Pop.* abt. 6,200.

Leominster, (*lem'in-ster.*) in *Massachusetts*, a post-village and township of Worcester co., about 46 miles W.N.W. of Boston.

Le'on, formerly a kingdom, and subsequently a province of Spain, now sub-divided into the smaller provinces of Salamanca, Zamora, and Leon, is situated in the north-west of Spain, south of Asturias, and bordering on Portugal. The country, which is intersected by the Douro, is mountainous, generally fertile, but miserably cultivated. It affords pasturage to vast flocks of merino sheep. The inhabitants are, for the most part, uneducated and lazy, but are very high-spirited, rich in peculiar customs, of pure Spanish descent, sincere, hospitable, and brave. It is said that in the high districts, south of Salamanca, remnants of the pure Gothic tribes exist, and at Astorga, remnants of the Old Celtiberi, called *Maragatos*. The area of the old prov. is about 15,000 sq m., and the pop. 878,194. The area of the actual prov. is 5,894 sq. m., with a pop. of 348,437.

Leon, the cap. of the above prov., is situate at the confluence of the Bernesga and the Torio, 59 m. S. of Oviedo, and 176 m. N.W. of Madrid. Its cathedral is one of the finest specimens of Gothic architecture; *pop.* 10,068. Founded prior to the reign of the emperet Galba, Leon was called by the Romans *Legio Septima Germanica*, and received its present name on its capture by the Visigoths, in 586. It was afterwards seized by the Moors, from whom it was taken in 722, and became the capital of the Christian kingdom of Leon, which was founded in 913. The city was taken by the Caliph Al-Mansur in 996, and remained in his power until his defeat at Calatanazor, in 998. In 1037 the kingdom of Leon was annexed to Castile, and, with the exception of the intervals from 1065 to 1072, and from 1157 to 1230, did not recover its independence.

Leon, (Isle of,) an insulated tract on the S.W. coast of Spain, containing Cadiz, on a promontory which projects from it. It is separated from the mainland by the channel of Santé Petri. *Ext.* 8 m. long, and 2 broad.

Leon, a town of Spain, in the above island, 11 m. from Cadiz; *pop.* 10,714.

Leon, Managua, or Matiares, a lake of Central America, in the State of Nicaragua, about Lat. 12° 15′ N., Lon. 86° 15′ W. It covers an area of about 500 sq. m. Its surface is 25 feet above that of Lake Nicaragua, from which it is distant about 25 m., and with which it is connected by the river Tipitapa.

Leon, a river of Central America, entering the Caribbean Sea about 75 m. W. of Trujillo.

Leon, a river of the United States of Colombia. See Guacuba.

Leon, a city of Central America former cap. of the State of Nicaragua, abt. 21 m. E. by S. of Realjo; Lat. 12° 25′ N., Lon. 86° 57′ W. It stands on a fertile plain upon the site of an ancient Indian town called Subtiaba. The town is regularly laid out, and contains some of the finest public edifices in Central America; as a massive cathedral, and the Episcopal palace. *Manuf.* Chiefly cutlery, leather, &c. *Pop.* 35,000.

Leon, a town of Mexico, about 30 m. W.N.W. of Guanajunta. It occupies a position 600 feet above sea-level, and contains many fine churches. *Pop.* 6,000.

Leon, in *Florida*, a N. co., adjoining Georgia; *area*, about 910 sq. m. *Rivers.* Ocklockonnee river, and some smaller streams. *Surface*, undulating; *soil*, fertile. *Cap.* Tallahassee, which is also the seat of the State government. *Pop.* (1895) 19,597.

Leon, in *Illinois*, a post-village of Henry co.

Leon, in *Iowa*, a post-village, cap. of Decatur co., about 60 m. S. by W. of Des Moines. *Pop.* (1895) 1,651.

Leon, in *Minnesota*, a township of Goodhue co.

Leon, in *New York*, a post-town and township of Cattaraugus co., about 40 m. S. of the city of Buffalo. *Pop.* (1897) 1,250.

Leon, in *Ohio*, a post-office of Ashtabula co.

Leon, in *Texas*, an E. central co.; *area*, about 1,000 sq. m. *Rivers.* Trinity and Navasoto. *Surface*, mostly level; *soil*, fertile. *Cap.* Centreville. *Pop.* (1890) 13,841.

Leon, in *Virginia*, a post-village of Madison co., about 80 m. N.W. of Richmond.

Leon, in *Wisconsin*, a flourishing post-township of Monroe co.

—A township of Waushara co.

Leo'na, in *Texas*, a post-village of Leon co., about 120 m. E.N.E. of Austin.

Leonard (*Le'nard*), in *North Dakota*, a post-township of Cass co.

Leonardtown (*Le'-ard-town*), in *Maryland*, a post-village, cap. of St. Mary's co., about 55 m. S. by W. of Annapolis. *Pop.* (1897) 600.

Leon'ardsville, in *New Jersey*, a post-village of Monmouth co.

Leonardsville, in *New York*, a post-village of Madison co., about 88 m. W. of Albany.

Leon'ardville, in *Kansas*, a post-village of Riley co., on Un. Pac. R.R., 100 m. W. of Leavenworth.

Leonese', *n. sing.* and *pl.* (*Geog.*) A native or inhabitant of the Spanish province of Leon.

—*a.* Having reference or belonging to Leon.

Leon'hardite, *n.* (*Min.*) A hydrous silicate of alumina and lime, resembling laumonite. It is found in Hungary.

Leon'idas, king of Sparta, a celebrated hero, who opposed Xerxes when he invaded Greece, and fought the whole Persian host at the Straits of Thermopylæ with such bravery as to check the progress of the invader. At

Fig. 1557. — View of Thermopylæ.

last a detachment of the Persians, led by Ephialtes the Trachinian, by a secret path up the mountains, came down on the rear of the Spartans, and obtained a com-

olete victory. Out of the 300, only one man escapod, and he was treated with ignominy by his countrymen, for leaving so glorious a field, where death was more honorable than life. A monument was afterwards erected upon the spot, with this inscription: "Stranger, tell the Lacedæmonians that we lie here, obeying their laws." This battle happened 480 B. C.

Leon'idas, in *Michigan*, a post-village and township of St. Joseph co., about 125 m. W. by S. of Detroit.

Leonil, (*la-o-neel'*,) a village of Brazil, on the Guapore, abt. 30 m. above Fort Principe de Beira.

Le'onine, *a.* [Lat. *leoninus*, from *leo*, a lion.] Like a lion, or partaking of its qualities; as, *leonine* strength.

Leonine City, [It. *Città Leonina.*] That part of Rome enclosed within the Vatican by the walls built by Leo IV.

Leonine verse. (*Lit.*) A species of poetry much in fashion during the Middle Ages, and consisting of the introduction of rhyme into Latin verse. The term is said to be derived from a poet Leo, or a monk Leoninus. An instance is the famous song of Walter de Mapes:

"Mihi est propositum in taberna mori;
Vinum sit appositum morientis ori."

Sometimes the rhymes fall in the same line, the end rhyming to the middle; as —

"Dæmon languebat, monachus tunc esse volebat;
Ast ubi convaluit, mansit ut ante fuit."

Le'oninely, *adv.* In the manner of a lion.

Leon River, in *Texas*, rises in Eastland co., and enters the Brazos River from Milam co.

Le'ontice, *n.* [Gr. *leon*, a lion; the leaf is likened to a lion's foot-track.] (*Bot.*) The Lion's-leaf, a genus of plants, order *Berberidaceæ*. *L. thalictroides*, the Pappoose Root, is a smooth, handsome plant, found in woods from Canada to Kentucky. Stem 1 to 2½ feet high, round, and dividing above into two parts, one of which bears a racemose panicle of greenish flowers.

Leon'todon, *n.* [Gr. *leon*, *leontos*, a lion, and *edous*, *edontos*, a tooth.] (*Bot.*) The Dandelion, or lion's-tooth, a genus of perennial, herbaceous plants, the leaves of which are cut at the edges into segments resembling teeth.

Leontopo'dium, *n.* (*Bot.*) The Lion's-foot, a genus of plants, order *Asteraceæ*, which owes its name to its soft, tufted, silky heads, resembling the foot of the lion.

Leonu'rus, *n.* [Gr. *leon*, a lion, *oura*, tail; from the appearance of the spikes of the flowers.] (*Bot.*) The Lion's-tail, a gen. of plants, ord. *Lamiaceæ*. *L. cardica*, the motherwort, is a perennial plant, native of Tartary, and introduced from Europe to America, where it is now common, especially about rubbish, stone walls, and waste places. Stem 3 to 5 ft. high, downy, square, purplish. Flowers in many whorls. It has a strong and pungent smell, and has considerable reputation as an ingredient in herb drinks for colds, coughs, &c.

Leopard, (*lĕp'ard*,) *n.* [Lat. *leo*, lion, and *pardus*, panther.] (*Zoöl.*) A name applied to the larger spotted cats, *Felis leopardus*, family *Felidæ*, which are found both in the Old and New worlds. In the Old World, the *L.* appears to have its most perfect development but the American *jaguar*, q. v. far exceeds the *L.* of Asia and Africa in size, strength, and sturdiness of make. There is much discrepancy of opinion among naturalists as to whether the *L.* and panther (*Felis pardus*) are distinct species or only varieties. Cuvier separated the panther from the *L.* specifically. He describes the panther as being yellow above and white beneath, with six or seven rows of black spots, formed by a cluster of five or six simple spots on each side. He speaks of the species as being found all over Africa, in the warm countries of Asia, and in the Indian Archipelago. The *L.* is referred to as differing from the panther in having ten rows of smaller spots. Linnæus, however, could not see sufficient grounds of distinction between them, and referred both names to one and the same animal (*Felis leopardus*). The *L.*, properly so called, is a beautiful but savage animal, and is spread over the African continent as widely as the lion. Over this vast extent he varies little, and that merely in magnitude and in the size and form of his markings, and their depth of color. Everywhere, however, he is the same in respect to form and structure, disposition and character. The general color of the *L.* is yellowish fawn, which grows paler in the sides till it merges into the white of the under part of body. Over the head, neck, back, and limbs are scattered black spots of various sizes; while the sides are covered with numerous rose-shaped spots. The *L.*'s general aspect is fierce, and its disposition is characterized by all the fierceness and craftiness which is noticed in the rest of the cat tribe. He preys upon antelopes, monkeys, and the smaller quadrupeds; but avoids man except when closely pursued, when he fights obstinately. *L.* have been known to attack solitary travellers. When they fall in with a flock of sheep, they commit almost incredible slaughter. Two *L.*, a male and female, with three young ones, have been known to enter a sheep-fold near the Cape of Good Hope, when the old animals killed nearly a hundred sheep. After having gorged themselves, they fed their young, and each seizing a whole carcass tried to carry it away; they were waylaid, however, and killed. The mode by which the negroes capture the *L.* is by digging pitfalls and slightly covering them with hurdles, over which a piece of meat is laid as a bait. From the great flexibility of the limbs of this animal, he is able to ascend trees with great ease, and when pursued, is in the habit of taking refuge among the branches. He can be somewhat tamed when taken very young. According to the accounts of African travellers, the flesh of the *L.* is excellent, resembling veal in flavor. The skins are valuable for making rugs, &c., and are sold in Europe at from $25 to $50. Among the larger spotted cats of the Old World is the *riman-dahan*, which partakes, in some measure, of the markings of the tiger and *L.*, though it seems to be more allied to the former than to the latter. Its probable size, when full-grown, will be about four feet from the nose to the root of the tail; and its height, at the shoulder, about one foot ten inches. Its color is brownish-gray, with no yellow or red tints. Its spots and stripes are large, dark, irregular, and oblong in form; the larger ones being marked by lines of velvety black. It inhabits Sumatra. According to Sir Stamford Raffles, who made personal observations on two individuals of the species, while young, these *L.* are very gentle and playful. He brought one specimen alive to England; but it died shortly after its arrival, during the process of dentition. "On board the ship," he relates, "there was a small musi dog, who used to play round the cage and with the animal; and it was amusing to observe the playfulness and tenderness with which the latter came in contact with his inferior-sized companion." This specimen was taken very young in the forests of Benecolen. The natives assert that the riman-dahan never attacks man, but lives principally upon poultry, birds, and the smaller kind of deer; and that it sleeps, and often lays in wait for its prey, on trees, from whence it derives the name of *dahan*, which signifies the fork formed by the branch of a tree. One of the most interesting forms of division of the *Felidæ* is the *chetah*, or hunting *L.* (*Cynielurus jubatus*); it is inferior in size to the *L.* proper, not being more than 32 inches high; besides which, his limbs are not so graceful nor his fur so sleek as those of the majority of the cat tribe. The claws of the chetah are not retractile, or, at most, so slightly that naturalists have found a difficulty in agreeing as to the animal's genus. The chetah is of much lighter build than the panther, shows better fight when hunted with dogs, and commonly inhabits the lower branches of the great trees of the forest, where the female brings forth her young. It is common with the European inhabitants of Ceylon to style the *L.* there found, chetah; but the true breed of hunting-leopard does not there exist. Whether the chetah is taken as a cub and trained to the business of deer-hunting, or whether, as a full-grown animal, it may be trapped and broken in, does not seem clear; it would, however, seem most probable that the former system was adopted; for although we have instances of *L.* and panthers becoming so far docile as to tolerate the society of man, it requires the utmost care that they do not relapse to their naturally ferocious habits. When the trained chetah is required for a day's sport, he is placed in a sort of cart, drawn by a horse, and accompanied by the hunters and the usual company that belong to the chase in India. When an antelope is started, it is shown to the chetah in the tumbril, who, as soon as his leash is slipped, leaps after it. The speed of the deer is much greater than that of the chetah; but it invariably happens, that as soon as the former becomes aware of its terrible pursuer, it becomes panic-stricken, and its swift and regular paces change to spasmodic leaping and stumbling, while the chetah, eager for the sanguinary reward for his service, increases his speed, and is presently on the back of the struggling animal, with its fangs buried in its throat. The hunters hasten up with the chetah's hood and chain, and after he has been enticed from the deer by the offer of pieces of meat, the hood is slipped over his eyes, and he is led back to the tumbril and held till fresh game is started. The behavior of the chetah in confinement is that of an ordinary savage dog. The chetah in its external form and habits presents a mixture of the feline and canine tribes; from whence it derives its name of *Cynailurus*, from the Greek *kunos*, a dog. — See JAGUAR.

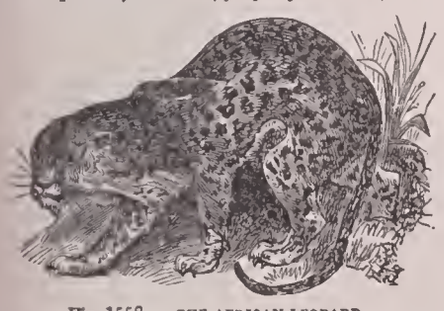


Fig. 1558. — THE AFRICAN LEOPARD,
(*Felis leopardus.*)

Leop'ard, in *Pennsylvania*, a post-office of Chester co.

Le'opold I., Emperor of Germany, son of Ferdinand III., B. 1640. Destined for the Church, he was educated by the Jesuits, and became well versed in metaphysics and theology, but not at all in the art of government. At the age of 15 he was crowned king of Hungary, in the following year king of Bohemia, and was elected emperor in 1658. His long reign of 49 years is marked by many events of European importance, but Leopold, personally, had little influence — he was led by his ministers. There were wars with Sweden, with Turkey, with Hungary, and three with France, and the peace of Oliva, the peace of Nimeguen, the League of Augsburg, the Grand Alliance, the peace of Ryswick, and the peace of Carlowitz, are landmarks of this period. The severities exercised by the emperor occasioned the junction of the Hungarians with the Turks, in 1683, and the besieging of Vienna. It was on this occasion that John Sobieski, the heroic king of Poland, interposed, won a great victory over the Turks, and saved the empire, for which *L.* gave him very cold thanks. Sobieski withdrew his army, declaring he would still fight the Turks, but never the insurgent Hungarians. *L.* then adopted more severe and merciless measures in Hungary. The war of the Spanish succession began in 1700, and while it was still going on, *L.* died, 1705.

LEOPOLD II., emperor, the second son of Francis I. and Maria Theresa, B. 1747. He became grand-duke of Tuscany in 1765, and his government was marked by wisdom and moderation, and by the establishment of important reforms, both civil and ecclesiastical. He succeeded his brother Joseph in the Austrian hereditary dominions in 1790, and the same year was chosen emperor. Very grave political difficulties beset him, and the Netherlands were in revolt, disaffection was growing to insurrection in Hungary and Bohemia, and the principal states of Europe were unfriendly. By wise measures he established tranquillity, recovered the Netherlands, and pleased his subjects by restoring with modifications the form of government which had existed before the innovations of his brother. The French revolution made fresh and greater difficulties. In 1791 he concluded the treaty of Pilnitz with the king of Prussia, and n. in March, 1792.

Le'opold I., (LEOPOLD, GEORGE CHRISTIAN FREDERICK,) prince of Saxe-Coburg Saalfeld, king of the Belgians, B. 1790, was the youngest survivor of the 9 children of Duke Francis, and the brother of the duchess of Kent, consequently uncle to Victoria, queen of England, and also to her consort, Prince Albert. In 1816, while Prince Leopold of Saxe-Coburg, he married the Princess Charlotte Augusta, only child of the prince-regent, afterwards George IV. The highest hopes were formed of that union; and, as the husband of the heiress apparent to the throne of Great Britain, Leopold obtained the highest esteem. After the sudden death of the Princess Charlotte, in 1817, he continued to live in retirement at Claremont, and was created by the king field-marshal and member of the privy council. In 1830 the Belgian provinces were lost to the crown of Holland, in consequence of the revolution of Brussels. A provisional government was formed, and the throne of Belgium was offered to the duke de Nemours, son of Louis Philippe. That prince declining it, Leopold was next solicited to accept the crown. After at first refusing, he was induced to ascend the throne of Belgium in 1831. Leopold promised, in his opening speech to the Belgian parliament, to encourage industry, and to rule according to the principles of civil and religious liberty: a promise which he has fully redeemed. In 1832 he contracted a matrimonial alliance with Louise-Marie-Thérèse, princess of Orleans, and eldest daughter of Louis Philippe; and, the same year, Antwerp, besieged by the allied French army, capitulated. From that time Belgium, enjoying a liberal constitution, a wise ruler, and freedom from foreign embroilments, advanced in prosperity: an army was organized and well disciplined; railways were constructed; a National Bank established; manufactures and commerce flourished; and no history has to be written of it except a social and parliamentary one. Tranquillity was preserved by the prudence of the king during the revolutionary movements of 1848. He met the leading statesmen, and offered to resign the crown if the nation wished it; the nation had no other wish than that he should keep it. The chief difficulty of the king lay in the passionate conflict of the Catholic and Protestant parties for supremacy; and in his successful dealing with this difficulty he especially displayed the wisdom and sagacity of a statesman. But Leopold held a position in Europe, by his character and influence far more important than mere royalty would have been. He was generally recognized as the calm, impartial judge to whose decision governments and kings might always safely appeal; the trusted *Juge de Paix de l'Europe*. His mediation was frequently of the greatest value to France and England. His family alliances with the principal sovereign houses of Europe gave him immense advantages in this respect. Son-in-law to George IV., and to Louis Philippe, uncle to Queen Victoria and also to the Prince Consort, he was connected by the marriage of his sister with the reigning house of Russia; his eldest son married the Archduchess Maria of Austria; his daughter, the Archduke Maximilian, who died in Mexico; and his great-nephew is king of Portugal. After suffering severely at intervals for several years from heart-disease, and a still more distressing malady, he died at the palace of Laeken, 9th of December, 1865, after a reign of 34 years. *L.* left 2 sons: the duke of Brabant, who succeeded him; and the count of Flanders, B. 1837, lieutenant-general in the service of Belgium.

LEOPOLD II., son of the preceding, ascended the throne at the death of his father, Dec. 10, 1865. He was married in 1853 to Marie, Archduchess of Austria, B. 1836, the daughter of Archduke Joseph of Austria. Living offspring of the union in 1882 were: Princess Louise, B. 1858, married, 1875, to Prince Philip of Saxe-Coburg-Gotha; Princess Stephanie, B. 1864, married, 1881, to Archduke Rudolph, of Austria; and Princess Clementine, B. 1872.

Leopold, (*lee'o-pold*,) a port of British N. America, near the N.W. entrance of Prince Regent's Inlet; Lat. 73° 50′ N., Lon. 90° 10′ W.—A cape of British N. America; Lat. 75° 47′ N., Lon. 78° 10′ W.

Leopold, in *Indiana*, a post-village and township of Perry co., about 14 m. N. of Rome.

Leopoldin'ia, *n.* [So called after the empress of Brazil.] (*Bot.*) A genus of trees, order *Palmaceæ*. *L. piassaba* is a very interesting and useful plant. Its persistent petiole bases terminate in long pendulous beards of bristle-like fibres; these are cut off from the young plants after having been previously combed out

by means of a rude comb, and now form an important article of commerce in Brazil. These fibres are known under the names of Piassaba or Piaçava, paragrass and monkey-grass, and are used for brooms, cleaning-brushes, &c. The pulpy envelope of the fruit yields a delicious drink resembling cream.

Le'opold Island, an Island of British N. America, in Barrow's Strait; Lat. 74° 3′ N., Lon. 89° 53′ W.

Lepadogas'ter, *n.* [Gr. *lepas, lepados*, a shell-fish.] (*Zoöl.*) A genus of small Malacopterygious fishes, which have the power of attaching themselves to rocks and other hard substances, by means of their disc. They have large pectorals reaching to the under side of the body; head broad and depressed; snout curved and protractile; body without scales; gills with little openings, and four or five rays; they have no air-bladder, but they swim briskly.

Le'pal, *n.* (*Bot.*) A sterile stamen. (R.)

Lepanto, (*le-pân'to,*) (anc. NAUPACTUS,) a town of Greece, nomarchie of Ætolia Arcanania, situated on the N. shore of the Gulf of Lepanto, 25 m. E. of Missolonghi. Anciently it was of considerable importance, but at present the trade is very small, and the pop. not above 3,000.

Lepanto, (Gulf of.) This arm of the Adriatic, anc. known as the Gulf of Corinth, lies between the northern shore of the Peloponnesus, or Morea, on the S., and the southern shore of the mainland of Greece, and is entered on the W by a narrow strait from the Gulf of Patras, where it is defended by two castles, one on either shore. The Gulf of Lepanto is about 70 m. in length, by a width of from 8 to 13. This narrow sea has been made celebrated as the scene of one of the most sanguinary naval battles of modern times. Philip II., the Pope, and the Venetians, having formed a league against the Ottoman, intrusted their combined fleet of 210 ships and galleys, with a large body of land forces, to the generalship of Don John of Austria, who, on the 7th of October, 1571, encountered in these waters the Sultan Selim's armament of 300 sail, commanded by Ali Pasha; when, after a long and most obstinate battle, the Turk was totally defeated, losing his admiral, and 25,000 men in the action, besides the greater number of his ships, and 10,000 men made prisoners. The great Spanish wit and author of *Don Quixote*, Cervantes, served with distinction in this battle, and was so severely wounded, that he ever after lost the use of one of his hands.

Lepas, *n.* [Gr., a limpet.] (*Zoöl.*) In the system of Linnæus, a genus containing all the Cirrhipeds or Multivalves.

Lepe, (*lai'pai,*) a sea-port town of Spain, in prov. of Huelva, 12 m. W. of Huelva city; *pop.* 3,400.

Lep'er, *n.* [Fr. *lepre*, leprosy, from Gr. *lepra*, leprosy, from *lepos*, a scale — *lĕpō*, to peel or bark.] A person affected with leprosy.

Lepered, (*lĕp'erd,*) *a.* Tainted with leprosy.

Lep'erous, *a.* See LEPROUS.

Lep'id, *a.* [Lat. *lepidus.*] Jocose; chatty; amusing. (R.)

Lepid'ium, *n.* [Gr. *lepis*, a scale; from the resemblance of the silicle.] (*Bot.*) A genus of plants, order *Brassicaceæ*. They are annual plants with white flowers. *L. sativum*, the Pepper-grass, is a well-known garden salad, native of the East; stem 1 to 3 feet high, very branching; leaves variously divided and cut; branches without spines. It has a warm and pungent taste.

Lepidoden'dron, *n.* [Gr. *lepis, lepidos*, and *dendron*, tree.] (*Pal.*) A genus of fossil plants, abundant in the coal-measures. Some species were of small size, but the greater number were large trees, 40 or 50 feet long, and more than 4 feet in diameter. They taper upwards, and branch generally in a dichotomous manner.

Lepidoids, *n. pl.* [From Gr. *lepis*, and *eidos*, shape.] (*Pal.*) A family of extinct fossil fishes belonging to the ctenite formation, remarkable for their large rhomboidal bony scales.

Lepidop'ter, *n.* (*Zoöl.*) One of the LEPIDOPTERA (*q.v.*).

Lepidop'tera, *n. pl.* [Gr. *lepis, lepedos*, a scale, and *pteron*, wing.] (*Entom.*) An order of insects which contains those generally known by the name of butterflies and moths. This order is divided into the *Rhopalocera* (butterflies) and *Heterocera* (moths), according to the structure of the antennæ, or feelers; the antennæ in the former being thread-like, with a little swelling or knob on the end, while in the latter there are quite a number of shapes other than this. They have four membranous wings, covered on both sides with minute generally colored scales, which appear to the naked eye like a quantity of fine dust scattered over them. Many of them possess a long tongue or proboscis, rolled up spirally, while some have no such mouth parts and only feed during the larvæ or caterpillar stage. The *L.* undergo perfect metamorphosis, passing through five stages; the egg, larva (caterpillar), chrysalis, and perfect or imago condition. As in all other moths, they possess two antennæ, generally long and of variable form, according to the species. The length of life in the adult state varies considerably in different species, but generally the males live a comparatively short time after the act of generation, and the females die shortly after they have oviposited. The nectar of flowers forms their principal food, and they suck it up from the depths of the narrowest blossoms by means of their probosces, which are wonderfully adapted for the purpose. The females of different species lay their eggs upon different plants, according to the proper food required for the young caterpillar. The eggs in some cases are deposited in a mass and in others laid singly, and in the former case the caterpillars sometime feed gregariously. The number of eggs a female will lay varies greatly in the different species, but probably never exceeds four or five hundred. The eggs when exuded adhere to the appropriate food plant by a kind of cement, impervious to water and moisture. When ready to be hatched, they come out in a worm-like form, the body being cylindrical and composed of 13 segments. They have 3 pairs of simple articulated feet, which serve the purpose of walking, and from 2 to 5 pairs of false legs, short and thick, armed at the end with hooks, which enable the

Fig. 1559.—MOHO-SPHINX CULLING ON A PETUNIA.

animal to fasten itself on leaves, branches, &c. Most of these larvæ move forward, but some walk backward with a leaping motion; others draw the body into a sort of a loop form, then suddenly straightening, spring with an energetic bound. During this state of their existence, they do considerable damage to trees, shrubs, &c., and change their skin several times. They then cease feeding, and change into the chrysalis or pupa state. (See CATERPILLAR, and INSECT.) When the perfect insect emerges, the wings are at first moist and unexpanded; it then appears weak; but, soon afterward expand to their full size and after being exposed to the air, its wings become dry and the insect seems full of life and activity. There are supposed to be about 35,000 species of *L.*; more than 6,000 are natives of America, north of Mexico. They present many points of interest to the entomologist, especially in their larva and their pupa state; while the beauty and elegance of the forms of the perfect insects are admired by all. The value of the silk cocoons of the pupæ of certain species is almost equal to the damage done by the larvæ of others.

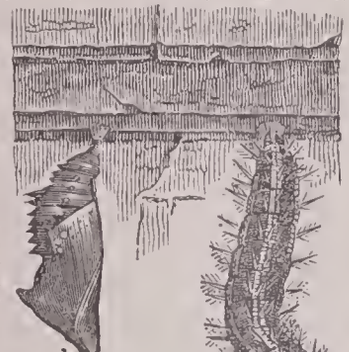


Fig. 1560.
1, chrysalis; larva of the butterfly Vulcano.

Lepidosir'en, *n.* [Gr. *lepidos*, and *seiren*, siren.] (*Zoöl.*) The Mud-eel, an animal which in late years has given rise to much discussion among naturalists, as to whether

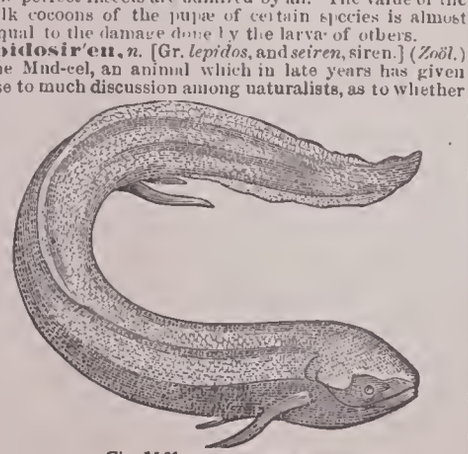


Fig. 1561. — LEPIDOSIREN.

it belongs to the class of reptiles or fishes. It is one of the most perfectly amphibious of all animals. Its organs of respiration are twofold. As in all fishes, it has well-organized gills on the inner edge of the branchial arches, and a regular gill-cover, with a small oblong aperture in front of the base of the inferior members. Besides these, it has two well-developed cellular lungs of nearly equal size. The body is elongate and fish-like in form, covered with oval imbricated scales, and furnished with dorsal and caudal membranes resembling fins, strengthened with soft-jointed rays. According to the supporters of the reptilian theory, these members are feet; while those who regard the animal as a fish look upon them as fins. Two species of Lepidosiren are known, — the *L. paradoxa* and the *L. annectans*: the former is found in the Amazon, and the latter in the Gambia. Several living specimens of the animal found in the Gambia have been brought to this country. During the inundations of the river, large portions of country are flooded; upon the retreat of the waters, the lepidosirens that are left behind burrow into the mud. The sun soon converts this into a hard cake, and they remain cased up into a sort of cocoon of dried mud. They remain torpid, and covered with a thick secretion of mucus, till the rainy season again commences, and the flooded river releases them. The natives eat the lepidosirens, and it is said that, when fried, they closely resemble eels in taste, and have a rich oily flavor.

Lepido'sis, *n.* [Gr. *lepis*, a scale.] (*Med.*) A disease characterized by an efflorescence of scales on the body; a scaly disease.

Lepidosteus, *n.* [Gr. *lepis*, and *osteon*, bone.] (*Zoöl.*) A genus of fishes, family *Sauridæ*, containing the bony pike, gar-pike, or GAR-FISH, *q. v.*

Lep'idote, Lep'idoted, *a.* [Gr. *lepidotos.*] (*Bot.*) Scurfy, or covered with membranous scales.

Lepido'tus, *n.* [Gr. *lepis.*] (*Pal.*) A fossil fish, distinguished by its large thick rhomboidal enamelled scales, and its hemispherical or obtusely conical teeth; its remains are widely diffused through the Wealden formation.

Lep'idus, MARCUS ÆMILIUS, the Triumvir, was a member of a distinguished patrician family of Rome. In B. C. 49 he held the office of prætor, and at the outbreak of the civil war he joined the popular party. Left præfect of the city while Cæsar was in Spain, he procured the appointment of Cæsar as director. He became master of the horse, and in 46 consul with Cæsar; was at Rome at the time of the murder of the latter, and succeeded him as pontifex maximus; had the government of Narbonnese Gaul, and Hither Spain; joined Antony, and was declared an enemy to the state. In Oct. 43, the first triumvirate was formed, and the Roman world was divided between Octavianus, Antony, and *L.* He was again consul in 42; was made governor of Africa after the defeat of Brutus and Cassius at Philippi; attempted afterwards unsuccessfully to make himself independent, and lost his provinces and his office. D. 13 B. C.

Le'pis, *n.* (*Bot.*) A scale or scurf, consisting of a thin transparent membrane attached by its middle, and having a lacerated irregular margin, owing to the imperfect union, towards its circumference, of the cellular tissue of which it is composed.

Lepodac'tyle, *n.* (*Zoöl.*) See LEPTODACTYL.

Lepor'idæ, *n. pl.* [Lat. *lepus*, a hare.] (*Zoöl.*) A family of rodent quadrupeds of which the genus *Lepus* is the type. See LEPUS.

Lep'orine, *a.* [Lat. *leporinus*, from *lepus, leporis*, a hare.] Belonging to a hare; having the characteristic qualities of a hare.

Lep'ra, *n.* [Lat.] (*Med.*) Leprosy.

Lepros'ity, *n.* The state of being leprous. (R.)

Lep'rosy, *n.* [From Lat. *lepra.*] (*Med.*) A disease characterized by the formation of scaly patches on the skin, of different sizes, but having always nearly a circular form. Physicians distinguish three varieties of this disease, — *Lepra vulgaris*, or common leprosy; *Lepra alphos*, or white leprosy; and *Lepra nigricans*, or black leprosy. Leprosy first manifests itself in small distinct reddish elevations of the cuticle, which enlarge till they sometimes attain the size of a crown-piece. They are covered with scales, which accumulate and form a thick prominent crust, and are quickly reproduced as they fall off. This disease usually makes its appearance first about the knee or elbow, and extends by degrees along the extremities, till sometimes the whole body becomes affected with it. Its progress is, in general, very slow, and it may continue in the same state for years. The general health of the patient is but little disturbed by this disease. In *lepra alphos* the scaly patches are smaller than in *lepra vulgaris*, and have also their central parts depressed or indented. The *lepra nigricans* differs from the others chiefly in the color of the patches, which are dark and livid. This disease sometimes makes its appearance without any apparent cause, sometimes it may be induced by exposure to cold or damp, and sometimes it is evidently hereditary. It is generally tedious of cure. The diet should be light and moderate, and all heating and stimulating liquors avoided. Externally, warm baths, sulphur-baths, and preparations of tar or creosote, are useful. The constitutional treatment will depend upon the condition of the body; if weakly, tonics, as quinine and iron, are to be administered. A solution of arsenic is often of advantage; but, of course, it can only be used under medical superintendence. This disease appears to have been much more prevalent, and of a severer type, in ancient than in modern times, if, indeed, this is the same disease, — many being of opinion that the *L.* of ancient times resembled rather what is now known as elephantiasis. — See ELEPHANTIASIS.

(*Hist.*) This contagious disease originated in Egypt and Arabia at a very early period. It is frequently alluded to in the Scriptures; and special regulations were prescribed concerning those afflicted with it by

the Mosaic law, B. C. 1491, (*Lev.* xiii.) Christ healed a leper in Galilee in 28. It was known to the Greeks and Romans, and is described by Hippocrates (B. C. 460–357) and Galen (130–200). The crusaders introduced the disease into Europe, where it raged with such virulence during the Middle Ages, that almost every town had its lazar-house for the reception of lepers. In 1225, during the reign of Louis VIII., there were in France no less than 2,000 of these institutions. Since the commencement of the 17th century the disease has almost entirely disappeared from Europe, where it is now limited to the most northern and southern countries. It was prevalent in the Faroe Isles in 1676, and cases were reported in England in 1736. The last case mentioned was described by Dr. Edmonston in 1809. Its prevalence in the Sandwich Islands led to the founding, in 1866, of a settlement, for its isolation and treatment, on the island of Molokai, which is given up to them. The whole number sent there up to 1886 reached 3,100, they number at present 700; the non-lepers are only abt. 150, officials, missionaries, and friends of the lepers, who have permits to remain. In the report for 1885, of the physician in charge, Dr. A. Mouritz, who claims, contrary to general medical opinion, that *L.* is contagious, he says, "The manner in which it is communicated is a mystery, it cannot be as accurately determined as in acute contagious diseases; but when the blood becomes poisoned by the virus, whether by inhalation or by actual contact, its development, although slow, is as certain. But there is nothing in the contagiousness, so far as it is known, to create general alarm. It is not communicated by casual contact like small-pox, measles or fever. There is no chance of contracting it in the open air, or in street contact, or in vehicles of transportation. With ordinary care and cleanliness the chance of leprous contamination of the general public is so slight as not to give greater concern than to induce caution." Under this favorable treatment the number is rapidly decreasing. *L.* is claimed by some as a germ disease, for the cause of which, Dr. Koch, in 1884, claims to have discovered the specific bacteria.

Lep'rous, Lep'erous, *a.* [Fr. *lepreux.*] Infected with leprosy; covered with white scaly sores.

Lep'rously, *adv.* In a leprous manner.

Lep'rousness, *n.* State of being leprous; leprosy.

Leptodac'tyl. (Sometimes written LEPODACTYLE.) [Gr. *leptos*, thin, and *dactylos*, finger.] (*Zoöl.*) A bird or other animal having slender toes.

Leptodac'tylous, *a.* Characterized by slender toes; relating or pertaining to the leptodactyls.

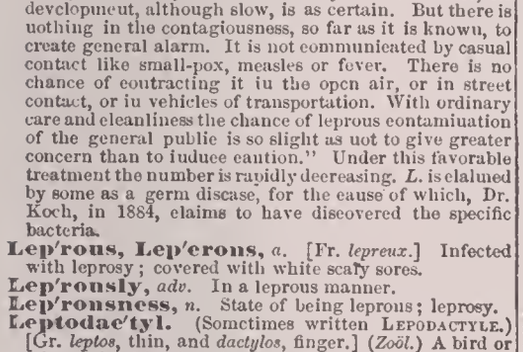


Fig. 1562.—THE COMMON HARE, (*Lepus timidus.*)

Leptol'ogy, *n.* [Gr. *leptologia.*] A detailed and prolix discourse on trifles or matters of no moment.

Leptop'oda, *n.* [Gr. *leptos*, slender, and *pous*, foot;—alluding to the elongated peduncle.] (*Bot.*) A genus of plants, order *Asteraceæ.* They are perennial N. American herbs, with the habits of HELENIUM, *q. v.*

Leptosper'meæ, *n. pl.* [Gr. *leptos*, slender, and *sperma*, a seed.] (*Bot.*) A tribe of the order *Myrtaceæ*, characterized by having capsular fruit. The typical gen. is *Leptospermum*, 2 species of which, *L. scoparium* and *thea*, have leaves which are used in the Australian colonies as a substitute for tea.

Le'pus, *n.* [Lat.] (*Zoöl.*) A gen. of rodent quadrupeds, fam. *Leporidæ*, peculiarly distinguished by having their superior incisors double, *i. e.*, each of them has a smaller one behind it. The molar teeth are also more numerous than in most other Rodentia, there being 6 on each side of the upper jaw and five on each side of the lower jaw; the ears are very long, the tail short and turned up. The species of this genus are called *hares* and *rabbits.* The eyes are large and prominent, and, with the well-developed ears, serve to announce to these timid and defenceless animals remote objects and sounds of peril; the strength and proportions of the limbs, of which the hind pair is much longer than the fore, enable them to escape by rapid flight. The smaller species, as the rabbit, add to their means of safety by burrowing in the soil. Among the anatomical characters of the gen. *L.* may be reckoned the rudimental condition of the clavicles, and the reticulate bony structure of the infra-orbital spaces. There are many species very similar to each other. N. America produces a number of them, some of which inhabit the swamps of the S. States.

(*Astron.*) One of the original constellations of Aratus and Ptolemy, situated in the N. Hemisphere to the S. of Orion. Its most considerable stars are of the third and forth magnitude.

L'Erable, in *Illinois*, a post-village of Iroquois co.

Le Ray, in *N. Y.*, a flourishing twp. of Jefferson co.

Le Rays'ville, in *New York*, a post-village of Jefferson co.—In *Pennsylvania*, a post-borough of Bradford co.

Lere, *a.* See LEAR, and LEER.

Lerici, (*ler'e-che,*) a seaport of Italy, island of Sardinia, on the Gulf of Spezzia, 5 m. E.S.E. of Spezzia. The town is walled, and protected by a castle. *Pop.* 5,800.

Lerida, (*ler'e-da,*) a town of Spain, cap. of a province of the same name, in Catalonia, on the Segre, 80 m. W. N. W. of Barcelona. It is considered as one of the most important military points in Spain, being the key to Aragon and Catalonia, and is strongly fortified. *Pop.* 21,500. *Pop.* of province 285,297.

Lerins Isles, (*ler'a,*) a group of islands in the Mediterraneau Sea, belonging to France, dep. of Var, consisting of the islands of St. Marguerite and St. Honorat. The first is noted as having been the prison of the "man with the iron mask."

Le Roi le veut, (*le(r) rwaw le(r) vuh(r.)* [Fr., the king wills it.] (*Eng. Law.*) A form of words by which the royal assent is intimated by the clerk of parliament to the passing of public bills. To private bills the royal assent is expressed by *Soit fait comme il est désiré.* The dissent of the sovereign to the passing of any measure is signified by the words *Le roi s'avisera.*

Leroux' PIERRE, a French socialistic writer, B. at Rennes in 1798, found employment at Paris as a compositor and corrector of the press. In 1814 his old schoolfellow, M. Dubois, met him in the printing-office in which he intended to bring out the *Globe.* This led to his being associated with him in his labors, in which he had De Broglie, Guizot, and Cousin for fellow-workers. In 1831 he became a St. Simonian, abandoned the communion when the late Father Enfantin proposed the question of the emancipation of women, and afterwards contributed to the *Revue des Deux Mondes*, and pursued with ardor his attacks on the religion and philosophy then prevailing. Since 1843, *L.* has chiefly occupied himself with philosophy applied to socialism, and has had Proudhon for an opponent. In the legislative assembly of 1848, of which he was a member, he distinguished himself by an amendment which bears his name, to the effect that all parties found guilty of adultery should lose their civil rights. After the *coup de état* of Dec., 1851, he withdrew to Jersey, and applied himself to literature and philosophy. He has led an active literary life, and written many works, the best known being *De l'Humanité de son Principe et de son Avenir*, pub. 1849. D. 1871.

Le Roy, in *Kansas*, a post-village and twp. of Coffey co.

Le Roy, in *Michigan*, a post-village and township of Osceola co.

Le Roy, in *Minnesota*, a post-village and township of Mower co.

Le Roy, in *New York*, a thriving town of Genesee co., 24 m. S. of Rochester, on the N.Y. Cent., Buff., R. & Pitts., and Lehigh Valley R.Rs.; has extensive manufactures of malt, patent medicines, &c. There are large limestone quarries in the vicinity. *Pop.* (1897) about 3,350.

—A village of Otsego co.

Le Roy, in *North Dakota*, a post-office of Pembina co.

Le Roy, in *Oklahoma*, a post-office of Pawnee co.

Lerwick, (*ler'rik,*) a town of Scotland, and chief town of the Shetland Islands, on Brassey Sound, 20 m. N.N.E. of Sumborough Head. The inhabitants are mostly engaged in the herring and whale fisheries. *Manuf.* Straw-plaiting and woolleus. *Pop.* abt. 3,500.

Le Sage, ALAIN RÉNÉ, a distinguished French novelist and dramatist, was B. in Brittany, 1668, and studied at the Jesuit's College at Vannes. In 1692 he went to Paris, where his talents and manners procured him admission into the best society, and he soon adopted the profession of an author. He studied the Spanish language, and produced a multitude of translations, or imitations, of Castilian dramas and romance. His comedy of *Crispin the Rival of his Master*, first attracted the public notice, but his success as a novelist has most contributed to make him known to foreigners. *Le Diable Boiteaux*, known in England by the title of *The Devil upon Two Sticks*, became extremely popular; the comedy of *Turcaret* added to his fame, and that fame was soon rendered imperishable by his admirable *Gil Blas.* Le Sage was endowed with great literary fertility. He composed 24 dramatic pieces, and had a share in the composition of 76 others. Among his novels are, *The Adventures of Guzman d'Alfarache*; *The History of Estevanille Gonzales*, &c. D. 1747.

Les'bos. See MITYLENE.

Lese-majesty, *n.* (*Law.*) Same as LEZE-MAJESTY, *q. v.*

Lesina, (*les'e-na.*) (Anc. PHAROS.) An island of Austria, in the Adriatic, prov. Dalmatia, 23 m. S.E. of Spalatro. *Ext.* 40 m. long, and average breadth bet. 2 and 6 m. *Soil*, fertile; producing wine, figs, rosemary-oil, &c.; also marble. *Pop.* estimated 14,000.—Its principal town, Lesina, has a pop. of abt. 2,500.

Lesion, (*lē'zhun,*) *n.* [Fr.; from Lat. *læsio, lædo, læsus*, to hurt, to injure.] (*Surg.*) A surgical term for any structural burst or injury to an internal organ. Any wound, breach, or loss of substance, caused by disease or accident to a part, is called a lesion.

(*Scot. Law.*) A term to denote injury or prejudice sustained by a minor or by a person of weak capacity, sufficient to be a ground of action to reduce or set aside the deed which caused the lesion.

Les'lie, CHARLES ROBERT, a distinguished modern painter and author, B. in London, of American parents, in 1794. In 1799 his father quitted England and settled in Philadelphia. After receiving the ordinary school education, young *L.* was apprenticed to a bookseller in Philadelphia; but the occupation was from the first distasteful to him; and eventually he was allowed to follow the bent of his inclination, and returned to London in 1813, with the view of becoming an artist. His first instructors in England were both American-born artists—the venerable president, West, and Washington Allston. The first picture which gained him fame was *Anne Page and Slender*, exhibited at the British Institution in 1819. This was followed at the succeeding exhibition of the Royal Academy by *Sir Roger de Coverley going to Church*, a work which excited general interest and admiration; and from this time forward his pictures steadily displayed increasing power. Most of his productions are illustrative of the works of Shakspeare, Addison, Fielding, Goldsmith, Cervantes, Molière, &c., &c.; but he has taken subjects suggested rather than described by them; and to use the words of a contemporary, it may be doubted whether the passages of quaint humor in any of these writers were ever represented with so genial a feeling, so much regard for the author, and so much respect for the spectator. In 1821 Leslie was elected Associate of the Academy; and in 1826, R. A. In 1833 he was appointed by the United States Government professor of drawing in the Military Academy at West Point; which post, after a trial of five months, he resigned, and returned finally to England. Mr. Leslie used with success the pen as well as the pencil. In 1845 he published a life of his friend Constable, the painter. From 1848 to 1851 he filled the post of professor of painting at the Academy, and his lectures have been published, with additions, as a *Handbook for Young Painters.* At the time of his death he was engaged on the *Life of Sir Joshua Reynolds*, which has been since published under the editorship of Mr. Tom Taylor. D. 1859.

Les'lie, SIR JOHN, a Scottish mathematician and physicist, B. in Largo, Fifeshire, 1766. After completing his education at the universities of St. Andrew's and Edinburgh, and travelling as tutor in the United States, he returned to Scotland, and, obtaining letters of introduction to individuals of literary and scientific celebrity, set out for London, where he for some time gained a subsistence by translating and compiling scientific works. In 1805 he became professor of mathematics in the University of Edinburgh. In 1809 he obtained the chair of natural philosophy, upon the death of Professor Playfair; and from that period until his death he produced a succession of valuable works on subjects connected with natural philosophy. In 1832 he was knighted. He contributed treatises on Achromatic Glasses, Acoustics, Climate, Cold, Dew, Meteorology, &c., to the "Encyclopædia Britannica," and also furnished the "Edinburgh Review" and the "Edinburgh Transactions" with many excellent papers. Among his larger works may be cited *The Elements of Geometry*, *Elements of Natural Philosophy*, and an *Account of Experiments and Instruments depending on the Relation of Heat to Moisture.* He was also the inventor of the differential thermometer. D. 1832.

Les'lie. in *Michigan*, a post-village and township of Ingham co., on the Michigan Central R.R. about 22 m., E.S.E. of Lansing. *Pop.* of village (1894) 980.

Les'lie. in *Wisconsin*, a post-office of Lafayette co.

Lesmahago, (*les-ma-hai'go,*) or **Abbey Green,** a village and parish of Scotland, in Lanark co., on the Clyde, 6 m. W.S.W. of Lanark. The celebrated falls of the Clyde are in this parish. *Pop.* about 8,800.

Lespede'za, *n.* [In honor of *Lespedez*, governor of Florida.] (*Bot.*) A genus of plants, order *Fabaceæ.* They are perennial plants, with leaves palmately trifoliate, reticulate-veined. *L. captata*, the Bush Clover, is an erect, hairy, half shrubby plant, found in dry soils from Canada to the Carolinas. Stem, 2 to 4 feet high; leaves numerous.

Less. A terminant syllable of many nouns and a few adjectives. It is a privative term, denoting lack or deprivation; as, child*less* (without children), money*less*, wit*less*, &c.

Less, *a.* [Irregular comp. of *little.* A. S. *læs*; Goth. *lans*, empty, blank, *fralinsan*, to lose utterly; akin to Gr. *lüō*, to lose.] Beret of part of that indicated by little; smaller; inferior; not so large or great.

"'Tis *less* to conquer than to make wars cease."—*Lord Halifax.*

—*adv.* Not so much; in a smaller or lower degree.

"Happy, and happy still she might have prov'd,
Were she *less* beautiful or *less* belov'd."—*Pope.*

—*n.* Not so much; a smaller portion.

"Feelings . . . with *less* of earth in them than heaven."—*Scott.*

—The inferior; the younger; as, St. James the *Less.*

Lessee'. *n.* [From *lease.*] (*Law.*) The person to whom a lease is given, or who holds land or real-estate on lease; as, the *lessee* of a theatre.

Lessen, (*lĕs'n,*) *v. a.* [From *less.* Goth. *galanjan*, to take off, to separate.] To make less in bulk, quantity, number, or amount; to make smaller; to diminish; as, to *lessen* an indemnity.—To make less in degree, state, or quality; to diminish in value; as, to *lessen* a punishment.—To reduce in dignity or estimation; to degrade; to abate; to weaken; to lower.

"St. Paul chose to magnify his office when evil men conspired to *lessen* it."—*Atterbury.*

—*v. n.* To become less in bulk, quantity, number, or amount; to be diminished or reduced.—To become less in degree, quality, or intensity; to decrease; to shrink; to contract; as, public faith in the government is daily *lessening.*

Les'sen, a town of Germany, in Brunswick, dist. of Wolfenbüttel; *pop.* 4,500.

Les'seps, VICOMPTE FERDINAND DE, a French diplomatist and engineer, B. at Versailles, 1805, was appointed, in 1828, attaché to the French consulate at Lisbon; and after holding various consular offices in Europe and the East, was made consul at Barcelona, in 1842, during the bombardment of which town he zealously devoted himself to protect French life and property, besides affording an asylum to Spaniards and others on board French

ships. He visited Egypt in 1854, conceived the idea of the Suez Canal, published a report thereon in 1856, and subsequently supervised its construction. He also promoted the Corinth Canal (see CANALS), and, in the height of his reputation, undertook the construction of the Panama Canal (*q. v.*). The cost of this had been estimated at $300,000,000; but de Lesseps asserted that $120,000,000 would suffice. After $280,000,000 had been expended, work was stopped, the company was dissolved (1889), and de Lesseps was convicted of fraud and bribery. The sentence of imprisonment was not executed, but de Lesseps thereafter led a life of comparative retirement. Died Dec. 7, 1894.

Lesser, (*lĕs'r,*) *a.* [A. S. *læssa, læsse.*] Less; smaller; inferior. (Of infrequent use.)

"The *lesser* breaches of the law."—*Locke.*

Les'ses, *n. pl.* [Fr. *laissés.*] The voided excrement of animals.

Lessines, (*les-seen',*) a town of Belgium, in Hainault, on the Dender, 20 m. N.N.W. of the Mons. *Manuf.* Chicory and salt. *Pop.* 5,500.

Les'sing, GOTTHOLD EPHRAIM, a distinguished German critic, dramatist, and miscellaneous writer, b. at Kamenz, in Lusace, 1729. He was educated at the public-school of Meissen and the university of Leipsic, and was from the first an ardent and laborious student. He was attracted to the stage; and his first essays in literature were dramatic compositions. After various literary attempts at Berlin, he went to Wittenberg, where he graduated M.A.; and on his return to Berlin, in 1753, he became the intimate friend and coadjutor of Moses Mendelssohn and the publisher Nicolai. Under their joint care appeared the journal entitled *Bibliothek der schönen Wissenschaften.* *L.* remained at Berlin, zealously pursuing his chosen tasks, till 1760, when he removed to Breslau, having been named secretary to the Prussian general in command there. After five years, he again returned to the capital, and in 1770 was appointed librarian to the prince of Brunswick, at Wolfenbüttel. He made a short visit to Italy two years later, lost his wife in 1776, and after a long decline of health, spirits, and mental power, he died in 1781. *L.*'s great aim was to infuse a new spirit into the literature of his country, and to refine and polish its style; and he succeeded. His writings are among the classics of German literature, and are especially distinguished for masterly criticism, forcible reasoning, and clear, nervous style. "He thinks," says Carlyle, "with the clearness and piercing sharpness of the most expert logician; but a genial fire pervades him — a wit, a heartiness, a general richness and fulness of nature, to which most logicians are strangers." Among his dramatic works are, *Miss Sara Samson, Minna von Barnhelm, Emilia Galotti,* and *Nathan the Wise* (his last work, which was not published till 1779). Of his prose works may be named, *Fabeln, Litteratur-Briefe, Dramaturgie* (which first made Shakspeare really known to the Germans), and *Laocoon.* The celebrated *Wolfenbüttel'sche Fragmente,* in which so bitter an attack was made on Revelation, first appeared in 1774, in the work entitled *Beiträge zur Geschichte und Litteratur aus den Schätzen der Herzoglichen Bibliothek zu Wolfenbüttel.* They were long attributed to *L.*, but were in fact written by the elder Reimarus, and only annotated by *L.* Coleridge was a diligent student of *L.*'s works; and some passages in the *Confessions of an Inquiring Spirit* were made the ground of a charge of plagiarism from *L.*

Less'ley, in *Missouri,* a village of Benton co., about 70 m. W.S.W. of Jefferson City.

Lessoe, or **Lassoe,** (*les-so',*) an island of Denmark, in the Cattegat, 12 miles N.E. of Jutland; *area,* 42 sq. m. The inhabitants are mostly engaged in fishing and agricultural pursuits. *Pop.* 2,700.

Lesson, (*lĕs'sn,*) *n.* [Fr. *leçon;* Lat. *lectio, lectionis,* from *lego, lectum,* to pick up, gather, or collect, to read.] A reading; a reading out or aloud; anything read or recited to a teacher, by a pupil or learner, for improvement, or such a portion of a book as a pupil learns and repeats at one time; a task.

"I but repeat that *lesson* I have learned of thee."—*Denham.*

—A portion of Scripture read in divine service; as, here endeth the second *lesson.* — A portion of a book or manuscript assigned by a preceptor to a pupil to be learned, or for an exercise; — hence, anything to be learned; precept, doctrine, or notion inculcated. — A severe lecture; rebuke; reproof; instruction, truth, or example taught by experience; as, the *lessons* of adversity.

"She would give her a *lesson* for walking so late."—*Sidney.*

(*Mus.*) A musical composition picked out or copied for an instrument.

"Good *lessons* set for a flute out of tune."—*Davies.*

—*v. a.* To instruct; to teach; to impart knowledge.

"Even in kind love, I do conjure thee to *lesson* me."—*Shaks.*

Lessor', *n.* (*Law.*) One who grants a lease; — opposed to *lessee.*

Lest, *conj.* [A. S. *leas,* abatement, privation, or taking away.] That not: for fear that; — a word denoting privation, prevention, or a separating or taking away.

"*Lest* they faint at the sad sentence rigorously urg'd."—*Milton.*

Les'ter, in *Illinois,* a post-office of Marion co.

Les'ter, in *Iowa,* a post-township of Black Hawk co.; *pop.* 803.

L'Estrange, SIR ROGER, a partisan of Charles I., born 1616, famous as a political writer and translator from the learned languages. D. 1704.

Lesueur, EUSTACHE, (*les-soo'er,*) a French painter, b. in Paris, 1617, and surnamed the "Raphael of France." He studied under Vouet, and early in life attracted the notice of Poussin. Displaying great disregard of court patronage, he worked only for private individuals and for religious establishments, and, while still young, retired to a cloister. He was the first painter in France during the reign of Louis XIV., and surpassed Lebrun, his rival, in grace and vigor. Among the most important of his works were the *Life of St. Bruno,* in twenty-two subjects; *St. Paul Preaching at Ephesus,* and *The Martyrdom of St. Lawrence.*

Le Sueur, in *Minnesota,* c. S.S.E. central co.; *area,* abt. 450 sq. m. *Rivers.* St. Peter's, or Minnesota, and Le Sueur. *Surface,* undulating; *soil,* fertile. *Cap.* Le Sueur. *Pop.* (1895) 20,915.

Le Sueur Center, a post-village, cap. of Le Sueur co., on the Minnesota river, about 50 m. S. of St. Paul.

Let, *v. a.* [A. S. *lætan, letan;* O. Sax. *lâtan;* Ger. *lassen;* Icel. *lâta;* Goth. *letan,* to permit to depart, to set free; Sansk. *lî,* to loose.] To permit; to allow; to suffer; to give leave or power by a positive act; or, negatively, to withhold denial or restraint; not to prevent.

—To lease; to grant possession and use for a specified compensation; as, to *let* a house. (See below, § *Let out.*)

"She *let* her second floor to a very genteel man."—*Tatler.*

NOTE. — *Let,* in the imperative mood, is employed as an auxiliary to denote resolution, fixed purpose, ardent desire, expressed wish.

"*Let* these describe the undescribable."—*Byron.*

—Exhortation; incitement.

"Liberty's in every blow! *Let* us do or die!"—*Burns.*

—Permission; command.

"'*Let* us worship God,' he says, with solemn air."—*Burns.*

—Concession; allowance; license.

"O'er golden sands *let* rich Pactolus flow."—*Pope.*

Let-alone principle. [Fr. *laissez-faire,* let alone.] (*Pol. Econ.*) The doctrine of non-interference of the state with the interests of social economy. — *To let alone,* to leave; to suffer to remain without molestation or interference; as, *let* me *alone.*

"This notion might be *let alone* and despised, as a piece of harmless, unintelligible enthusiasm." — *Rogers.*

To let blood, to phlebotomize; to bleed; to puncture a vein in order that blood may flow.

"Let's purge this choler without *letting blood.*"—*Shaks.*

To let down, to lower; to cause to sink, fall, or be depressed.

"*Let down* thy pitcher, that I may drink." — *Gen.* xxiv. 14.

To reduce in tempering; to soften in malleability; as, *to let down* steel articles in process of manufacture.

"You must *let* it *down,* that is, make it softer by tempering it." *Moxon.*

To let drive, or *fly,* to send forth with violent impulsion; as, *to let fly* an arrow.

"He *let drive* at his antagonist with a blow straight out from the shoulder."—*Egan.*

To let in, or *into,* to admit; to suffer to come in or enter; as, *to let in* a visitor.

"What boots it at one gate to make defence,
And at another to *let in* the foe." — *Milton.*

To insert, as an extraneous adjunct; as, *to let in* a wedge.

To let loose, to suffer to depart; to allow to go at large; to remove restraint from.

To let out, to allow to escape, as a bird or animal. — To loosen by extending; to enlarge; as, *to let out* the tuckers of a dress. — To lease; to let on hire; as, *to let out* a farm, *to let out* a vehicle.

To let off, to discharge, as the arrow of a bow, or the charge of a gun.

"Charging my pistol with powder, I *let* it *off* in the air."—*Swift.*

To release, as from a promise or engagement; to suffer to evade, or escape from, as a punishment; as, I *let* him *off,* it being his first offence.

—*v. n.* To be leased, or let; as, he has a house *to let.*

Let, *v. a.* [A. S. *lettan;* D. *letten.*] To impede; to keep back; to obstruct; to retard; to withhold.

"Their senses are not *letted* from enjoying their objects."—*Sidney.*

—*n.* Hinderance; obstacle; obstruction; impediment. (R.)

"Secret *lets* and difficulties in public proceedings." — *Hooker.*

Let, a termination of diminutive words; as, wave*let,* a small wave; stream*let,* ring*let,* tart*let,* rivu*let,* &c.

Letart', in *Ohio,* a township of Meigs co.

Letart Falls, in *Ohio,* a post-village of Meigs co., abt. 110 m. S.E. of Columbus.

Leteh, *n.* A leach-tub. See LEACH. — In some parts of England, an oblong swamp.

—*v. a.* Same as LEACH, *q. v.*

Leteh'er, in *Kentucky,* an E. by S. co., adjoining Virginia; *area,* abt. 300 sq. m. *Rivers.* The head-waters of the Kentucky River, and some other small streams. *Surface.* Diversified with mountains and valleys, the Cumberland Mountains forming the S.E. border. *Soil.* Moderately fertile. *Min.* Coal, in considerable quantities. *Cap.* Whitesburg.

Leteh'-tub, *n.* Same as LEACH-TUB, *q. v.*

Le'thal, *a.* [Lat. *lethalis,* from *letum,* death, as implying forgetfulness of all our earthly cares, from Gr. *lē-thē,* forgetfulness, from *lanthăno, lathein,* to escape notice.] Causing oblivion; — hence, deadly; mortal; fatal.

Lethargie, Lethargieal, (*le-thär'jik,*) *a.* [Lat. *lethargicus;* Gr. *lethargikos.* See LETHARGY.] Dull; drowsy; preternaturally disposed to be sleepy; heavy; torpid; as, a *lethargic* constitution.—Resembling, or belonging to, or caused by lethargy; as, a *lethargic* sleep.

Lethar'gieally, *adv.* In a lethargic manner; heavily; drowsily.

Lethar'giealness, Lethar'gieness, *n.* Disposition to lethargy; morbid inclination to sleep; preternatural drowsiness; heaviness.

Leth'argize, *v. a.* To make lethargic; to deaden.

Leth'argy, *n.* [Fr. *léthargie;* Lat. *lethargia;* Gr. *lēthargia,* from *lēthargos,* forgetting, forgetful, from *lē-thē,* forgetfulness.] (*Med.*) A state of unnaturally profound and continuous sleep. It is intermediate between heavy sleep and a state of complete coma, and may result from severe exertion of the body or mind; but it is also frequently produced by congestion of the blood in the vessels of the brain; and hence it is often a symptom of great danger, frequently preceding an attack of apoplexy. It may also be caused by the action of any narcotic substance, or of alcoholic liquors. In general, the cure is effected by the removal of the cause by which it has been brought about. If the result of a determination of blood to the head, then topical bleedings by cupping, and purgatives, are required; but if, on the other hand, it proceed from nervous weakness, then tonics, stimulants, and a generous diet, are necessary. — See APOPLEXY, COMA.

—Dulness; inaction; unnatural quietude.

"Europe lay then under a deep *lethargy.*" — *Atterbury.*

Lethe, (*lē'the,*) *n.* [Gr. *Lē-thē,* the river of oblivion.] (*Gr. Myth.*) One of the rivers of Hell, whose waters the souls of the dead drank after they had been confined for a certain space of time in Tartarus. The draught caused them to forget whatever they had done, seen, or heard before, as the name implies.

—Oblivion; forgetfulness; a draught of oblivion.

"The conquering wine hath steept our senses
In soft and delicate *lethe.*"—*Shaks.*

—Death; eternity. — *Shaks.* (B.)

Le'thean, *a.* [Gr. *lēthaios.*] Causing forgetfulness; superinducing obliviousness; as, a *lethean* draught.

Le'theon, *n.* [Gr. *lē-thē.*] (*Med.*) A name formerly given to sulphuric ether when inhaled as an anæsthetic agent.

Le'theonize, *v. a.* To place under the influence of lethcon; hence, to cause to become oblivious or unconscious.

Lethif'erous, *a.* [Fr. *léthifère.*] Deadly: fatal; occasioning death or destruction; as, a *lethiferous* drug.

Let'ter, *n.* [From *let.*] One who lets, allows, or permits. — One who retards, obstructs, or hinders. — One who gives vent; as, a blood-*letter.*

Let'ter, *n.* [Fr. *lettre;* Lat. *litera.* from *lino, litum,* to daub, lay on, smear upon; as the early mode of writing was by graving the characters upon tablets smeared over with wax.] A mark or character, written, printed, engraved, or painted, used as the representative of a sound, or of the articulation of the human organs of speech. — One of the elements of syllabic speech. — See ALPHABET; PHILOLOGY; WRITING.

—An epistle; a written or printed message or despatch; an inscribed missive. — Verbal expression; literal definition of sense or meaning.

"In obedience to human laws, we must observe the *letter* of the law."—*Jeremy Taylor.*

—*pl.* Erudition; learning; intellectual lore or accomplishments; as, a man of *letters,* the world of *letters.*

(*Printing.*) Type; a character formed of metal or wood (usually of metal), and used in printing books, &c.; also, type, in a collective sense; as, black-*letter.*

Dead letter, and *Dead-letter Office.* See DEAD-LETTER; DEAD-LETTER OFFICE.

—*v. a.* To impress with letters; to form letters on; as, to *letter* the binding of a book.

Let'ter-board, *n.* (*Printing.*) A board on which paged type is laid, previous to electrotyping or distribution.

Let'ter-box, *n.* A box or receptacle for letters.

Let'ter-case, *n.* A case, book, or portfolio, for the deposition of letters.

(*Printing.*) The case in which types are kept for use.

Lettered, (*lĕt'terd,*) *a.* Literate; educated; erudite; versed in science or literature; as, a *lettered* man, a *lettered* education. — Pertaining to letters or learning; suitable to letters. — Furnished with, or demonstrated by letters; as, *lettered* cuts.

Let'ter-founder, *n.* A type-founder; one who casts letters for printing.

Let'tering, *n.* Act or process of impressing or imprinting letters.

—The type or letters so impressed.

Letterken'ny, in *Pennsylvania,* a township of Franklin co.

Let'tern, *n.* Same as LECTURN, *q. v.*

Letter of Advice. (*Com.*) A letter usually written by the drawer of a bill of exchange to the drawee, as well to prevent fraud or alteration of the bill, as to let the drawee know what provision has been made for the payment of the bill.

Letter of Attorney, a letter or instrument by which one person authorizes another to do some act for him, such as to sign a deed, collect rents, &c., the party so authorized to act being called the attorney of the other. The terms of the letter must be strictly adhered to, for the principal is only bound for the acts of his agent to the extent that he authorized him to act. It includes, however, an authority to do everything that is absolutely necessary in carrying out the orders of the letter. The authority to act ceases on the death of the person granting it.

Letter of Cachet. See CACHET (LETTRE, DE.)

Letter of Credence. See CREDENTIAL.

Letter of Credit. (*Com.*) An order given by a banker, or other person, at one place, to his agent in another, authorizing him to pay to a particular individual a certain sum of money. A letter of credit is not a negotiable instrument, and therefore only the person named in it can legally demand payment.

Let'ter-office, *n.* A post-office; a place for the depositing and distribution of letters.

Letter of License. (*Law.*) An instrument by which

Gotthold Ephraim Lessing

1729–1781

creditors allow to a party who has failed in his trade time for payment of debts and management of affairs.

Letter-of-marque. See MARQUE.

Letter-paper, *n.* Writing-paper; post-paper; — particularly as distinguished from *foolscap.*

Let'ter-press, *n.* Print; letters or words impressed or imprinted on paper or other material by means of types; — sometimes used in contradistinction to *engraving.*

Letters Close. (*Eng. Law*) Letters sealed up, containing grants of the king, and, being of private concern, they are thus distinguished from *Letters-patent.*

Letters-Patent. (*Law.*) The name of an instrument granted by the government to convey a right to the patentee, as a patent for a tract of land; or to secure to him a right which he already possesses, as a patent for a new invention or discovery. *L. P.* are matter of record. They are so called because they are not sealed up, but are granted open. See PATENT.

Letters Testamentary. (*Law.*) An instrument in writing granted by the judge or the officer having jurisdiction of the probate of wills, under his hand and official seal, making known that at a certain date the last will and testament of —— was duly proved before him; that the probate and grant of administration was within his jurisdiction; and he accordingly certifies "that the administration of all and singular the goods, chattels, and credits of the said deceased was granted to ——" (the executor named in the will), "he having been already sworn well and faithfully to administer the same .... and also to render a just and true account thereof."

Let'ter-wood, *n.* (*Bot.*) A species of plant, genus *Brosimum,* native of Guiana. The wood is very hard, of a beautiful brown color, variegated with black spots resembling hieroglyphics.

Let'ter-writer, *n.* A correspondent; one who writes letters.

—A press or apparatus for copying letters.

Letter-writing. (*Lit.*) A branch of literature which, unfortunately, is but little studied. It is to be regretted that more pains are not taken to excel in an art which is so commonly and so universally practised. There are comparatively few persons that can write a good letter; and yet it is an attainment that may be reached by comparatively little pains and study. A good letter requires to be easy, natural, and well expressed, suited to the circumstances, and to the character of the person to whom it is addressed. It is exceedingly doubtful whether epistolary communication was known in the Homeric age, which is assigned by various chronologists to different periods between B. C. 1184 and 684. David wrote a letter to Joab, and dispatched it by Uriah, B. C. 1035 (2 *Sam.* xi. 14, 15), and Jezebel wrote letters in Ahab's name, and sealed them with his seal, B. C. 899 (1 *Kings* xxi. 8). The classical authors regarded Atossa, queen of Darius I. (Hystaspes), who flourished in the 6th cent. B. C., as the inventor of letter-writing.

Let'tic, Let'tish, *n.* or *a.* (*Philol.*) The name for that branch of the Aryan family of languages which includes the old Prussian and the living dialects of Lithuania, Courland, and Livonia.

Let'ting, *n.* The letting out on lease, as a house or farm.

—The allotting or placing out work to be done by contract; as, the *letting* of a length of railroad.

Lettuce, (*lĕt'tis,*) *n.* [Fr. *laitue;* Lat. *lactuca,* from *lac, lactis,* milk. See LACTEAL.] (*Hort.*) A smooth, herbaceous, annual plant, containing a milky juice, which has been cultivated from very early times. It is much used as a salad. There are many varieties of cultivated lettuce, which are divided into two families — the *cos,* and the *cabbage.* The cos varieties are distinguished by being of an upright growth, and are more grown in summer than winter. The cabbage lettuce is grown at all seasons, but more especially in winter, on account of its superior hardihood. It grows close to the ground, and produces a blanched heart, like the cabbage, without assistance. When young, the cabbage varieties are generally sweeter than those of the cos at the same age, but at full growth this is reversed; hence, the latter are preferred for salads, and the former for soups. — See LACTUCA.

Le Tun'breville, in *Ohio,* a village of Marion co., about 55 m. N. of Columbus.

Leuaniline, (*lu-an'e-leen,*) *n.* (*Chem.*) A base obtained from aniline by acting on a salt of rosaniline with sulphide of ammonium. It is a dazzlingly white crystalline solid, soluble in water, and forming well-defined salts with the acids. It differs from rosaniline, in containing two equivalents of hydrogen less than that alkaloid; in other words, leuaniline seems to bear the same relation to rosaniline that white indigo does to the blue variety.

Leuca, (Capo di.) (*lai'oo-ka,*) the most S.E. extremity of Italy, 25 m. S.E. of Otranto; Lat. 39° 48′ 6″ N., Lon. 18° 22′ 5″ E.

Leucan'themum, *n.* [Gr. *leukos,* white, *anthos,* flower; the heads have large, white, conspicuous rays.] (*Bot.*) A genus of plants, order *Asteraceæ.* They are perennial herbs, with alternate leaves. *L. vulgare,* the White-weed, or Ox-eye Daisy, is a great annoyance to farmers, rapidly overspreading pastures and neglected fields throughout N. America.

Leuce, or **The Isle of Serpents,** (*loo-se',*) a high islet of the Black Sea, 22 m. E. of the delta of the Danube.

Leu'cine, *n.* (*Chem.*) A substance formed during the decomposition of cheese, muscle, or gluten, in the presence of water. It forms crystalline salts with several of the acids. It is somewhat cholesterine in appearance. It is sparingly soluble in cold water, but readily so in hot. It has an unctuous feel, and sublimes at 340° in woolly flocculi.

Leucip'pus, a Greek philosopher, who lived between the 4th and 5th centuries B. C., and to whom the first idea of the atomic system is attributed, which was afterwards perfected by his disciple Democritus. Kepler and Descartes were much indebted to the ancient doctrines of these masters for the explanation of the planetary vortices. Bacon remarks that Democritus and Leucippus were so much taken up with the particles of things as to neglect their structure.

Leu'cite, *n.* [Fr., from Gr. *leukos.*] (*Min.*) A crystallized silicate of alumina and potash, of a gray or white color, generally opaque, and resembling garnet in form. It usually occurs in lava, especially in that of Vesuvius; hence it is also termed *Vesuvian* and *Volcanic garnet.*

Leucit'ic, *a.* (*Min.*) Containing or resembling leucite.

Leucocythæ'mia, *n.* [Gr. *leukos, kytos,* cell, and *aima,* blood.] (*Med.*) A condition of the blood which consists in the superabundant development of the white corpuscles.

Leuco-ethiop'ic, *a.* [Gr. *leukos,* and *aithiopos,* swarthy.] White and black, as the albino of the negro race.

Leuco'ma, *n.* [Gr. *leukos,* white.] (*Med.*) A white opacity of the cornea of the eye. It is occasioned by acute inflammation, causing a deposition of lymph either upon the surface or into the substance of the cornea. When merely superficial, it often passes away with the cessation of the inflammation, but when deep-seated, it is often incurable. Astringent lotions are generally recommended.

Leucop'athy, *n.* [Gr. *leukos,* and *pathos,* condition.] The state or condition of an albino, or of a white offspring of black parents.

Leucophane, (*lū'ko-fān,*) *n.* [From Gr. *leukophanēs.*] (*Min.*) A silicate of glucina and lime with fluoride of sodium, found in the syenite of Norway.

Leucophlegmacy, (*lū-ko-fleg'ma-se,*) *n.* [Gr. *leukophlegmatia,* from *leukos,* white, and *phlegma,* phlegm.] (*Med.*) A pallid, flabby state of body.

Leucophlegmat'ic, *a.* [Fr. *leucophlegmatique,* from Gr. *leucophlegmatos.*] Affected with a dropsical habit of body; with a white, bloated skin.

Leucop'yrite, *n.* [Gr. *leukos,* and Eng. *pyrite.*] (*Min.*) An ore of iron, color between silver-white and steel-gray. *Comp.* Arsenic 72·8, iron 27·2.

Leucorrhœ'a, *n.* [Gr. *leukos,* white, and *rheo,* to flow.] (*Med.*) The fluor albus.

Leucoth'ea, *n.* (*Astron.*) An asteroid discovered by Luther in 1855.

Leuco'thiop, *n.* An albino of black parents.

Leu'cous, *a.* [Gr. *leukos,* white.] White; applied particularly to the albino class of people.

Leuctra, (*luk'tra,*) a village of Greece, in Bœotia, 6 m. from Thebes, famous for the victory of Epaminondas over the Lacedæmonians, B. C. 371.

Leuk, or **Loueche,** (*look,*) a village of Switzerland, canton of Valais, on the Rhone, at its confluence with the Dala, 15 m. E.N.E. of Sion, and 4,500 feet above the sea; *pop.* 600. — It is noted in connection with the *Baths* of Leuk, situated 8 m. northward, at the head of the valley of the Dala, and the foot of the ascent over the Gemmi Pass. At this place, which is 4,500 feet above the sea, there is a hamlet of 300 inhabitants, and several lodging-houses and hotels for the accommodation of patients and travellers. The springs have a high temperature (120° F.), are slightly saline, chalybeate, and sulphureous, and are used both for drinking and bathing. They are chiefly useful in diseases of the skin; and one peculiarity is the length of time the patients remain in the baths — as long as eight hours a day. For this purpose there are several apartments of 20 feet square, in which as many as 15 or 20 persons of both sexes, clad in long woollen dresses, bathe in common; sitting up to their necks in water, they beguile the time with conversation, chess, reading the newspapers, &c. There appears to have been a bathing establishment here as early as the 12th century.

Leu'then, or LISSA. (*Hist.*) The Prussians, under Frederick II., after an obstinate contest, defeated the Austrians, led by Prince Charles of Lorraine and Marshal Daun, at the village of Leuthen, near Lissa, in Silesia, Dec. 5, 1757. The Austrians withdrew through Lissa.

Levan'na, in *New York,* a post-village of Cayuga co., about 14 m. S.W. of Auburn.

Levau'na, in *Ohio,* a post-village of Brown co., on the Ohio River, about 52 m. above Cincinnati.

Levant, (*lĕ'vant,*) *a.* [Fr., the Levant, the East, from *lever,* to raise or rise; Lat. *levo,* to raise. See LEVER.] Denoting the part of the hemisphere where the sun rises; eastern; — opposed to *ponent.*

—*n.* A term applied to that part of the Mediterranean Sea which is bounded by Asia Minor on the N., Syria and Palestine on the E., Egypt and Barca on the S., and by the island of Candia and the rest of the Mediterranean on the W.

Levant', *v. a.* To flee one's creditors; to decamp in a discreditable manner; as, he *levanted* with his friend's wife. (English cant.)

Levant', in *Maine,* a post-village and township of Penobscot county, about 75 miles N.E. of the city of Augusta.

Levant', in *New York,* a village of Chautauqua co., about 18 m. E.S.E. of Mayville.

Levant'er, *n.* A strong wind in the Mediterranean, blowing from the eastward. — One who decamps from a race-course without paying his losses in betting; a defaulter; — hence, any one who elopes or runs away in a disgraceful manner. (Eng. cant.)

Lev'antine, *a.* [Fr.] Having reference or pertaining to the Levant; as, the *Levantine* trade. — A sort of silk cloth.

Levant'-nut, *n.* (*Bot.*) See COCCULUS INDICUS.

Lava'ri-fa'cias, *n.* [Low Lat., cause to be levied.] (*Law.*) A writ of execution issued at common law.

Leva'tor, *n.* [From Lat. *levare,* to raise.] (*Anat.*) The name given to certain muscles which serve the purpose of lifting the parts to which they are attached.

(*Surg.*) A surgical instrument used in raising a depression in the skull.

Levee, (*lĕv'e,*) *n.* [Fr. *levée,* from *lever,* to raise.] The assembly of persons who visit a sovereign or great personage in the morning; — opposed to *couchée.* — A *matinée,* as opposed to *soirée.*

"None of her sylvan subjects made their court,
Levees and couchees pass'd without resort." — *Dryden.*

—A stated public reception when a sovereign receives visits from such of his or her subjects as are entitled, by rank, fortune, or position, to the honor. — In England, the term *levee* is applicable to the presentation and reception of gentlemen only; that of ladies being styled the DRAWING-ROOM, (*q. v.*) — In the U. States it is also used for an evening party or assembly; as, "The President's *levee,*" and, in this sense, it is frequently pronounced *le-vee'.*

—A causeway, dike, or embankment, raised along the sides of a river as a barrier against inundation; as, the *levee* at New Orleans.

Levee en masse. See LEVY.

—*v. a.* To attend at a levee. — To confine within a proper channel by means of levees; as, to *levee* a river.

Lev'el, *n.* [A. S. *læfel, læfyl;* It. *livella,* a line, level, plummet; *livellare,* to level; Lat. *libella,* a water-level, from *libra,* a balance, a plummet, a level.] (*Physics.*) An instrument which shows the direction of a straight line parallel to the plane of the horizon. The plane of the sensible horizon is indicated in two ways: by the direction of the plummet or plumb-line, to which it is perpendicular; and by the surface of a fluid at rest. Accordingly, levels are formed either by means of the plumb-line, or by the agency of a fluid applied in some particular manner. They all depend upon the same principle, namely the action of terrestrial gravity. *L.* in which the plumb-line forms the essential part are those most usually employed for the common purposes required by bricklayers, masons, carpenters, &c. They are constructed under many different forms (Fig. 1563); but the general principle is as follows: A frame or board is prepared, having one edge perfectly straight, and a straight line is drawn on the frame at right angles to the straight edge. To some point of this straight line a thread carrying a plummet is attached; consequently, when the frame is placed in such a position that the thread of the plummet, hanging freely, coincides with the straight line, the straight edge of the frame, which is perpendicular to it, must be horizontal. — *Spirit Level.* By far the most convenient and also the most accurate level is the spirit level, (Fig. 1564.) It consists of a closed glass tube, A B, very slightly curved on the upper side. It is filled with spirit, with the exception of a bubble of air which tends to rise to the highest part of the tube. It is set in a case, C D; and when it is placed on a perfectly level surface, the bubble is exactly in the middle of the tube, as in the figure.

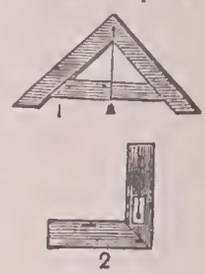


Fig. 1563. — LEVELS.

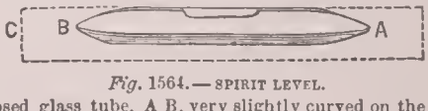


Fig. 1564. — SPIRIT LEVEL.

—An horizontal line, or a plane; a surface without inequalities.

"Those bred in a mountainous country over-size those that dwell on low *levels.*" — *Sandys.*

—Usual elevation; customary height; rate; standard; degree; as, the ordinary *level* of human intelligence. — Equal elevation with something else; state of equality.

"Providence, for the most part, sets us upon a *level.*" — *Addison.*

—Line of sight or direction in which a missile or projectile weapon is aimed.

"Shot from the deadly *level* of a gun." — *Shaks.*

—Rule; plan; scheme; method. — State of rest or fixity; state of quiescence.

(*Mining.*) A gallery excavated horizontally in a mine, at different fathoms of depth below the adit.

Lev'el, *a.* Horizontal; coinciding with the plane of the horizon. — Even; flat; smooth; plane; not having one part higher than another; not ascending or descending; as, a *level* floor, the *level* ground. — Of the same height; even with anything else; on the same line or plane with another thing.

"The knowledge of our Creator lies *level* to human understanding." — *Tillotson.*

—Equal in rank or degree; having no gradation of superiority.

"So sways she *level* in her husband's heart." — *Shaks.*

Lev'el, *v. a.* To make horizontal; to make to coincide with the plane of the horizon. — To make smooth, plane, or even; to reduce or remove inequalities of surface in; as, to *level* a pathway. — To reduce to an even plane or surface; to lay flat; to bring to the same height with something else.

"He *levels* mountains, and he raises plains." — *Dryden.*

—To bring or reduce to equality of condition, quality, state, or degree. — To aim; to point, in taking aim or

sight; to raise or depress, so as to direct a missile or projectils weapon to an object; as, to *level* a gun. — To aim; to direct; to point. — To place on a par or level with; hsnce, to adapt suitably to the capacity or comprehension of; as, *level* one's language to the intellectual calibre of another person.

Lev'el, *v. n.* To aim at; to point a missils or projectile weapon to the sight or mark. — To aim; to direct the aim, intent, or purpose; — usually before *at*.

"Ambitious York did *level at* thy crown." — *Shaks.*

Lev'elism, *n.* The doctriue of bringing down all social castes and distinctions to one coumon level. — See SOCIALISM.

Leveliza'tion, *n.* Act or operatiou of levelling; equalization.

Lev'eller, *n.* One who levels or makes smooth or even. — Ons who seeks to destroy distinctions, and reduce to one common equality.

Lev'ellers, *n. pl.* (*Eng. Hist.*) The name of a party which arose in the army of the Long Parliament, and whose professed object was to level all ranks of socicty, and to cstablish equality in titles and estates throughout the country. When Cromwell departed for Ireland in 1649, they raised mutinies in various quarters, and were put down, not without bloodshed, by Fairfax.

Lev'elling, *n.* Ths reduction of an uneveu surface to a level or plane.

(*Surveying.*) Ths art, process, or practiee by which the heights and depths of rising ground and hollows may be estimated abovo or below a curved surface, corresponding to the curvature of the globe when the distance is considerable, or above or below an horizontal plane passing through a certain point in the earth's surface when the distance is short. In geodetic surveys, where the operations extend over a great part of the earth's surface, great nicety is required, and ths measurements must be made with reference to the actual spheroidal shape of the earth; but in levelling a piece of ground for a railway or canal, it is sufficient to consider the surface to which the measurements are referred as being perfectly spherical. If it be desired to find the heights of a successive series of points in a line, straight or curved, running along the surface of the earth, it is manifest that the heights of these points can only be determined by referring them to other points, which are called level-points, and which are themselves equidistant from the centre of the earth, its form being assumed to be spherical. Such points are found by the aid of a spirit-level and by an instrument called a the-

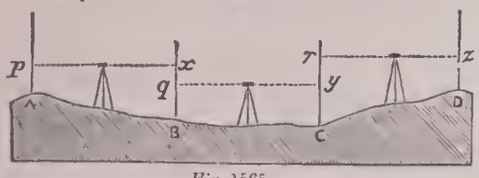


Fig. 1565.

odolite. (See THEODOLITE.) Suppose that it is desired to determine the relative heights of the points A, B, C, D, along the surface of the ground, in a line proceeding direct from A to D. When the most convenient stations have been determined at intervals along the line between its extremities, which in the present instance are assumed to be at B and C, and tho distances between them have been ascertained by measurement, the operator proceeds to place the theodolite midway between the first and second stations A and B, and, by tho aid of the spirit-level, hrings the telescope into such a position that the line passing through the centres of its lenses (called the line of collimation) may remain perfectly parallel to the plane of the horizon when the instrument is turned about its vertical axis. All points, thcrefore, in distant objects, which would be intersceted by the line of collimation produced, would be level-points, since they are in a plano passing through that line, provided always that they are equidistant from the vertical axis of the telescope; and if any two poiuts in a straight line with each other and the axis of the instrumeut be dctermined, the relative heights of any points above or below these may be readily ascertained. The surveyor having brought his instrument into a position parallel to the horizon at a point midway between the stations A and B, looks towards the station-staff at A, and gives signals to the assistant standing thcre, to move the index up or down thostaff as may be requisitc, until it comes directly in the plane in which the line of collimatiou lies, which is ascertained by means of the coincidence of the point in question with the point of section of two wires, fixed within the telescope at right angles to each other, in the line of collimation, and crossing in the csntro of the field of view. Turning the telescope towards the station at B, he goes through the same operation, and as the staves are divided into feet and inches, tho distance between the index and the surface of the ground at each station is known, and the relative heights of the points A and B are determined; the difference between the numbers shown on each staff denoting the uumber of inches that the point B happens to he below the point A. As the heights are successively taken from positions midway between each pair of stations, they are registered in a field-book, the heights Bx, Cy, Dz being entered in one column as fore-sights, while the heights Ap, Bq, Cr are entered in another as back-sights. By the aid of these heights, and a table of the distances between each station, an accurate sketch of the profile of the ground along the whole extent of the line can be made according to scale, the distances between the stations being drawn ou a less scale than the heights, for ths sake of clearness, as they are so very long in proportion to ths extent of the heights. This enables the euginecr to regulate the extent of ths embankments and cuttings that must he made in the construction of a railway canal along ths line that has been thus determined by levelling.

Levelling-staff, a graduated staff used in land-surveying.

Lev'elly, *adv.* In a level mannsr; evenly.

Lev'elness, *n.* State of being level; evenness; equality of surface; equality with something else.

Lev'en, *n.* Same as LEVIN, *q. v.* — A glade. (Scottish.)

Lev'en (Loch.) a lake of Scotland, co. Kinross, about 12 m. in circumferencc. It contains 4 islands, on one of which stood ths castle of Loch Leven, anc. a royal residence. Here Queen Mary was confined in 1567–8, and was forced to sign her abdication of the Scottish erown. On May 2, 1568, after a previous unsuccessful attempt, she succeeded in effecting her escape, by ths aid of George Douglas, the governor's brother, and of Willie Douglas, "a foundling," supposed to be a relative of the family.

Le'ver, *n.* [Fr. *levier*, from *lever*, to lift up; Lat. *levo*, to raise.] (*Mech.*) The most simple and common, but, at the same time, most important of the seven mechanical powers, consisting of an inflexible right line, rod, or beam, movable about a fulcrum or prop, and used for the raising of weights, being either without weight itself, or at least having such a weight as may be conveniently counterbalanced. The lever is the first of the mechanical powers, and on account of its simplicity was the first that was attempted to be explained. Its properties are treated of by Aristotle, and also by Archimedes. When a workman wishes to raise a large stone, he places an iron bar under it (1, Fig. 1566), with a block under the bar near the stone, and then presses down upon the other end of the bar; or else he places the end of the bar under tho stone (2, Fig. 1566), so that one end of it rests upon the ground, and then lifts upon the other end. The bar thus used constitutes a *lever*. The mass to be raised is called the *weight*. The moving force applied to the other end of the bar is called the *fulcrum*. The parts between the fulcrum and the points where the power or weight act are the *arms* of the lever. In the first case, the fulcrum moves between the weight and the power; in the second case, the weight was between the fulcrum and the power. In the fishing-rod (3, Fig. 1566), one hand, F, is the fulcrum; the other hand, P, is the power; and tho fish is the weight. Here the power is applied between the fulcrum and the weight. There are, then (Fig. 1567), 3 kinds of lever: 1, that with the fulcrum between the weight and power; 2, that with tho weight between the fulcrum and power; 3, that with the power between the fulcrum and the weight. — In the lever of the first kind, if the fulcrum is just half-way between the weight and power, then the weight and power will move through equal distances. In this case, the weight and power must be equal in order to balance each other, or to be in equilibrium. If the power were twice as far from the fulcrum as the weight, then the weight would move through only half the distance that the power does, and in this case the power need be only half the weight in order to balance it. Thus we see that, in the case of the lever, the weight and power will balance each other when the power, multiplied by the distance through which it moves, equals the weight multiplied by the distance through which it moves; that is, if the fulcrum of a lever be so placed that one end of the lever will move through a thousand inches while the other end moves one inch, then a power of one pound on the former will balance a weight of a thousand pounds on tho latter. — Sometimes two or more levers are combined. Suppose that P (Fig. 1568) be five times as far from the fulcrum, *f*, as A is, the point P will then move five times as fast as tho point A, and a pull of one pound on P will exert a pull of five pounds on A. If B is five times as far from the fulcrum F as W is, ths five pounds of pull on B will exert twenty-five pounds of pull at W. In this case, one pound of pull exerted at P will balance twenty-five pounds at W. But it will be found on trial that by pulling P down one inch, W will be raised only one twenty-fifth of an inch. Such combination of levers is called a *compound lever*. — A *bent lever* is that in which the arms of the lever are bent (Fig. 1569). In such a lever, the lengths of the arms are straight lines drawn from the fulcrum at right angles to the lines which showed the direction in which the power and weight act. The common claw-hammer, as used for drawing nails, is an illustration of this kind of lever. — *Universal lever* (Fig. 1570), is the name given to a machine formed of a combination of the lever with the wheel and axle, the object of which is to give a continued rectilinear motion to a heavy body by means of the reciprocating motion of the lever. F G H is a straight line, whose centre of motion is at G. At the extremity of its shorter arm hang two bars, the former of which has a hook to catch into the teeth of the wheel A C D, while the latter has its end bent in order to slide over the outer parts of those teeth. The axle A has a cord wound round it, to the end of which is attached the weight W. Now suppose the end H of the lever to be raised from H to I, while the other end descends from F to B; the bar F E will then push the tooth E of the wheel to C, while the hook D slides over an equal space on the other side of the wheel. On bringing down again the end of the lever from I to H, the other extremity ascends through B F, and the hook D raises up the left-hand side of the wheel through a space equal to E C. Thus the reciprocating motion of the lever is made to communicate a continued rotatory motion to the wheel, and consequently to lift the weight W suspended from its axle by the cord. The universal lever has long been employed in saw-mills, for the purpose of drawing along the logs to the saw.

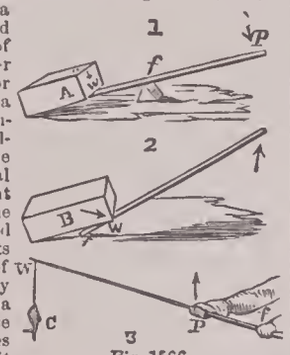


Fig. 1566.

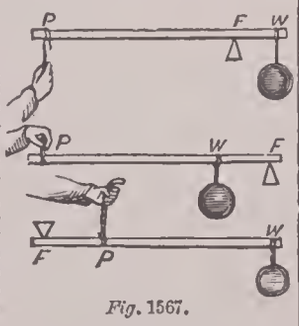


Fig. 1567.

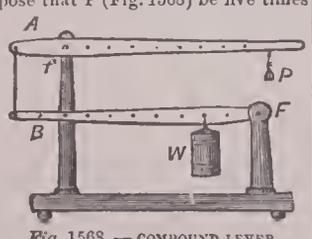


Fig. 1568. — COMPOUND LEVER.

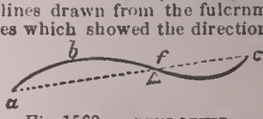


Fig. 1569. — BENT LEVER.

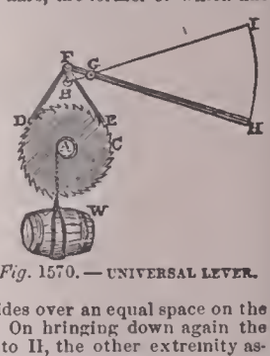


Fig. 1570. — UNIVERSAL LEVER.

Lever-valve. (*Mach.*) A safety-valve kept in its seat by the pressure of a lever with an adjustable weight. In locomotive-engines a spring is used at the end of the lever, instead of the weight: and the pressure is regulated by a screw, and indicated on a brass plate.

Lever, CHARLES JAMES, an Irish novelist, b. at Dublin, 1809. At an early age he was destined for the medical profession, and entered Trinity College, Cambridge, attended lectures, and eventually took his degree in medicine, — afterwards passing through a course of study at Göttingen, where he also obtained a degree. When the cholera broke out in Ireland, in 1832, *L.* was appointed medical superintendent of an extensive district. In this position he rendered good service, and when the disorder had abated, was attached to the British Legation at Brussels, in the capacity of physician. While occupying this post, he produced *Harry Lorrequer*, commenced as a serial, a novel of Irish life and character, the success of which led to his writing other novels, mostly in a serial form. Of these the best-known are — *Charles O'Malley*, *Jack Hinton*, *Our Mess*, *The O'Donoghue*, *St. Patrick's Eve*, *Roland Cashel*, *The Knight of Gwynne*, *The Daltons*, *The Dodd Family Abroad*, and *Arthur O'Leary*. He was very successful in these and many others, touching chiefly on the various phases of Irish military life, which were illustrated by the pencil of Mr. Hablot Browne. *L.* was appointed vice-consul at Spezzia, 1858, and was transferred to Trieste in 1867. Among the best of his works, published anonymously are *Diary of Horace Templeton*, and *Can Cregan*, an Irish Gil Blas; and his latest productions were, *One of Them*, *Barrington*, *Luttrell of Arran*, *Lord Kilgobbin*, and *Sir Brook Fosbrooke*. Died June 3, 1872.

Lev'erage, *n.* Operation of a lever. — Mechanical power obtained by the application of the lever.

Lev'eret, *n.* [Fr. *levrant*, dim. of *lievre*; Lat. *lepus*, *leporis*, a hare.] A young hare; a hare in its first year.

Lev'erett, in *Massachusetts*, a post-village and township of Franklin co., about 28 m. N. by E. of Springfield.

Lev'ering, in *Ohio*, a post-village of Knox co., about 60 m. N.N.E. of Columbus.

Lever'rier, URBAIN JEAN JOSEPH, a French astronomer, b. at St. Lô, 1811, was a distinguished pupil of the Polytechnic School, and on leaving it chose to accept the office of engineer to the administration of tobaccoes, that he might be able to reside in Paris to continue his studies. Though he made one or two important discoveries in chemistry, astronomy became the study in which he achieved a high reputation. After for many years silently carrying forward works of enormous extent, he one day astonished the scientific world by the announcement that, in an indicated point of space, and at a specified instant, they would see a star until then unknown. The sensation caused by this discovery was immense; honors and places were heaped upon Leverrier from all sides, and the electors of the department of La Manche returned him as their representative to the Legislative Assembly. The Royal Astronomical Society of London voted him, in 1848, a testimonial "for his researches in the problem of inverse perturbations, leading to the discovery of the planet Neptune." *L.*, who succeeded M. Arago in the

Observatory of Paris, in the Legislative Assembly contributed greatly to forward the cause of education in France. He was a senator, officer of the Legion of Honor, professor of the Faculty of Science, &c., though his personal character was not on a par with his scientific reputation. Partial and despotic, he managed the Observatory in a way so prejudicial to the advancement of science, that, in 1870, the Emperor asked for his dismissal from the rectorship of that establishment. He was, however, reappointed to that post in 1872. Died in 1877.

Le'vi. (*Script.*) The third son of Jacob and Leah, B. in Mesopotamia; and father of three sons, and of Jochebed, the mother of Moses, (*Gen.* xxix. 34; *Ex.* vi. 16–20.) For his share in the treacherous massacre of the Shechemites, (*Gen.* xxxiv.,) his father, at his death, foreboded evil to his posterity; but as they afterwards stood forth on the Lord's side, Moses was charged to bless them. (*Ex.* xxxii. 26–29; *Deut.* xxxiii. 8–11.) The tribe of Levi was, according to Jacob's prediction, scattered over all Israel, having no share in the division of Canaan, but certain cities in the portions of other tribes. It was not the worse provided for, however, since God chose this tribe for the service of the temple and priesthood, and bestowed on it many privileges above the other tribes. See LEVITES.

Lev'iable, *a.* That may be levied; that may be assessed and collected.

"The sums . . . were to be *leviable* by course of law." — *Bacon.*

Levi'athan, *n.* [Heb. *livyâlhan*, a serpent, "a seamonster."] (*Script.*) An aquatic animal, described in the Book of Job (xli.), and by some supposed to be the crocodile, by others a whale, by others a serpent, and, by others again, an animal now extinct.

—A large whale.

Lev'igable, *a.* That may be levigated or triturated.

Lev'igate, *v. a.* [Lat. *levigo, levigatus*, from *levis*, akin to Gr. *leios*, smooth.] To rub or grind to a fine, impalpable powder; to triturate; to comminute. — To make fine, soft, or smooth.

—*a.* Rendered smooth, as if by polish.

Leviga'tion, *n.* (*Chem.*) The process of rubbing down or pounding minerals into a paste with water. Camphor, for instance, is easily reduced to powder by levigation with a few drops of alcohol: whereas, if it is pounded in the dry state, great difficulty is experienced in reducing it.

Lev'in, Lev'en, *n.* [From A.S. *legen.*] Lightning. (Principally used in poetry.)

Levin-brand, a thunder-bolt.

Lev'irate, Levirat'ical, *a.* [From Lat. *levir*, a brother-in-law.] Pertaining or having reference to the old Jewish law of marrying a woman, without issue, to her deceased husband's brother; as, "a *Levirat*ical marriage." — *Dean Alford.*

Levira'tion, *n.* Among the early Hebrews, the act of marrying a childless widow to her late husband's brother; — and, in a secondary sense, and in ecclesiastical jurisprudence, the marriage of a man with his sister-in-law generally.

Lev'is, in *Wisconsin*, a township of Clark co.

Levis'ticum, *n.* (*Bot.*) See LIGUSTICUM.

Levita'tion, *n.* [From Lat. *levis*, light.] Buoyancy; lightness; act or property of making light or airy.

Le'vite, *n.* [From *Levi.*] One of the LEVITES, *q. v.*

—A priest; — applied in derision or contempt.

Le'vites, *n. pl.* (*Script.*) The descendants of LEVI, *q. v.* The Mosaic law commanded the tenth of the vegetable produce of the land, and also of the cattle, to be given to them; of this a tenth was set apart for the priests, whose assistants the Levites were. The priests were to be confined to the family of Aaron, who with Moses his brother were both of the tribe of Levi. The classes of which the Levites were composed, their offices, privileges, &c., are enumerated in *Num.* iii., iv., viii.; also 1 *Chron.* xxiii.–xxvi. On this subject the following conclusions are maintained by several recent writers. The historical books of the Old Testament apparently give no evidence of the actual existence of a privileged and powerful sacerdotal caste before the days of the later kings. In the Book of Judges, only two Levites are mentioned, the one being spoken of as belonging to the family of Judah, and wandering about in great poverty until he is appointed by Micha, an Ephraimite, to keep his idols. The other, who seemingly exercises no priestly function, is noticed only in the narrative which describes an almost complete destruction of the tribe of Benjamin. In the first Book of Samuel, Eli, and his sons Hophni and Phinehas, who are spoken of as priests, belong apparently to the tribe of Ephraim; and their sacerdotal offices are afterwards discharged by Samuel, who seems also to have been an Ephraimite; and although Samuel rebukes Saul for presuming to offer sacrifice, it is not on the ground that by so doing he was invading the office of an established priestly order. The right of offering sacrifice and praying for the people is further exercised by David and Solomon; and even under their successors the Levites have no great power or pre-eminence. The full development of their sacerdotal privileges seems to have followed their return from the Babylonish captivity.

Levit'ic, Levit'ical, *a.* Belonging, or having reference to the Levites, or descendants of Levi. — Priestly; sacerdotal.

Levitical degrees. Degrees of relationship within which marriage is forbidden in the Book of Leviticus.

Levit'ically, *adv.* After the manner of the ancient Levites.

Levit'icus, *n.* (*Script.*) The name of the Third Book of the Old Testament Scriptures, which treats principally of the rites, ceremonies, and sacrifices of the Hebrew religion. That this Book was written by Moses is proved not only by Jewish tradition, but by passages in the Book itself, and other parts of Holy Scripture where it is attributed to Moses. It contains the history of one month, viz., from the erection of the tabernacle to the numbering of the people who were fit for war; that is, from the beginning of the second year after the children of Israel's departure from Egypt to the beginning of the second month of the same year, 1490 B. C. The four leading topics of this Book are: — The laws concerning sacrifices, in which the different kinds of sacrifices are enumerated, together with their concomitant rites (i.–vii); 2, the institution of the priesthood, in which the consecration of Aaron and his sons to the sacred office is related, together with the punishment of Nadab and Abihu (viii.–x.); 3, the laws concerning purification, both of the people and the priests (xi.–xii.); 4, the laws concerning the sacred festivals, vows, things devoted, and tithes, (xxiii.–xxvii.) These were all "shadows of good things to come;" and this Book is of great use in explaining numerous passages of the New Testament, especially in the epistle to the Hebrews, which, in fact, would be unintelligible without it.

Lev'ity, *n.* [It. *levità*; Lat. *levitas*, from *levis*, light.] Lightness; buoyancy; the deficiency of weight in a body as compared with another of greater weight; — opposed to *gravity*; as, "the *levity* of a bubble." (*Bentley.*) — Lightness of temper or conduct; easy frivolity of manner; inconstancy; fickleness; changeableness; disposition to trifle; want of steadiness or sobriety of demeanor. "Our graver business frowns at this *levity*." (*Shaks.*) — Ease; buoyancy; hence, frivolity of mind or manner; vanity; airiness of temper.

"A spirit of *levity* and libertinism."—*Atterbury.*

Levogy'rate, *a.* Tending or turning to the left.

Lev'y, *v. a.* [Fr. *lever*; Lat. *levo.*] To raise; to collect; to bring together; as, to *levy* a body of troops.—To raise, collect, or gather by assessment; as, to *levy* a rate or tax.

To levy war. (*Law.*) To assemble a body of men for the purpose of effecting by force a treasonable object; and all who perform any part, however minute, or however remote from the scene of action, and who are leagued in the general conspiracy, are considered as engaged in levying war, within the meaning of the Constitution.

—*n.* Act of raising or collecting men for military or other public service, as by enlistment, enrolment, conscription, or other means.—The army raised, or body of troops so collected.—Act of collecting money for public use by tax or other imposition.

(*Law.*) A seizure; the raising of the money for which an execution has been issued. In order to make a valid levy on personal property, the sheriff must have it within his power and control, or at least within his view; and if, having it so, he makes a levy upon it, it will be good if followed up afterwards within a reasonable time by his taking possession in such manner as to apprise everybody of the fact of its having been taken into execution. The usual mode of making levy upon real estate is to describe the land which has been seized under the execution, by meter and bounds, as in a deed of conveyance.

Levy in mass. [Fr. *levée en masse.*] A raising of all men capable of bearing arms for the public service. (In Germany, called *landsturm.*)

Le'vy, in *Florida*, a N.W. co. (of the peninsula) bordering on the Gulf of Mexico; *area*, about 1,104 sq. m. *Rivers.* Suwanee, Wacasassa, and Withlacoochee rivers. *Surface*, mostly level; *soil*, not very fertile. *Cap.* Brouson. *Pop.* (1895) 7,534.

Le'vyville, in *Florida*, a post-village, former cap. of Levy co., about 150 m. S.E. of Tallahassee.

Levyne, (*lev'in.*) *n.* [From the English mineralogist *Levy.*] (*Min.*) A hydrous silicate of alumina; a variety of chabazite.

Lewd, (*lūd,*) *a.* [A.S. *læwd*, from *leod*, the laity. Originally, laical; pertaining to the common people.] Lascivious; libidinous; lustful; licentious; sensual; given to the unlawful indulgence of carnal desires. — Resulting from impure gratifications. — Dissolute; profligate; despicable; contemptible; as, "a *lewd* custom."

Sir J. Davies.

Lewd'ly, *adv.* Wantonly; wickedly; profanely. — Libidinously; lustfully; with unlawful indulgence of lust.

Lewd'ness, *n.* Unlawful gratification of lust; fornication or adultery; lasciviousness; unchastity; debauchery.

"Suffer no *lewdness*, nor indecent speech,
Th' apartment of the tender youth to reach."—*Dryden.*

Lewes, (*loo'is,*) a town of England, co. Sussex, on the Ouse, 8½ m. N.E. of Brighton. *Manuf.* Paper; but the principal trade consists in corn and malt. *Pop.* about 10,500.

Le'wes, in *Delaware*, a post-town of Sussex co., on Delaware Bay, opposite the breakwater, about 45 m. S.S.E. of Dover; reached by the P., W. & B. R.R. Has canneries and fisheries. *Pop.* (1897) about 2,000.

Lew'is, ANDREW, an American revolutionary general, B. in Ulster, Ireland, 1730, son of John Lewis, who emigrated to America in 1732, and settled at Bellefonte, Augusta co., Va., being the first white resident of the county. *L.* was held in high estimation by Washington; but, though distinguished for his military abilities, he was chiefly remarkable for his great bodily vigor and commanding presence. Upwards of 6 ft. in height, clad in his fringed hunting-shirt, and carrying his long rifle, with a countenance calm and almost stern, *L.* was an accurate type of a race of men who, in the obstinate struggle of the Revolution, bore the heat and burden of the day. At Fort Stanwix, the governor of New York said that "the earth seemed to tremble under him as he walked along." His statue fills one of the six pedestals around the Washington monument at Richmond. Died 1780.

Lew'is, MATTHEW GREGORY, (familiarly styled "Monk" Lewis,) an English popular romance-writer and dramatist, was born in London, in 1773, and was the son of the under-secretary of war. He was educated at Westminster school; after which he travelled on the Continent, and imbibed, while in Germany, that taste for the marvellous and romantic which characterizes most of his writings. His first novel was *The Monk*, a work which, however open to the charge of licentiousness, is a production of most extraordinary ability, and attained an immense popularity. He also wrote *Feudal Tyrants*, 4 vols.; *Romantic Tales*, 4 vols.; *Tales of Terror*; *The Castle-Spectre*, a drama; and many others. He was a member of Parliament, but undistinguished by any oratorical powers. D. 1818.

Lew'is, MERIWETHER, an American soldier and explorer, B. near Charlottesville, Va., 1774, was employed by the govt. with Clarke to make discoveries in the N. parts of the American continent, with a view to the extension of commerce to the Pacific Ocean. In 1805 they undertook a journey for the purpose of discovering the source of the Missouri; and they passed the winter in an icy region, 4,000 miles beyond its confluence. *L.* was soon after made governor of Louisiana, and Clarke a general of its militia, and agent of the United States for Indian Affairs. In a fit of hypochondria he put an end to his life, 1809.

Lew'is, KINGS OF FRANCE. See LOUIS.

Lew'is, *n.* [From *Louis* XIV., during whose reign the invention was made or first employed.] (*Mech.*) An ingenious contrivance for securing heavy blocks of stone to the tackle for hoisting. In the blocks to be raised, quadrangular cavities are made, spreading out at the bottom on two opposite sides, as in dovetailing. Into this hole 3 slips of iron are inserted to fill it, altogether forming a wedge in shape, the head of which is at the bottom of the cavity. The 3 ends projecting out of the stone present each an eye for a bolt, which is passed through the whole, and forms a handle for raising the block. To liberate the *L.*, the bolt is removed, and the middle slip, which is a straight, rectangular piece of iron, is readily taken out, setting free the other two. The chain, or double lewis, has been much used in this country; and in constructing the dry-dock at Brooklyn, stones were suspended by it weighing from 500 to 10,000 lbs.

Lew'is, with Harris, an island of Scotland, one of the largest and most N. of the Hebrides, abt. 30 m. N.W. of Ross co., from which it is separated by the Minch. An arm of the sea divides the island into 2 parts; the N., called *L.*, belongs to Ross co., and the other portion, Harris, to Inverness co. Lat. between 57° 40′ and 58° 32′ N., Lon. between 6° and 7° W. Entire length 60 m., greatest breadth 30 m. The surface is rugged, with tracts of swamp, a portion being covered with peat. *Prod.* Barley, potatoes, and cattle. *Pop.* 26,000.

Lew'is, in *Illinois*, a village of Kendall co.

Lew'is, in *Indiana*, a township of Clay co.

—A post-village of Vigo co. *Pop.* (1897) 562.

Lew'is, in *Iowa*, a post-town, the former cap. of Cass co., about 50 m. E. of Council Bluffs.

Lew'is, in *Kentucky*, a N.E. co., adjoining Ohio; *area*, about 450 sq. m. *Rivers.* Ohio river, and some smaller streams. *Surface*, hilly; *soil*, in some parts very fertile. *Cap.* Vanceburg. *Pop.* (1890) 14,803.

Lew'is, in *Missouri*, a N.E. co., adjoining Illinois; *area*, about 510 sq. m. *Rivers.* Mississippi, Wyaconda, North Fabius, Middle Fabius, and South Fabius rivers. *Surface*, diversified; *soil*, exceedingly fertile. *Cap.* Monticello. *Pop.* (1890) 15,935.

Lew'is, in *New York*, a N.N.E. central co.; *area*, about 1,294 sq. m. *Rivers.* Black and Oswegatchie rivers. *Surface*, mostly hilly; *soil*, fertile. *Min.* Iron and lead. *Cap.* Lowville. *Pop.* (1890) 29,806.

—A post-township of Essex co.

—A township of Lewis co.

Lew'is, in *Ohio*, a township of Brown co.

Lew'is, in *Pennsylvania*, a township of Lycoming co.

—A township of Northumberland co.

—A township of Union co.

Lew'is, in *Tennessee*, a S.W. central co.; *area*, about 280 sq. m. *Rivers.* Buffalo and Duck rivers. *Surface*, uneven; *soil*, fertile. *Cap.* Newburg. *Pop.* (1890) 2,555.

Lew'is, in *Washington*, a S.W. co.; *area*, about 2,308 sq. m. *Rivers.* Chehalis and Cowlitz rivers, besides some smaller streams. *Surface*, hilly or mountainous; *soil*, generally fertile. *Cap.* Chehalis. *Pop.* (1897) about 12,850.

Lew'is, in *West Virginia*, a N. central co.; *area*, about 400 sq. m. *Rivers.* West Fork of Monongahela river, and many smaller streams. *Surface*, hilly or mountainous; *soil*, in some parts fertile. *Min.* Coal. *Cap.* Weston. *Pop.* (1890) 15,895.

Lew'isberry, in *Pennsylvania*, a post-borough of York co., about 10 m. S. of Harrisburg.

Lew'isborough, in *New York*, a post-town and township of Westchester co. *Pop.* (1897) 1,490.

Lew'isburg, in *Arkansas*, a village of Conway co., on the Arkansas river, about 60 m. above Little Rock.

Lew'isburg, in *Indiana*, a village of Cass co., about 8 m. E. of Logansport.

—A village of Hancock co.

Lew'isburg, in *Iowa*, a post-village of Wayne co., about 12 m. W. of Corydon.

Lew'isburg, in *Kentucky*, a village of Mason co., about 7 m. S. of Maysville.

—A post-town of Logan co.

Lew'isburg, in *Minnesota*, a post-village of De Soto co., 10 m. N.E. of Hernando.

Lew'isburg, in *Ohio*, a village of Champlain co., about 14 m. S.E. of Urbana.
—A post-village of Preble co.
Lewisburg, in *Pennsylvania*, a post-borough, cap. of Union co., on the Susquehanna river, and the Penna. and Phila. & Reading R. Rs., 69 m. N. of Harrisburg; has varied manufactures, includiug flour, furniture, woollen, lumber, and nail works, &c. Seat of Bucknell University (Baptist). *Pop.* (1897) about 3,550.
Lewisburg, in *Tennessee*, a post-village, cap. of Marshall co., about 55 m. S. of Nashville.
Lewisburg, in *West Virginia*, a post-village, cap. of Greenbrier co., about 165 m. S. by W. of Wheeling.
Lewis Creek, in *Vermont*, flows into Lake Champlain from Addison co.
Lew'isham, a town of England, co. Kent, on the Ravensbourne, 5 m. S. E. of London. It abounds with handsome villas, inhabited by opulent families retired from business. *Pop.* (1897) 15,500.
Lewisia (*lu-is'e-ă*), *n.* [In honor of Meriwether *Lewis*, (*q. v.*)] (*Bot.*) A genus of plants, order *Mesembryaceæ*. The root of *L. rediviva* is said to be eaten by the Indians of Oregon, who call it *spatlum*. It is sometimes called tobacco-root, from the smell which it acquires while cooking. M. Geyer states that it is the *racine amère* (bitter root) of the Canadian voyageurs. When cooked it is agreeable and wholesome.
Lew'is Island, in the Dampier Archipelago, on the N.W. coast of Australia; Lat. 20° 30′ S., Lon. 116° 30′ E.
Lew'isport, in *Kentucky*, a post-village of Hancock co., about 11 m. W. of Hawesville.
Lewis River, or SNAKE RIVER, the largest tributary of the Columbia river, is formed by several small streams rising in the S.E. part of Idaho. Flowing N.W. to Fort Boisé, it turns to the N., and continues along the W. border of the State as far as Lewiston, whence it enters Washington, and, flowiug a S.W. course, joins the Columbia river a few miles above Walla Walla. *Length*, about 900 miles.
Lewis Run, in *Pennsylvania*, a post-village of McKean co., on the Erie and B. & W. P. R. Rs.
Lew'iston, a seaport of Prince Edward's Island, co. of Prince, on the N. side of the entrance to Holland Bay, about Lat. 46° 51′ N., Lon 64° 7′ W.
Lewiston, in *California*, a post-village of Trinity co., about 225 m. N.N.W. of Sacramento.
Lewiston, in *Georgia*, a post-office of Wilkinson co., on Cent. R.R. of Georgia, 15 m. N.W. of Irvington.
Lewiston, in *Idaho*, a post-village, cap of Nez Percés co., on the Lewis river (or fork) of the Columbia river, about 100 m. N. by W. of Boisé City. *Pop.* (1897) 1,000.
Lewiston, in *Maine*, a manufacturing city of Androscoggin co., on the Androscoggiu river, and the Maine Central and Gr. Trunk R. Rs.; has abundant water power, and cotton and woollen mills employing some 8,000 hands. *Pop.* (1897) about 22,900.
Lewiston, in *New York*, a post-village and township of Niagara co., on the Niagara river, about 7 miles from Lake Ontario. It is the port of entry of this co., and commands an active trade. *L.* suffered severely during the second war with Great Britain, being once entirely destroyed by the enemy. *Pop.* of township (1897) 2,620.
Lewiston, in *Wisconsin*, a post-village and township of Columbia co., about 45 m. N.N.W. of Madison.
Lew'istown, in *Illinois*, a post-village and township, cap. of Fulton co., about 55 m. N.W. of Springfield. *Pop.* (1897) 2,350.
Lewistown, in *Maryland*, a post-village of Frederick co., about 10 m. N. of Frederick. *Pop.* (1897) 290.
Lewistown, in *Montana*, a post-village, cap. of Fergus co. *Pop.* (1897) 950.
Lewistown, in *Ohio*, a post-village of Logan co., about 66 m. N.W. by W. of Columbus.
Lewistown, in *New Jersey*, a post-village of Burlington co.
Lewistown, in *Pennsylvania*, a post-borough, cap. of Mifflin co., on the Juniata river and Penna. R. R., 61 m. N.W. of Harrisburg; has important and varied manufactures. *Pop.* (1897) 3,350.
Lew'isville, in *Arkansas*, a post-village, the former cap. of La Fayette co.
Lewisville, in *Indiana*, a post-town of Henry co., about 42 m. E. of Indianapolis. *Pop.* (1897) 540.
Lewisville, in *Ohio*, a village of Hancock co.
—A village of Coshocton co., about 70 m. E.N.E. of Columbus. Its post-office is CANAL LEWISVILLE.
—A post-village of Monroe co., abt. 110 m. E. of Columbus.
—A village of Ross co., abt. 9 m N. by W. of Chillicothe.
Lewisville, in *Pennsylvania*, a post-village of Chester co., about 22 m. S.W. of Chester.
—A village of Indiana co., abt. 167 m. W. of Harrisburg.
Lewisville, in *S. Carolina*, a village of Chester dist., abt. 60 m. N. of Columbia.
Lewisville, in *Virginia*, a village of Brunswick co., abt. 78 m. S.S.W. of Richmond.
Lew-Kew Islands. See LOO-CHOO.
Lex, *n.* [Lat., law, from *legere*, to read.] The law. A law for the government of mankind in society. Among the ancient Romans this word was often used as synonymous with right, *jus*. When put absolutely, it means the Law of the Twelve Tables.
Lex Fori. [Lat., the law of the Forum.] The law of the country, to the tribunal of which appeal is made.
Lex loci contractus and *actus.* [Lat., the law of the place of making the contract, or of the thing done.] It is the doctrine that all contracts made, or obligations incurred, have an implied reference to the laws of the place where the transaction occurred, unless it appear otherwise on the face of the contract.
Lex mercatoria. See MERCHANT LAW.
Lex talionis. [Lat., law of retaliation.] A mode of punishing crime, by doing to the criminal the same hurt which he has done to his neighbor. Among the Jews, as well as among the ancient Greeks and Romans, the Egyptians, &c., the law of retaliation was frequently enforced; as we read of "an eye for an eye, a tooth for a tooth," &c. In general, however, retaliation cannot be a proper measure of justice, for the difference of persons, place, time, provocation, or other circumstances, may enhance or mitigate the offence. There are, besides, many crimes that will not admit of retaliation without manifest absurdity and injustice.
Lex'ical, *a.* Relating or pertaining to a lexicon, or to lexicography; determined by lexicography; as, the *lexical* definition of a phrase.
Lex'ically, *adv.* According to a lexicon; by means of a lexicon.
Lexicographer, (*lĕks-i-kŏg'ra-fer,*) *n.* One versed or skilled in lexicography; the author or compiler of a lexicon or dictionary.
Lexicograph'ic, Lexicograph'ical, *a.* Pertaining or having reference to lexicography, or to the writing or compiling of a dictionary.
Lexicog'raphy, *n.* [Gr. *lexikon*, and *graphō*, to write.] The act or art of writing or compiling a lexicon or dictionary.—Systematic rules which should guide the construction of a lexicon or dictionary.
Lexicol'ogy, *n.* [Gr. *lexikon*, and *logos*, discourse.] The science of words; that branch of learning which treats of the derivation, proper signification, and just application of words.
Lex'icon, *n.* [Gr. *lexikon*, from *lexis*, a speaking, a word, from *legō*, to say, to speak.] A word-book; a dictionary; a vocabulary, or book, containing an alphabetical arrangement of the words in a language, with the definition or signification of each. The term is more particularly applied to dictionaries in the Greek or Hebrew language.
Lex'iconist, *n.* One who writes or compiles a lexicon. (R.)
Lexigraph'ic, *a.* [Fr. *lexigraphique.*] Relating or pertaining to lexigraphy.
Lexig'raphy, *n.* [Gr. *lexis*, a speaking, diction, style, and *graphō*, to delineate.] The art or practice of defining words; a representation of the signification of words by the combination of other words.
Lex'ington, in *Alabama*, a post-village of Lauderdale co., abt. 20 m. N.E. of Florence.
Lex'ington, in *California*, a post-village of Santa Clara co., abt. 12 m. S S.W. of San José.
Lexington, in *Georgia*, a post-village, cap. of Oglethorpe co., abt. 75 m. W.N.W. of Augusta.
Lexington, in *Illinois*, a post-village and township of McLean county, about 15 miles N.E. of Bloomington.
Lexington, in *Indiana*, a village of Lagrange co., about 50 m. N. by W. of Fort Wayne.
—A post-village and township, the former cap. of Scott co., about 18 m. S.W. of Madison.
Lexington, in *Iowa*, a post-village of Washington co., 10 m. N.W. of Washington.
Lexington, in *Kansas*, a township of Johnson co.,
—A post-township of Clark co.
Lexington, in *Kentucky*, a city, cap. of Fayette co., on the Town Fork of Elkhorn river, about 25 m. S.E. of Frankfort; Lat. 38° 6′ N., Lon. 84° 18′ W.; reached by the Louisv. & Nash., the Queen & Crescent, and 3 other R. Rs.; is beautifully located, regularly laid out, well-built, and very clean. The State College of Kentucky and Kentucky University are here located. *L.* commands an active and extensive trade, and has numerous manufactures, especially of distilled liquors. *Pop.* (1897) about 22,500.
Lexington, in *Maine*, a post-office of Somerset co., about 30 m. N.E. of Farmington.
Lexington, in *Massachusetts*, a post-town and township of Middlesex co., about 11 m. N.W. of Boston. This place is memorable as the scene of the first conflict of the War of Independence, between the Americans and British, April 19, 1775. A monument has been erected with an appropriate inscription commemorating the patriotism of the eight Americans who fell in the encounter. *Pop.* (1895) 3,498.
Lexington, in *Michigan*, a post-village and township, port of entry, and the cap. of Sanilac co., on Lake Huron, about 80 m. N.N.E. of Detroit.
Lexington, in *Minnesota*, a post-town and township of Le Sueur co., about 10 m. E. of Le Sueur.
Lexington, in *Mississippi*, a post-town, cap. of Holmes co., about 70 m. N. of Jackson. *Pop.* (1897) 1,159.
Lexington, in *Missouri*, an important city, cap. of La Fayette co., on the Missouri river, 42 m. E. of Kansas City. *L.* commands an active trade, especially in hemp, grain, and live-stock. In Sept., 1861, *L.* was besieged and taken by the Confederate forces under Gen. Price. *Pop.* (1897) 5,250.
Lexington, in *Nebraska*, a city, the cap. of Dawson co., on the Un. Pac. R. R., 35 m. W. of Kearney. *Pop.* (1897) about 1,500.
Lexington, in *North Carolina*, a post-village, cap. of Davidson co., about 12 m. W. of Raleigh.
Lexington, in *New York*, a post-township of Greene co. *Pop.* (1897) 1,280.
Lexington, in *Ohio*, a post-village of Richland co., about 8 m. S.W. of Mansfield. *Pop.* (1897) 465.
—A township of Starke co.
Lexington, in *Oregon*, a village of Clatsop co., about 9 m. S.W. of Astoria.
Lexington, in *Penna.*, a post-village of Lancaster co.
Lexington, in *South Carolina*, a W. central co.; *area*, 780 sq. m. *Rivers.* Sandula, Broad, Congaree, and Edisto rivers. *Surface*, undulating; *soil*, fertile. *Cap.* Lexington. *Pop.* (1890) 22,181.
Lex'ington, in *South Carolina*, a post-village, cap. of above co., 14 m. W.S.W. of Columbia. *Pop.* (1897) 360.
Lexington, in *Tennessee*, a post-town, cap. of Henderson co., 80 m. S.W. of Nashville. *Pop.* (1897) 850.
Lexington, in *Virginia*, a fine post-village, cap. of Rockbridge co., about 146 m. W. of Richmond. It is situated in a fertile valley and is the seat of Washington College, founded in 1798, and endowed by Gen. Washington. The Virginia Military Institute, a flourishing school, established by the State Legislature in 1839, is also here located.
Lexiphanic, (*-făn'ik,*) *a.* [Gr. *lexiphanes.*] Stilted or affected in style; pretentious; inflated; bombastic; bumptious.
Lexiphanicism, (*-făn'i-sizm,*) *n.* Ridiculous affectation in style or diction; pretentious empiricism in speech or writing; bombast; euphuism.
Lexipharmic, (*-făr'mik,*) *a.* (*Med.*) See ALEXIPHARMIC.
Ley, (*lat,*) *n.* [O. Fr.] (*Law.*) Law; for example, *Termes de la Ley*, Terms of the Law.
(*Chem.*) A technical term for the solution of an alkali; —(also written *Lye.*)
Ley, *n.* A standard of metal; contents in pure metal.
Ley, *n.* (A different orthography of *Lay* and *Lea.*) A meadow; a grassy flat; pasture-land; as, a *ley* for cattle.
Ley'den, JOHN OF, leader of the Anabaptists of Munster, was born at the Hague about the close of the 15th century. Brought up at Leyden to the trade of a tailor, he spent several years in travelling, stayed four years in England, visited Flanders, Portugal, and other countries, and then settled at Leyden as an innkeeper, and married. In his leisure hours he indulged his natural taste for literature, composed verses, played the comedian, and discussed theology. He went to Munster in 1533, and there adopted the opinions of the Anabaptists, and after a short visit to his own country he returned to Munster with Mathison. Crowds flocked to hear them, and looked on them as prophets, but Catholics and Protestants alike feared and hated them. At length, at the close of 1534, the prince-bishop of Munster resolved to regain his lost sovereignty by arms. All who were on his side left the town, and the Anabaptists were left masters of it. The siege began, vigorous defence was made, a government being organized — twelve "ancients of the new Israel," with John of Leyden as prophet at their head, — the people armed, provisions stored, and the fortifications repaired. John was soon named king. After a successful defence, protracted for more than six months, the bishop's troops were admitted by treachery, in June, 1535; most of the people perished, John and two of his companions were taken alive, and for eight days the town was sacked by the soldiers. In January, 1536, John of Leyden and his two friends were publicly tortured with red-hot pincers, stabbed and mutilated, and their bodies hung up in iron cages on the tower of a church. — The life of John of Leyden has furnished the plot of the *libretto* of the admirable opera by Meyerbeer, "The Prophet."
Leyden, (*lī'den,*) a city of the Netherlands, in S. Holland, on the Rhine, 22 m. S.W. of Amsterdam. Lat. 52° 9′ 5″ N., Lon. 4° 29′ 5″ E. The town is traversed by canals, which by their various intersections form upwards of 50 small islands, connected by not less than 150 bridges, mostly of stone. The streets are broad, well paved, and remarkably clean, whether with or without canals. The Broad Street, in which the Stadthouse or town-hall is situated, is considered among the finest in Europe. The town-hall contains many valuable paintings. The university, founded by the Prince of Orange in 1575, to reward the inhabitants for their bravery, and as some compensation for the sufferings they sustained during the siege of their city by the Spaniards, was for a long period one of the most celebrated in Europe. Among its pupils were Arminius, Grotius, Descartes, Goldsmith, &c. Though no longer so celebrated as formerly, it is still well conducted, and has a valuable library of 100,000 printed volumes, with 14,000 MSS, about 2,000 of which are Arabic, besides many scientific collections. The chief trade of *L.* is in agricultural produce. Printing, especially of classical books, was formerly a great branch of trade, but it is now much reduced as compared with Leipsic and other cities. *Pop.* (1897) 41,900.
Ley'den, in *Illinois*, a thriving township of Cook co.
Leyden, in *Massachusetts*, a township of Franklin co., about 9 m. N. of Greenfield.
Leyden, in *New York*, an important post-township of Lewis co.
Leyden Jar, or ELECTRICAL JAR, *n.* (*Physics.*) A jar or phial used in electrical experiments. It is an example of a solid dielectric between two conducting substances. By means of this instrument the electric fluid can be accumulated and preserved in large quantities. The author of this great invention is not distinctly known; the merit appears to be claimed for three persons independently, — a monk of the name of Kleist; a person of the name of Cuneus; and Professor Muschenbrock, of Leyden; all of whom lived about 1745. The invention, however, was called the *Leyden Jar*, because it was either invented or applied principally in that city. Muschenbrock had observed that excited electrics soon lost their electricity in the open air, and that their loss was accelerated when the atmosphere was charged with moisture or some other conducting material; he, therefore, conceived the idea that the electricity of bodies might be retained by surrounding them with bodies which were not conductors. In order to test this idea by experiment, some water was electrified in a glass bottle; an assistant held the bottle, and while trying to disengage the communicating wire, he received a sudden shock in the arms and breast. This is said to have

been the origin of the Leyden jar. Fig. 1571 represents a *L. J.* of the ordinary French shape in the process of being discharged. It consists of a glass bottle of any convenient size, the interior of which is either coated with tin foil or filled with leaves of copper, or with gold leaf. Up to a certain distance from the neck the outside is coated with tin foil. The neck is provided

Fig. 1571.

with a cork, through which passes a brass rod, which terminates at one end with a knob, and communicates with the metal in the interior. The metallic coatings are called, respectively, the *internal* and *external coatings*. The jar is charged by connecting one of the coatings with the ground, and the other with the source of electricity. When it is held in the hand by the external coating, and the knob presented to the positive conductor of the machine, positive electricity is accumulated on the inner, and negative electricity on the outer coating. The reverse is the case if the jar is held by the knob, and the external coating presented to the machine. The positive discharge acting inductively across the dielectric glass, decomposes the electricity of the outer coating, attracting the negative, and repelling the positive, which being free escapes by the hand to the ground. The *L. J.* may be discharged either slowly or instantaneously. For the latter, it is held in the hand by the ontside coating (Fig. 1571), and the two coatings are then connected by means of the simple discharger. Care must be taken to touch *first* the external coating with the discharger, otherwise a smart shock will be felt. To discharge it slowly, the jar is placed on an insulated plate, and first the internal, and then the external coating touched, either with the hand or with a metallic conductor. A slight spark is seen at each discharge. Fig. 1572 represents a very pretty experiment for illustrating the slow discharge. The rod terminates in a small bell, *d*, and the ontside coating is connected with an upright metallic support, on which is a similar bell, *e*. Between the two bells a light copper ball is suspended by a silk thread. The jar is then charged in the usual manner, and placed on the support *m*. The internal coating contains a quantity of free electricity; the pendulum is attracted and immediately repelled, striking against the second bell, to which it imparts its free electricity. Being now neutralized, it is again attracted by the first bell, and so on for some time, especially if the air be dry, and the jar pretty large.

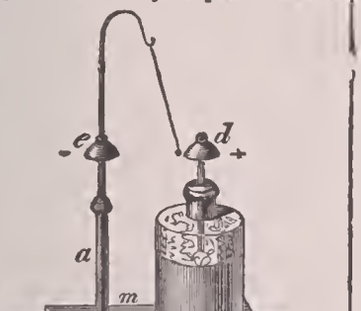


Fig. 1572.

Leyte, (*lai'e-tai',*) an island of the Malay Archipelago, lying to the S. of Samar. *Ext.* 130 m. long, and average breadth 35 m. *Prod.* Cotton, rice, ebony, and other fine woods.

Leytha, (*li'ta,*) a tributary of the Raab, in Germany, and forming part of the boundary between Austria and Hungary. After a course of 90 m., it joins an arm of the Danube, at Altenburg.

Leze-maj'esty, Lese-maj'esty, *n.* [Fr. *lèse-majesté*, from Lat. *læsus* — *lædere*, to hurt, and *majestas*, majesty.] (*Law.*) Any crime committed against a crowned head or monarchical power.

Lher'zolite, *n.* [From *Lherz*, a locality in the Pyrenees.] (*Min.*) A variety of crystallized or lamellar pyroxene, of a deep-green or olive-green color.

L'hôpital, MICHEL DE, chancellor of France, B. in Aigueperse, 1504. He was made president of the Court of Accounts in 1554, and chancellor of France in 1560. To him were due the edict of Romorantin, 1560, which prevented the introduction of the Inquisition in France; the edict of pacification, 1562, which authorized the free exercise of Protestant worship; and the ordinance of Moulines, 1566, to reform the administration of justice. Distinguished for his integrity and moral courage, L'hôpital aimed to moderate the parties, and he opposed violence in politics, and intolerance in religion. He gave up the seals of office in 1568, and resided in his château of Bellebat, near Etampes, where he died, 1573.

Li, *n.* A Chinese copper coin, worth about $\frac{1}{10}$ of a cent. —Also, a Chinese itinerary measure, equal to 0·36 of a mile.

Liabil'ity, *n.* Responsibility; state of being bound in a legal or customary point of view; as, he would be glad to be released from his *liability*. — Tendency; predisposition; state of being subject or exposed to; as, a *liability* to accidents.

—*pl.* Debts; monetary obligations; as, he discharged all his *liabilities* in full.

Li'able, *a.* [From Fr. *lier*, Lat. *ligo*, to bind; L. Lat. *ligabilis*.] Bound; obliged in law or equity; responsible; accountable; answerable, as for debt. — Subject: exposed; not exempt; — preceding *to;* as, mankind is *liable to* error.

Li'ableness, *n.* Liability; state or condition of being liable.

Liaison, (*lē-a-zōng',*) *n.* [Fr.] A bond of union; intimacy; but, more particularly, an illicit understanding or intimacy between a man and a woman; a clandestine attachment.

Lia'na, *n.* [Sp.; Fr. *liane.*] (*Bot.*) A term first used in the French colonies, but afterwards adopted by English, German, and other travellers, to designate the woody, climbing, and twining plants which abound in tropical forests, and constitute a remarkable and ever varying feature of the scene. Such plants are comparatively rare in colder climates, although the honeysuckles and some species of *Clematis* afford familiar examples of them; but as these often overtop the hedges or bushes on which they grow, and fall down again by the weight of their leaves as their stems elongate, so the *L.* of tropical countries overtop the tallest trees, descend again to the ground in vast festoons, pass from one tree to another (see Fig. 1573), and bind the whole forest to-

Fig. 1573. — LIANAS.

gether in a maze of living network, and often by cables as thick as those of a man-of-war. Many parts of the forest—as in the alluvial regions of the Amazon and Orinoco—thus become impenetrable without the aid of the hatchet, and the beasts which inhabit them either pass through narrow covered paths kept open by continual use, or from bough to bough far above the ground. Many *L.*—as some of the species of *Wrightia*—become tree-like in the thickness of their stems, and often kill by constriction the trees which originally supported them; and when they have decayed, the convolutions of the *L.* exhibit a wonderful mass of confusion, magnificent in the luxuriance of foliage and flowers. No tropical flowers excel in splendor those of the *L.* Among them are found also some valuable medicinal plants, as sarsaparilla. The rattans and vanilla are lianes. Botanically considered, *L.* belong to natural orders the most various. Tropical plants of this description are seldom to be seen in our hot-houses, owing to the difficulty in their cultivation.

Li'ar, *n.* One who tells a lie or lies; one who knowingly utters falsehood; one who declares to another as a fact what he knows to be not true, and with an intention to deceive.

Li'ard, *a.* [O. Fr. *liarde.*] In Scotland, gray-haired; as, a *liard* old man.

Liard, (*le-ăr',*) *n.* [Fr.] A French copper coin of trifling value.

Li'as, *n.* (*Geol.*) A term applied to a peculiar formation, consisting of thick argillaceous deposits, which constitutes the foundation on which the oölite series rests. The word *lias* is believed to have had its origin in a provincial mode of pronouncing the English word *layers*. To a considerable depth, the upper portion of these deposits consists of beds of deep-blue marl, containing a few irregular beds of limestone. In the lower portion, however, the limestone beds increase in frequency, and assume the characteristic aspect of lias presenting a series of thin stony beds, separated by narrow argillaceous partings, so that the quarries of this rock assume a striped or ribbon-like appearance when viewed from a distance. When in their purest state, these limestone beds contain about 90 per cent. of lime, the other constituents being alumina, iron, and silica. The lime afforded by the blue lias is strong, and is distinguished by having the property of setting under water. The lias clay often occurs in the form of soft slate or shale, which divides into thin laminæ, and is frequently impregnated with bitumen and iron pyrites. In consequence of this, when laid in heaps with fagots and set on fire, it continues to burn till the pyrites is decomposed. It also ignites spontaneously when it falls in large masses from the cliffs on the sea-shore and becomes moistened. The alum slate of Whitby is of this kind. The whole of the lias formation is rich in fossils, and is remarkable for its numerous remains of chambered univalves and bivalves, and certain species of fish and vertebral animals allied to the order of lizards, some of which are of enormous size. The ichthyosaurus and plesiosaurus were among these. (See ICHTHYOSAURUS, and PLESIOSAURUS.) The lias crosses England from Whitby, in Yorkshire, to Lyme, in Dorsetshire. Its most valuable productions are water-setting lime and alum shale. A similar formation is found in France, in the Alps, and in the Jura. The nearest representatives of that formation in the U. States are found in the coalfields of S.E. Virginia and N. Carolina; and the middle secondary sandstones of the Connecticut River valley and of New Jersey; though it may be that these correspond more closely to the Oölite.

Lias'sic, *a.* Pertaining to the lias; having reference to the lias formation.

Lia'tris, *n.* [Gr. *li*, an emphatic prefix, *atros*, invulnerable; used as a vulnerary.] (*Bot.*) A genus of plants, order *Asteraceæ*. They are perennial herbs or shrubs; root tuberous; stem simple; flowers cyanic. The principal American species are *L. squarrosa*, the Blazing Star; *L. scariosa*, the Gay Feather; *L. graminifolia*, the Grass-leaved Liatris; *L. spicata*, the Slender-spiked Liatris; and *L. pycnostachya*, the Thick-spiked Liatris.

Libanius, (*lī-bai'ne-us,*) a celebrated Greek rhetorician, B. at Antioch in 314. He studied at Athens, and afterwards became famous as a teacher of eloquence at Constantinople, till, the jealousy of the other professors being excited by his success, he was accused of magical practices, and banished. He afterwards became preceptor to Basil and John Chrysostom, so celebrated in the Christian Church; and on the accession of Julian, he was honored with his friendship, and is supposed to have assisted the emperor in some of his compositions. Many of his orations and declamations are extant, but they are verbose and pedantic.

Li'bant, *a.* [From Lat. *libare.*] Sipping; hence, skimming or touching lightly. (B.)

Lib'anus, the modern name of the ancient LEBANON, *q. v.*

Libation, (*li-bai'shun,*) *n.* [Lat. *libo*, 1 pour.] In the religious worship of the ancients, the pouring of wine or some other liquid on the altar or on the ground during sacrifice. Libations were also in use among the Hebrews, who poured a hin of wine on the victim after it was killed. It was also a custom among the Greeks and Romans at their feasts to pour out a small quantity of wine by way of libation to the gods.

—The wine, or other liquor, poured out in honor of a deity.

Li'batory, *a.* Belonging to, or partaking of the character of, a libation.

Liban, (*li-bou',*) a sea-port town of European Russia, in Courland, on the Baltic, 105 m. S.W. of Mittau. It possesses a secure harbor. The chief industry is ship-building.

Lib'bet, *n.* A club; a cudgel. (Used as an English provincialism.)

Li'bel, *n.* [Fr. *libelle*, bill, lampoon; Lat. *libellus*, dim. of *liber*, the inner bark or rind of a tree, used for paper; a book.] (*Law.*) A malicious defamation of any person, made public by either printing, writing, signs, or pictures, in order to provoke him to wrath or expose him to public hatred, contempt, and ridicule. Libel, which is written slander, is looked upon, in law, as a greater offence than mere slander, being regarded as committed with greater deliberation, and as usually inflicting more extensive and permanent injury. Every libel is viewed as a public offence, as having a direct tendency to a breach of the public peace, by provoking the person libelled. In order to constitute a libel, it must be published; but the communication of it to any person is a sufficient publication in the eye of the law. There is, perhaps, no branch of the law which is so difficult to reduce to exact principles, or to compress within a small compass, as the requisites of a libel. It is allowed to a defendant, in pleading to an indictment for a libel, to allege the truth of the matters charged, and that it was for the public benefit that they should be published. The truth of the libel may then be inquired into at the trial; but it shall not amount to a defence, unless it was for the public benefit that the matter charged should be published. If, after such plea, the defendant shall be convicted, the court may, in pronouncing sentence, consider whether the guilt of the defendant is aggravated or mitigated by the plea. In a civil action, however, a libel must appear to be false, as well as scandalous; for, if the charge be true, the plaintiff has received no private injury, and has no ground to demand compensation for himself, whatever offence it may have been against the public peace; and therefore, upon a civil action, the truth of the accusation may always be pleaded in bar of the suit. The sending an abusive pri-

vate letter to a man does not constitute publication so as to support a civil action. The publishing, or threatening to publish, a libel, or proposing to abstain from publishing anything, with intent to extort money, and the publication of any defamatory libel, knowing the same to be false, are punishable with imprisonment. The printer of a libel is liable to prosecution, as well as the writer; and so also is the person who sells it. In an action for a libel in a newspaper or other periodical, the defendant may plead that it was inserted without malice, and that he made, or offered to make, an apology before the action was commenced, or as soon thereafter as possible. There are certain kinds of communications that are regarded as privileged, and cannot be viewed as libellous, unless malice be proved, or may be inferred from the circumstances. Such are charges made by a master against a servant in giving his character to a party inquiring after it.

(*Admiralty Practice.*) A written statement by a plaintiff of his cause of action, and of the relief he seeks to obtain in a suit.

—*v. a.* To frame or publish a libel against; to defame by publishing a writing or picture calculated to expose to public hatred, contempt, or derision; to lampoon.

"Some wicked wits have *libell'd* all the fair." — *Pope.*

(*Law.*) To exhibit a charge against in a court of chancery.

Li'bellant, *n.* One who libels; one who brings forward a suit in an ecclesiastical or admiralty court.

Li'beller, *n.* One who libels or defames by injurious writing or pictures; a lampooner.

"Our common *libellers* are as free from the imputation of wit, as of morality." — *Dryden.*

Li'bellous, *a.* Containing a libel; defamatory; exhibiting that which exposes a person to public hatred, contempt, or derision; as, a *libellous* pamphlet.

Libel'la, *n.* [Lat. dim. of *libra*, a balance.] A small balance.

(*Building.*) A level used by carpenters and masons to test flat surfaces. (R.)

Li'ber, *n.* [Lat., bark.] (*Bot.*) The interior lining of the bark in Exogenous plants. In this part of the bark only the woody or longitudinal tissue occurs. In many instances it is very abundant, and exceedingly tough and thick-sided, in consequence of which it is of great value for many useful purposes. When freed from the cellular tissue adhering to it, it is often manufactured into cordage, especially in trees and shrubs of the natural order *Malvaceæ*. The useful articles commonly called Russia mats are made from the thin laminæ into which the *endophlœum* of the lime-tree (*Tilia Europœa*) readily separates. The lace-bark of Jamaica, remarkable for its beautiful lace-like appearance when pulled gently in a lateral direction, and for its great toughness, is the laminated liber of *Lagetta lintearia;* in consequence of its latter quality, it is twisted into whiplashes. The liber appears to be formed annually, at the same time as the concentric zones of wood, and is intended by nature to convey downwards the secretions elaborated in the bark and leaves. The term *bass*, or *bast*, is applied by gardeners to the liber of the lime-tree, which is used for making packing-mats, and also for binding up bunches of flowers, &c.

(*Myth.*) The name given by the Latins to the Greek Dionysus or Bacchus. Originally, the Latin Liber was a distinct god, presiding over the fertility of fields, and worshipped along with Libera and Ceres. The name seems connected with *liberare* and *libertas*.

Lib'eral, *a.* [Fr.; Lat. *liberalis*, from *liber*, free, from *tibere*, infin. of *libet*, *lubet*, it is agreeable; Sansk. *lubh*, to desire.] Free by birth; of gentle manners and breeding; polished; refined.

—Becoming a freeman or a gentleman; befitting an elevated station in life; as, the *liberal* arts.

"To love her was a *liberal* education." — *Sir R. Steele.*

—Free; frank; generous; open-hearted; cordial; free to give or bestow; as, a *liberal* donor.

"The *liberal* are secure alone." — *Granville.*

—Given with a free hand and open heart; bounteous; ample; munificent; beneficent; and, sometimes, profuse; extravagant; as, a *liberal* bequest, a *liberal* construction of words, a *liberal* discharge of pus, &c. (In this sense, *of* is used before the thing given, and *to* before the person or object on which anything is bestowed.) — Catholic; tolerant; enlarged in spirit; embracing other interests than one's own; not selfish, narrow, bigoted, or contracted; as, a *liberal* mind.

—Licentious: regardless of law or moral obligation; not literal or strict; diffuse. — Untrammelled by orthodoxy or doctrinal conservatism in political or religious matters; broad and catholic in mental views and judgment; independent in opinion; progressive; not reactionary; evincing a disposition to allow great freedom in administrative and legislative polity and government; friendly to needful reforms in church or state; as, a *liberal* statesman, a *liberal* thinker, the *liberal* party, a *liberal* speech, &c.

Liberal Arts. Those arts which depend more upon the employment of the mind than upon manual exertion; — hence, grammar, painting, sculpture, architecture, music, are liberal arts; — the correlative is termed *mechanical arts.*

—*n.* A name which, since 1815, has been applied to the party in each country which advocates constitutional institutions where they do not exist, or their extension into a more popular character where they do. As a party name, this word was perhaps first adopted in Spain, when the party of the Cortes assumed the title of *Liberales*, and nicknamed their adversaries by that of *Serviles.*

Lib'eral-hearted, *a.* Having a large, generous heart.

Lib'eralism, *n.* [Fr. *libéralisme.*] Liberal ideas, principles, or feelings; freedom from narrow political bias, and from religious bigotry and sectarianism; — opposed to *conservatism.*

Lib'eralist, *n.* A person of liberal opinions; a liberal.

Liberalis'tic, *a.* Characterized by liberalism; pertaining to liberal views and principles; acting in accordance with liberal or progressive ideas and tendencies.

Liberal'ity, *n.* [Fr. *libéralité;* Lat. *liberalitas.*] Disposition to give freely or largely; munificence; bounty; beneficence; generosity.

"Why should he despair, that knows to court
With words, fair looks, and *liberality*." — *Shaks.*

—A particular act of munificence or bounty; a gratuity; a donation; a gift;—frequently in the plural. — Catholicism; largeness of mind; breadth of affinity, toleration, or sympathy; absence of prejudice; impartiality; as, *liberality* of views or opinions.

Lib'eralize, *v. a.* [Fr. *libéraliser.*] To free from the trammels of prejudice, intolerance, or bigotry; to broaden or enlarge; to render liberal or catholic; as, to *liberalize* the constitution of a state.

Lib'erally, *adv.* In a liberal manner; bountifully; munificently; largely; beneficently.

"God giveth to all men *liberally*, and upbraideth not."—*James* i. 5.

—With enlarged ideas, views, or principles; with freedom from selfishness, prejudice, or intolerance; in a catholic and comprehensive manner; as, to act *liberally* in judging of others. — Freely; with scope or latitude; not strictly or literally; as, to construe words *liberally.*

Lib'eral-minded, *a.* Possessing broad principles of liberality, justice, and toleration; high-minded; magnanimous.

Lib'eral-souled, (*-sōld,*) *a.* Having a free, generous soul; open-hearted.

Lib'erate, *v. a.* [Lat. *libero, liberatus*, from *liber*, free.] To free; to deliver; to redeem from restraint or bondage; to release from slavery or oppression; to set at liberty; to manumit; as, to *liberate* a prisoner, to *liberate* public opinion when stifled by tyranny.

Libera'tion, *n.* [Fr.; Lat. *liberatio.*] Act of delivering, or of liberating from restraint, bondage, or slavery; state of being so liberated; emancipation.

Lib'erator, *n.* [Lat.; Fr. *libérateur.*] One who liberates, delivers, or redeems; a manumitter; an emancipator.

Lib'eratory, *a.* Having a tendency to liberate or set free. (R.)

Libe'ria, a republican state of W. Africa. Its territory extends along the Guinea coast for about 500 m., with a breadth inland of some 200 miles, though its boundaries in the interior are not determined and the area is not fixed. The coast is generally low, but the country gradually rises toward the interior, and at about 20 or 30 m. from the sea, the hills are of considerable elevation. Several rivers fall into the Atlantic within the republic, — as the St. John, St. Paul, and Mesurado; but they are navigable only by small vessels for short distances. The soil is fruitful, and the climate better, or rather less destructive, than in most other parts of the coast. Rice, cotton, coffee, sugar, indigo, bananas, yams, and cassava, are raised; and camwood, palm-oil, ivory, hides, wax, and pepper are among the exports. The republic is divided into four cos., called Sinoe, Montserrado, Grand Bassa, and Maryland. The capital is Monrovia, at the mouth of St. Paul's River. There are also about 20 considerable towns and villages in the territory. Rich metallic deposits are said to exist, but as yet the industry of the inhabitants has been directed almost exclusively to trade and commerce, they having built and manned 30 coast-traders, besides a number of large vessels engaged in commerce with the U. States and Great Britain. — *Govt.* The government of *L.* is formed on the plan of that of the U. States, and consists of a president, a vice-president, a senate and a house of representatives. Every male citizen possessing real estate has the right of suffrage. None but citizens may hold real estate in the republic. None but persons of color are admitted to citizenship. The law excluding white persons from the right of citizenship is intended to be of temporary duration. The president is elected by the people for a term of 2 years. The judicial power is invested in a supreme, and several subordinate courts. —The Republic owes its origin to the American Colonization Society, which, in 1820, sent the first colonists from the U. States to the Sherboro Islands, who eventually, however, settled at Cape Mesurado in 1822. In 1847, the declaration of independence was made, and a constitution adopted. The first president was Joseph Jenkins Roberts, who served for 4 terms (1848–'56). The establishment of the Republic of *L.* was virtually an attempt to show the capacity of the negro race for self-government; but as such it is generally admitted to be a failure. Prevailing discord, with absence of all progress and civilization, mark the character of the negro republic, in its more recent history. The public revenue is estimated to amount annually to $85,000, and the expenditure to $120,000. The principal part of the revenue is derived from customs duties. In Aug. 1871, the Republic laid the foundation of a public debt by contracting in England a loan of $500,000, at 7 per cent. interest, to be redeemed in 15 years; but no interest has been paid on it since 1874, the government being actually bankrupt. President James Roye, who had contracted the English loan, was accused of having appropriated the money thus obtained for his own benefit. A popular rising took place in *L.*; the president was imprisoned, and the first president, J. J. Roberts, was again (1871) placed at the head of the government. Roye was drowned in 1874. President A. W. Gordon, assumed office Jan. 7, 1878, and was re-elected in 1880. The Republic peaceably annexed in 1880 a large and important tract of land known as the Kingdom of Medina, whose forests are full of ebony wood, palms, gum, and gutta-percha trees, while the well-known Liberian coffee tree grows wild in its native beauty up to thirty and forty feet in height. The Medina Botora-Land will constitute, with the exception of the rich coffee plantations on the St. Paul river, the richest and most densely peopled part of the Republic. The population of *L.* amounts to about 1,068,000, of whom 18,000 are liberated American slaves and their descendants, the remainder being native Africans, including the Kroomen. Religious toleration exists, the Methodists prevailing. The Republic has not won much favor in the eyes of the natives, nor of American negroes, though every year some of the latter arrive.

Libe'ria, in *Virginia*, a village of Prince William co.

Libertad, an extreme N.W. dept. of Peru, bounded partially on the E. and N.E. by Ecuador, and on the W. by the Pacific Ocean. It is divided into 8 provinces. *Cap.* Trujillo. *Pop.* 300,000.

Liberta'rian, *a.* [See LIBERTY.] Having reference or belonging to liberty, or to the doctrinal character of free-will, as opposed to *necessity.*

—*n.* An upholder of the doctrines of free-will;—opposed to *necessitarian.*

Liberta'rianism, *n.* The philosophical tenets held by libertarians.

Libertas, *n.* [Lat.] (*Myth.*) The goddess of freedom. By the Greeks she was invoked by the synonymous title Eleutheria. At Rome, her most famous temple, built by T. Gracchus, was situated on the Aventine Mount. She was represented under the figure of a woman, holding in one hand a cap, the symbol of Liberty, and two poniards in the other. In modern times, a cap is also used as a symbol of Liberty; thus, in France, a red cap formed the badge of the Jacobin Club. In England, a blue cap with a white border is used as a symbol of the constitutional freedom of the nation, and Britannia sometimes bears it on the point of her spear.

Lib'erticide, *n.* [From Lat. *libertas*, and *cædere*, to destroy.] The destruction or death of liberty. — A destroyer or extinguisher of liberty.

Lib'ertinage, *n.* [Fr.] See LIBERTINISM.

Lib'ertine, *n.* [Fr. *libertin;* Lat. *libertinus*, from *libertus*, one set free.] One who is at liberty or free from restraint.

"The air, a charter'd *libertine*, is still." — *Shaks.*

—One who allows his passions to act without restraint; one who indulges his lust with freedom; one who leads a dissolute, libidinous life; a debauchee; a rake; a seducer; a voluptuary.

"Want of power is the only bound that a *libertine* puts to his views upon any of the sex." — *Richardson.*

—*a.* Uncontrolled; acting with entire freedom; — hence, dissolute; licentious; irreligious; as, *libertine* morals.

Lib'ertines, *n. pl.* (*Script.*) Considerable controversy has been excited respecting the synagogue of the Libertines, said to have been in existence at Jerusalem in 37 (*Acts* vi. 9). Some writers believe it refers to the Libertini, or the children of freedom; and other authorities believe the Libertines to have been the inhabitants of Libertina, a city near Carthage.

(*Eccl. Hist.*) A sect of that name, who defended impure morals with a profession of Christian faith, appeared in Flanders in the 14th and 15th centuries. The sect spread into France, and received encouragement from Margaret, Queen of Navarre, in 1533. James Gruet, a member of this sect and an opponent of Calvin, was put to death at Geneva, in 1550.

Lib'ertinism, *n.* State of a freedman, or manumitted serf.

—Licentiousness of opinion and practice; libertinage.

—Unrestrained indulgence of lustful appetites; debauchery; lewdness.

Lib'erty, *n.* [Fr. *liberté;* Lat. *libertas*, from *liber*, free. See LIBERAL.] Freedom or power to do as one desires or pleases; freedom from restraint, either of body or mind; — in contradistinction to *slavery.*

"Give me a crust of bread, and *liberty*." — *Pope.*

—Power of acting without any restraint or control except from the laws of nature, or from such laws as are necessary and expedient for the safety and interests of society.

"The God who gave us life gave us *liberty* at the same time." *Jefferson.*

—The freedom of a nation or state from all unjust abridgment or non-recognition of its rights and independence by another nation; privilege; exemption; immunity.

"His majesty gave not an entire country to any, much less did he grant any extraordinary *liberties*." — *Davies.*

—A space in which one is permitted to pass without hinderance, and beyond whose limits he may not lawfully pass; as, the *liberties* of a prison. — The free right of adopting and enjoying opinions on religious subjects, and of worshipping the Supreme Being according to the dictates of conscience, without external or magisterial control. — The power of an agent to do or forbear any particular action, according to the determination or thought of the mind, by which either is preferred to the other; as, *liberty* of choice or selection.

"I must have *liberty* . . . to blow on whom I please."—*Shaks.*

—Privilege; leave; license; permission granted; relaxation of restraint; as, the *liberty* of the press.

"License they mean when they cry *liberty*." — *Milton.*

—Territorial or municipal jurisdiction within whose limits certain immunities are enjoyed or privileges exercised; as, the *liberties* of the city of London.

—Freedom of action or speech beyond the bounds of con-

ventional civility or decorum; violation or non-observance of the standard rules of social etiquette or propriety; as, to take a *liberty*.

(*Man.*) An arch in the middle of a bit, to give place to the tongue. — *Crabb.*

At liberty, without restraint or confinement. — *Religious liberty*, or *liberty of conscience*, freedom to worship God accordiug as one's own conscience dictntes. — *Liberty of the press*, freedom to print or publish without governmental supervisiou or control. — *Moral liberty*, entire elective freedom in affinity to moral responsibility. — *Liberty party.* (*Amer. Pol.*) The designation given, during the Revolutionary period, to that party which advocated severance from the mother-country. — *Liberty pole*, a loug pole, or flag-staff, displaying the cap of liberty nt its summit.

Civil, or *political liberty*, may he defined, in n general sense, a state of freedom, in contradistinction to slavery or restraint. It is either natural or civil: the former consists properly in the power of acting as one thinks lit, without any restrnint or control, unless such as the law of nature imposes, being a right inherent in us by birth, and one of the gifts of God to man at his creation, when he endowed him with the faculty of free will. But every man, when he enters iuto society, necessarily gives up a part of his natural liberty, and, in consideration of receiving the advantages of protection, commerce, &c., he is obliged to conform himself to those laws which the community has thought fit to establish. Civil liberty, therefore, is no other than natural liberty restrained by human laws as far as is necessary and expedient for the common weal. Hence, the law which restrains a man from doing mischief to his fellow-citizens, though it diminishes the natural, increases the civil liberty of mankind; but every wanton and causeless restraint of the will of the subject, whether by a monarch or popular assembly, is a degree of tyranny. Even laws which regulate or constrain our conduct in matters of indifference, without any good end in view, are destructive of liberty. Laws, when prudently framed, are by no means subversive, but rather conducive to liberty; for, "where there is no law there is no freedom." Civil liberty, rightly understood, consists in the power of doing whatever the laws permit. The rights and liberties enjoyed in this country are, in the law books, divided into three classes: — 1. The right of personal security, which accords to each individual legal and uninterrupted enjoyment of his life, his limbs, his body, his health, and his reputation. 2. The right of personal liberty, or the power of moving one's person to whatsoever place his own inclination may direct, without imprisonment or restraint, unless by due course of law. 3. The right of private property, which consists in the free use, enjoyment, and disposal of all his acquisitions, without any control or diminution, save only by the laws of the lan

(*Phil.*) The power to will, or not to will, a certain act. — See FREE-WILL.

Lib'erty, in *Alabama*, a post-village of Blount co., about 15 m. N. of Oneonto.

Lib'erty, in *Arkansas*, a small and unimportant village of Ouachita co.

Liberty, in *California*, nn important township of Klamath co.

—A small village of San Joaquin co., nbout 20 m. N. of Stockton.

Liberty, in *Florida*, a N. co.; *area*, about 800 sq. m. *Rivers.* Ocklockonnee and Appalachicola rivers, besides many smaller streams. *Surface*, level; *soil*, not fertile. *Cap.* Bristol. *Pop.* (1895) 2,079.

Liberty, in *Georgia*, S.E. co., bordering on the Atlantic Ocean; *area*, about 966 sq. m. *Rivers.* Altamaha, Medway and Newport. *Surface*, level; *soil*, mostly sterile. *Cap.* Hinesville. *Pop.* (1890) 12,887.

Liberty, in *Illinois*, a post-town and township of Adams co., about 90 m. W. by N. of Springfield.

—A village of Randolph co.

Liberty, in *Indiana*, a prosperous township of Crawford county.

—A township of Delaware co.

—A township of Fulton co.

—A townsbip of Grant co.

—A township of Hendricks co.

—A township of Henry co.

—A township of Howard co.

—A village of Johnson co., about 3 m. S.W. of Franklin.

—A village of Lawrence co., about 5 m. S.W. of Bedford.

—A township of Parke co.

—A township of Porter co.

—A township of St. Joseph co.

—A township of Shelby co.

—A township of Tipton co.

—A post-village and township, cap. of Union co., about 70 m. E. by S. of Indianapolis. *Pop.* of village (1897) 1,450.

—A village and township of Wabash co., about 36 m. W. by S. of Fort Wayne.

—A township of Warren co.

—A township of Wells co.

—A township of White co.

Liberty, in *Iowa*, a township of Buchanan co.

—A post-town and township of Clarke co., about 33 m. S. of Des Moines

—A township of Clinton co.

—A township of Dubuque co.

—A township of Jefferson co.

—A township of Johnson co.

—A township of Keokuk co.

—A township of Lucas co.

—A township of Marion co.

—A township of Marshall co.

—A township of Ringgold co.

Lib'erty, in *Iowa*, a township of Scott co.

—A township of Warren co.

—A towusbip of Wright co.

Liberty, in *Kansas*, a township of Linn co.

—A post-townsbip of Woodson co.

Liberty, in *Kentucky*, a post-village, cnp. of Casey co., nbout 69 m. S. of Frankford.

Liberty, in *Maine*, a post-townsbip of Waldo co.

Liberty, in *Michigan*, a post-towusbip of Jackson co.

Liberty, in *Minnesota*, a village of Scott co.

—A towusbip of Polk co.

Liberty, in *Mississippi*, a post-village, cap. of Amite co., about 100 m. S.S.W. of Jackson.

Liberty, in *Missouri*, a city, cap. of Clay co., 14 m. N.E. of Kansas City. *Pop.* (1897) 2,750.

—A townsbip of Marion co.

—A township of Stoddard co.

—A township of Washingtou co.

Liberty, in *New York*, a post-village and township of Sullivan co., about 100 m. N.W. of New York city.

Liberty, in *Nebraska*, a towusbip of Cass co.

—A towusbip of Valley co.

Liberty, in *Ohio*, a township of Adams co.

—A townsbip of Butler co.

—A towusbip of Clinton co.

—A towusbip of Crawford co.

—A towusbip of Delaware co.

—A townsbip of Fairfield co.

—A village and township of Guernsey co., about 80 m. E. of Columbus.

—A towusbip of Hancock co.

—A township of Hardin co.

—A towusbip of Henry co.

—A township of Highland co.

—A township of Jackson co.

—A township of Knox co.

—A township of Licking co.

—A township of Logan co.

—A towusbip of Mercer co.

—A post-village of Montgomery co., about 7 m. W. of Dayton.

—A towusbip of Putnam co.

—A township of Ross co.

—A townsnip of Seneca co.

—A township of Trumbull co.

—A township of Union co.

—A township of Van Wert co.

—A township of Washington co.

—A towusbip of Wood co.

Liberty, in *Pennsylvania*, a township of Adams co.

—A township of Bedford co.

—A townsbip of Centre co.

—A village of Clinton co., about 110 m. N.N.W. of Harrisburg.

—A township of McKean co.

—A township of Mercer co.

—A township of Montour co.

—A township of Susquehanna co.

—A post-township of Tioga co.

Liberty, in *Tennessee*, a post-village of DeKalb co., about 54 m. E. of Nasbville.

Liberty, in *Texas*, an E.S.E. co.; *area*, about 1,170 sq. m. *Rivers.* Trinity river nud E. fork of San Jacinto river, besides nuuierous smaller streams. *Surface*, mostly level; *soil*, in the N. part moderntely fertile. *Cap.* Liberty. *Pop.* (1897) 5,150.

—A post-village, cap. of Liberty co., on Trinity river, about 60 m. N. of Galveston.

Liberty, in *Virginia*, a post-village the former cap. of Bedford co., about 25 m. W. of Lynchburg.

Liberty, in *Wisconsin*, a township of Grant co.

—A township of Manitowoc co. Its former name was BUCHANAN.

—A towsbip of Outagamie co.

—A post-township of Vernou co.

Liberty Corner, in *New Jersey*, a post-village of Somerset co., about 8 m. N.N.E. of Somerville.

Liberty Corners, in *Ohio*, a P. O. of Crawford co.

Liberty Corners, in *Pennsylvania*, a post-office of Bedford co.

Liberty Falls, in *New York*, a post-villnge of Sullivan co.,, about 100 m. N.W. of New York city.

Liberty Grove, in *Wisconsin*, a township of Door co.

Liberty Hill, in *Alabama*, n post-village of Dallas co.

Liberty Hill, in *California*, a village of Nevada co., about 12 m. E. by N. of Nevada City.

Liberty Hill, in *Connecticut*, a post-office of New London co., about 35 m. E. by S. of Hartford.

Liberty Hill, in *Georgia*, a post-village of Pike co., about 13 m. S.E. of Griffin.

Liberty Hill, in *Mississippi*, a post-office of La Fayette co., about 17 m. S.E. of Oxford.

Liberty Hill, in *North Carolina*, an unimportant village of Iredell co.

Liberty Hill, in *Texas*, a post-village of Williamson county.

Liberty Mills, in *Indiana*, a post-village of Wabash co., about 100 m. N. by E. of Indianapolis.

Liberty Mills, in *Virginia*, a post-village of Orange co., about 79 m. N.W. of Richmoud.

Liberty Square, in *Pennsylvania*,, a post-village of Lancaster co.

Liberty, Statue of. See BARTHOLDI.

Lib'ertytown, in *Maryland*, a post-village of Frederick co., 70 m. N.W. of Annapolis. *Pop.* (1897) 650.

Lib'ertyville, in *Illinois*, a post-village and township of Lake co., about 34 m. N. of Chicngo.

Libertyville, in *Iowa*, a post-village of Jefferson co., about 60 m. S.S.W. of Iowa City.

Libertyville, in *New Jersey*, a small village of Sussex county.

Libertyville, in *New York*, a post-village of Ulster co., about 70 m. S. by W. of Albany.

Libeth'enite, *n.* [From *Libethen*, Hungary.] (*Min.*) A phosphate of copper, of a dark olive-green color.

Libid'inist, *n.* [See LIBIDINOUS.] A fornicator; one given to lechery.

Libid'inous, *a.* [Fr. *libidineux*; Lat. *libidinosus*, from *libido*, pleasure, desire, — *libet*, it is agreeable; Sansk. *lubh*, to desire.] Given to sensnal pleasure; full of animal desire or appetite; calculated to inspire lustful wishes; lewd; lascivious: as, "wanton glances and *libidinous* thoughts." — *Bentley.*

Libid'inously, *adv.* Lustfully; in a libidinous manner; with lewd desire.

Libid'inousness, *n.* State or quality of being libidinous or lustful; inordinate appetite for sexual intercourse.

Libourne, (*le-boorn'*,) a town of Frnnce, dept. of Gironde, on the Dordogne, at its confluence with the Isle, 18 m. E.N.E. of Bordeaux. The town is regularly and well built. Its streets are wide and clean, its houses elegant, and it is surrounded with walls and agreeable promenades. *Manuf.* Woollen stuffs, cordage, nails, and glass. It has also docks for ship-building. *L.* is the entrepôt for salt nnd agricultural produce destined for Bordeaux. *Pop.* estimated at 15,000.

Li'bra, *n.* [Lat., n balance.] (*Roman Antiq.*) A balnnce; a pair of scales. — Also, a pound, or As, *q. v.*

(*Astron.*) A constellation which gives its name to the seventh sign of the Zodiac. It seems to have once formed a part of the constellation Scorpio, which then occupied two signs of the Zodiac, the body being in one part, and the claws, now called Libra, in the other. It lies between Scorpio, Virgo, the Centaur, and Lupus. Its largest stars are of the second magnitude. The sun enters Libra at the commencement of the vernal equinox, nnd the name was probably given to this constellation and sign of the Zodiac in allusion to the equality that exists at that time between day and night.

Libra'rian, *n.* [Lat. *librarius*, from *liber*, a book.] The keeper of a library; one who has charge of a collection of books. — One who transcribes or copies books. (R.)

Libra'rianship, *n.* Office or condition of a librarian.

Li'brary, *n.* [Lat. *librarium*; Fr. *librairie*.] A collection of books belonging to a private person, community, public institution, or joint-stock company.

—A room, or suit of rooms, appropriated to the arrangement and safe-keeping of books, fitted up with shelves to hold them, or articles of furniture called book-cases, in which shelves are affixed for the same purpose. — At a very early date the Jews nttached collections of books to most of their synagogues; and we are told that Nehemiah founded a public library at Jerusalem. The Egyptians also had libraries, and in the recent discoveries in Assyria, a vast collection of clay tablets, hearing cuneiform inscriptions, was found in the palace at Nineveh, forming what has been termed a "library in clay." Others far older in date have been recently found in the buried cities of Babylonia. Pisistratus of Athens is said to have established the first public library in Greece, and to have collected, at great trouble and expense, the works of Homer. Aristotle is the first person on record who was possessed of a private library. After the death of Alexander, the love of science and literature generally passed from Athens and Greece to Alexandria, where was formed the most magnificent library of ancient times; it is said to have contained no fewer than 700 000 volumes. (See ALEXANDRIAN LIBRARY.) Next to the Alexandrian library, that of Pergamus was the most renowned, and is said to have contained 200,000 volumes. The first library established at Rome was probably that founded by Paulus Æmilius, B.C. 167. Having defeated Perseus, king of Macedonia, he brought his library to Rome; and this collection was subsequently augmented by the library of Apellicon the Teian, brought by Sylla from Athens. From the intercourse of the Romans with the Greeks, the passion for forming libraries rapidly increased, and individuals began to pride themselves on their private collections. Among the illustrious Romans who have been noted for their magnificent libraries, are Asinius Pollio, Crassus, Cæsar, Lucullus, and Cicero. Among the projects formed by Cæsar was the establishment of a public library; and the duty of selecting and arranging it was assigned to Varro; but the design was frustrated by the assassination of the emperor. Among the benefits conferred by the emperor Augustus upon Rome was the erection of two public libraries, — the Octavian and the Palatine. The successors of Augustus, though they did not equally encourage learning, were not altogether neglectful of its interests. Tiberius founded a library in the new temple of Apollo; Vespasian established a library in the new temple of Peace; and even Domitian, in the early part of his reign, restored, at vast expense, the libraries in the Capitol which had been burned; and to this end both collected MSS. from various countries, and sent scribes to Alexandria expressly to make copies of works there. The most magnificent library, however, founded by the emperors at Rome was that of the emperor Ulpius Trajan, from whom it received the name of the Ulpian library. Constantine the Great, after removing the seat of his empire to Constantinople, is said to have given a large share of his attention to the formation of a library, and to have bestowed especial pains in the rescue, as far as possible, of those Christian works which had been doomed to destruction by his predecessor, Diocletian. The task was continued by his son Constantius. Theodosius II., and others, until it comprised, according to some accounts, upwards of 100,000 volumes. The em-

peror Leo III. is stated to have burnt a considerable library at Constantinople, in 730; and between this time and the capture of Constantinople by the Crusaders, several such casualties are related to have occurred. This last calamity, however, eclipsed all previous losses, and, two hundred and fifty years later, it was followed by the final destruction of the empire; the imperial library, however, was preserved by the express command of Mohammed, and was kept in some apartments of the seraglio. Whether it was destroyed by Amurath IV., as is commonly supposed, or allowed to fall into decay, is uncertain; but there are not a few scholars of eminence who still believe that ancient and valuable MSS. are concealed in the seraglio of the Sultan, though it has been repeatedly asserted that the library of the Sultan does not contain any Greek or Latin MSS. of any importance. The manner in which the ancient books were written (upon rolls) greatly increased the number of volumes; and it is said that "the largest libraries in ancient times might be represented by the contents of a modern library containing from 50,000 to 100,000 volumes." (*Edwards.*) Comparatively little is known of the libraries of the Middle Ages. It is usual to speak of these as "the dark ages," and to look upon them as a period when learning and intellectual culture were almost extinct. Among the people generally, this may have been the case; but they still had an abiding-place in the monasteries, to an extent that those unacquainted with the inner history of the period would scarcely credit. Many of the monks gave themselves not only to the study, but to the transcribing of books; and to their care and labor we are indebted for many of the ancient works that have come down to us. Foremost among the cultivators of learning and the arts stands the Order of St. Benedict, which had the good fortune to include a number of men remarkable for mental vigor and force of character. Many of these religious houses had considerable libraries attached to them, catalogues of several of which have been printed in recent times. In Alexandria, the Arabians had a considerable collection of Arabian books; and Al Mamoun collected many Greek manuscripts in Bagdad. In the West, libraries were formed in the second half of the 8th cent. by the encouragement of Charlemagne. In France, one of the most celebrated was that in the abbey of St. Germain des Près, near Paris. In Germany, the libraries of Fulda, Corvey, and, in the 11th cent., that of Hirschau, were valuable. In Spain, in the 12th cent, the Moors had 70 public libraries, of which that of Cordova is said to have contained 250,000 volumes. In England and Italy libraries were also founded with great zeal, particularly in the former country by Richard Aungerville, in the latter by Petrarch, Boccaccio, and others. The revival of learning is usually dated from the middle of the 15th century. On the fall of Constantinople in 1453, many of its inhabitants immigrated into Italy, and were the means of awakening an interest in classical learning. The appetite for books was revived and quickened, and no labor or expense was spared in acquiring them, learned men being dispatched in all directions to collect manuscripts. The invention of printing was of great service, as enabling collections of books to be made at less trouble and expense. Several of the great libraries of Europe date their beginnings prior to 1450, when the art of printing had been established, but without having, as yet, materially affected the labors of the copyists; as the imperial libraries of Paris and Vienna, the Laurentian library at Florence, and the library of the Vatican. Town libraries had also begun to be formed in various parts, particularly of Germany and France. In this respect England stands in striking contrast to other countries, being centuries behind them. In 1570, Sir Humphrey Gilbert in vain pressed upon the attention of Queen Elizabeth the importance of establishing a public library, after the pattern set us by "the more civilized nations, as Germany, Italy, and France." In fact, it was not until the reign of James I. that Great Britain could boast of even a royal library worthy of the name. The Bodleian library was founded in 1597, and down to 1753, when the British Museum library was formed, it continued to be the only one of national importance. The most celebrated modern library is the *Bibliothèque Nationale* of Paris. It was commenced in the middle of the 14th century, with *ten* volumes; and has been augmented by subsequent additions to the enormous number of more than 2,500,000 volumes. The libraries of Munich, and of London (British Museum), over 1,600,000 vols., are also very valuable. That of St. Petersburg has over 1,000,000 volumes. In Italy, the Ambrosian at Milan, and the Vatican at Rome, are peculiarly rich in MSS. The U. S. was slow in the development of its public libraries until after 1850, in which year there were only 81 that contained 5,000 or more volumes, these containing in all 980,413 volumes—much less than could have been found in the libraries of Paris alone. The larger libraries were then such as the Philadelphia Library, founded by Franklin, that of Harvard, which contained 72,000 vols., &c. The movement in favor of public libraries since that date has been very effectual. In 1850 there was no library with as many as 75,000 vols. In 1890 there were a dozen or more with over 100,000. See LIBRARIES OF THE UNITED STATES, in SECTION II.

Li'brate, *v. a.* [Lat. *libro, libratus,* from *libra,* a pound, a balance.] To poise; to balance; to hold in equipoise.
—*v. n.* To be poised; to move, as a balance.

Libra'tion, *n.* [Lat. *libratio.*] Act of librating or balancing; state of being balanced; state of equipoise, with equal weights on both sides of a centre.

"Their pinions still in loose *libration* stretch'd."—*Thomson.*

L. of the Moon. (*Astron.*) The term applied to an irregularity in the moon's motion, through which the moon does not at all times present the same face to an observer on the earth's surface. The moon accomplishes her revolutions about her axis and in her orbit in the same *mean* time. Now, if the moon's motion in her orbit were uniform at all times during the period of revolution, and if the plane of her equator passed through the centre of the earth, the moon would always exhibit the same face to an observer in that position; but as this is not the case, and as the moon's orbital motion is irregular, the axis of the moon does not always preserve the same inclination to an observer on the earth, but appears to have a slight oscillatory motion, through which very small crescent-shaped portions of the moon's surface, at all parts of her circumference N., S., E, and W, are alternately presented and withdrawn from view at regular periodic times.

Li'bratory, *a.* Balancing; moving like a balance, while tending to its equipoise.

Libret'to, *n.*; It. *pl.* LIBRETTI; Eng. *pl.* LIBRETTOS. [It. dim. of *libro.*] (*Mus.*) A book containing the words of an opera, oratorio, or other extensive piece of music; also, the words themselves.

Lib'ya. (*Anc. Geog.*) The name given by the oldest geographers to Africa. In Homer and Hesiod, it denoted the whole of this quarter of the globe, except Egypt; in Herodotus, occasionally, the entire continent; but it is also applied by others, in a more restricted sense, to the northern part of the country, from Egypt and the Arabian Gulf westward to Mount Atlas. The great sandy tract of which the Sahara forms the principal part, was called the Libyan Desert. To what extent it was known to the ancients is not very clearly ascertained.

Lica'ta. See ALICATA.

Lice, *n. pl.* of LOUSE, *q. v.*

Li'censable, *a.* That may be licensed; susceptible of being permitted by legal grant; as, a *licensable* play.

License, (*lī'sens,*) (old spelling LICENCE,) *n.* [Fr.; Lat. *licentia,* from *licet,* it is permitted.] Freedom, liberty, or leave to do or act as one pleases; leave; permission; formal authorization accorded to do or to forbear any act; as, a *license* to retail certain commodities, a *license* to act stage-plays, a *license* to practise a certain profession. — A certificate giving permission or authority; a permit; as, a spirit *license.* — Excess of freedom; abuse of rational liberty; freedom used exorbitantly, or in defiance of law or propriety; as, he gives his tongue too much *license.* — Voluntary divergence from orthodox rules or established custom; as, poetical *license.*
—*v. a.* To grant a license to; to authorize by permissive grant; to remove legal bar or restraint from by official sanction; to authoritatively allow to act in a particular character; as, to *license* a preacher, to *license* one to sell certain articles.—To tolerate; to tacitly permit or sanction.

"The press groaned with *licensed* blasphemies."—*Pope.*

Licensee', *n.* (*Law.*) One to whom a license is granted.

Li'censer, *n.* One who grants a license or permit; a person authorized to grant permission to others.

Li'censure, *n.* A granting a license. (R.)

Licentiate, (*li-sēn'shī-āt,*) *n.* [Fr. *licencié,* from Lat. *licentia.*] One who has a license to practise any art or faculty, or to exercise a profession, as in medicine or theology. — In France, Spain, and some other European countries, a degree between that of bachelor and that of doctor.

Licentiation, (*li-sēn-shī-a'shun,*) *n.* Act of licensing or permitting. (R.)

Licentious, (*li-sen'shus,*) *a.* [Fr. *licencieux;* Lat. *licentiosus,* from *licentia,* license, freedom.] Full of freedom or license; over-free; using license; — not necessarily in a bad sense; as, a *licentious* abuse of language.
—Exceeding the limits of law or propriety, as acts; unrestrained by morality or sense of decorum; dissolute; loose; profligate; lascivious; wanton; — used invariably in a bad sense: as, a *licentious* woman.

Licen'tiously, *adv.* In a licentious manner; loosely; laxly; without proper restraint; dissolutely.

Licen'tiousness, *n.* Quality or state of being licentious; excessive indulgence of freedom from restraint; contempt of law, morality, or decorum; lasciviousness.

Lichen, (*lī'ken,* and sometimes, *lī'ken,*) *n.* [Lat.; Gr. *leichēn,* from *leichō;* Sansk. *lih,* to lick, to lick up.] (*Bot.*) A plant of the alliance *Lichenales,* q. v.

(*Med.*) A disease of the skin. There are two species, viz., *L. simplex* and *L. agrius,* the latter of which may be regarded as a very aggravated form of the former. *L. simplex* consists in an eruption of the minute papulæ of a red color, which never contain a fluid, and are distributed irregularly over the body. They appear first on the face and arms, then extend to the trunk and lower extremities, and are accompanied with a sense of heat, itching, and tingling. In a mild case, the disease is over in a week, but sometimes one crop of papulæ succeeds another for many weeks or months. In *L. agrius,* the papulæ are more pointed at the summit, and are of a bright-red color, with more or less redness extending round them. In this form of the disease, the general health is usually affected, in consequence of loss of sleep and general irritation. It is often hard to say what is the cause in lichen. The simpler form is often dependent in children on intestinal irritation, while in other cases it may frequently be traced to exposure to heat or errors of diet. The severe form is also occasioned by extreme heat and by the abuse of spirituous drinks. In ordinary cases, an antiphlogistic diet, a few gentle aperients, and two or three tepid baths, are all that is required. When the disease assumes a chronic character, a tonic treatment (bark and the mineral acids) is necessary; and in very obstinate cases, small doses (three to five minims, well diluted) of Fowler's Arsenical Solution may be given with advantage.

Coloring-matter of L. — All the lichens contain definite crystalline substances which become colored on exposure to a moist warm atmosphere containing ammonia. Tropical lichens are especially rich in these matters, and are largely imported into Europe for the purpose of making the well-known lilac-blue, violet, and purple dyes known as *archil, cudbear,* and *litmus.*

Lich'enales, *n. pl.* (*Bot.*) An alliance of plants, class *Thallogens.* DIAG. Cellular flowerless plants, nourished through their whole surface by the medium in which they vegetate; living in air; propagated by spores usually inclosed in asci, and always having green gonidia in their thallus. They commonly present a dry, shrivelled, more or less lifeless appearance. About 2,400 species, grouped in 58 genera, are known, but they have not been, until now, separated in well-defined orders. They are distributed over all parts of the world, and form a considerable proportion of the vegetation of the polar regions and of mountain-tops. Many species possess nutritive properties, from containing starchy matter, such being also emollient and demulcent. Others contain bitter principles, which render them tonic and astringent. Several, again, are important as dyeing agents. None are known to be poisonous. See CETRARIA, GROPHOEA, LECANORA, ROCELLA.

Lich'enin, *n.* (*Chem.*) A substance closely allied to starch, extracted from the *Cetraria Icelandica,* or Iceland moss.

Lichened, (*lī'kend,* or *lich'end,*) *a.* Pertaining to lichens; covered with lichens.

Lichen'ic Acid, *n.* (*Chem.*) An acid peculiar to some species of lichens. It appears to be the *malic acid.*

Lichenograph'ic, Lichenograph'ical, *a.* Belonging to lichenography.

Lichenog'raphist, *n.* [Fr. *lichenographe.*] One learned in lichenography.

Lichenog'raphy, *n.* [Gr. *leichēn,* and *graphein,* to write.] A description of, or treatise on, lichens; the science which demonstrates the natural history of lichens.

Lichenol'ogy, *n.* [Gr. *leichēn,* and *logos,* treatise.] The science which treats of lichens.

Lich'enous, *a.* Of, belonging to, or resembling lichens; possessing lichens.

Lichfield, (*lich'feeld,*) a town of England, in Stafford co., 16 m. N. of Birmingham. It has a free grammar school, in which Addison, Ashmole, Johnson, and Garrick were educated. *Pop.* 8,000.

Lich'-gate, (*litch-,*) *n.* [A.S. *lic,* corpse, and Eng. *gate.*] (*Arch.*) A gate to a church-yard covered with a porch,

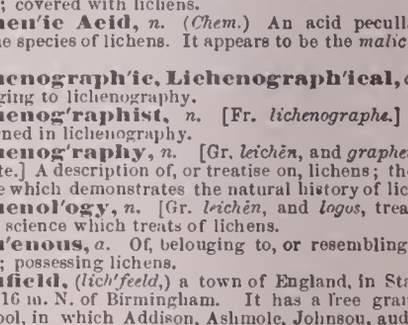


Fig. 1574. — LICH-GATE AT GARSINGTON, OXFORDSHIRE.

to afford shelter to a bier during the introductory portion of a burial-service.

Lich'-owl, (*litch-,*) *n.* An owl whose hooting was formerly believed to forebode death.

Lichtenstein, or **Liechtenstein,** (*leezh'ten-stine.*) a small independent principality of Europe, which until 1860 formed part of the German Confederation. It has on the E. the Austrian duchy of Vorarlberg, S. the Swiss canton of the Grisons, W. the canton of St. Gall, from which it is separated by the Rhine.—*Area.* 64 sq. m. The surface is mostly mountainous. Cattle breeding, agriculture and cotton-spinning are the chief occupations of the inhabitants.—*Prod.* Corn, fruit, wine and flax. The prince of *L.* is one of the richest proprietors of Europe, his estates in Germany and Moravia extending over nearly 2,200 sq. miles, with an annual revenue estimated at 1,200,000 florins, or $600,000. The cap. and principal town is Vadutz or Lichtenstein, with a pop. of abt. 1,000.

Lich'tenstein, a town of Prussia, 42 m. from Leipsic; *pop.* 4,000.

Lich'tenstein, JOHANN JOSEPH, PRINCE VON, an Austrian general and diplomatist, B. in Vienna, in 1760. He entered the army, and made his first campaign in the Turkish war. He was engaged in the principal campaigns of the war with France, was taken prisoner with Mack at Ulm, negotiated the armistice of Austerlitz, and assisted in the treaty of Presburg, and was made, in 1809, governor of Upper and Lower Austria. He greatly distinguished himself by his valor at the battles of Aspern, Essling, and Wagram. He enjoyed the confidence of his sovereign, and was employed by him on various occasions. D. 1836.

LICH'TENSTEIN, *Joseph Wenceslaus,* Prince of, an Austrian general and diplomatist, B. in Vienna, 1696. He had the chief command of the Austrian army in Italy, with the title of field-marshal, in 1746, when he gained the victory of Placentia. From that time he was chiefly employed in diplomatic affairs, and the duties of his office, as director-general of the artillery. He was a patron of the arts and artists, and founder of the Lichtenstein Gallery at Vienna. D. 1772.

Lichtervelde, (*leezh'ter-veld,*) a town and parish of Belgium, 12 m. from Bruges; *pop.* 6,712.

Lich'-wake, *n.* The time of watching with a dead body before its interment.

Lich'-way, *n.* The path traversed by a funeral procession.

Licin'ius, CAIUS, a Roman tribune, of a plebeian family, who rose to the rank of tribune, when he obtained the surname of Stolo, or Useless Sprout, on account of the law which he enacted forbidding any one to possess more than 500 acres of land; alleging as his reason, that when they cultivated more, they could not pull up the useless shoots (*stolones*) which grew from the roots of trees. He also made another law, which allowed the plebeians to share the consular dignity with the patricians; and he himself became one of the first plebeian consuls, B. C. 364.

Licin'ius, CAIUS FLAVIUS, a native of Dacia, of obscure origin, who was born about 263, and became emperor of Rome in 312. He was defeated by Constantine, 323, and put to death the year following. — His son, FLAVIUS VALERIUS, who had been declared Cæsar in 317, was put to death at Constantinople in 326.

Licit, (*lis'it,*) *a.* [Lat. *licitus,* from *licet,* it is lawful.] Lawful; legal; legitimate; — correlative of *illicit.*

Licita'tion, *n.* [Lat. *licitatio.*] Act of offering for sale to the highest bidder.

Lic'itly, *adv.* Legally; lawfully; legitimately.

Lic'itness, *n.* Legality; lawfulness.

Lick, (*lik,*) *v. a.* (*imp.* and *pp.* LICKED.) [A. S. *liccian;* D. *likken;* Ger. *lecken;* Dan. *slikke;* Fr. *lecher;* Ir. *lighim;* Lat. *lingo;* Gr. *leicho;* Heb. *lâkak.*] To touch with the tongue; to pass or draw the tongue over the surface.

"He *licks* the hand just raised to shed his blood." — *Pope.*

—To lap; to take in by the tongue; to suck.

"Let them not *lick* the sweet which is their poison" — *Shaks.*

—To castigate; to chastise with blows; to flog. (Colloq.)

To lick the dust, to fall in battle; to be slain.

"His enemies shall *lick the dust.*" — *Psalms* lxxii. 9.

To grovel; to find abasement.

"Pride that *licks the dust.*" — *Pope.*

To lick the spittle of, to toady; to fawn upon; to humble one's self to; to act the part of a sycophant. — *To lick up,* to devour; to consume utterly.

"Luxury has *licked up* all thy pelf." — *Pope.*

—*n.* Act of licking; that which is licked up. — A blow; a stroke; a smack. (Colloquial.)

"He turned upon me . . . and gave me a *lick* across the face." *Dryden.*

—In some of the W. States, an efflorescent deposit of salt, resorted to by cattle which lick the surface of the ground to obtain it.

Lick, in *Ohio,* a township of Jackson co.

Lick Creek, in *Illinois,* a post-office of Union co.

Lick Creek, in *Indiana,* enters the E. Fork of White River from Martin co.

Lick Creek, in *Iowa,* a twp. of Davis co.

—A township of Van Buren co.

Lick Creek, in *Missouri,* enters Salt Riv. from Ralls co.

Lick Creek, in *Ohio,* enters Tiffin's Riv. in Defiance co.

Lick'er, *n.* The person who, or thing which, licks.

Lick'erish, Liq'uorish, Lic'orous, *a.* [A. S. *liccera;* D. *lekker;* Ger. *lecker,* from *lecken,* to lick, to lick up.] Nice in the selection of food; dainty; apician; epicurean; as, "a *liquorish* palate." — *L'Estrange.*

—Eager to taste or enjoy; craving gustation; having a keen goût or relish. — Choice; dainty; tempting the appetite; nice; delicate; savory.

"*Lickerish* baits, fit to ensnare a brute." — *Milton.*

—Salacious; voluptuous; fond of venery.

Lick'erishly, *adv.* Daintily; in a licorous manner.

Lick'erishness, Lic'orousness, *n.* Niceness of taste; delicacy or daintiness of palate; goût; relish; also, salaciousness.

Lick Fork, in *Missouri,* a village of Daviess co.

Lick'ing, *n* A lapping with the tongue; a drawing the tongue over the surface. — A castigation; a thrashing; a flogging. (Colloq. and vulgar.)

Lick'ing, in *Indiana,* a township of Blackford co.

Lick'ing, in *Missouri,* a post-village of Texas co., abt. 95 m. S. by E. of Jeffersou City.

Lick'ing, in *Ohio,* a central co.; *area,* about 670 sq. m. *Rivers.* Licking River, and several smaller streams. *Surface,* undulating; *soil,* fertile. *Min.* Cannel coal, saudstone, and freestone. *Cup.* Newark.

—A township of Licking co.

—A township of Muskingum co.

Lick'ing, in *Pennsylvania,* a township of Clarion co.

Lick'ing Creek, rises in Fulton co., Pennsylvania, and flowing S. into Maryland, enters the Potomac River in Washington co.

Lick'ing Creek, in *Pennsylvania,* a township of Fulton co.

Lick'ing River, in *Kentucky,* rises on the N.W. slope of the Cumberland Mountains, in Floyd co., and flowing a general N.W. course of about 200 m., enters the Ohio River at Newport, opposite Cincinnati, Ohio. It receives numerous smaller streams, the most considerable of which is the South Licking River, which rises in Montgomery co., and joins the main stream at Falmouth, in Pendleton co.

Lick'ing River, in *Ohio,* rises in Licking co., and flowing S.E., enters the Muskingum opposite Zanesville, in Muskingum co.

Lick'ing Station, in *Kentucky,* a vill. of Morgan co.

Lick'ing Val'ley, in *Ohio,* a post-office of Muskingum co., 10 m. N.W. of Zanesville.

Lick'-penny, *n.* In Scotland, a miserly person; a covetous hunks.

Lick'shillett, in *Georgia,* a village of Floyd co., on the Etowah River, opposite Rome.

Lick'-spigot, *n.* A tapster; a drawer of liquor.

Lick'spittle, *n.* A toady; an abject sycophant; a mean parasite; one who cringes to another.

Lick'ville, in *S. Carolina,* a village of Greenville district, about 100 m. N. of Columbia.

Licordia, (*le-kor'de-a,*) a town of Italy, in Sicily, 7 m. S.E. of Caltagirone; *pop.* 7,700.

Licorice, (sometimes written LIQUORICE,) (*lik'o-ris,*) *n.* [It. *liquirizia;* Gr. *glykyrrhiza* — *glykys,* sweet, and *rhiza,* a root.] (*Bot.*) See GLYCYRRHIZA.

—The extract from the licorice-root, much used as a demulcent.

Lic'orous, *a.* Another spelling of LICKERISH, *q. v.*

Lic'orousness, *n.* See LICKERISHNESS.

Lictor, (*lik'tŭr,*) *n.* [Lat., from *ligo,* to bind: Fr. *licteur.*] (*Rom. Antiq.*) A Roman officer of state (Fig. 994), who attended on the early Roman kings, and afterwards on the chief magistrates of the republic — the consuls, decemvirs, dictators, and masters of the horse. Each bore on his shoulder a bundle of rods bound about an axe, which was emblematical of the power of the magistrate to inflict punishment by death and by scourging. (See FASCES.) It was the duty of the lictors to carry out the orders of the magistrate with regard to those who were found guilty of any offence against the state or private individuals; and it is supposed that they derived their name from having to bind criminals before inflicting capital or corporal punishment on them.

Licua'la, *n.* [Its Macassar name.] (*Bot.*) A genus of trees, order *Palmaceæ,* from India and the Indian Archipelago, one species of which, *L. acutifida,* yields the walking-sticks known by the name of *Penang lawyers.* The stems average about an inch in diameter, and five feet or more in height.

Lid, *n.* [A. S. *hlid, gehlid;* D. *lid;* O. Ger. *hlit,* a lid; Sansk. *lud,* to cover.] A cover; that which closes the opening of a vessel or box. — The cover of the eye, or eyelid.

"Violets . . . sweeter than the *lids* of Juno's eyes."—*Shaks.*

(*Bot.*) A calyx, which falls off from the flower in a single piece.

Lid'less, *a.* Without lids; having the eyes uncovered; — heuce, wakeful, watchful.

"A *lidless* watcher of the public weal."—*Tennyson.*

Lie, *n.* See LYE.

Lie, *n.* [A. S. *lig, lyg;* D. *logen;* Ger. *lüge;* Icel. *lygd.* See the verb.] An intentional violatiou of truth; a criminal falsehood; an untruth; a false statement or assertion, uttered with a view to deceive.

"Dare to be true; nothing can need a *lie.*"—*Herbert.*

—A fiction; a fabrication or fable; — in a ludicrous sense.

"The moral is truth, though the tale a *lie.*"—*Dryden.*

—False doctrine; an idolatrous picture of God, or a false god.

—Deception; that which deceives and disappoints confideuce.

To give the lie to. To impute falsehood to; to accuse of lying.

"Then *give* them back *the lie.*"—*Queen Elizabeth.*

—*v. n.,* (*imp.* and *pp.* LIED, *ppr.* LYING.) [A. S. *leógan;* Icel. *linga;* Sansk. *lâkh,* to refuse.] To deny or refuse to give up the truth, and at the same time to state that which is not true; to utter falsehood with an intention to deceive, or with an immoral design; to utter a criminal falsehood; to exhibit a false representation.

"Lord, Lord, how this world is given to *lying.*"—*Shaks.*

Lie, *v. n.,* (*imp.* LAY, *pp.* LYING, LAIN.) [A. S. *licgan;* D. *liggen;* Ger. *liegen;* Dan. *ligge;* Icel. *liggiu;* akin to W. *lle,* and Corn. *leh.*] To lay one's self in an horizontal position; to be in an horizontal position, or nearly so, and to rest on anythiug lengthwise, and not on the end; to lean; to rest in an inclining posture; to be prostrate or stretched out; to rest on a bed or couch; to rest in the grave; — frequently before *down* iu refereuce to human beings.

"He maketh me to *lie down* in green pastures."—*Ps.* xxiii. 2.

—To be situated or placed; to occupy a fixed position; as, Europe *lies* east of the Atlantic Ocean.

"What *lies* beyond our positive idea towards infinity, *lies* in obscurity."—*Locke.*

—To remain; to abide; to stay; — generally followed by some phrase implying or expressing a state or coudition; as, to *lie* under a wrong imputation, to *lie* concealed, to *lie* waste, to *lie* at the mercy of another, &c.

"This England . . . never shall *lie* at the proud foot of a conqueror."—*Shaks.*

—To cousist; to be in the power of, or dependent; to belong; to pertain; — used with *in;* as, he does all that *lies in* his ability. — To lodge; to take temporary habitation.

"Mr. Quinion *lay* at our house that night."—*Dickens.*

(*Law.*) To be susceptible of being maintained; feasibility of sustainment; as, a refereuce will *lie* iu this case.

To lie at ' heart. To be fixed or persistent, as an object of solicitude or inner desire.

"The recovering of Jamaica has ever *lain at* (*the* Spaniards') *hearts.*"—*Sir W. Temple.*

To lie by. To rest; to remain quiescent; to take rest or breathing-time. — To remain with, as in a depository; as, I have the work referred to *lying by* me. — *To lie down.* To retire to repose; to assume a recumbent posture on the ground, &c. — *To lie hard* or *heavy.* To burden; to oppress; to weight; as, the crime *lay heavy* on his conscience.

"*Lie heavy* on him, earth; for he
Laid many a *heavy* load on thee."—*Epitaph on Sir J. Vanbrugh.*

To lie in. to be in child-bed; to undergo parturition.

To lie in one, to be in the power or capacity of.

"Endeavor as much as *in thee lies* to preserve the lives of all man." *Duppa.*

To lie in the way, to be an obstacle, obstruction, impediment, or difficulty. — To be opportune or convenient. — *To lie in wait,* to lurk in ambush; to watch privily for; as, a highwayman *lay in wait* in the coppice. — *To lie on* or *upon,* to be a matter of duty, obligation, or necessity.

"The charge of souls *lies upon* them." — *Bacon.*

To lie on hand, to remain in keeping; to await disposition; as, they have a quantity of goods *lying on hand.* — *To lie on the hands,* to remain unoccupied or inactive; to be tedious, or productive of inertia.

"They are at a loss how to employ those hours that *lie upon* their *hands.*" — *Addison.*

To lie on the head of, to be judicially imputed to.

"What he gets more out of my wife than sharp words, let it *lie on my head.*"—*Shaks.*

To lie over, to be postponed or deferred to some future occasion; as, the resolution before the House was ordered to be *laid over.*—To remain unliquidated after the specified date of payment, as a bill of exchange. — *To lie to.* (*Naut.*) To be stopped in progress, as by backing the topsail or counterbracing the yards; —said of a ship. — *To lie under,* to suffer; to be subject to; to be oppressed by; as, he *lay under* a great disadvantage. — *To lie with,* to sleep with; hence, to have sexual commerce with.

"Pardon me, Bassanio, for by this ring she *lay with* me." *Shaks.*

To belong to; to be responsible for; as, the onus *lies with* you.

Lie'berkuhn, *n.* (*Optics.*) A silver concave reflector fixed on the object-glass end of a microscope to briug the light to focus on an opaque object.

Lieberkuhnian Glands, *n. pl.* (*Anat.*) Simple secerning cavities, having the form of blind tubular depressions of the intestinal mucous membrane, thickly distributed over the whole surface of the large and small intestines. They are so called after their discoverer Lieberkühn, who observed them in the small intestines, where they are visible only with the aid of a lens, their orifices appearing as minute dots scattered between the villi. They are larger in the large intestine.

Liebig, JUSTUS, BARON VON, (*lē'big,*) an eminent German chemist, B. at Darmstadt, 1803. His early predilection for physical science induced his father to remove him from the gymnasium at Darmstadt to Bonn and Erlangen, where he studied from 1819 till 1822. By aid of a travelling stipend allowed him by the grand-duke, he removed to Paris, where he continued his studies from 1822 till 1824, and read at the Institute his first paper on *Fulminic Acid,* which attracted much attention. Humboldt was so struck with the views of the young chemist, that he procured his appointment, in 1824, as Professor Extraordinary, and in 1826, as Ordinary Professor of Chemistry, at Giessen, where, supported by the government, he founded the first model laboratory, and raised its small university to eminence, more especially for the study of chemistry. In 1845 the grand-duke of Hesse bestowed upon him an hereditary barony; in 1852 he accepted a professorship at the University of Munich, as president of the Chemical Laboratory at that place, where a new and important sphere of operation was opened to him. He has composed numerous works, which have been translated into most European languages. His researches are recorded in his own journal (*Annalen*); in the *Annales de Chimie et de Physique;* and in the *Handbook of Chemistry,* commenced in 1836, by Poggendorf. He revised Geiger's *Handbook of Pharmacy,* of which a corrected edition appeared at Heidelberg in 1839, and of which his section may be considered as forming a Handbook of Organic Chemistry. His *Organic Chemistry in its Application to Agriculture,* published at Brunswick in 1840, has gone through several editions, and has been translated into English by Dr. Lyon Playfair, who studied under Liebig at Giessen. In a series of *Familiar Letters,* he developed his views on chemistry and its relations to commerce, physiology, and vegetation, with such success that the appearance of the work had the effect of inducing the foundation of several new chemical professorships in Germany. He was named foreign associate of the French Academy of Sciences, 1861. D. at Munich Apl. 18th, 1873.

Liechtenstein, (PRINCIPALITY OF.) See LICHTENSTEIN.

Lief, (*leef,*) *adv.* [From A. S. *leof,* beloved, from *lufian,* to love; D. *lief;* Ger. *lieb;* Goth. *luibs.* loved. See LOVE.] Gladly; freely; cheerfully; willingly; — used in familiar discourse; as, I had as *lief* not go.

"I had as *lief* have the foppery of freedom as the morality of imprisonment." — *Shaks.*

Lief, (*leef,*) *a.* [A. S. *leof.*] Beloved; dear; — used in poetry.

"You have stirred up my *liefest* liege to be mine enemy." *Shaks.*

Lie'-fraught, (*-frawt,*) *a.* Characterized by lies; full of lies.

Liegance, Ligeance, (*le'jens,*) *n.* (*O. Eng. Law.*) Allegiance; reciprocal relation of sovereign and subject.

Liege, (*leej,*) *a.* [Fr. *lige,* from L. Lat. *litus, lidus, ledus,* one attached to the soil and transferred with it; a man who owed fidelity and other duties to his lord.] Bound by a feudal tenure; a being compulsorily faithful and loyal to a superior, as a vassal to his lord; — hence, faithful: devoted; as, a *liege* man. — Sovereign; controlling duty and allegiance; as, our *liege* lord, the king.

"Cupid . . . *liege* of all loiterers and malcontents." — *Shaks.*

—*n.* A liegeman; a vassal; a subject owing allegiance.

—A sovereign; a feudal lord or superior.

"For that my sovereign *liege* was in my debt." — *Shaks.*

Liege, (*le'aizh.*) (Fr.; Ger. *Lüttich*; Fl. *Luyk.*) The most easterly province of Belgium; *area*, 1,106 sq. m. The southern part of the province is hilly, rocky, heathy, and much covered with wood, in some places yielding, however, great quantities of coal and iron; but the part called the *Herveland* (north of the Weeze) is extraordinarily fertile and well cultivated, and has also splendid pasturage for cattle. The valley of the Weeze is very beautiful, and exhibits an endless diversity of scenery. The railway from Aix-la-Chapelle to *L.*, which passes through this valley, has had immense difficulties to overcome in the nature of the ground, and is consequently regarded as a *chef-d'œuvre* of the kind. Nearly a sixth of the whole road had to be artificially constructed. The inhabitants are Walloons. *Pop.* 580,277.

Liege, a town of Belgium, cap. of the above prov., on the Maese, 54 m. S.E. of Brussels. It is divided into upper and lower towns. The latter stands at the confluence of the Maese and Ourthe, and is intersected by many branches of the first-named river, which are enclosed by stone walls, and crossed by numerous bridges. *L.* has some broad streets, neat squares, quays, and promenades: but, in general, it is poorly built, and lacks that cleanliness for which most towns of the Netherlands are noted. *L.* is one of the largest manufacturing towns of Europe, owing principally to its situation in a district abounding with coal, iron, lead, copper, and marble. *Manuf.* Cannons, and fire-arms of every description, steam-engines and machinery, hardware of every kind; watches, jewelry, bronze and other ornaments: woollens, cottons, &c.

Liegnitz, (*leeg'nitz,*) a town of Prussia, in Silesia, at the confluence of the Katzbach, Schwartzwasser, and the Neisse, 40 m. N.W. of Breslau. *L.* was formerly strongly fortified, but at present it has gates without walls, and the former ramparts serve as gardens and public walks. It is an old, but well-built town, and contains many handsome edifices. *Manuf.* Woollen, linen, and cotton fabrics, Prussian-blue, &c., and has a considerable trade in the agriculturnl produce of the country adjacent. The gardeners of this vicinity are considered the most expert of the prov. *Pop.* 20,528.

Lie'-ley, *v. n.* [*Lie* and *ley.*] To lie in grass or pasture. (Prov. Eng.)

Lien, (*le'en,*) *n.* [Fr., bond.] (*Law.*) The right of a creditor to retain the property of his debtor until his debt has been paid. Liens are either general or specific. A general lien is a right to retain certain goods until all the claims of the holder against the debtor are satisfied. This sort of lien is not favored by the law. A specific lien is the right to retain certain goods for claims arising from these goods. Thus, in the sale of any article, the vender has a right to retain it until the price agreed to paid. As a general rule, a workman may retain any article which he has improved for the price of his labor; as a tailor who has received cloth to make into a coat may retain the coat until he is paid for the labor of making it. An innkeeper may retain the goods of his guest until the amount of his bill is paid. Liens are implied by law, or authorized by custom; or they may be created by express compact. The custom, however, to be legal, must be reasonable; but this does not apply to special contract, which is good, though it may also be foolish or hard. Lien can exist only where the possession of the goods has been legally obtained, and ceases to exist the moment they are parted with. A lien can only be based upon a present existing claim. It is not affected by the lapse of time, like a simple debt; for the lien exists so long as the creditor continues to retain the goods in his possession. — *Maritime lien* applies to ships, freight, or cargo, and differs from the other in not depending upon possession, and requiring a legal process for its enforcement. It may arise by law or by special contract. Seamen have a lien on the vessel for their wages. Bottomry is also a lien established by special contract, on a vessel for repairs or necessaries supplied to her to enable her to complete her voyage.

Lienter'ie, *a.* [Lat. *lientericus*; Fr. *lientérique.*] (*Med.*) Belonging to a lientery.

Li'entery, *n.* [Gr. *leinteria*, from *leios*, smooth, and *entera*, bowels.] (*Med.*) A term formerly applied to a form of diarrhœa in which the food passes rapidly through the bowels in an apparently undigested state. Lubricity of the intestines.

Li'er, *n.* One who lies down, or rests, or remains.

"There were *liers* in ambush against him behind the city." *Josh.* viii. 14.

Lierre, (*le'air,*) a town of Belgium, prov. of Antwerp, at the confluence of the Great and Little Nathe, 10 m. S.E. of Antwerp. *L.* has noted breweries, extensive manufactures of linens, silk, lace, and musical instruments are carried on, and there are several sugar refineries, and also oil-mills, rape-seed being largely cultivated in its vicinity. *Pop.* estimated at 16,000.

Lieu, (*lū,*) *n.* [Fr., from Lat. *locus*, place.] Place; room; stead; — following *in*.

"*In lieu* of such an increase of dominion, it is our business to extend our trade."—*Addison.*

Lient. Abbreviation of LIEUTENANT, *q. v.*

Lieutenancy, Lieutenantry, Lieutenantship, (*lev-ten'an-se.*) *n.* Office, rank, or commission of a lieutenant: as, the *lieutenancy* of a county, a *lieutenancy* in the army. — The collective body of lieutenants.

"The list of the *lieutenancy* of our metropolis." — *Felton.*

Lieutenant, (*lev-ten'ant,*) *n.* [Fr., from *lieu*, place, and *tenir*, to hold.] (*Mil.* and *Navy.*) One who supplies the place and discharges the duty of his immediate superior in his absence. — In the *Army*, this officer ranks next below, and is subordinate to the captain, in whose absence he takes command of his company. In the British service, *L.* in the Horse Guards, Life Guards, and foot-guards have the rank of *captain*. — In the *Navy*, a *L.* has relative rank with a captain in the army. In the British service it is the next rank below commander, but in the United States it is two grades below.

Lieuten'ant-Col'onel, *n.* In the British army, is nominally the second officer of a regiment, but virtually each battalion of infantry and regiment of cavalry is commanded by a *L.-C.*, the post of colonel being merely an honorable sinecure.

Lieutenant-Commau'der, *n.* In the U. States navy, an officer ranking next below the grade of commander. This grade was made to assimilate with that of major in the army, and is equivalent to lieutenants of eight years' standing in the British navy. Officers of this grade are usually appointed *first lieutenants* (sometimes called Executive Officers) and *navigators* of ships of war.

Lieutenant-Gen'eral, *n.* An officer next in rank to a general, who is entrusted with the command of the whole or principal part of an army. The rank was made for General Washington, and was held by brevet by General Scott. It was revived by Act of Congress in 1864, and conferred upon General Grant, and has since then been borne by several of the great leaders of the Civil War. A higher honorary rank, that of General, was subsequently created, and has been borne by Grant, Sherman, and Sheridan, the latter receiving it a few hours before his death.

Lieutenant-General of the Kingdom. A dignity equivalent to that of regent, which has been occasionally held in France on temporary emergencies. It was last held in 1830 by the Duke of Orleans, who retained the title until he was proclaimed king on the 7th of August following.

Lieutenant-Governor. In the U. States, an officer next in rank below the governor of a State, and performing the duties of governor in the absence, sickness, or death of the latter functionary.

—In England, a deputy-governor.

Lieuten'antry, Lieuten'antship, *n.* See LIEUTENANCY.

Life, *n.*; *pl.* LIVES. [A.S. *lif, lyf*; Icel. *lif*; Dan. *liv*; Goth. *libains*, life. See LIVE.] State of living or of being alive; that state of animals and plants in which the natural functions and motions are or may be performed; animation; vitality; also, the time or duration of such state, whether generally or individually; as, the *life* of a dog, or a flower. — That state of being, in man, in which the soul and body are united; present state of existence; the time from birth to death; and, sometimes, the lasting existence of the soul in the present and future state.

"While there is *life* there's hope, he cried." — *Gay.*

—Condition or circumstance attendant upon the period of human existence, as prosperous or miserable; conduct; deportment, in regard to moral manifestation of life; manner of living, with respect to virtue or vice.

"*Lives* of great men all remind us
We can make our *lives* sublime."—*Longfellow.*

—Blood, as the supposed vehicle of animation; — used in a poetical sense.

"The warm *life* came issuing through the wound." — *Pope.*

—Animal being; animated existence. — System of animal nature; animals generally or collectively.

"Full nature swarms with *life*." — *Thomson.*

—A living person; a human being: as, a number of *lives* were lost. — The person or thing forming the centre of spirit, energy, or enjoyment; the nucleus or originating vehicle of success or persistent prosecution; as, he was the *life* of the company.

"Reason is the *life* of the law." —*Sir E. Coke.*

—The real or original form or person; living state; — in contradistinction from *copy*; as, a sketch drawn from *life*. — History of the events of a lifetime; biographical narration; as, Boswell's *Life* of Johnson. — General state of man; occurrences belonging to human affairs; course of things.

"There's nothing half so sweet in *life* as love's young dream." *Moore.*

—Social position; worldly status; rank, as determined by manner of living; as, high *life*, low *life*.

"Each change of many-colour'd *life* he drew." — *Johnson.*

—Spirit; resolution; animation; briskness; vivacity; nerve; vim.

"The fire and *life* with which he kiss'd Amphyctrion's wife." *Prior.*

—Eternal happiness in another state; heavenly existence, as opposed to eternal death.

—A pet; a darling; that which is fondly endeared to one; —used as a term of fondness.

(NOTE. *Life* enters into the construction of many compound words, as *life*-preserving, *life*-ending, *life*-assurance, &c.)

To the life, so as to present a close resemblance of the original; perfectly; inimitably; exactly.

"Every figure *to the life* express'd the godhead's power."—*Dryden.*

(*Physiol.*) Life is defined to be that "state or condition of a being that exhibits vital actions;" and it is thus placed in opposition to the term *death*, which implies the state of a being in which those actions have altogether ceased, and whose structure is subject to no other forces than those of inorganic matter, which speedily effect its decomposition. The class of phenomena to which we apply the term *vital*, and which differs in its character both from those of physics and chemistry, is only manifested by bodies of that peculiar structure which we term *organized*. It was long regarded as sufficient to attribute to the vital principle all those actions of a living body which cannot be referred to the laws of chemistry or physics. The laws of vital phenomena, however, are, in fact, as open to investigation as those which comprehend the phenomena of gravitation, electricity, or chemical affinity. A strict examination into their character will show that, although not identical with physical phenomena, they are analogous to them, in so far as they take place according to a regular plan, and present themselves under fixed conditions, a definite acquaintance with which would give to physiological science the same kind of precision and comprehensiveness as it is the aim of the physical philosopher to attain in his branch of study. The intricacy, however, of the combinations under which the vital phenomena are usually presented to our observation renders a knowledge of their laws more difficult of attainment; but the success which has attended the philosophical method of inquiry of late pursued by scientific physiologists, is a most satisfactory proof that they are not beyond the reach of persevering and well-directed search. Life commences with the first production of the germ; it is manifested in the phenomena of growth and reproduction; and it terminates in the death of the organized structure, when its component parts are disintegrated more or less completely by the operation of the common laws of matter. Life is thus "the sum of the actions of an organized being." It includes all those phenomena which it is the province of the physiologist to consider. The changes exhibited by any one living being, in its normal condition at least, have one manifest tendency, — the preservation of its existence as a perfect structure. By these it is enabled to counteract the ever operating influence of chemical and physical laws, and to resist to a greater or less extent the injurious effects of external agencies. In the investigation of vital phenomena, the fact has been too much overlooked, "that we always find a similarity of action when the organized structure on the one hand, and the stimuli which call its properties into activity on the other, are identical; and a difference in either of these conditions always produces a difference in the result." We do, indeed, occasionally find variations in the result, without being able to detect any change in either of the conditions; but knowing how very imperfect our powers of discovering minute changes at present are, and bearing in mind that every increase of our means of observation has gone to strengthen the force of our rule, we cannot look upon them as exceptions. In attempting to reduce the mass of phenomena presented to us by vital actions to distinct classes, we find that all living beings introduce into their own structure alimentary substances derived from external sources; and likewise that all submit their fluid ingredients to the influence of the element which they inhabit, so as to produce a reciprocal change between them. Thus, the function of respiration is essentially the same throughout the whole organized world. Hence we conclude that the action of each particular organ is dependent upon the excitation of its properties by agents external to it. When these stimuli are withdrawn, vital action ceases. Further, every class of organs in the living body may be said to require its particular stimulus for the display of its properties. There are also other conditions of a more general nature necessary for the support of vital actions. All vital actions require a certain amount of heat for their performance, and this amount varies in different cases. Light, again, is essential to many others, especially in the vegetable kingdom. Electricity is also an important agent in the vital economy; but our knowledge of its operations is still very imperfect. Many physiologists argue for the existence of a distinct set of vital affinities, from the fact that the tissues and fluids which maintain a certain composition when possessed of vitality, rapidly resolve themselves into new combinations when this has become extinct; but there appears to be more reason to infer that the preservation of the normal constitution of organic compounds in the living body is dependent on the continuance of the vital actions of the economy, rather than due to its mere possession of the property of vitality. In fact, it may be reasonably maintained "that the vitality of each tissue, that is to say, its possession of vital properties, is dependent on the perfect condition of its organization; and that, so far from preserving the organism from decay, it merely remains until decay has commenced." There are many organized beings, at particular periods of whose existence all vital action seems to be suspended; and this may result either from the absence of the stimuli necessary to maintain it, or from some change in the organism itself, by which it is, for a time, less capable of responding to these stimuli. The former is manifested in a remarkable manner in the case of seeds of plants, which have been found to preserve their vitality during many centuries; the latter, in the case of certain animals which pass the winter in a state of torpor.

Life'-assur'ance, Life-insurance, *n.* See INSURANCE.

Life'-belt, *n.* A belt, generally made of cork and inflated with air, used to sustain a person above the water. — See LIFE-BUOY.

Life'-blood, *n.* The blood necessary to life; the vital fluid. — That which constitutes the essence or vitalizing principle of anything; that which makes strong or energetic.

"Money (is) the *life-blood* of the nation." — *Swift.*

Life'-boat, *n.* (*Naut.*) A boat constructed for preserving lives in cases of shipwreck or other destruction at sea of a ship or steamer. The boat represented in the accompanying diagram (Fig. 1575) receives its name of life-boat from the air-cases with which it is furnished, to prevent it from being sunk through overload-

ing: A A are the end, and B B the side air-cases; C C are relieving tubes, six inches in diameter, through which any water that is shipped is got rid of; D D is the deck. In the longitudinal section, the dotted lines show the position and dimensions of the air-chambers and tubes within board.

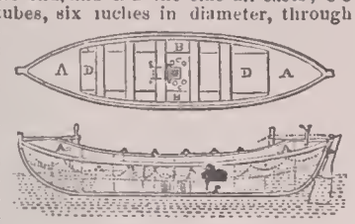


Fig. 1575.— LIFE-BOAT.

Life'-buoy, (*boi,*) *n.* (*Naut.*) An apparatus carried on shipboard, piers, &c., for the purpose of throwing to a person who has fallen into the water, to enable him to sustain himself until the arrival of assistance. The commonest form is a zone of about thirty-one inches in diameter, six inches wide, and four inches thick. It is formed of about twelve pounds of cork in thin layers; the whole being held together by a painted canvas case. Such a buoy will sustain six persons. Some life-buoys comprise a short mast to carry a flag, for daylight, or a composition, which at night burns for some minutes with a powerful light. The object of this arrangement is to attract the attention of the drowning person.

Life'-drop. *n.* A vital particle of blood.

Life'-estate, *n.* An estate held by an individual during his life, but not descendable to his heirs.

Life'-everlast'ing, *n.* (*Bot.*) See GNAPHALIUM.

Life'ful, *a.* Lively; inspirited; full of life and energy.

Life'-giving, *a.* Bestowing life, spirit, or energy; invigorating; inspiriting.

"Kindled from heaven's *life-giving* fire."— *Spenser.*

Life'-guard, (*-gärd,*) *n.* A guard of the life or person; a body-guard.

—*pl.* (*Mil.*) In England, the designation given to two regiments of heavy cavalry belonging to the Household Brigade of Guards; they correspond with the French cuirassiers.

Life'-guardsman, *n.* An officer or private of one of the English regiments of Life-guards.

Life'-hold, *n.* (*Law.*) Same as LIFE-LAND.

Life'-land, *n.* (*Eng. Law.*) Land held by lease for a life or lives.

Life'less, *a.* Dead; defunct; deprived of life.

"Ghastly with wounds, and *lifeless* on the bier."—*Prior.*

—Wanting power, force, energy, and spirit, as a discourse; dull; heavy; inactive.

"A *lifeless* king, a royal shade I lay." — *Prior.*

—Vapid; spiritless; insipid; flat; dead; tasteless, as a liquor. — Destitute of physical energy; inert; torpid; sluggish.

Life'lessly, *adv.* In a lifeless or lethargic manner.

Life'lessness, *n.* State of being lifeless; want of life, vigor, energy, and spirit; listlessness; inactivity.

Life'like, *a.* Resembling a living original; as, a *life-like* portrait or sketch.

Life'-line, *n.* (*Naut.*) A line passed along the external bulwarks of a ship for the safety and security of the seamen.

Life'-long, *a.* Continuing through the duration of life.

Life'-preserver, *n.* (*Naut.*) A term applied to an apparatus or arrangement for rendering the human body buoyant in the water. The weight of the human body is a little less than that of an equal bulk of water, so that it naturally floats in that liquid. When, however, a man floats on his back on the water, his mouth will most probably sink under the surface, unless he use some strong muscular effort, so as to throw the head back. It is a well-known fact, that many persons unable to swim, who fall into still water, might be saved, if they retained their presence of mind, so as to preserve a proper position. By attaching to the chest some buoyant substance, it becomes an easy matter to keep the upper part of the body above the surface of the water. The arrangements for effecting this purpose are not large in bulk, and are generally known by the name of life-preservers. They are principally made of cork, in the form of jackets and belts, or of India-rubber cloth belts or cylinders, which, when inflated, are able to sustain a person above the surface of the water. — The term life-preserver has been also applied to a small weapon, about a foot long, made of twisted whalebone, and heavily loaded at each end. Although originally intended for protection against attack, it seems to have become the special weapon of burglars and other ruffianly characters.

Life'-rent, *n.* The rent of an estate or property payable during life.

Life'-spring, *n.* The spring, fountain, or source of life.

Life'-string, *n.* A nerve, ligament, or string, that is imagined to be essential to vitality.

"The arteries, the undecaying *life-strings* of those hearts." *Daniel.*

Life'-table, *n.* A statistical table of probabilities concerning the duration of life.

Life'time, *n.* Duration of life; time during which life continues.

Life'-weary, *a.* Tired of life.

Liffey, (*liff'e,*) a river of Ireland, in Leinster, on whose banks stands the city of Dublin. It rises in the mountains of Wicklow, about 12 m. from Dublin, and after a course of 50 m. falls into the Bay of Dublin.

Lifford, a market-town of Ireland, in Ulster, cap. of the co. of Donegal, aht. 14 m. S.S.W. of Londonderry; *pop.* 800.

Lift, *v. a.* [A. S. *hlifian,* to raise up; Ger. *lüften,* to air, to lift, from *luft,* air, atmosphere; Swed. *lyfta;* Dan. *lofte;* Icel. *lopta;* It. and Lat. *levare;* Fr. *lever.* The origin of the Teut. fam. is the Goth. *luftus,* air. See LOFTY.] To raise; to elevate; to raise from a lower to a higher position; to upheave; to hoist; to erect; — used with reference to material things; as, to *lift* a load.

"Take her up tenderly, *lift* her with care." — *Hood.*

—To raise intellectually or spiritually; to elevate in fortune, estimation, diguity, or rank; to exalt; — with *up.*

"The Roman virtues *lift up* mortal man." — *Addison.*

—To raise in spirit; to elate; to exhilarate; to cause to swell, as with pride or vanity; — frequently with *up.*

"Our hearts have been too much *lifted up* by our successes." *Atterbury.*

—To shift or remove from one place to another; — hence, to sequestrate; to carry off by theft; to pillage; to remove by stealing.

"Night-robbers *lift* the well-stored hive." — *Dryden.*

(*Script.*) To raise for the act of crucifying.

"When ye have *lifted up* the Son of man." — *John* viii. 28.

To lift up the eyes, to look steadily; to raise the eyes. To turn one's appeal to God in prayer. — *To lift up the face* or *countenance,* to look with confidence, comfort, or gratification.

"Your guests are coming; *lift up* your *countenance.*"—*Shaks.*

To lift up the feet, to come quickly to one's succor. *Psalms* lxxiv. 3.

To lift up the hand, to swear upon oath. — To elevate the hands in supplication or prayer. — To rise in revolt; to assault. — To cast aside sloth and become industrious. *Heb.* xii. 12.

To lift up the hand against, to injure; to crush; to destroy. — *To lift up the head,* to raise from a low condition to a higher.

"The eye of the Lord *lifted up* his *head* from misery." *Ecclesiastes.*

To exalt; to rejoice; to glorify.— *To lift up the heel against,* to treat with arrogance or contumely. — *To lift up the voice,* to cry aloud; to call out, as expressing feelings or emotions.

"And she . . . *lifted up* her *voice,* and wept."—*Gen.* xxi. 16.

—*v. n.* To endeavor to raise something heavy; to apply one's strength for the purpose of raising or bearing.

"Like the body strained by *lifting* at a weight too heavy." *Locke.*

—To be raised, upborne, or elevated; as, the fog is beginning to *lift.* — To show an apparent rise, as the land viewed from a ship approaching it.

Lifting-bridge. See DRAWBRIDGE.

Lifting-gear. (*Mach.*) The apparatus for lifting the safety-valves from within a boiler; it consists of levers connected to the valve and to a screw worked by a handle outside the boiler.

Lift, *n.* A lifting; act of raising or bearing up.

"In races, it is not the large stride, or high *lift,* that makes the speed."—*Bacon.*

—That which is to be raised or elevated.

—Assistance in lifting; hence, help in general; as, to give a person a *lift.*

"The goat gives the fox a *lift,* and out he springs."—*L'Estrange.*

—That which lifts or raises; a lifter; an elevator.

—A movable gate removed by lifting; a lift-gate. (Used as provincial English.) — In Scotland, the sky; the firmament.

—*pl.* (*Naut.*) Ropes connecting the yard-arm with the mast, used to make the yards hang lower or higher as required.

Dead lift, an effort to raise something at an extreme disadvantage; hence, figuratively, something to be done which calls forth one's utmost energies.

"Myself and Trulla made a shift
To help him out at a *dead lift.*"—*Hudibras.*

Lift'able, *a.* That may be lifted or raised.

Lift'er, *n.* He or that which lifts or raises; a thief; as, a shop-*lifter.* — A contrivance for hoisting goods, &c.; as, a grain-*lifter.*

(*Founding.*) A tool for dressing the mould. — Also, a contrivance attached to a cope to hold the sand together when the cope is lifted.

(*Mach.*) In a steam-engine, the arm on a lifting-rod that lifts the puppet-valve.

Lift'-gate, *n.* See LIFT.

Lift'ing, *n.* The act of one who lifts. — Assistance; help; aid.

Lift'ing-jack, *n.* A simple mechanical arrangement for raising one end of the axletree of a carriage, and so lifting the wheel from the ground; the wheel can then be removed, or turned round for the purpose of being cleaned.

Lift'-lock, *n.* A lock of a canal.

Lift'-wall, *n.* The cross wall in the lock-chamber of a canal.

Lig'ament, *n.* [Fr.; Lat. *ligamentum,* from *ligo, ligatus,* to bind; Sansk. *lag,* to cleave to.] That which binds, ties, or unites one thing or part to another; a band; a bandage: a bond; a chain.

(*Anat.*) The name of a particularly tough, elastic, fibrous substance or texture among the solids of the animal body. Ligaments, sometimes called tendons or sinews, are of various sizes, shapes, and thicknesses: thus, when thinly expanded, like the inner skin that envelops the different sections of an orange, it is called a *ligamentous sheath,* and covers each muscle of the body in a separate surrounding; when bound together in bundles of white, glistening threads, and forming the two extremities of a muscle, it is called a *tendon* or sinew, the substance commonly known as paxwax; the upper tendon serving for the origin of the muscle, or its place of attachment, and the lower, and always the longer, for its insertion. The next important use of ligaments is to bind one bone to another, and all the bones of the skeleton together; they also connect cartilages with bones, as exemplified in the case of the false ribs with the continuation of the breast-bone. The manner in which the various bones are individually connected with each other, more particularly those composing perfect and imperfect joints, is one of the most beautiful provisions in the human anatomy, combining both strength and neatness. The third general use of ligaments is when they are expanded in fibrous layers, like parchment, to close up large apertures across bones, as in the *pelvis,* to prevent the escape of the organs within. Ligaments are round or flat, broad or narrow, and are named sometimes according to their shape, very frequently after their position, and sometimes from some specialty of their duty; or else they are called after the name of some distinguished anatomist.

Ligament'al, Ligament'ous, *a.* Composing a ligament binding; having the nature of a ligament; as, a *ligamentous* membrane.

Li'gan, *n.* (*Mar. Law.*) Same as LAGAN, *q. v.*

Ligarius, QUINTUS. (*li-gair'e-us,*) proconsul in Africa, who conducted himself so well in that station, that, at the desire of the people, he was appointed perpetual governor. He opposed Cæsar, who pardoned him after the defeat of Scipio. Not thinking himself safe, he absented himself from Rome, on which account Tubero accused him; but Ligarius was defended by Cicero and acquitted. He was one of the conspirators with Brutus and Cassius against Cæsar.

Liga'tion, *n.* [Lat. *ligatio.*] The act of binding; also, the state of being bound.

"Slumber of the body . . . is the *ligation* of sense."—*Addison.*

—A bond; a bandage; a ligature.

Lig'ature, *n.* [Fr.; Lat. *ligatura,* from *ligo,* to bind.] (*Surg.*) Any tight-fitting string or cord. A term in surgery implying a thread tied round a bleeding artery; a bandage; a tape drawn tightly round a limb, to stop the circulation in the main artery, like a *tourniquet,* or to prevent the absorption of some *virus,* as from a reptile's sting. Ligatures for arteries are generally fibres of strong, fine silk, or unbleached thread.

—The act or process of binding; as, stoppage by strong *ligature* or compression. (*Arbuthnot.*) — State of being bound; stiffness.

"Sand and gravel grounds . . . contract no *ligature.*"—*Mortimer.*

(*Mus.*) The tie which binds several notes of like length together, by which they appear in groups. Thus

four quavers, by means of a ligature at top or bottom, assume the form

, the line connecting them being the ligature.

(*Print.*) Two or more letters cast on one piece or shank. They are also called *logotypes* (*wood types*). The ligatures now in use are few in number, having been reduced to æ, œ, ff, ffi, ffl, fi, and fl; but within the last forty years we had also the ct, fb, fh, fi, fk, fl, and ft, now discarded mainly in consequence of our confining ourselves entirely to the short *s.* The & is the modern form of the &c. the *e* and *t* joined together for *et.* Earl Stanhope proposed to abolish the present ligatures by making the f more upright without being kerned, so as to admit an i or an l or another f after it, and to introduce others which occur more frequently, viz., th, in, an, re, se, to, of, and on. — In former times, Greek was printed as written in the Middle Ages, with an immense number of ligatures, some easily decipherable, but most of them not intelligible even to good Greek scholars of the present day.

Lige'ance, *n.* (*Old Eng. Law.*) Same as LIEGANCE, *q. v.*

Lige'ment, *n.* See LEDGEMENT.

Light, (*līt,*) *n.* [A. S. *leoht, leht, liht;* D. and Ger. *licht;* Icel. *lios;* Dan. *lys;* Lat. *lux;* W. *llūg,* light; Sansk. *ruc,* to shine, *lōk, lōc,* to shine, to see, *l* and *r* being interchangeable.] That which produces vision; that by which objects are made perceptible to the sight; that flood of luminous rays which flows from the sun and constitutes day. (See below, § *Optics.*) — Day; the dawn of day; that which constitutes day; as, he rose with the *light.* — Anything which illumines, or gives light, as a lamp, candle, taper, or pharos, a star, the sun, and the like; any luminous body.

"Put out the *light,* and then — put out the *light.*"—*Shaks.*

—Illumination of mind; instruction; knowledge; particularly, the source of mental or religious enlightenment.

"*Light* after *light* well used they shall attain."—*Milton.*

—A visible state; public view or notice; publicity; popular observation; as, the truth comes to *light* at last.

"Why am I ask'd, what next shall see the *light?*" — *Pope.*

—A place or object which permits light to enter; a window or pane of glass; as, a sky-*light.*

(*Paint.*) The medium by which objects are discerned. In a picture it means the part which is most illuminated. This may happen from *natural light,* as the sun or moon; or from *artificial light,* as a fire, candle, &c. The principal light is generally made to fall on the spot where the principal figures are placed, and generally near the centre of the picture. A reflected light is that which a body in shadow receives from a contiguous light object.

(*Optics.*) Light is the natural agent by which objects are rendered perceptible to the sense of seeing. The study of the nature and properties of light has been an object of philosophical disquisition from ancient times, and much of interest has been learned about its conditions, while the theoretical views concerning its nature accord well with observed phenomena.

Among the earliest speculations on the subject are those of Pythagoras, who considered that vision was caused by particles continually emanating from the surfaces of bodies and entering the pupil of the eye. Plato and his followers, however, believed that vision was the result of the emission of particles from the eye meeting with certain emanations from the surfaces of things. Notwithstanding this improbable hypothesis, the Platonists seem to have detected several properties of light; such as its propagation in straight lines, and the equality of the angles of incidence and reflection when it falls on a reflecting surface. The ancients were also acquainted with the fact that the sun's rays could be concentrated by means of a concave mirror. Light was regarded by Aristotle as a mere quality of matter, and Ptolemy the geographer wrote a treatise on optics, which has not been handed down. After this æra of speculation, a long period of darkness occurred, till the Arabians began to cultivate the learning of the Greeks, and several of their philosophers treated on optics. The earliest Arabian work on this subject was written by Alhazen; it contains a description of the eye, and details many experiments on reflection and the refracting power of air. The work of Alhazen was commented upon by Vitelio, a native of Poland, in 1270; and from a passage in Roger Bacon's works, it would appear that spectacles were used about the same time. There is, however, no absolute certainty as to the discoverer of spectacles. After the revival of letters, Maurolycus of Messina, one of the earliest cultivators of mathematics, made optics his study. Baptista Porta, and afterwards Lord Bacon, also made light a subject of investigation. The latter philosopher complained that the *origin* and *form* of light had been too much neglected. Antonio, bishop of Spalatro, first gave the true theory of the rainbow. The next important step was the discovery of the telescope, by Zacchias Jansen, a spectacle-maker of Middleburg, in Walcheren, in 1590. This valuable invention was immediately applied, by Galileo, to physical astronomy with great success. In a short period of time he discovered by its means the satellites of Jupiter, the structure of the Milky Way, the phases of Venus, the spots on the sun's disc, and a number of stars hitherto unknown. The invention of the compound microscope seems also to belong to Jansen. After a number of philosophers had given their attention to the subject, the interesting discoveries of the century were crowned by the researches of Newton concerning the optical properties of light. Notwithstanding the brilliant discoveries that have been made in this branch of science, much remains to learn concerning the nature of light. Philosophers are agreed, in so far that they acknowledge that the phenomena of vision depend upon the agency of a subtile, extremely attenuated matter, set in motion by the sun and other luminous bodies. That it is material is inferred from the deflection of light from its course in passing near various bodies; from its being arrested by some substances, while it passes freely through others; from its capability of condensation and dispersion; from its producing chemical changes in certain compounds; and from its seemingly entering into the composition of certain substances, from which it can be again extracted. With regard to the propagation of light, and the mode in which it makes itself perceptible to our senses, two hypotheses have been advanced—the hypothesis of *emission* and the hypothesis of *undulation*. The hypothesis of emission supposes that light consists of a highly attenuated fluid, the particles of which are not affected by gravity, but are endowed with a great repulsive force, and are actually projected from luminous substances in straight lines with inconceivable velocity. In the hypothesis of undulation, on the contrary, the whole universe, including the interstitial spaces of all matter, is conceived to be filled with a highly elastic rare medium, which possesses the property of inertia, but not gravitation, to which the name of *ether* has been given. This medium is not light, but light is produced in it by the excitation on the part of luminous bodies of an undulatory motion, analogous to the waves of water. By this theory, luminous bodies are supposed to act on the universally diffused fluid somewhat in the same manner that sonorous bodies do on air in the production of sound. Scientific research has abundantly indicated that the propagation of light is a process of the most astonishing rapidity. It was observed by Roemer that the eclipses of Jupiter's satellites happened sometimes sooner and sometimes later than the times given by the tables of them, and that the observation of them was before or after, according as the earth was nearer to or farther from Jupiter. It was therefore concluded that this circumstance depended upon the distance of Jupiter from the earth. Subsequent observations showed that planetary light requires about fourteen minutes to cross the earth's orbit. These results demonstrate to the complete satisfaction of scientists that light travels the vast regions of planetary space at the speed of 186,772 miles per second. The following extract from Sir J. Herschel's "Discourse" may give some conception of this velocity:—"A cannon-ball would require seventeen years, at least, to reach the sun, supposing its velocity to continue uniform from the moment of its discharge; yet light travels over the same space in seven minutes and a half. The swiftest bird, at its utmost speed, would require nearly three weeks to make the tour of the earth; light performs the same distance in much less time than is required for a single stroke of its wing." The origin of light, like that of heat, may be traced to various sources. The sun is not only the great fountain of heat, but also of light, which it imparts to the earth and to the other members of the solar system. Light emanates, also, from terrestrial matter in different states of activity. It is thrown off when certain homogeneous substances act upon one another by the mechanical force of friction; thus, when two pieces of quartz or rock-crystal, or two pieces of loaf-sugar, are rubbed together, they emit flashes of light in a dark place. Flashes of light have also been observed when bodies suddenly change their state under the force of crystallization. It is generated in still greater abundance when heterogeneous substances act upon one another under the force of chemical affinity. All the common means of artificial illumination by lamps, candles, and gas-lights, are dependent upon this action. When solid bodies are heated to a temperature of 800°, they begin to shine in the dark; and if a current of air at 900°, which is in itself non-luminous, be made to strike upon pieces of metal, earth, &c., it will speedily communicate to them the power of radiating light. The passage of electricity excites it with a degree of intensity only surpassed by that of the solar ray, while in the glow-worm and fire-fly we see that the processes of life are capable of evolving it. When bodies are in this state of activity, they are said to be self-luminous; but by far the greatest number possess no such property at ordinary temperatures. Although unable to be luminous themselves, all substances are capable of becoming so when placed in the presence of a self-luminous body, since a process of secondary radiation commences from them. A lamp, for instance, brought into a dark room, is not only visible itself, but renders all the objects in the room visible. A sunbeam admitted into a dark chamber only renders luminous the objects directly in its course; but if any of these be white, as a sheet of paper, the whole apartment will become illuminated by this secondary radiation. Among the heavenly bodies this fact is illustrated on a splendid scale. The sun is the great self-luminous source of the system; the moon and the planets possess no such inherent property; but those parts of them on which the sun's light falls become for the time luminous, and perform all the offices of self-luminous bodies. It is, therefore, evident that the communication which we call *light* not only subsists between luminous bodies and our eyes, but between luminous and non-luminous bodies, or between luminous bodies and each other. The investigation of the properties of light constitutes the peculiar province of optics. This science is completely mathematical (see Optics); but its basis, like that of all other branches of natural knowledge, must be experiment. The physiological relations of light will be found described in the article Eye; it is only further necessary to say here, that the radiant force produces the sensation of light by striking against the expanded nerve of vision—the retina of the eye—and that the effect is persistent during a definite portion of time. Hence it is, that winking with the eyelids forms no impediment to correct vision. Experiment has also shown that the impression received by the mind lasts for about the eighth part of a second, but varies with the intensity of the light; so that a luminous point, revolving with a velocity sufficient to complete a circle in that time, will not appear as a fiery point, but a fiery circle. One of the first relations of light to ponderable matter is, that most bodies possess the property of intercepting it in its progress, while a few allow it to traverse their substance. From this circumstance arises the distinction of bodies into opaque, transparent, and diaphanous. The light of the sun reaches us freely through a plate of glass, but is entirely excluded by a plate of metal. A sheet of white paper, or a piece of porcelain, also allows light to pass through it; but not in straight lines parallel to its first direction,—the rays become broken up, as it were, and radiated again from a new, self-luminous centre. When an opaque screen is placed between a luminous body and another object, such as a sheet of paper, a shadow is cast which is similar in outline to the section of the body producing it; from this phenomenon we learn that the rays of light are transmitted in straight lines. When a pencil of light traverses space, or a perfectly homogeneous medium, its course is rectilinear and its velocity uniform; but when it encounters an obstacle or enters a different medium, it undergoes certain modifications; it separates itself into several portions: one of these is *reflected*, that is, turned aside, after which it pursues a course wholly exterior to the obstacle or new medium; a second portion enters the medium and is *refracted*, or bent out of its original direction; a third portion is *absorbed*, or lost; and a fourth portion is *radiated*, or repelled in all directions from the surface. In reflection, the primary law is, that the angle of incidence is equal to the angle of reflection. It is thus that the images are formed in a looking-glass; and as we always see objects in the direction in which the ray of light arrives at the eye, we judge the image to be as much behind the surface of the glass as the object is before it. Every known substance, not excepting air, the most diaphanous of all, reflects some portion of light. It is calculated that if a person were plunged 150 feet in the clearest water, he would find the light of the sun no more than that of the moon. When objects are looked at through glass, they become more dim in exact proportion to its thickness. There is, indeed, no such thing in nature as perfect transparency. On the other hand, also, there is no substance possessing the property of perfect reflection; a piece of leaf-gold held up between the eye and any strong light, permits bluish rays to pass through. Light may be so reflected from regular curved concave surfaces that all the rays may converge to a point or focus. In these cases the direction of each ray is the same as if it had been reflected at the point of incidence from a plane surface tangent to the curve. When a ray of light is admitted into a dark room, it may be almost wholly turned aside by reflection from a metallic mirror in any direction, according to the angle at which the mirror is presented to it. If it be made to fall on any object, it will affect that object as the original ray, a portion of it becoming irregularly repelled or scattered. It is this portion that renders an object visible in all directions. When this scattered light falls upon other bodies, it is again reflected and dispersed from them, making them visible, but in a less degree, on account of the partial absorption which is continually taking place, and the whole apartment is lighted. If the ray falls on a sheet of white paper, the room will be well lighted; but if upon black velvet, the room will remain dark; since nearly the whole of the light will be absorbed. To ordinary vision this property is of the highest importance. All bodies on the earth possess it in various degrees, and the atmosphere which surrounds it, in a remarkable manner. The sun's light, by this means, is diffused, and that milder radiance maintained which is so agreeable to the eye, and which renders objects visible when the rays do not fall upon them. Without this property, all objects shaded from the sun would be totally invisible, and without an atmosphere the sun would appear as a fiery disc in a black sky. Travellers state that on lofty mountains, where the atmosphere is rare, the sun's rays are painfully intense, and the sky of the darkest blue, almost amounting to black. When a pencil of light, that is an assemblage of rays passing from a luminous point, falls on the surface of any transparent uncrystallized medium, a portion pursues its course through it. If it enters perpendicularly, it passes through in a straight line; if at an angle, it is bent from its course, and is said to be *refracted*. In refraction, each different medium has its own action on light, some turning a ray incident at a given angle more out of its way than others. As a general rule, the refractive power of substances is in some degree proportional to their densities; for instance, water acts more powerfully than air, and has its power increased by the solution of different salts; and glass, again, is superior to either. The effect of refraction is familiarly illustrated if a stick be held obliquely in water, when it appears bent at the point of immersion. The direction of a ray of refractive light depends not only upon the surface where it enters, but also at its point of exit. Thus, by modifying the surfaces of reflecting media, the rays of light transmitted can be diverted almost at pleasure. (See Lens.) Since the deflecting power acts at the surfaces of bodies, the original deviation of a ray entering a piece of glass may be doubled at its emergence by a proper adjustment of surfaces. In the case of a triangular prism, the light which falls upon one of the faces is refracted at the first surface, and also at the second; but the second refraction does not bring the ray into a direction parallel with the incident ray, as is the case when the surfaces of the glass are parallel; but they are bent permanently in another direction. If a pure ray of white light from the sun be admitted into a dark room through such a prism, instead of being refracted altogether, and appearing still as a white ray, it is divided into several rays of very vivid colors. In this state it is said to be analyzed, or decomposed into its elementary rays. Seven distinct colors can be distinguished, namely: red, orange, yellow, green, blue, indigo, and violet. The red ray is the least bent, and the violet the most. If these colored rays be again collected by refraction through a convex lens, or by reflection from a concave mirror, they reproduce white light at the respective foci. The space illuminated and colored by a pencil of rays from the sun thus analyzed is called the solar spectrum. (See Spectrum, Solar.) This analysis of white light, however, is not wholly dependent upon the refractive power of a transparent medium, but from an effect called *dispersion*. The mean refractive and dispersive powers of bodies are not proportional to each other. If a hollow glass prism be filled with oil of cassia, the spectrum produced will be two or three times longer than that of a solid glass prism. Different substances not only exhibit a difference of dispersive power generally upon all the rays of light, but are found to act unequally on the different rays. Thin plates or scales of different substances, or substances divided by fine regular lines, or consisting of minute fibres, have also the property of decomposing light which falls upon them; but the phenomena which they represent are totally different, and depend upon different principles. The simplest case of this property occurs when a beam of divergent light enters a dark room by an aperture not more than 1-40th part of an inch in diameter, and a thin rod, such as a pin, is placed in its course. On examining the shadow, fringes of colored light will be found on both sides. (See Diffraction of the Rays of Light.) These fringes are caused by the *interference* of the rays bent into the shadow on one side of the body, with the rays bent into the shadow on the other. Interference is accounted for by the undulatory hypothesis; and the alternate cessation and increase of sound produced by two musical notes nearly in unison, known by the name of *beats*, presents a marked analogy with the alternate luminous and black fringes arising from the interference of light. Thin plates of different substances, such as mica, produce similar phenomena of color; and the same effects are seen in the splendid colors exhibited in soap-bubbles, and also when a small quantity of oil is poured on the surface of water. The iridescent tints in mother-of-pearl, the beautiful and varied plumage of many birds, and the color of many shells and fishes, are all dependent upon the same cause. The law of ordinary refraction is far from general. Rays of light in traversing

the larger number of crystallized bodies, are commonly split into two pencils: one of these, called the *ordinary ray*, follows the common laws of refraction; while the other, called the *extraordinary ray*, obeys very different laws. This phenomenon is observed in all crystallized bodies which do not belong to the tessular system, or that class which may be supposed to be constructed of spherical particles; such as the regular cube, octohedron, &c. According to the nature of the crystal, and the direction in which it is cut, the division of the beam is greater or less. The best exemplification of this mode of refraction is to be found in a substance called *Iceland spar*, the crystallized carbonate of lime. If a small illuminated object be looked at through a rhombohedron of this substance in certain positions, two images of the object will appear; and on turning the crystal round in its own plane, so as to make a complete revolution, the two images will assume a regular movement with regard to each other, and one will fall upon the other, or coincide with it, twice in the revolution. If the rays of light separated by passing through Iceland spar be passed through another crystal placed similarly to the first, no further sub-division of the light will take place. If, again, the crystals be so placed that the principal sections are at right angles, there will still be but two images; but the ordinary and extraordinary rays of the first will become reversed in the second; at all intermediate positions, however, there will be a sub-division of each ray, and, consequently, four images. Each ray has then suffered a physical change, which has been called *polarization*, a term which indicates, according to Dr. Whewell, "opposite properties in opposite directions, so exactly equal as to be capable of accurately neutralizing one another." Many crystallized minerals, when cut into parallel plates, are sufficiently transparent to allow of abundance of light to pass through them, which, in consequence, is found to be polarized. Through a well-polished plate of *tourmaline*, cut from a crystal of a brown color, in a direction parallel to the axis of the prism, a candle may be seen as through a piece of colored glass, and no change will be observed on turning it round. If another similar plate be interposed between the first plate and the eye, and made to revolve slowly in its own plane, the candle will appear and disappear alternately at every quarter revolution; passing through every degree of brightness, to total, or nearly total, evanescence, in each quadrant. If the rays separated by a crystal of Iceland spar be examined by means of a plate of tourmaline, it will be seen that the *ordinary* image is most intense when the axis of the tourmaline is perpendicular to the principal section of the rhombohedron, and that it becomes extinct in the opposite direction. When the axis of the tourmaline lies in the principal section itself, the *extraordinary* image presents similar phenomena. The polarization of a ray of light may also be effected by reflection. When a ray of light falls upon a polished glass surface at an angle of 56° 45′, if the reflected ray be examined through a plate of tourmaline, it will exhibit the same series of phenomena as if it had passed through another plate of the same substance. The light is invisible when the axis of the tourmaline is parallel to the plane of reflection. Different substances polarize light by reflection at different angles; water at 53° 11′, and the diamond at 68° 1′. The most interesting, as well as the most splendid phenomena of polarized light, are the brilliant and gorgeous colors which, under certain conditions, are developed by crystallized plates. If a ray of light which has been polarized be made to traverse a thin plate of mica, or sulphate of lime, which is colorless to common light, and then examined through a plate of tourmaline in that position where, without the plate, it would disappear, the ray will be seen, but splendidly colored with tints depending upon the thickness of the plate and its inclination. The polarization of light has been made useful in detecting the nature of substances which elude the direct process of chemical examination, and also for the purpose of detecting rocks and shoals at the bottom of the sea. By viewing objects at the bottom of the sea through a polarizing tube, nearly the whole of the glare of the reflected light is extinguished. Every instrument for investigating the properties of polarized light consists essentially of two parts, one for polarizing the light, the other for ascertaining or exhibiting the fact of light having undergone polarization. The former part is called the *polarizer*, the latter the *analyzer*. The most simple but complete instrument for polarizing light is that invented by M. Norremberg. It may be used for repeating most of the experiments on polarized light. It consists of two brass rods, *b* and *d* (Fig. 1576), which support an unsilvered mirror, *n*, of ordinary glass, movable about an horizontal axis. A small graduated circle indicates the angle of inclination of the mirror. Between the feet of the two columns there is a silvered glass, *p*, which is fixed and horizontal. At the upper end of the columns there is a graduated plate, *i*, in which a circular disc, *o*, rotates. This disc, in which there is a square aperture, supports a mirror of black glass, *m*, which is inclined to the vertical at the polarizing angle. An annular disc, *k*, can be fixed at different heights on the columns by means of a screw. A second ring, *a*, may be moved around the axis. It supports a black screen, in the centre of which there is a circular aperture. When the mirror, *n*, makes with the vertical an angle of 35° 25′, which is the complement of the polarizing angle for glass, the luminous rays, S *n*, which meet the mirror at this angle, become polarized, and are reflected in the direction *n p* towards the mirror *p*, which sends them in the direction *p n r*. After having passed through the glass *n*, the polarized ray falls upon the blackened glass, *m*, under an angle of 35° 25′, because the mirror makes exactly the same angle with the vertical. But if the disc, *o*, to which the mirror, *m*, is fixed, be turned horizontally, the intensity of the light reflected from the upper mirror gradually diminishes, and totally disappears when it has been moved through 90°. This position is that represented in the diagram: the plane of incidence on the upper mirror is then perpendicular to the plane of incidence, S *n p*, on the mirror, *n*. When the upper mirror is again turned, the intensity of the light increases until it has passed through 180°, when it again reaches a maximum. The mirrors *m* and *n* are then parallel. The same phenomena are repeated as the mirror *m* continues to be turned in the same direction, until it again comes into its original position; the intensity of the reflected light being greatest when the mirrors are parallel, and being reduced to zero when they are at right angles. If the mirror *m* is at a greater or less angle than 35° 25′, a certain quantity of light is reflected in all positions of the plane of incidence. — For many years it has been known that solar light is capable of producing powerful chemical changes. One of the most striking of these is its power of darkening the chloride of silver. This effect takes place slowly in diffused light, but very rapidly in the direct rays of the sun. It was at first thought that this effect was caused by the luminous rays; but through later observations it appears that solar light may be divided into three parts, — the light-giving rays, the heat-giving rays, and the chemical rays. It is by the latter rays that the salts of silver are decomposed. The greatest chemical action, it has been observed, takes place just beyond the violet rays of the spectrum, and the property gradually diminishes till the green division is reached; beyond which it does not exist. (See PHOTOGRAPHY.) Light is of great importance in the vegetable kingdom; when deprived of it, plants grow white and contain an excess of aqueous and saccharine particles. To the influence of the sun, flowers owe the beauty of color; to man and all the superior animals, the sun is necessary for life and health. See ABERRATION; CHROMATICS; INTERFERENCE; OPTICS; REFLECTION; REFRACTION, &c.; also LIGHT, ARTIFICIAL, in SECTION II.

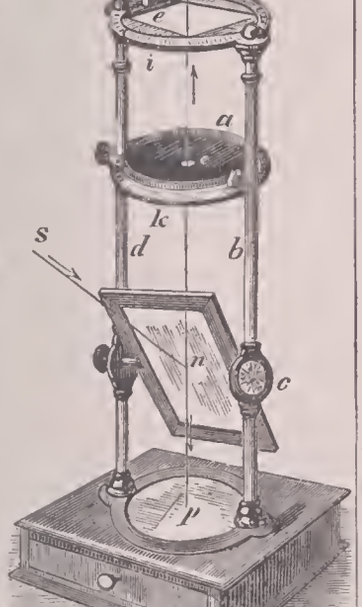


Fig. 1576.
NORREMBERG'S APPARATUS FOR POLARIZING LIGHT.

Light (*līt*), *v. a.* To kindle; to inflame; to set on fire.

Light, (*līt,*) *a.* [Sax. *leoht, liht;* Du. *ligt;* Ger. *leicht;* Lat. *levis.*] Not tending downward or to the centre with great force; having little weight. — Not heavy; not burdensome; easy to be lifted, borne, or carried by physical strength. — Not oppressive; easy to be suffered or endured; easy to be performed; not difficult. — Easy to be digested. — Active; swift; nimble; unembarrassed. — Not laden; not sufficiently ballasted. — Slight; not important. — Not dense; small; inconsiderable. — Moderate, as a breeze. — Inconsiderate; easily influenced by trifling considerations. — Unstead; unsettled; volatile. — Gay; airy; indulging levity; trifling. — Wanton; unchaste. — Loose; sandy; wanting depth, as a soil.

Light, *v. n.* [Sax. *lihtan, alihtan,* to descend, alight, — from *liht,* not heavy.] To descend or alight, as from a horse or carriage. — To settle; to rest; to stoop from flight, as a bird. — To fall on; to come to by chance; to happen to find. (Followed by *on* or *upon.*)

Light, *adv.* Lightly; cheaply.

Light'-ball, *n.* (*Mil.*) A case filled with a composition that ignites readily and burns with a brilliant flame, which is thrown from mortars to illumine any position in which a party of the enemy is supposed to be working. They are chiefly used by the besieged in order to discover the troops that are engaged in tracing and forming the trenches at the commencement of operations against a fortified town, and in case of an assault, when the balls are thrown by the hand into the ditches on either side of the breach and on the debris of which it is composed, that the light proceeding from them may enable the defenders to direct a fire with precision against their assailants. The composition that is used consists of 10 parts of saltpetre to 3 of rosin, and 4 of sulphur. These ingredients are first powdered, and passed through a sieve, and then mixed into a stiff paste by the addition of a little boiling linseed-oil. This is placed in a spherical case of cartridge-paper, or canvas made of gores sewn together, or in cylinders formed by two hemispherical ends of metal kept apart by a few strong wires fastened at either end to the rims of the metal-cups, the framework thus formed being covered with canvas or stout paper. The case made in this manner is about half as long again as it happens to be in diameter, and the diameter varies in accordance with the calibre of the piece from which it is to be discharged. Either kind of case is filled with the composition through a hole made for the purpose, which also serves as a fuse-hole for the introduction of a piece of quick-match that ignites the mixture as soon as the case is discharged from the mortar. These cases are sometimes filled with a composition that emits a dense smoke when it is set alight. They are then used to mask the operations of troops, or to compel men who are working in the galleries of mines to abandon them in order to escape suffocation from the smoke and stifling odor that issue from them. The composition that is used in making these consists of 10 parts of mealed powder, 2 of saltpetre, 3 of coal-dust, 4 of pitch, and 1 of tallow. The powder, saltpetre, and coal-dust are pulverized and sifted, after which they are mixed with the pitch and tallow in a melted state.

Light'-barrel, *n.* (*Mil.*) An empty powder-barrel pierced with holes, and filled with shavings soaked in pitch, used to light up a ditch or breach.

Light'-boat, *n.* Same as LIGHT-SHIP, *q. v.*

Light'-brain, *n.* An empty-headed person.

Light Cav'alry, *n.* See CAVALRY.

Light'en, *v. n.* [Sax. *lihtan,* from *liht;* O. Ger. *liuhtjan.*] To flash; to burst forth or dart, as lightning; to shine with an instantaneous illumination; to shine, like lightning.

— *v. a.* To dissipate the darkness of; to fill with light; to spread over with light. — To illuminate with knowledge. — To free from trouble and fill with joy.

Lighten, (*līt'n,*) *v. a.* [Sax. *lihtan;* O. Ger. *lihtjan.*] To make less heavy; to reduce in weight. — To alleviate; to make less burdensome or afflictive. — To cheer; to exhilarate.

Lighter, (*līt'er,*) *n.* One who lights or kindles. — A large, open, flat-bottomed boat, used to lighten ships of their burden, as well as in loading them.

Lighterage, (*līt'er-aj,*) *n.* The price paid for unloading ships by lighters or boats.

— The act of unloading into lighters.

Lighterman, (*līt'er-man,*) *n.; pl.* LIGHTERMEN. A boatman; one who manages a lighter.

Light'-fingered, *a.* Dexterous in taking and conveying away; thievish; addicted to petty thefts.

Light'-foot, or **LIGHT'-FOOTED,** *a.* Nimble in running or dancing; active.

Light'ful, *a.* Full of light.

Light'-handed, *a.* (*Naut.*) That is short of men, as a ship.

Light'-headed, *a.* Thoughtless; heedless; weak; volatile; unsteady. — Dizzy; delirious.

Light'-headedness, *n.* Deliriousness; dizziness. — Disorder of the mind.

Light'-hearted, *a.* Free from grief or anxiety; gay; cheerful; merry.

Light'-heartedly, *adv.* With a light heart.

Light'-heartedness, *n.* The state of being free from care or grief; cheerfulness.

Light'-heeled, (*līt'heeld,*) *a.* Lively in running or walking.

Light'-horse, *n.* (*Mil.*) Light-armed cavalry.

Light'-house, *n.* A building (Fig. 906) erected on any part of the coast, or on islands at a little distance from it, to enable the sailor to determine the position of his vessel when it is approaching land at night, and to shape his course so that he may avoid any dangerous shoals, reefs, or headlands that may lie in its vicinity. Light-houses are generally built in the form of a cylindrical tower, the lower chambers of which often afford accommodation for the keeper of the light and his family, while the uppermost story constitutes a gigantic lantern, being a room with glazed sides, and having a lamp in the centre. This is lighted at nightfall by the keeper, and burns with a brilliant flame, the light of which is reflected seawards for some miles by the aid of a combination of highly polished reflectors. There is generally some peculiarity in the appearance of the light shown by every light-house, which enables it to be readily identified. In some a steady light is exhibited, which may be made to appear to be colored by transmitting it through a colored glass; while in others the light is intermittent, the light appearing at certain intervals of longer or shorter duration, or a flash of one color being sometimes succeeded by a flash of another color. The obscuration of the light for any fixed interval of time, or a change of color, is effected by bringing an opaque screen, or screen of colored glass, before the lamp, and withdrawing it successively, the revolution of the screen or colored medium being effected by machinery which is attached to it, and which is similar in its nature to clock-work. In places where the navigation is intricate on account of sandbanks and shoals, as it is at the entrance of any large tidal river, vessels are moored in the necessary positions on which the lights are displayed. Every vessel is provided with instructions respecting the peculiar way in which the light is exhibited from any light-house or floating-light, and its bearings with regard to other parts of the coast

and headlands in its immediate vicinity, that the captain or master may be enabled to recognize the light, and so determine the position of his vessel. The distance at which any light can be seen, depends, of course, on the height of the tower, and varies with the state of the atmosphere. The greatest recorded distance at which an oil-light has been visible is that of the holophotal light of Allepey at Travancore, which has been seen from an elevated situation at a distance of 45 miles. The holophotal revolving-light at Baccalieu, in Newfoundland, is seen every night in clear weather at Cape Spear, a distance of 40 nautical miles. — The use of lights for directing the mariner is of very high antiquity; but their early history is involved in much obscurity. In the ancient world, there were light-houses at Ostea, Ravenna, Puteoli, Capri, Rhodes, on the Thracian Bosphorus, &c.; but by far the most celebrated light-house in antiquity was that erected by Ptolemy Soter on the small island of Pharos, opposite to Alexandria — "nocturnis ignibus cursum navium regens." (*Pliny*, lib. v., c. 31.) Its extraordinary height, which some authors have estimated at 500 feet and upwards, procured for it a place among the wonders of the world; and according to Josephus, its "beaming summit" could be seen at a distance of 300 stadia — about 42 English miles. It is said to have cost 800 talents; and its celebrity was such that Pharos rapidly became, and still continues to be in many countries, a generic name equivalent to *light-house*. The most celebrated light-houses of modern times are the Eddystone light-house (see ENNYSTONE), and the Tour de Cordouan at the entrance of the Gironde, in France, which was begun in 1584, and finished in 1611. It is 186½ feet (English) in height; and besides being of the highest importance to the sailor on so dangerous and frequented a coast, it is at the same time a splendid architectural work. The early history of light-houses in the U. States is not well known; but it is certain that before 1789 the principal capes and ports of the Atlantic coast were lighted. A new impulse was given to light-houses about the year 1845, and the lens of Fresnel system of light-house illumination has been generally adopted. In 1897 there were 1,475 lighthouses and lighted beacons on the coasts of the U. S., and 46 light vessels, with numerous buoys, fog-signals &c., in connection with the lighthouse service, with 1,213 light-keepers and numerous other employees. The introduction of the electric light, in connection with the system of reflectors in use in lighthouses, has proved highly serviceable. See LIGHTHOUSE, in SECTION II.

Light'-in'fantry, *n.* (*Mil.*) See INFANTRY.

Light-legged, (*lit'legd,*) *a.* Nimble; swift.

Light'less, *a.* Wanting light; dark.

Light'ly, *adv.* With little weight. — Without deep impression. — Easily; readily; without difficulty. — Without reason, or for reasons of little weight. — Cheerfully. — Wantonly. — Nimbly; with agility. — Gayly; airily; with levity; without heed or care.

Light'-minded, *a.* Unsettled; unsteady; volatile; not considerate.

Light'ness, *n.* Want of weight or oppressiveness; levity, as of air or animal spirits. — The quality of mind which disposes it to be influenced by trifling considerations; inconstancy; unsteadiness; giddiness. — Wantonness; lewdness. — Agility; nimbleness.

(*Fine Arts.*) The quality of being free from weight or clumsiness.

Light'ning, *n.* (*Electricity.*) The sudden and vivid flash that precedes thunder, produced by a discharge of atmospheric electricity. When a thunder-storm commences, light clouds with jagged edges are observed, the motions of which are often opposite and variable. At the surface of the earth, the atmosphere is still and calm, with a slight elevation of temperature and considerable barometric and hygrometric changes; producing sensations of closeness, faintness, and oppression. Low murmurings of distant thunder are then heard, after which the lower region of the air is refreshed by cooler, but light breezes of uncertain direction. The thunder-clouds appear nearer, larger, and blacker, and the sensations of uneasiness increase. At short intervals, flashes of lightning are observed. Their course is sometimes zigzag, when it is called *forked lightning*; the breaking up of its course shows that it is dangerous, since the lightning must be near terrestrial objects. After the discharge heavy showers of hail or rain descend, and the atmosphere is again cooled. The blackness then becomes universal, and the thunder is heard in a loud burst, almost instantaneously with each brilliant flash of lightning. The color of lightning varies, being generally a changeable yellow, and sometimes red, blue, or violet, according to the density of the atmosphere. The identity of lightning with the discharge of ordinary electricity was discovered by Benjamin Franklin in America, and Romas in France. Franklin, in June, 1752, having perceived a thunder-cloud approaching, sent up a silk kite attached to a dry hempen cord. Soon afterwards he noticed that the loose threads of the cord stood erect, and upon approaching his finger to the cord, he drew sparks. A little rain falling, the conducting power of the cord was increased, and the violence of the shocks received from the sparks warned him that it was dangerous to continue the experiment. The experiments were repeated in Europe, and atmospheric electricity became a favorite study, till it was checked by the death of Professor Richmann, of St. Petersburg. He had attached a simple species of electrometer to his apparatus for measuring the intensity of the electricity in a thunder-cloud. After a loud clap of thunder, he proceeded to read off the degree indicated by his instrument, when a globe of electric fire was discharged through his body, and killed him on the spot. The causes which produce atmospheric electricity are not well known. In general, when a flash of lightning occurs, the earth and the cloud may be looked upon as the terminal planes of a highly-charged system of di-electric air, the tension of which goes on increasing until any further increase causes it to give way, when the opposite electricities rush together with violence, producing equilibrium by disruptive discharge, or a flash of lightning. There are several varieties of lightning, known by different names. — *Forked lightning*, the only kind probably that strikes terrestrial objects, frequently divides into two or more zigzag ribbons or lines of light. When forming a long rippling line of light, it is called by the sailors *chain lightning*. *Sheet lightning* seems to be spread over an immense surface, and varies in color, being often red, but sometimes blue and violet. When lightning of this kind appears without thunder, it is called *summer lightning*, and is generally considered to be the reflection of some very far-distant storm. — *Globular lightning* appears like a luminous ball or globe of fire, and travels comparatively slowly, while those mentioned previously are almost instantaneous. This variety of lightning, in a milder form, is known to the French and Spaniards as St. Elmo's fire; to the Italians, as the fires of St. Peter and St. Nicholas; and to the Portuguese, as corpos santos, which has been corrupted by English sailors into *comazants*. In this form it appears as tufts of fire on the top of ships' masts, the tips of bayonets, on the alpenstocks of Alpine travellers, or on the tips of the outspread fingers, when the atmosphere is in a peculiar state of electrical excitement. When lightning strikes the earth, it has generally been remarked that the flash is succeeded by a suffocating odor, often compared to that of burning sulphur. To others, the odor appears to resemble that of phosphorus or nitrous acid. It seems probable that the smell is in reality due to the presence of ozone, generated by the action of the electric fluid on the air. One of the commonest effects of lightning is the fusion of metals. There is an instance on record of an iron chain being converted into a solid rod by the passage through its length of a flash of lightning. It has also been known to fuse sand and other siliclous minerals into a kind of glass or enamel. When solid imperfect conductors are struck by lightning, they are torn and scattered to pieces. The masts of ships have in this way been shattered to fragments in an instant. Lightning is often fatal to human life. In all cases accidents from lightning are more frequent in elevated situations than in the plains, and in villages or in the open country than in populous cities. Death by lightning is instantaneous, and seems to be caused by the shock to the brain and nervous system. Sometimes no marks of injury are found, but oftener there are lacerations, bruises, burns, and occasionally broken bones. The clothes may be burnt or torn, even when the body is not visibly injured, metallic substances on the body may be fused, and steel magnetized.

Light'ning-conduct'or, *n.* A bar of metal, or a collection of wires or bars of metal, attached in a particular manner to a building or a ship, and extending from below the level of the ground, or from below the sheathing of the ship, to a point several feet above the highest part of the building or ship. The object of these contrivances is to conduct the electric fluid to the earth without doing any damage. — See CONDUCTORS and NON-CONDUCTORS OF ELECTRICITY.

Light'ning-rod, *n.* A metallic rod to protect buildings or vessels from lightning.

Lights, (*lits,*) *n. pl.* The lungs generally of animals, — so called from their comparative lightness.

Light'some, *a.* Luminous; not dark; not obscure. — Gay; airy; exhilarating; cheering.

Light'someness, *n.* Quality of being light; luminous. — Cheerfulness; merriment; levity.

Light Street, in *Pennsylvania*, a post-village of Columbia co., abt. 2 m. N.E. of Bloomsburg.

Ligne, CHARLES JOSEPH, PRINCE DE, (*leen,*) a Belgian general in the service of Austria, famous for his wit, the graces of his person, and his military talents. B. at Brussels, 1735. He distinguished himself under the Austrian standard during the Seven Years' War, and in the subsequent campaigns, becoming, in 1771, lieutenant-general. He was a favorite with Maria Theresa, and particularly with Joseph II., who, in 1782, sent him to Russia on a mission to Catharine II. He became the intimate friend of Catharine, and was charged to participate with the Russian general Potemkin in acting against the Turks. In 1789 he greatly contributed to the taking of Belgrade. He subsequently fell under the displeasure of the successors of Joseph II., but was, nevertheless, created field-marshal by Francis II. in 1808. De Ligne's reputation as a wit was of the highest order in Continental society. He was an industrious writer, and left behind some thirty volumes of journals, military memoirs, &c. A selection from these, under the title of "Letters and Opinions of the Prince de Ligne," was published by Madame de Staël in 1809. D. 1814.

Lig'neous, *a.* [Lat. *ligneus*, from *lignum*.] Made of wood; consisting of wood; resembling wood.

Ligniferous, *a.* Producing or bearing wood.

Lignifica'tion, *n.* The process of converting into wood, or the hard substance of a vegetable.

Lig'niform, *a.* Resembling wood; like wood.

Lig'nify, *v. a.* [Fr. *lignifier*; Lat. *lignum*, and *facio*, to make.] To convert into wood.

— *v. n.* To become wood.

Lig'nin, *n.* [Lat. *lignum*, wood.] (*Chem.*) The incrusting matter contained within the cellular tissue, giving hardness to the wood and other parts of plants. At one time it was supposed that lignum was a true chemical principle; but the researches of Payen and others prove that it is not always constant in composition. It is, however, always characterized by being soluble in weak alkalies and insoluble in water.

Lignip'erdous, *a.* [Lat. *lignum*, wood, and *perdo*, to destroy.] (*Zoöl.*) Applied to insects that destroy wood.

Lig'nite, *n.* (*Min.*) A name given to those varieties of brown-coal which show distinct marks of having been formed of trees. The most remarkable are those of the Rhine, and the best passages from the one fuel to the other are seen in Styria. See BROWN-COAL.

Lig'nose, Lig'nous, *a.* Woody; ligneous. A new explosive, apparently woody fibre, prepared with nitroglyceriu; explosive force about three times that of blasting powder.

Lig'num-vi'tæ, *n.* (*Bot.*) [Lat., wood of life.] The wood of Guaiacum officinale. — See GUAIACUM.

Ligny, (*leen'yee,*) a village in Belginm, prov. of Namur, about 10 m. N.E. of Charleroi, famous on account of the battle fought here by the French under Napoleon, and the Prussians under Blücher, 16th of June, 1815, the same day on which the French, under Marshal Ney, were engaged with the British, under Wellington, at Quatre-Bras. Napoleon had formed a plan for overpowering his antagonists in detail ere they could concentrate their forces; and, contrary to the expectations both of Wellington and Blücher, began his operations by assailing the Prussians. The battle took place in the afternoon. The possession of the villages of *L.* and St. Amand was hotly contested; but the Prussians were at last compelled to give way. The Prussians lost in this battle 12,000 men and 21 cannons; the French, 7,000 men. A mistake prevented a corps of the French army, under Erlon, from taking the part assigned to it in the battle, and led to Ney's encountering the Belgians and British at Quatre-Bras, instead of uniting his forces with those engaged against the Prussians at Ligny.

Ligonier', in *Indiana*, a post-town of Noble co., about 108 m. W. by S. of Toledo. *Pop.* (1897) 2,450.

Ligonier, in *Pennsylvania*, a post-borough and township of Westmoreland co., about 52 m. E. S. E. of Pittsburg. *Pop.* (1897) 2,940.

Ligor, (*le-gor',*) (Siamese SAKOR, *sa-kor',*) a town of Lower Siam, on the E. side of the Malay peninsula, on the Ta-yung, near its mouth in the Gulf of Siam; Lat. 8° 17′ N., Lon. 100° 12′ E. *Pop.* 5,000.

Lig'ula, *n.* [Lat. *lingula* or *ligula*, a little tongue.] (*Bot.*) A membranous appendage at the apex of the sheathing petiole of grasses, and analogous to the corona of some silenaceous plants. — The term *ligula* is also applied to certain bodies proceeding from the base, and alternate with the horns, of the organ called the *orbiculus* in Asclepiadaceous plants.

(*Zoöl.*) A name applied by Latreille to the lower lip, or *labrum*, of Insects.

Lig'ulate, or **Lig'ulated,** *a.* (*Bot.*) Strap-shaped; having a ligula.

Lig'uliform, *a.* (*Zoöl.*) Applied to the mouth of an insect when it emerges from the lahium, and when it is short, flat, and not coucealed within the mouth, as in *Vespa* and many *Hymenoptera*.

Ligno'ri, ALFONSO MARIA DE, a saint of the Roman Catholic Church, and founder of the congregation of the Most Holy Redeemer, B. at Marianella, near Naples, 1787. He belonged to a noble family, and embraced the profession of the law, which, however, he suddenly relinquished for the purpose of devoting himself entirely to a religious life. He received priest's orders in 1725; and in 1732, in conjunction with 12 companions, founded the association of the REDEMPTORISTS, *q. v.* In 1762, he was appointed bishop of Sant' Agata dei Goti, in the kingdom of Naples, and his life as a bishop is confessed by Protestant as well as Catholic historians to have been a model of the pastoral character; but shrinking from the responsibilities of such an office, he resigned his see. In 1775, after which date he returned to his order, and continued to live in the same simple austerity which had characterized his early life. Having survived his retirement twelve years, he died at Nocera dei Pagani, Aug. 1, 1787, and was solemnly canonized in 1839. *L.* is one of the most voluminous and most popular of modern Catholic theological writers. His works, which extend to 70 volumes 8vo., embrace almost every department of theological learning, divinity, casuistry, exegesis, history, canon law, hagiography, asceticism, and even poetry. His correspondence also is voluminous, but is almost entirely on spiritual subjects. *L.'s Theologia Moralis* (8 vols. 8vo.) has been reprinted numberless times, as also most of his ascetic works. The most complete edition of his works (in Italian and Latin) is that of Monza, 70 volumes. They have been translated entire into French and German, and in great part into English, Spanish, Polish, and other European languages.

Li'gure, *n.* The name of a stone mentioned as worn in the breast-plate of the Jewish high-priest. (*Ex.* xxviii. 19.) It was, probably, the same as the Jacinth, or Hyacinth, of the moderns.

Ligu'ria, (*Anc. Geog.*) A district of N. Italy, the whole territory of Genoa and Nice, and which, according to the division of Augustus, was bounded N. by the Padus (Pô), E. by the Macra (Magra), separating it from Etruria, S. by the Ligurian Sea (Gulf of Genoa), and W. by the Varus (Var) and the Maritime Alps, separating it from Transalpine Gaul. It was inhabited by an ancient people called the Ligures (see GENOA), of whose origin nothing authentic has been recorded. They first came into collision with the Romans B. C. 241, and P. Lentulus Caudinus celebrated a triumph over them B. C. 236. The Ligurians, allied with the Carthaginians, commenced hostilities by attacking Placentia and Cre-

mona, Roman colonies, B. C. 200. A long series of wars, extending over a period of 80 years, ensued between the Romans and the Ligurians. Several tribes were reduced to subjection before B. C. 173; others held out, and one tribe in the Maritime Alps was not reduced to obedience until B. C. 14. The Lombards overran the country in 569.

Ligu'rian Repnb'lic. (*Hist.*) The French created a revolution in Genoa early in 1797, and by a convention signed at Montebello, June 5 and 6, this republic placed itself under the protection of France. Napoleon Bonaparte gave it the name of the Ligurian Republic, June 14, which was incorporated with France by a convention concluded at Milan, June 4, 1805. The Ligurian Republic was dissolved in 1814, and Genoa was annexed to Sardinia. The inhabitants revolted, and proclaimed the restoration of the republic, April 3, 1849. The revolt was suppressed April 11.

Ligus'ticum, *n.* [One of the species was said to be native of *Liguria*; hence the name.] (*Bot.*) A genus of plants, ord. *Apiaceæ*. They are perennial plants; leaves ternately divided; involucels many-leaved; flowers white. The principal American species is *L. Scoticum*, the Sea Lovage.

Ligus'trum, *n.* [Lat. *ligo*, to bind: from the use made of the shoots.] (*Bot.*) A genus of plants, order *Oleaceæ*. They are shrubs with simple leaves; flowers in terminal panicles, tetramerous. The species *L. vulgaris*, the Privet or Prim (Fig. 1577), found in woods from Virginia to Mississippi, is commonly used for hedges in England, and its purplish-black berries are said to be used, among others, for coloring inferior port-wine.

Fig. 1577.
THE COMMON PRIVET,
(*Ligustrum vulgaris.*)

Like, *a.* [Sax. *lic, gelik*; Dn. *gelijk*; Ger. *gleich*.] Equal in quantity, quality, or degree. — Similar; having resemblance; resembling. — Probable; likely, that is, having the resemblance or appearance of an event; giving reason to expect or believe.

—*adv.* In the same manner. — In a manner becoming. — Likely; probably.

—*v. a.* [Sax. *lician, gelician*, to be pleased with; Icel. *lika*, to please; Goth. *leikan, galeikan*, to be well pleased, or content.] To be pleased with in a moderate degree; to regard with approbation; to approve.

—*v. n.* To be pleased: to choose.

—*n.* Some person or thing resembling another; an equal.

Like'hood, *n.* Probability; likelihood.

Like'lihood, *n.* Appearance of truth or reality; verisimilitude; probability.

Like'liness, *n.* Probability; the qualities that please.

Like'ly, *a.* Probable; that may be rationally thought or believed to have taken place in time past, or to be true now or hereafter; such as is more reasonable than the contrary. — Such as may be liked; pleasing; handsome; well formed.

Like'ly, *adv.* Probably.

Like'minded, *a.* Having a like or similar disposition or purpose.

Liken, (*lik'n,*) *n.* [Goth. *leikon, galeikon*.] To compare; to represent as resembling or similar.

Like'ness, *n.* Resemblance in form; similitude; similarity; guise or external appearance; one who resembles another. — An image, picture, or statue, resembling a person or thing; a portrait; an effigy.

Lik'ening, *n.* The forming of resemblance.

Like'wise, *adv.* In like manner; also; moreover; too.

Lik'ing, *n.* Delight in; pleasure in. — State of trial.

"A while on *liking* here." — *Dryden.*

—Inclination; as, this entertainment is to your *liking*.

Li'lac, *n.* (*Bot.*) See SYRINGA.

—*a.* Of a color resembling the flowers of the lilac.

Lil'acine, *n.* (*Chem.*) A bitter crystallizable principle contained in the leaves of the *Syringa vulgaris*. It has also been called *Syringine*.

Lilia'ceæ, *n. pl.* [Lat. *lilium*, the lily.] (*Bot.*) The Lily family, an order of plants, alliance *Liliales*. They are herbs, shrubs, or trees, with bulbs, rhizomes, tuberous or fibrous roots, and parallel-veined, sessile, or sheathing leaves. Flowers regular: perianth green or petaloid, inferior, 6-leaved or 6-parted: stamens 6, inserted in the perianth or rarely into the thalamus; anthers introrse; ovary superior, 3-celled; style 1; stigma simple, or 3-lobed. Fruit a loculicidal capsule, or succulent and indehiscent, 3-celled. Seeds with fleshy albumen, numerous. The *L.* are widely distributed throughout the temperate, warm, and tropical regions of the globe. There are 147 genera, and about 1,200 species. Among the useful plants of this order are the onion, leek, asparagus, squill, and aloe; and among the valuable products yielded by them are fibres used for twine and cordage, edible seeds, and balsamic resins.

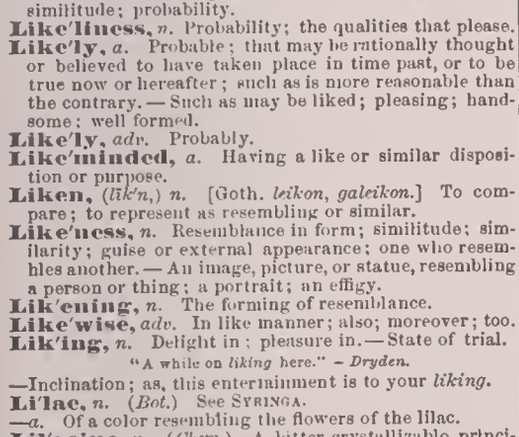


Fig. 1578. — LILY OF THE VALLEY, OR MAYFLOWER,
(*Convallaria majalis*)

Lilesville, (*lilz'vil,*) in *N. Carolina*, a post-village of Anson co., about 140 m. S.W. by W. of Raleigh.

Liliaceous, (*lil-i-ā'she-us,*) *a.* (*Bot.*) Pertaining to lilies; lily-like.

Lil'ials, *n. pl.* (*Bot.*) An alliance of plants, class *Endogens*. DIAG. Hypogynous, bisexual, hexapetaloid, with copious albumen. The alliance is divided into 4 orders, viz. — GILLIESIACEÆ, MELANTHACEÆ, LILIACEÆ, and PONTEDERACEÆ, *q. v.*

Lil'ian, or LILLIAN, in *Minnesota*, a township of Goodhue co.

Lil'ied, *a.* Embellished with lilies.

Lil'iput. See LILIPUTIAN.

Liliputian, *n.* An inhabitant of the imaginary kingdom of Liliput, described by Swift in *Gulliver's Travels*, of which the natives are not greater in size than an ordinary man's finger; — hence, anything very diminutive.

Lil'ium, *n.* [Lat.] (*Bot.*) The Lily, the typ. gen. of the ord. *Liliaceæ*. *L. candidum*, the White Lily, has always been considered the emblem of purity; and this and

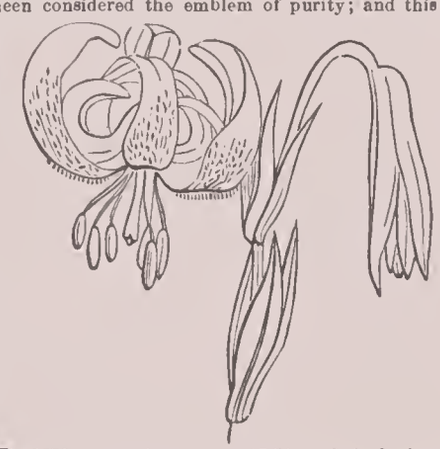


Fig. 1579. — TURK'S-CAP LILY, (*Lilium chalcedonicum.*)

many other species form beautiful border-flowers. *L. martagon*, *L. chalcedonicum* (Fig. 1579), and their varieties, are known as Turk's-cap lilies, from the turban-like form of their flowers. The bulbs of some species, as those of *L. tenuifolium*, *kamschaticum*, and *spectabile*, are commonly eaten in Siberia.

Lil'leeash, in *Illinois*, a village of Will co., abt. 160 m. N.N.E. of Springfield.

Lil'ley's Mills, in *Pennsylvania*, a village of Mifflin county.

Lilloo'et, a village of British Columbia, on a lake of the same name, abt. 60 m. N. by E. of New Westminster.

Lil'y, *n.*; *pl.* LILIES. [Gr. *leilan*; Lat. *lilium*; Ger. *lilie*; Fr. *lis*; It. *giglio*; Sp. *lirio*.] (*Bot.*) See LILIUM.

Lil'y, (GIGANTIC,) *n.* (*Bot.*) The *Doryanthes excelsa*, (Fig. 1580,) a plant of the ord. *Amaryllideæ*, with flowering stem 10 or 14, sometimes 20 feet high, bearing at top a

Fig. 1580. — GIGANTIC LILY, (*Doryanthes excelsa.*)

cluster of large crimson blossoms. The stem is leafy, but the largest leaves are near the root. This plant is found both on the mountains and the sea-coast of New South Wales. It is of splendid beauty. The fibre of its leaves has been found excellent for ropes and for textile fabrics.

Lil'y-handed, *a.* Having delicate, white hands.

Lily of the Valley, *n.* (*Bot.*) See CONVALLARIA, and Fig. 1578.

Lille, or **Lisle,** (*leel,*) a city of France, dept. of Nord, on the Deule, 62 m. S.E. of Calais, and 140 m. N.N.E. of Paris; Lat. 50° 38′ N., Lon. 3° 2′ W. The city has an imposing appearance, and few cities of France can compare with it in the straightness and width of its streets, the regularity of its buildings, and its neatness. It has 32 squares and market-places, the largest, the Grande Place, being 170 yds. long, by 80 broad. The houses are mostly modern, and in a solid, plain style, built chiefly of brick. *L.* has many large and conspicuous public buildings and beautiful churches. It also contains many benevolent institutions, a communal college, a public library of over 21,000 vols., a gallery of paintings comprising some admirable works of Vandyke, Vnez, Rubens, and other masters, academies of music, drawing, architecture, a botanic garden, and various learned societies. Lille is one of the chief seats of French cotton manufacture. The manuf. of table-linen, thread, lace, woollens, velvets, serges, leather, paper, &c., are very extensive. The government has also here a tobacco manufactory, and saltpetre refinery; and the neighborhood is studded with bleaching-grounds and oil-mills, near the city are some very extensive beet plantations. *Pop.* (1897) 161,155.

Lima, (*lee'ma,*) *n.* [Lat., a file.] (*Zoöl.*) A genus of Lamellibranchiate Bivalves, of the tribe *Ostreidæ*, characterized by the length of their shells as compared with those of the nearly allied genus *Pecten*, and their more regular oval form. Tho ridges of the shell are often relieved with scales. The *Limæ* swim with rapidity by means of their valves, but in the young state they secure themselves by means of a byssus.

Li'ma, an important city, cap. of Peru and of a department and province of its own name, on the river Rimac, abt. 7 m. from the Pacific Ocean; Lat. 12° 3′ S., Lon. 77° 6′ W. It is built in a delightful valley on both sides of the river, and at an elevation of about 600 feet above sea-level. Next to Mexico, *L.* is considered the most magnificent city in the countries formerly comprised in Spanish America. It is for the most part regularly laid out, and substantially built; but the streets, though spacious, are badly paved, and not kept very clean. It contains many fine churches and other edifices, among which the cathedral is most prominent. *L.* was made an archbishop's see in the 16th century, and was long the grand entrepôt for the trade of all the W. coast of S. America; but a considerable part of the foreign trade of Peru is now carried on through Buenos Ayres, and the former is also in the habit of importing European goods at second-hand from Valparaiso, and other parts of Chili. It is still, however, the great emporium of Peru. Its chief exports are bullion and specie, vicuña, and sheep's wool, bark, chinchilla skins, copper, tin, saltpetre, and sugar. Its imports are principally woollen and cotton stuffs, cutlery, hardware, silks, spirits, tobacco, flour, lumber, tea, and perfumery. *L.* was founded by Pizarro in 1535, under the title of *Ciudad de los Reges*, "City of Kings." It suffered severely from the earthquakes of 1678 and 1746, the latter leaving only 20 houses standing out of 3,000; and again by those of 1764, 1822, and 1828. San Martiu entered it on the 12th of July, 1821, and on the 28th proclaimed here the Independence of Peru. It was taken and occupied by the Chilians in 1881. *Pop.* (1897) about 201,400.

Lima (*li'ma*), In *Illinois*, a post-village and township of Adams county, about 100 miles W.N.W. of Springfield.

—A township of Carroll co.

Lima, in *Indiana*, a post-village and township of Lagrange county, about 32 miles east of Elkhart. *Pop.* of village (1897) 625.

Lima, in *Iowa*, a post-office of Fayette co., about 33 m. S.W. of Prairie du Chien, Wisconsin.

Lima, in *Louisiana*, a post-village of St. Tammany par.

Lima, in *Michigan*, a post-town and township of Washtenaw county, about 50 miles west of Detroit.

Lima, in *New York*, a post-town and township of Livingston county, about 18 miles south of Rochester. *Pop.* (1897) 1,095.

Lima, in *Ohio*, an important city, cap. of Allen co., on C., H. & D., Erie, Penna., and 2 other R. Rs., 71 m. N. of Dayton; in center of Ohio petroleum and natural-gas field, and has large refineries, besides other extensive and varied industries. *Pop.* (1897) about 20,000.

—A village of Mahoning co., about 170 m. N.E. of Columbus. Its P. O. is NORTH LIMA.

Lima, in *Pennsylvania*, a post-village of Delaware co., about 7 m. N.W. of Rochester. *Pop.* (1897) 560.

Lima, in *Wisconsin*, a township of Grant co.

—A township of Pepin co.

—A township of Rock co.

—A township of Sheboygan co.

Lima Centre, in *Wisconsin*, a post-village of Rock co., abt. 56 m. S.W. of Milwaukee.

Lima'ceous, *a.* [Lat. *limax*, a slug.] Belonging to the naked snail.

Limaci'na, *n.* [Lat. *limax.*] (*Zoöl.*) A genus of Molluscs, order *Tetrabranchiata*, existing in considerable numbers in the northern seas, and forming, with

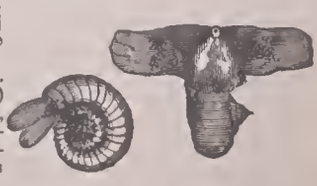


Fig. 1581. — LIMACINA ARCTICA.

the *Clio borealis* and other small marine animals, the food of the whalebone-whale. The body terminates in a spirally convoluted tail, and is lodged in a very thin shell, by one whorl and a half, umbilicated on one side and flattened on the other. The animal uses its light shell as a boat, and its wing-like fins as oars, and thus navigates in countless fleets the surface of the tranquil deep.

Limari, (*le-ma-ree'*,) a river of Chili, flows into the Pacific Ocean abt. 70 m. S.S.W. of Coquimbo; *length* abt. 100 m.

Lima'tion, *n.* [Lat. *limo*, to file.] The act of filing or polishing.

Li'mature, *n.* Filings of any metals; the particles rubbed off by a file.

Li'maville, in *Ohio*, a post-village of Stark co., about 140 m. N.E. of Columbus.

Li'max, *n.*; **Lima'cidæ,** *n. pl.* [Lat. *limax*, a slug.] A genus and family of Molluscs, of the order *Gasteropoda*, of which the common Slug is the type. The species are naked, but they have a small scutiform rudimental shell developed in the substance of the mantle, and protecting the heart. The orifice of respiration in the true slugs (*Limax*, Cuv.) is on the right side, and not so far forward as in *Arion*. The rudimental shell is marked with fine and concentric striæ, and is calcified internally. The species of this genus are the pests of gardens and cultivated grounds. Young plants may be protected from slugs by having a course horse-hair rope coiled around their stems, or by being plentifully sprinkled with soot; or they may be watered morning and evening with strong and fresh lime-water.

Limb, (*lim,*) *n.* [Sax. *lim*; Icel. *lim*, *lima*, to divide limb by limb.] A jointed and divisible part of animals; one of the extremities of an animal body; a member; a projecting part, as the arm or leg. — The branch or bough of a tree.

(*Astron.*) The name given to the border or edge of the disc of the moon or any planet, and also further applied to the edges of circles that form part of any astronomical instrument. The term is used more particularly in reference to the moon in descriptions of lunar eclipses.

(*Bot.*) A term applied to petals, to denote that portion which is supported by the unguis or claw; it is the same organ in a petal as the lamina in a leaf, and is what constitutes the broad thin colored part which renders many flowers so beautiful.

—*v. a.* To dismember; to tear off the limbs.

Lim'bat, *n.* A cooling periodical wind, in the Island of Cyprus, which blows from the N.W. from 8 o'clock A.M. till noon.

Lim'bate, *a.* (*Bot.*) Bordered; having one color surrounded by an edging of another

Limbed, (*limd,*) *a.* Having limbs; (used in composition:) as, large-*limbed*.

Lim'ber, *a.* [Dan. *lempe*, to adapt, suit, accommodate to.] Flexible; easily bent; pliant; yielding.

Lim'ber, *n.* [Of uncertain derivation; possibly connected with *limp*, Swiss *lampen*, to hang loose; wedgewood.] (*Mil.*) A two-wheeled carriage, carrying ammunition-boxes, to which the trail of the gun-carriage is attached when the latter has to be moved. It thus forms with the gun-carriage a four-wheeled carriage. — To *limber up* is to attach the gun to the limber.

(*Ship-building.*) One of the gutters running along each side of the keelson, receiving the hose of the pumps, and all the internal drainage of the vessel. They are emptied from time to time by the pumps. — *Limber-boards*, are short pieces of plank fitted from the limber-strake to the keelson of a ship, butting at the sides of all the bulk-heads, that they may be easily taken up. — *Limber-strake*, is the strake of wood waling nearest the keelson, from the upper side of which the depth in the hold of a vessel is measured.

Lim'berness, *n.* Quality of being limber, or easily bent; flexibleness; pliancy.

Limb'less, *a.* Without limbs.

Lim'bo, Lim'bus. [Lat. *limbus*, an edge, a border; Ital. *limbo*.] (*Theol.*) In the creed of the Roman Catholic Church, a place for the souls of good men until the coming of our Saviour, and also for the souls of unbaptized infants.

—A place of restraint or confinement.

(*Bot.*) See Limb.

Lim'burg, a prov. of Belgium, bounded by Antwerp, Brabant, Liege, and Dutch Limburg, from which it is separated by the Meuse. *Area*, 929 sq. miles. The surface is level, and in a large portion barren, but in the S. and centre the soil is fertile. There is excellent pasturage along the banks of the Meuse, and large herds of cattle and swine are reared. *Min.* Iron and coal. *Manuf.* Woollens and linens, leather and tobacco. *Pop.* 203,069.

Limburg, a prov. of the Netherlands, in the S.E. part of the kingdom, contiguous to the Belgian prov. of same name. *Area*, 896 sq. m. Its surface is generally level, and the soil poor, a large portion of it consisting of moors and marshes. However, in the valleys of the Meuse, and its tributaries, excellent crops of grain, hemp, flax, &c., are raised, though the rearing of live-stock forms the principal branch of rural industry. *Min.* Iron, coal, and calamine. *Manuf.* Woollens and linens.

Lim'burg-on-the-Lahn, a walled town of Germany, 32 m. from Mentz; *pop.* 4,000.

Lime, *n.* [Sax. *lime*, that which causes adhesion; Du. *lijm*, glue, *leem*, clay.] (*Agric.* and *Building.*) A substance termed in chemistry oxide of calcium (see Calcium), which is used in the former as a manure, and in the latter as the principal ingredient in making mortar, by means of which stones and bricks are bound together in a compact and solid mass. It is also used in making plaster and cement for giving a smooth and uniform surface to the walls of buildings internally and externally. It is obtained by burning limestone, chalk, marble, or any stone which contains carbonate of lime, in kilns, in order to produce calcination. The process of burning expels the water and carbonic acid gas from the stone, which falls to pieces on exposure to the air after removal from the kiln, and crumbles into a white flaky powder, which is called quicklime, and is possessed of highly caustic properties. When it is required for building purposes, it is slaked, as it is technically termed, or caused to go to pieces by throwing as much water upon it as it will imbibe, and allowing it to remain in the air for a considerable period. This treatment destroys its caustic properties in a great measure, and it is then known as slaked lime. Limes are divided into three classes, and distinguished as *rich*, *poor*, or *hydraulic*, according to the constituents of the various limestones from which they are produced. Rich limes contain very little of silicate of lime in proportion to pure carbonate of lime, being composed of about 1 part of the former to 19 parts of the latter. They are so called because the stones from which they are procured imbibe a considerable quantity of water when they are slaked after calcination, and, consequently, increase to a great extent both in bulk and weight. The mortar made from limes of this description never becomes thoroughly hard; and they should not, therefore, be used in making mortar or plaster which is likely to be exposed to the action of the weather. They are, however, well suited for making plaster for the internal surfaces of walls, and for manures. Chalk affords a lime of the purest and richest kind after calcination. The poor limes, of which class the lime produced from oölitic limestones is a fair specimen, are obtained from stones which contain a large percentage of metallic oxides and insoluble flinty grit, and are so called because they do not increase in volume to any extent when they are slaked. They are similar to hydraulic limes in this respect, but they are distinguished from them in not possessing the property of setting or hardening rapidly under water, which is an eminent characteristic of the hydraulic limes. The limestones from which hydraulic limes are made, such as the blue lias and greystone lime, are those which contain a quantity of silicate of alumina in conjunction with pure carbonate of lime. When water is mixed with *hydraulic* lime after calcination, hydrated silicate of lime and alumina is formed, which gives the mortar thus made the power of hardening under water and resisting its influence. The hydraulic limes are classed according to the proportion of silicate of alumina that they contain; limes which contain 1 part of silicate of alumina to 2 or 3 parts of carbonate of lime being termed *eminently hydraulic*, as they are most capable of resisting the action of water; while those which contain a less proportion of silicate of alumina are known as *hydraulic* and *moderately hydraulic* limes. The best limes, however, for resisting the action of water are those which are made artificially by burning clay which contains soluble silicate of alumina and pure carbonate of lime together. (See Cement.) — Rich lime, or pure carbonate of lime, when mixed with a quantity of water, forms an opaque white fluid termed *whitewash*, used for coating the walls of houses within and without. Colored washes may be produced by the addition of any colored earth, such as red or yellow ochre. A little glue or size should be added to the whitewash or wash of any color, to bind it and cause it to adhere to the walls without coming off on anything that may touch them. Lime is also valuable as a disinfectant, and is used in tanning for removing the hair from the skins of animals that are to be converted into leather.

L., (*Chloride of.*) See Calcium (Chloride of).

L., (*Phosphate of.*) See Phosphate of Lime.

L., (*Sulphate of.*) In combination with water ($CaO.SO_3.HO+Aq.$) it is met with in nature, both in the form of transparent prisms of *selenite*, and in opaque and semi-opaque masses known as *alabaster* and *gypsum*. It is this latter form which yields *plaster of Paris*, for when heated to between 300° and 400° F., it loses its water, and if the mass be then powdered, and again mixed with water, the powder re-combines with it to form a mass of hydrated sulphate of lime, the hardness of which nearly equals that of the original gypsum. In the preparation of plaster of Paris, a number of large lumps of gypsum are built up into a series of arches, upon which the rest of the gypsum is supported; under these arches the fuel is burnt, and its flame is allowed to traverse the gypsum, care being taken that the temperature does not rise too high, or the gypsum is *overburnt*, and does not exhibit the property of re-combining with water. When the operation is supposed to be completed, the lumps are carefully sorted, and those which appear to have been properly calcined, are ground to a very fine powder. When this powder is mixed with water to a cream, and poured into a mould, the minute particles of anhydrous sulphate of lime ($CaO.SO_3$) combine with 2 eqs. of water to reproduce the original gypsum ($CaO.SO_3.HO+Aq.$), and this act of combination is attended with a slight expansion, which forces the plaster into the finest lines of the mould.

Lime, *n.* [Fr. See Lemon.] (*Bot.*) The fruit of *Citrus limetta* (Fig 1582), which is a native of Asia, but is now largely cultivated in the W. Indies, where it grows to the height of 7 to 8 feet, and is employed to form hedges, for which purpose its prickly branches are admirably adapted. The fruit, of which it bears a large quantity, resembles the lemon, only being smaller, and having a nipple-like projection in the centre of each. It is largely cultivated for the sake of its acid juice, which, being more abundant and cheaper than that of the lemon, is extensively employed as an antiseptic in scurvy, for which it is now universally used. Its medicinal efficacy

Fig. 1582. — Lime.

depends on the large amount of citric acid contained in its juice. The dose is from one to two tablespoonfuls, with sugar, two or three times a day, according to the nature of the disease.

Lime, *v. a.* To smear with lime, or with a viscous substance. — To entangle; to ensnare. — To manure with lime. — To cement.

Lime, Lime'-tree, or **Lin'den,** *n.* (*Bot.*) See Tilia.

Lime, in *Minnesota*, a township of Blue Earth co.

Lime City, in *Iowa*, a post-office of Cedar co.

—A township of Washington co. *Pop.* (1895) 1,615.

Lime Hill, in *Pennsylvania*, a P. O. of Bradford co.

Lime'-burner, *n.* One who prepares lime for cement, &c., in a kiln.

Lime'-kiln, (*-kil,*) *n.* [A.S. *cyln*, from *cylene*, a furnace.] The pit or species of oven in which limestones are burnt or calcined, in order to obtain lime for building and other purposes. Lime-kilns are built of brick, with an interior lining of fire-bricks, or of hard stone, that is calculated to resist the action of fire for a long period of time. When the fuel that is used in burning the limestone is placed in a mass by itself at the bottom of the kiln, and the stone above it, the kiln is termed an intermittent kiln, as the fire must be let out, and the kiln cooled, before the lime can be withdrawn. Kilns of this description are squareor cylindrical in shape, while running kilns are in the form of an inverted cone, or funnel, the diameter of the pit being larger at the top than at the bottom. They are so called because the fuel and limestone are thrown in in alternate layers, and the lime is withdrawn from the bottom of the pit, as it is burnt, so that the operation of burning can be kept up for some time by throwing in fresh limestone and fresh fuel at the top, as the lime is taken out at the bottom. Either wood, peat, or coal, may be used for burning lime in an intermittent kiln; but only coal can be used in a running kiln. It appears that when limestone is burnt in a running kiln, less coal, in proportion, is required to effect the process of calcination, than when it is burnt in an intermittent kiln. On approaching a lime-kiln when alight, a shimmering vapor will be seen ascending from the top of the pit, which is carbonic acid gas disengaged from the stone while burning. Fig. 1583 represents a form of kiln, in which the limestone is supported upon an arch built with large lumps of the stone above the fire, which is kept burning for above three days and nights, until the whole of the limestone is decomposed.

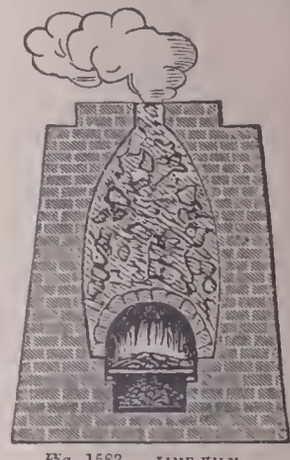


Fig. 1583. — Lime-kiln.

Lime'-light, or Drum'mond-light, *n.* A light of extreme brilliancy, invented by the English Lieut. Drummond, consisting of a jet of oxygen and hydrogen, mixed in the proportions to form water, directed upon a cylinder of lime. The lime, which is infusible, becomes white-hot, and emits a pure white brilliant light, of such intensity, that it has been distinctly seen at a distance of one hundred and twelve miles. The lime-cylinder is generally placed on a rotating pin, as part of the earth volatilizes from the intense heat. The Drummond-light, or lime-light, as it is more frequently called, is much used in exhibiting the magic-lantern and the reflecting microscope. It has been applied also to light-houses, but has been abandoned, the principles upon which the illuminators are constructed requiring a broad, flat light; whereas the lime-light is extremely minute in proportion to its wonderful brilliancy.

Lime'-mound, *n.* A limner, or large dog, led by a leam or string, used in hunting the wild boar.

Limen'itis, or **Sybil'ia,** *n.* (*Zoöl.*) The Honeysuckle Butterfly. See SYBILLA.

Lime'-plant, *n.* (*Bot.*) The May-apple, or Wild Mandrake. See PODOPHYLLUM.

Lime'-rod, *n.* The same as LIME-TWIG, *q. v.*

Lime'-sink, *n.* A hole in the ground formed of limestone.

Lime Point, in *California*, a promontory of Marin co., on the N. side of the Golden Gate.

Lime'port, in *Pennsylvania*, a P. O. of Lehigh co.

Limerick, (*lim'e-rik,*) a county of Ireland, prov. of Munster, separated from Clare by the river Shannon, and having N.E. and E. Tipperary, S. Cork, and W. Kerry. *Area*, 1,064 sq. m., a portion of which is unimproved mountain and bog. The surface, though diversified, is not, generally speaking, mountainous, excepting on the S.E., where it is bounded by the Galtees, a lofty ridge, which extends into Tipperary, and on the borders of Kerry, where the ground rises and forms a grand amphitheatre of low but steep hills. The soil is generally fertile, especially the dist. called Golden Vale, comprising 150,000 acres; also, a portion of the left bank of the Shannon, below *L. Prin. towns.* Limerick, Newcastle, and Rathkeale. *Rivers.* Shannon, Maig, Deale, and Blackwater. *Min.* Iron, copper, lead, and coal; also, brown and black marble. At present, no mining or manufactures of any consequence are carried on. *Prod.* The usual crops of cereals; the dairy and stock farms are extensive. Large quantities of corn, butter, and cider are exported. *P.* (1871) 191,936; (1880) 177,203.

LIMERICK, cap. of the above co., on the Shannon, 60 miles from its mouth, and 120 W.S.W. of Dublin; Lat. 52° 40' N., Lon. 8° 35' W. *L.* is divided into three portions, viz.: Englishtown, on King's Island, formed by a detached arm of the Shannon, now old and decayed; Irishtown, immediately S. of the above; and the New-town, to the W. of the latter, called also Newtown-Pery, from Pery, the family-name of the earl of Limerick, on whose estate it was built. In all the old parts of the town the streets are narrow and gloomy, but the new town is regularly built, with handsome houses, the streets being wide, and running at right angles. *L.* is particularly noted for the beauty of its women. *Manuf.* are unimportant; the principal are lace and fishing-hooks. There are, however, numerous flour-mills, foundries, tanneries, distilleries, and breweries. Considerable ship-building is also carried on. The principal support of *L.* is her trade, which is very extensive, being the great mart for the country traversed by the Shannon; the exports being mostly corn and provisions, including beef, butter, and

Fig. 1584. — VIEW OF LIMERICK.

other agricultural produce. — *Hist. L.* was formerly fortified, and from its situation was considered an important military station. It was occupied after the battle of Aghrim by the troops of James II.; it capitulated to the English army under Ginkell, afterwards earl of Athlone, in 1691. The capitulation, better known as the "Treaty of Limerick," was very favorable to the besieged; but it was afterwards most shamefully violated by the conquering party, and its most important stipulations openly set aside and trampled upon. The remains of its fortifications add considerable beauty and interest to this ancient city. The so-called "Treaty-stone," where the treaty was said to have been signed, still marks the spot, near the entrance of the suburb of Thomond Gate, on the Clare side of the Shannon. *Pop.* (1897) about 41,250.

Lim'erick, in *Illinois*, a village of Bureau co.

Limerick, in *Maine*, a post-village and township of York co., about 30 m. west of Portland. *Pop.* (1897) 980.

Limerick, in *New York*, a post-village of Jefferson co., about 6 m. W. N. W. of Watertown.

Limerick, in *Pennsylvania*, a post-township of Montgomery co.

Limerick Square, in *Pennsylvania*, a village of Montgomery co.

Lime Ridge, in *Pennsylvania*, a post-office of Lancaster county.

Lime Rock, in *Connecticut*, a post-village of Litchfield co., 40 m. N. W. by W. of Hartford. *Pop.* (1897) 620.

Lime Rock, in *Rhode Island*, a post-village of Providence co., about 10 m. N. N. W. of Providence.

Lime Spring, in *Iowa*, a post-town of Howard co.

Lime'stone, *n.* (*Min.* and *Geol.*) A general term applied to a great variety of rocks which contain a certain quantity of lime. Chalk is an earthy, massive, opaque variety, generally soft and without lustre. (See CHALK.) In nature, carbonate of lime is found more or less pure, both perfectly crystallized, as in calc-spar and arragonite; imperfectly, as in granular limestone; and in compact masses, as in common limestone, chalk, &c. *Concretionary L.*, generally called *stalactitic carbonate of lime*, is formed by the filtration of water through rocks containing lime, which is dissolved out; and as the water drips slowly out in cavernous recesses, it parts with its carbonate of lime, which is deposited in zones, more or less undulated, which have a fibrous structure. These fibres are very beautifully shown in the long fibrous pieces called stalactites. The stratified variety called *stalagmites* shows a similar structure, varied only by the circumstances under which it was produced. — *Incrusting concretionary L.* is similar to the above. It is found in calcareous springs in many countries. It is a common practice to place vegetable substances in these springs, when they become incrusted with carbonato of lime, and present all the appearance of fossils. There are several remarkable wells of this kind in volcanic districts, in some of which the water flows in almost a boiling state. — *Spongy L.* is found at the bottom of those lakes the water of which is impregnated with lime. — *Travertine* was a *L.* deposited by the waters of the Anio and the Solfaterra of Tivoli. Most of the monuments in ancient Rome were constructed of it. — *Compact L.* has a close texture, usually an even surface of fracture, and dull shades of color. — *Granular L.* includes statuary and architectural marble, and has a texture somewhat resembling that of loaf-sugar. (See MARBLE.) — *Oölite* consists of rounded particles of *L.*, like the roe or eggs of a fish. Coarse lias is sometimes called *coarse-grained L.* — *Marly L.* is found in lake and fresh-water formations; its texture is fine-grained, its color is white or pale-yellow, and it is apt to crumble in the air. — *Silicious L.* is a combination of silica and carbonate of lime; and *stinkstone* is a carbonate of lime combined with sulphur and organic matter, which emits the smell of sulphuretted hydrogen when struck or rubbed. All *L.* seem to have been the result of deposition effected by chemical changes. The vast space of time required to accumulate the great limestone ranges of this country cannot be estimated. *L.* of all kinds are found in rocks of all geological ages; but it is generally fancied that the more crystalline varieties occur with the more ancient or the more distinctly metamorphic rocks. Thus in England the carboniferous limestones pass into marble. In the Alps, however, the oölitic rocks, and in the Carpathians cretaceous rocks, assume this form, and not unfrequently even tertiary rocks are altogether crystalline. On the other hand, the Silurian *L.* are mere mudstones, and quite uncrystalline, so that there is no real law on the subject. Whenever *L.* are not distinctly metamorphic, they bear traces of organic structure. This is so much the case as to justify the assumption by geologists that all *L.* is the result of organic action at some period or other. The indication of life is of various kinds, often microscopic. Corals, shells, and even bones make up in some cases the entire mass of large deposits. In other cases the *L.* consists of minute particles of such bodies so cemented and combined into a solid, that it is scarcely possible, without minute investigation, to discover the secret.

Lime'stone, in *Alabama*, a N. co., adjoining Tennessee; *area*, 596 sq. m. *Rivers.* Tennessee and Elk rivers, besides several smaller streams. *Surface*, hilly; *soil*, very fertile. *Cap.* Athens. *Pop.* (1890) 21,201.

Lime'stone, in *Illinois*, a village and township of Kankakee co., about 60 m. S. S. W. of the city of Chicago.

—A township of Peoria co.

Lime'stone, in *Maine*, a post-township of Aroostook co. *Pop.* (1897) 1,010.

Lime'stone, in *New York*, a post-village of Cattaraugus co. *Pop.* (1897) 840.

Lime'stone, in *Pennsylvania*, a village of Bedford co.

—A post-township of Clarion co.

—A village of Columbia co.

—A township of Lycoming co.

—A township of Montour co.

—A township of Union co.

—A township of Warren co.

—A village of Washington co.

Lime'stone, in *Texas*, an E. central co.; *area*, about 960 sq. m. *Rivers.* Navasoto river, and some smaller streams. *Surface*, mostly level prairie; *soil*, fertile. *Min.* Limestone in great abundance; hence the name of the co. *Cap.* Groesbeck. *Pop.* (1890) 21,678.

Lime'stone Springs, in *South Carolina*, a village of Spartanburg co., about 93 m. N. W. of Columbia.

Lime'stoneville, in *Penna.*, a p.-vill. of Montour co.

Lime'-twig, *n.* A twig smeared with bird-lime.

Lime'-twigged, *a.* Smeared with lime.

Lime'-water, *n.* Water impregnated with lime.

Lime'wort, *n.* (*Bot.*) A species of Pink, genus *Dianthus*, (q. v.)

Lim'ing, *n.* The act of manuring with lime.

Lim'ington, in *Maine*, a post-village and township of York county, about 70 miles W.S.W. of Augusta.

Lim'it, *n.* [Lat. *limes, limitis*, from *limus*, transverse, oblique, askew.] The bound; boundary; border; utmost extent; the part that terminates a thing; the thing which bounds; restraint; restriction; hinderance; check.

—*pl.* The extent of the liberties of a prison.

(*Math.*) A given or determinate quantity, to which some other variable quantity continually approaches in value, but never reaches. Thus, if we suppose a polygon to be inscribed in a circle, by increasing the number of sides of the polygon its area is increased. But the area can never exceed that of the circle within which the polygon is inscribed; and it is only when the number of its sides are conceived to be infinitely great that its area becomes equal to that of the circle. The circle is thus said to be the limit of the area of the inscribed polygon.

—*v. a.* [Lat. *limito.*] To bound; to set bounds to. — To confine within certain bounds; to circumscribe; to restrain. — To restrain from a lax or general signification; to restrict.

Lim'itable, *a.* That may be limited, circumscribed, bounded, or restrained.

Lim'itar, in *New Mexico*, a village, former cap. of Socorro co., on the Rio Grande, 120 m. S. by W. of Santa Fé.

Limita'rian, *n.* (*Theol.*) One who holds that a part only of the human race are to be saved; — opposed to *universalist.* — *Craig.*

Lim'itary, *a.* Placed at the limits or boundaries, as a guard or superintendent. — Kept or confined within limits.

Limita'tion, *n.* [Lat. *limitatio.*] The act of limiting, or of bounding or circumscribing. — Restriction; restraint; circumscription; confinement.

(*Law.*) The limited time allowed to parties to commence their suits or actions, or other proceedings, so as to shorten litigation. In all civilized countries, some period is prescribed by statute (called statutes of limitation or prescription) with this view, though few countries adopt the same limit; and the States differ much from each other in this point. The most general rule, however, is, that suits to recover land must be brought within twenty years, and to recover debts, including bills of exchange, and damages, within six years. Actions for assault or battery must be brought within four years, and for slander within two years.

Lim'ited, *a.* Narrow; circumscribed; confined; restricted.

Lim'ited Liabil'ity. (*Law.*) See PARTNERSHIP.

Lim'itedly, *adv.* With limitation.

Lim'itedness, *n.* State of being limited.

Lim'itless, *a.* Having no limits; boundless; unlimited; unbounded; infinite; immense; vast.

Limmat, (*lim'ma,*) a river of Switzerland, rising in Lake Zurich, and, after a course of 18 m., joins the Aar at Brugg.

Lim'mer, *n.* A hunting-dog led by a leam or string, and let slip at the game; a lime-hound. — A still-horse. — An idler. (Local Eng.)

Limn, *v. a.* [Fr. *enluminer;* Lat. *illumino.* See LUMINOUS.] To draw or paint, or to paint in water-colors.

Limnantha'ceæ, *n. pl.* [Gr. *limne*, a marsh; *anthos*, a flower.] (*Bot.*) A small order of plants, included by Lindley in the TROPÆOLACEÆ, *q. v.*

Limnan'themum, *n.* [Gr. *limne*, a lake, *anthos*, a flower; from its aquatic habitat.] (*Bot.*) A genus of plants, order *Gentianaceæ.* They are perennial plants, generally submerged in stagnant water; leaves floating, on long petioles. The most common American species is *L. lacunosa*, the Lake-flower.

Lim'ner, *n.* [Fr. *enlumineur;* Lat. *illuminator.*] One who colors or paints on paper or parchment; a portrait-painter.

Lim'ning, *n.* [From Lat. *lumen*, light.] (*Paint.*) The art of painting in water-colors; in which sense it is used to distinguish it from painting in oil-colors. The term was originally applied to the decoration or illumination of MSS.

Limoges, (*le-mozh,*) a town of France, dep. Haute-Vienne, on the Vienne, 110 m. from Bordeaux. It is the seat of a university, academy, and of several learned societies. Its manufactures of porcelain are celebrated. *Pop.* 56,158.

Lim'onite, *n.* (*Min.*) Brown iron-ore. It is a hydrated peroxide of iron.

Limo'sa, *n.* (*Zoöl.*) The Godwita, a genus of Grallatores birds, family *Scolopacidæ*, frequenting marshes and the sea-shore. They are characterized by a long straight beak, slightly bent at the extremity; and by the external toes, which are long and slender, being palmated at the base. The godwits are represented in N. America by the Marbled Godwit, *L. fedoa* (Fig. 1585), which is 18 inches long and the wing 9 inches; and by the Hudsonian Godwit, *L. Hudsonicus*, of northern N. America.

Fig. 1585. — THE MARBLED GODWIT,
(*From Tenney's Manual of Zoölogy.*)

Limosel'la, *n.* [Lat. *limus*, mud; the plant grows by the edge of puddles and in muddy places.] (*Bot.*) A genus of plants, order *Scrophulariaceæ.* They are minute aquatic, annual herbs. *L. tenuifolia*, the Mudwort,

is found throughout the Middle and New England States. It is about an inch in height, with very small blue and white flowers.

Limo'sis, *n.* [Gr. *limos*, hunger.] (*Med.*) A disease distinguished by excessive or defective appetite.

Limotherape'ia, *n.* [Gr. *limos*, hunger, and *therapeia*, cure.] (*Med.*) Cure by fasting; hunger-cure.

Li'mous, *a.* [Lat. *limosus*, from *limus*, slime, mud.] Muddy; slimy; thick.

Limou'sin. This ancient province of France, inhabited by the Lomovices, was wrested from the Visigoths by Clovis I., king of the Franks, in 507. It was included in Guienne, and afterwards made a separate province for the possession of which the kings of France and England waged frequent war. Richard I. lost his life from a wound received while besieging the castle of Chalus-Chabrol, in Limousin, March 26, 1199. Philip II. seized it in 1203, but Louis IX. restored it to the English in 1259, and it was united to France in 1370. It was united to the French crown by Henry IV. in 1589. It is now distributed into the depts. of Corrèze, Creuse, Haute-Vienne, and Dordogne.

Limoux, (*le-moo'*,) a town of France, dep. Aude, on the river Aude, 13 m. S.S.E. of Carcassonne. It is known for its sparkling white wine called *Blanquette de Limoux*. *Pop.* 7,630.

Limp, *v. n.* [Sax. *lemp-healt*, limping-halt.] To be stopped or stayed in the free action of the limbs; to halt; to walk lamely.

—*n.* A halt; act of limping.

—*a.* Flexible; limber; lacking stiffness.

Limp'er, *n.* A person who limps.

Lim'pet, *n.* (*Zoöl.*) The common name of *Patella*, a genus of Gasteropodous molluscs, the type of the family *Patellidæ*. In all this family, the shell is nearly conical, not spiral, and has a wide mouth, and the apex turned forwards. The animal has a large round or oval muscular foot, by which it adheres firmly to rocks, the power of creating a vacuum being aided by a viscous secretion. Limpets live on rocky coasts, between tidemarks, and remain firmly fixed to one spot when the tide is out, as their gills cannot bear exposure to the air, but move about when the water covers them; many of them, however, it would seem, remain long on the same spot, which in soft calcareous rocks is found hollowed to their exact form. They feed on algæ, which they eat by means of a long ribbon-like tongue, covered with numerous rows of hard teeth. *P. testudinalis* (Fig. 1586) is a species common on the coast of New England.

Fig. 1586. — LIMPET, (*Patella testudinalis.*)

Lim'pid, *a.* [Lat. *limpidus*, for *liquidus*, liquid, clear, transparent. See LIQUID.] Clear; transparent; lucid; crystal; pure; pellucid.

Limpid'ity, or **Limpidness,** *n.* [Fr. *limpidité*.] Clearness; purity; transparency.

Limp'ingly, *adv.* In a lame, halting manner.

Lim'ulus, *n.*; *pl.* LIMULI. [Lat. dim. of *limus*, sideways.] (*Zoöl.*) The King-crab, a genus of large Crustacea, order *Entomostraceæ*, represented in N. America by the Horse-shoe Crab (Fig. 1587), which sometimes attains the length of 2 feet. The Limuli are of a very singular form and structure; their bodies are divided into two parts,—of which the anterior, covered by a large semicircular shield, bears the eyes, the antennæ, and six pairs of legs, which surround the mouth, and are used both for walking and for mastication; while another shield of a somewhat triangular shape covers the posterior portion of the body, which supports five pairs of swimming-legs, and terminates in a long pointed process. The Limuli are almost confined to the shores of tropical Asia, the Asiatic Archipelago, and tropical America. Their habits do not appear to be very well understood; it seems, however, that they prefer the neighborhood of sandy shores; and it is said that, in order to avoid the violent heat of the sun, which becomes fatal to their existence, they bury themselves in the sand. The long horny process is used by some of the Malays as a point for their arrows; the wound it makes being dangerous, like those made by the jagged spines of certain fishes.

Fig. 1587. HORSE-SHOE CRAB, or KING-CRAB.

Lim'y, *a.* Viscous; glutinous. — Containing lime. — Resembling lime; having the qualities of lime.

Lina'ceæ, *n. pl.* [Lat. *linum*, flax.] (*Bot.*) The Flax family, an order of plants, alliance *Geraniales*. DIAG. Symmetrical flowers, distinct styles, carpels longer than the torus, and seeds with little or no albumen. They are herbs, or, very rarely, shrubs, with exstipulate, simple, entire leaves. Flowers hypogynous, and regular; sepals, petals, and stamens, 3, 4, 5, each, the sepals persistent and imbricate; the petals deciduous and twisted in æstivation; the stamens united at their base, and having little, tooth-like, abortive stamens alternating with them; ovary, 3-, 4-, 5-celled; styles distinct; stigmas capitate. Fruit capsular, many-celled, each cell more or less divided by a spurious dissepiment, and each division containing one seed. The *L.* are chiefly natives of the S. of Europe and N. of Africa. There are four genera, and 90 species. They are generally remarkable for the tenacity of their liber-fibres, and also for the mucilage and oil contained in their seeds.

Linares, (*le-na'rais*,) a town of Spain, 22 m. from Jaen, near the Guarregas; *pop.* 7,500.

Linaria, *n.* (*Bot.*) See SNAPDRAGON.

Linch, *n.* A promineuce or rising part; a rectangular projection.

Linch'-pin, *n.* [Sax. *lynis*, an axle-tree; Du. *luns*; Ger. *lünse*.] A pin used to prevent the wheel of a carriage from sliding off the axle-tree.

Lin'coln, ABRAHAM, 16th President of the U. States, b. in Hardin co., Kentucky, Feb. 12, 1809. His family were of Quaker and Pennsylvanian origin. In 1816 his father settled in what is now Spencer co., Indiana; and for 10 years the future President was employed in hard manual labor on the paternal farm. The whole time spent by him at school, to which he went at intervals, did not amount to more than a year. A *Life of Washington* is recorded as among the few books which he early read with interest. At 19 he was 6 feet 4, and his physical capabilities were remarkable. When, in 1830, his father removed to Macon county, Illinois, Abraham not only helped to build the family log-hut, but with a single assistant split rails enough to fence ten acres of land. In 1831 he worked to New Orleans a flat-boat which he had assisted in building. He became then for a time a clerk in the New Salem store of the owner of the boat; and in 1832 entered, and was made captain of, a company of volunteers raised on the breaking out of the Black Hawk war. After a three months' campaign, he was supported by the electors of his own district as a candidate for a seat in the State legislature; but his principles being Whig, he was rejected by the county in favor of a Democrat. Unsuccessful in the country store which he then opened, he was appointed postmaster of New Salem, and — borrowing from a neighbor practitioner law-books, to be returned in the morning — spent his evenings in the study of law. In 1834 he was elected a member of the State legislature, and he continued to be reëlected until 1840. In 1836 he had been licensed to practise as a lawyer, and in 1837 commenced business at Springfield, his residence until he was elected President. As a lawyer he became rapidly successful, especially in cases where a jury adjudicated; and in politics he rose to be a prominent leader of the Whig party in Illinois. In 1844 he canvassed the State, making speeches almost daily on behalf of Henry Clay, when that well-known statesman was a candidate for the Presidency. In 1846 he was himself delegated to the Congressional House of Representatives by the central district of Illinois, and took his seat on the 6th of Dec., 1847. In Congress he distinguished himself as an active opponent of the annexation of Texas, and of the extension of slavery, and as a supporter of its abolition in the District of Columbia. He advocated a protective tariff, the sale of public lands at a low price, and the system of grants for the improvement of rivers and harbors. The first Congress in which he sat came to an end in the March of 1849, and he was unsuccessful as a candidate for the representation of his State in the Congressional Senate. He pursued his professional career until the repeal of the Missouri Compromise recalled him to active political life. Through his exertions a Republican senator — the Whig party having become extinct — was returned by Illinois. In the Presidential election of 1856 he worked strenuously for Fremont, and his own name was mentioned in connection with the Vice-Presidency. In 1858 he ran against Mr. Douglas as Republican candidate for a seat in the Senate; and after a spirited contest, *L.* secured a large majority of the popular vote — the State legislature, however, returning Douglas. The struggle with Douglas placed *L.* in the foremost rank of his party; and the Republican national convention which met at Chicago on the 16th May, 1860, nominated him their candidate for the Presidency by a considerable majority over Mr. Seward, and on the 18th proceeded to ballot. *L.* obtained 354 votes on the third ballot, against 110½ recorded for Mr. Seward, and his nomination was subsequently made unanimous. On the 6th of Nov., 1860, the election took place, and *L.* received 180 electoral votes out of 303. No sooner was his election known, than the insurrection which led to the Civil War burst out in the South, and nearly a month before his taking the official oath, six States had separated themselves from the Union. On the 4th of March, 1861, *L.* took the oath of office, and delivered his inaugural address. In that plain, straightforward talk with the nation he declared that he took the oath to support the Constitution "with no mental reservation." He argued, briefly, the question of secession, averring that, in spite of all that had been done at the South, the Union was unbroken, and he should, to the extent of his ability, take care "that the laws of the Union be faithfully executed in all the States;" that in doing this there would be no bloodshed, "unless it be forced upon the national authority," but that the power of the govt. would be used "to hold, occupy, and possess the property and places belonging to the government, and to collect the duties and imposts;" and he closed his address with an earnest appeal to all who really loved the Union, to pause and consider "before entering upon so grave a matter as the destruction of our national fabric, with all its benefits, its memories, and its hopes." "In your hands, my dissatisfied fellow-countrymen," said he, "and not in mine, is the momentous issue of civil war. You have no oath registered in heaven to destroy the government, while I shall have the most solemn one to *preserve, protect, and defend it.*" The history of the President's remaining years is that of the Civil War, which lasted four years, and ended with the submission of the Confederates. President *L.* had been reëlected in 1864 to the Presidential chair, and lived just long enough to see the triumph of his policy. On the evening of April 14, 1865, while present at Ford's Theatre, in Washington, he was shot by Wilkes Booth, an actor and fanatical secessionist, who was himself shot in the act of being arrested. *L.* died the next morning, and the tidings of it were received with deep sorrow and indignation in all civilized countries. The funeral honors paid to the deceased chief magistrate surpassed in magnificence, as well as in the manifestations of the intensity of real sorrow, those ever bestowed on any President who had deceased either in or out of office, and have hardly been equalled in the funeral pomp of the obsequies of any monarch of ancient or modern times. President *L.* was an honest man in the best and most extensive sense of the word. He had a deep sense of religion, great good-nature, considerable humor, and cordial, pleasant manners. Perhaps somewhat slow in arriving at conclusions, when once settled in them, he was firm to his convictions. He discharged the arduous duties of his office with great good sense, moderation, and wisdom. His tragic end, combined with his many virtues and patriotism, will ever render his name venerated.

Lincoln, (*link'on*,) a maritime co. of England, bordering on the North Sea, divided from York co. on the N. by the river Humber, having on the S. the cos. Rutland, Northampton, and Cambridge, and W. York, Nottingham, and Leicester; *area*, 2,776 sq. m. *L.*, though but little diversified in its aspect and surface, yet presents three great natural divisions,—the Wolds, the Heaths, and the Fens. The *Wolds* commence near Spilsby, and extend, in a N.W. direction, to Barton-on-the-Humber. They are, on an average, nearly 8 m. in breadth. The *Heaths*, N. and S. of *L.*, extend from the Humber to Grantham, and were formerly barren, but are now chiefly inclosed and cultivated. Along the foot of the Wolds is a low land, which forms a district called the Marsh, a long and rather narrow strip, extending from Wainfleet, on the Walsh, to the Humber. To the S. of this is the district of the *Fens*, which forms the northern termination of the great fenny district, which extends so widely over the counties of Norfolk, Cambridge, Bedford, and Huntingdon. *Rivers.* The principal are the Trent, Wellaud, Witham, Glen, and Ancholme. *Prod.* The Fens form one of the richest tracts in the kingdom. They are adapted to all the ordinary crops, especially oats, which are raised in great quantities; but they are chiefly devoted to grazing. *L.* has been long famous for its breed of horses. *Manuf.* Unimportant.

Lincoln, the cap. of the above co., on the Witham, 47 m. from Derby. It is a place of great antiquity, but it has lost much of its ancient importance. Its cathedral, an elegant specimen of Gothic architecture, has three towers, and the central one rises 303 feet above the floor. *Pop.* (1897) 42,540.

Lin'coln, a S. co. of province of Ontario, bordering on Lake Ontario; *area*, about 306 sq. m. *Rivers.* Niagara river, and some smaller streams.

Lincoln, in *Arkansas*, S.E. co.; *area*, 536 sq. m. *Caps.* S. Varner and Star City. *Pop.* (1890) 10,255.

Lin'coln, in *California*, a post-town of Placer co., 14 m. W. of Auburn, on So. Pac. R. R.; in a fine fruit and grain-growing district; has large pottery works. *Pop.* (1897) 1,150.

Lincoln, in *Colorado*, an E. central co.; *area*, 2,600 sq. m.; drained by Big Sandy creek and numerous smaller streams. *Surface*, undulating prairie; *soil*, a sandy loam, fertile when irrigated; timber on streams only; *products*, wheat, corn, alfalfa, cheese, butter; sheep and wool growing is the chief industry. *Cap.* Hugo. *Pop.* (1890) 689.

Lincoln, in *Colorado*, a mining post-town of Summit co., about 90 m. W.S.W. of Denver.

Lincoln, in *Georgia*, a N.E. co., adjoining S. Carolina; *area*, about 309 sq. m. *Rivers.* Savannah, Broad, Little Broad, and Little rivers, besides many creeks. *Surface*, hilly; *soil*, in some places fertile. *Min.* Iron in abundance, and granite. *Cap.* Lincolnton. *Pop.* (1890) 6,146.

Lincoln, in *Illinois*, a thriving city, capital of Logan co., on the P., D. & E., Ch. & Alton, and Ill. Cent. R.Rs.; 28 m. N.N.E. of Springfield; has some manufactures and a good local trade. *Pop.* (1897) 8,100.

Lincoln, in *Indiana*, a post-village in Cass co., about 14 m. S.E. of Logansport.

Lincoln, in *Iowa*, a township of Adair co.

—A township of Adams co.

—A township of Appanoose co.

—A township of Black Hawk co.

—A township of Calhoun co.

—A township of Cerro Gordo co.

—A township of Dallas co.

—A township of Grundy co.

—A township of Harrison co.

—A township of Iowa co.

—A township of Madison co.

—A township of Mitchell co.

—A township of Monona co.

—A township of Montgomery co.

—A township of Page co.

—A township of Plymouth co.

—A post-village of Polk co., abt. 16 m. N.W. of Des Moines.

—A township of Poweshiek co.

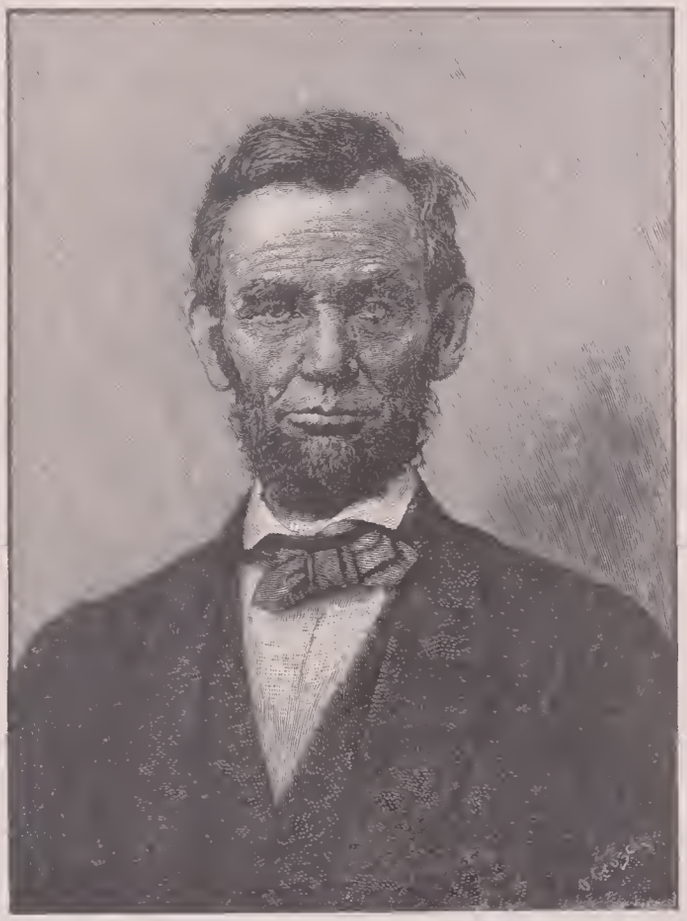
—A township of Scott co.

—A township of Storey co.

—A township of Tama co.

—A township of Union co.

—A township of Winneshiek co.



Abraham Lincoln

1809–1865

Lincoln, in *Kansas*, a central co.; *area*, 720 sq. m. *Cap.* Lincoln. *Pop.* (1895) 9,065.

Lincoln, in *Kansas*, a post-village, cap. of Lincoln co., 25 m. N. of Ellsworth on Un. Pac. R. R.; has water-power, coal, marble, and building stone in vicinity. *Pop.* (1895) 652.

Lincoln, in *Kentucky*, an E. central co.; *area*, 328 sq. m.; *soil*, fertile. *Cap.* Stanford. *Pop.* (1890) 15,962.

Lincoln, in *Louisiana*, a N.W. parish formed in 1873; *area*, 480 sq. m. *Cap.* Ruston. *Pop.* (1890) 14,753.

Lincoln, in *Maine*, a S. by W. co., bordering on the Atlantic Ocean; *area*, about 520 sq. m. *Rivers.* Kennebec, Damariscotta, and Sheepscott rivers. *Surface*, much diversified; *soil*, fertile. The coast is deeply indented with bays and inlets, and the industry of the inhabitants is chiefly directed to navigation and fishing. *Cap.* Wiscasset. *Pop.* (1890) 21,996.

—A post-town of Penobscot co. *Pop.* (1897) 1,810.

Lincoln, in *Massachusetts*, a post-town and twp. of Middlesex co., about 17 m. W.N.W. of Boston.—In *Michigan*, a village of Mason co., about 60 m. E. of Manitowoc, Wisconsin.—In *Minnesota*, a S.W. co.; *area*, 500 sq. m. *Cap.* Lake Benton. *Pop.* (1895) 7,196.—In *Mississippi*, a S.W. co.; *area*, 570 sq. m. *Cap.* Brookhaven. *P.* (1890) 17,912.

Lincoln, in *Missouri*, an E. co., adjoining Illinois; *area*, about 598 sq. m. *Rivers.* Mississippi and Cuivre or Copper rivers, besides several considerable creeks. *Surface*, undulating or hilly; *soil*, generally fertile. *Cap.* Troy. *Pop.* (1890) 18,346.

Lincoln, in *Nebraska*, a W. co.; *area*, 10,441 sq. m. *Cap.* North Platte. *Pop.* (1890) 10,441.

Lincoln, in *Nevada*, a S.E. co.; *area*, 17,680 sq. m.; bounded on the S.E. by the Colorado river. *Surface*, generally barren table land, on which wood and water are scarce; some fertile soil in the valleys; *products*, corn, wheat, barley, wool, and hay. Silver mining is the chief occupation. *Cap.* Pioche. *Pop.* (1890) 2,466.

Lincoln, in *New Hampshire*, a post-twp. of Grafton co.

Lincoln, in *New Mexico*, a S.E. co.; *area*, about 26,452 sq. m. *Cap.* Lincoln. *Pop.* (1890) 7,081.

Lincoln, in *North Carolina*, a W. by S. co.; *area*, about 312 sq. m. *Rivers.* Great Catawba and South Catawba rivers. *Surface*, diversified; *soil*, fertile. *Min.* Iron in abundance and gold. *Cap.* Lincolnton. *Pop.* (1890) 12,586.

Lincoln, in *Ohio*, a twp. of Morrow co.—In *Pennsylvania*, a P. O. of Lancaster co.—In *Tennessee*, a S. co., adjoining Alabama; *area*, about 540 sq. m. *Rivers.* Elk river, and some smaller streams. *Surface*, undulating; *soil*, very fertile. *Cap.* Fayetteville. *Pop.* (1890) 27,382.

Lincoln, in *Oklahoma*, a central co.; *area*, 14,554 sq. m.; intersected by the Deep Fork of the Canadian river, and has numerous small streams. *Surface*, undulating; *soil*, sandy, red sub-soil, very fertile; about three-fourths of the county in timber; *products*, cotton, corn, castor-beans, fruit, vegetables. *Cap.* Chandler. *Pop.* (1897) 20,000.

Lincoln, in *South Dakota*, S.E. co.; *area*, 540 sq. m. *Cap.* Canton. *Pop.* (1895) 10,884.

Lincoln, in *Vermont*, a post-township of Addison co.—In *West Virginia*, a W. co.; *area*, 460 sq. m. *Surface*, hilly; *soil*, fertile. *Cap.* Hamlin. *Pop.* (1890) 11,240.

Lincoln, in *Wisconsin*, a N. co.; *area*, 700 sq. m.; drained by the Wisconsin, Pelican, and Tomahawk rivers. *Surface*, largely covered with forests and lakes; agricultural products increasing. Lumbering and manufacturing are the chief occupations. *Cap.* Merrill. *Pop.* (1895) 14,765.

Lincoln, in *Wisconsin*, a township of Adams co. *Pop.* about 450.—A township of Eau Claire co.—A township of Kewaunee co.—A township of Monroe co.

Lincoln Center, in *Maine*, a post-village of Penobscot co., about 50 m. N.N.E. of Bangor.

Lincoln-green, *n.* The color of a kind of cloth believed to have been originally made at Lincoln, England.

Lincolnton (*link'on-ton*), in *Georgia*, a post-village, cap. of Lincoln co., about 90 m. N.E. of Milledgeville.

Lincolnton, in *N. Carolina*, a post-village, cap. of Lincoln co., about 170 m. W. by S. of Raleigh. *Pop.* abt. 900.

Lin'colnville, in *Maine*, a post-town of Waldo co.

Lincolnville, in *Penna.*, a post-village of Crawford co.

Linc'ture, or **Linc'tus,** *n.* Anything to be licked up with the tongue. A term used in the Pharmacopœia to designate any soft confection or mixture, as the conserve of roses, jams, or jellies. A vehicle for any medicine to correct the state of the mouth,—such as borax and honey, which would be called a *borax linctus*.

Lind, Jenny, a Swedish vocalist, b. at Stockholm, 1821. At three years of age she could sing correctly any piece she had once heard, and at nine she was placed, by the advice of Madame Lundberg, a celebrated actress at Stockholm, under Croelius, a famous teacher of music. Count Pücke, manager of the Court Theatre, felt disinclined to act on Croelius's recommendation of his youthful pupil, on account of her want of personal attractions; but after hearing her sing, he caused her name at once to be entered at the Musical Academy, where she made rapid progress. She acted repeatedly in children's parts on the Stockholm stage until her twelfth year, when her upper notes lost their sweetness. For four years she studied music theoretically, until on one occasion, when the fourth act of Meyerbeer's *Robert le Diable* was to be performed at a grand concert, and the humble part of Alice was declined by the female vocalists of the city, Berg, the director of the academy, applied to Jenny Lind. Her performance showed that every note of her register had recovered its power and purity, and she was greeted with enthusiasm. Her next success was in the part of Agatha, in *Freischütz*, and for a year and a half she continued the star of the opera at Stockholm. Having, by a series of concerts in the principal towns of Norway and Sweden, obtained the means of going to Paris, she studied, not without some previous discouragement, under Garcia. A year after her arrival in Paris, she was introduced to Meyerbeer, who was anxious to engage her for Berlin, but she preferred returning to her native city, where she enjoyed a great triumph on her re-appearance. In 1844 she went to Dresden, and afterwards to Frankfort, Cologne, and Vienna. She first appeared before a London audience in May, 1847, as Alice, in *Robert le Diable*, followed by a series of unparalleled triumphs in the *Somnambula*, *La Figlia del Reggimento*, *Puritani*, &c. She visited New York in 1850, under the auspices of Mr. Barnum, and was enthusiastically received, but dissolved the engagement prematurely in 1851, was married to M. Otto Goldschmidt, a skilful pianist and conductor, and retired from the stage. She reappeared in 1855, in 1861, in 1863, and in 1880, for a limited period. She has shown a generous disposition, and has been instrumental in adding many thousand dollars to the charitable institutions of every country which she has visited. D. 1887.

Lind, in *Wisconsin*, a post-township of Waupaca county.

Lin'da, in *California*, a township of Yuba co.

Lin'dale, in *Georgia*, a post-office of Floyd co.

Lindale, in *Ohio*, a post-office of Clermont co.

Lindale, in *Texas*, a post-village of Smith co.

Lin'den, in *Alabama*, a post-village, cap. of Marengo co., about 100 m. W. of Montgomery.

Lin'den, in *California*, a post-village of San Joaquin co., about 12 m. E. of Stockton.

Lin'den, in *Illinois*, a village of Ogle co.

Lin'den, in *Indiana*, a post-village of Montgomery co., about 18 m. S. of La Fayette.

Lin'den, in *Iowa*, a post-village of Dallas co.

Lin'den, in *Michigan*, a post-village of Genessee co., about 55 m. N.W. of Detroit. *Pop.* (1897) 650.

Lin'den, in *Minnesota*, a post-township of Brown co.

Lin'den, in *Missouri*, a village, former cap. of Atchison co., about 70 m. N.N.W. of St. Joseph.

—A village of Clay co.

Lin'den, in *New Jersey*, a post-township of Union co.

Lin'den, in *New Jersey*, a twp. of Union co.

Lin'den, in *New York*, a post-village of Genesee co., abt. 40 m. E. of Buffalo.

Lin'den, in *Pennsylvania*, a post-village of Lycoming co., on the W. branch of the Susquehanna River, abt. 8 m. above Williamsport.

Lin'den, in *Tennessee*, a post-village, cap. of Perry co., abt. 100 m. S.W. of Nashville.

Lin'den, in *Texas*, a post-village, cap. of Cass co., abt. 20 m. N. of Jefferson.

Lin'den, in *Virginia*, a post-village of Warren co., abt. 8 m. E. of Front Royal.

Lin'den, in *Wisconsin*, a post-village and township of Iowa county, about 6 miles N.W. of Mineral Point.

Lin'den-tree, *n.* (*Bot.*) See Tilia.

Lin'denville, in *Ohio*, a post-village of Ashtabula co., abt. 155 m. N.E. of Columbus.

Lin'denville, in *Wisconsin*, a village of Sheboygan county.

Lin'denwood, in *Illinois*, a post-village of Ogle co., abt. 1,200 m. W.N.W. of Chicago.

Lindi'na, in *Wisconsin*, a township of Juneau county.

Lind'ley, John, a celebrated English botanist, b. at Catton, near Norwich, 1799. He was the son of a gardener, and was thus early led into the path which he steadily pursued through life. In his twentieth year he began his career as a writer by a translation of Richard's *Analyse du Fruit*, and after publishing several other works he came to London, and was for some time engaged in the heavy task of writing the descriptive portion of the *Encyclopædia of Plants*, projected by Mr. Loudon, which appeared in 1829. The same year he was appointed Professor of Botany at the London University, the duties of which office he very successfully discharged for a long course of years. He was for some time lecturer on botany at the Royal Institution and at Chelsea Botanic Gardens. His services as secretary to the Horticultural Society were of great value, many new plants and new methods of cultivation being introduced under his management. But it is as the able and earnest advocate of the natural system of botany, in opposition to the artificial system of Linnæus, that Dr. Lindley earned his high reputation. As early as 1830 he announced his views of its importance and advantages, in the essay accompanying his *Introduction to the Natural System of Botany*; and to establish and illustrate it was the chief aim of his life. His works are very numerous, and among the most important are—*The Vegetable Kingdom*, published in 1846; *Flora Medica*; *Fossil Flora of Great Britain*, in which he was assisted by Mr. Hutton; *The Genera and Species of Orchidaceous Plants*, a family in which he took enthusiastic interest; *Folia Orchidacea*; and *Theory of Horticulture*. From 1841 till his death, Dr. Lindley was editor of the *Gardener's Chronicle*. He wrote a large number of the botanical articles in the "Penny Cyclopædia," and contributed to the "Botanical Register," in which he first made known some of our famous garden-flowers: Fuchsias, Verbenas, and Calceolarias. Dr. Lindley was a Fellow of the Royal Society, and received their medal in 1858, for his services to science. He was also a Fellow of the Linnæan and Geological societies, and member of many foreign scientific societies. He received the degree of Ph. D. from the University of Munich. In 1860, he was appointed Examiner in Botany in the university of London; but he had to resign his professorship several years ago from injured health. The last literary work on which he was engaged was the *Treasury of Botany*, recently published as a companion volume to "Maunder's Treasuries." Died at Acton Green, near London, Nov. 1, 1865.

Lind'ley, in *Missouri*, a post-village of Grundy co., about 25 m. N. by E. of Chillicothe.

Lind'ley, in *New York*, a post-town and township of Steuben co., about 12 m. S. of Corning.

Lind'ley's, in *Kentucky*, a village of Ohio co., about 165 m. W.S.W. of Frankfort.

Lind'leytown, in *New York*, another name for Lindley, in Steuben co.

Lindly's Mills, in *Pennsylvania*, a post-village of Washington co.

Lindsay (*lin'zee*), a village, cap. of Victoria co., province of Ontario, about 20 m. N.W. of Peterborough.

Lindsay's Mill, in *Kentucky*, a P. O. of Knox co.

Lind'seyville, in *Maryland*, a post-village of Worcester co.

Lind'ville, in *Iowa*, a village of Monroe co., abt. 110 m. W.S.W. of Iowa City.

Line, *n.* [Lat. *linea*, from *linum*, flax.] A slender string; a small cord or rope.—Lineament; a mark in the hand or face.—Delineation; sketch; contour; outline; exterior limit of a figure.—The words and letters in printing, &c., which stand on a level in one row, between one margin and another.—A verse in poetry, or the words which form a certain number of feet, according to the measure.—A short letter; a note; as, a *line* from a friend.—A rank or row of soldiers; the disposition of a fleet prepared for engagement; or anything extended in length.—Method; disposition.—Limit; border.—A series or succession of progeny, or relations descending from a common progenitor.—The twelfth part of an inch.—Occupation; employment; department or course of business.

(*Math.*) That which has length without breadth or thickness.—A thread, string, or cord extended to direct any operation.—A right line or curve which continually approaches, but never meets, a given curve, is called an *asymptote*. A curve whose ordinates, M N, are inversely proportional to the corresponding abscissæ, O N, will clearly approach both axes incessantly, but never intersect either, however far it may be produced. A second curve, similarly constructed, but having its ordinates, M′ N, twice as long as before will approach but never meet either the axes or the first curve. Under such circumstances either curve would be called an asymptote of the other, and both would have the axes for *rectilinear* asymptotes. Two curves, neither of which have infinitely distant points, may also be asymptotic. For instance, suppose a radius, O A, of a circle to rotate incessantly in the same direction, and in every position a portion, A B, cut off inversely proportional to the angle it has described. The point B once inside the circle will never be able to leave it again, or even to reach the circumference, which it will incessantly approach. In this case the circle is said to be asymptotic to the spiral described by B.

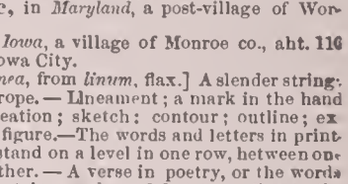


Fig. 1589.

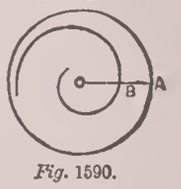


Fig. 1590.

(*Mus.*) One of those members of the stave between and upon which the notes are placed. The stave itself consists of five lines only, but other and smaller lines, called *ledger-lines*, are placed above and beneath, for the reception of all notes that are too high or too low to come within the stave. The invention of lines is attributed to Guido. At their first introduction the spaces between them were not used.

(*Geog.* and *Navigation.*) It is used for the equator; as, equinoxial *line*.

(*Mil.*) The regular infantry of an army, as distinguished from the militia, guards, volunteer corps, cavalry, artillery, &c.—Troops are said to be in *line* when their formation is of considerable frontage but little depth,—as opposed to *column*.

(*Fort.*) Any extended defence, as a ditch with its parapet, a row of gabions, &c.

L. of battle. (*Naut.*) The line formed by the ships of the fleet when ranged ahead and astern of each other, at equal distances, and close-hauled or nearly so. It could be formed accordingly upon either tack. The line used to be composed of ships of not less than two decks, thence called *line-of-battle ships*. The invention of steam, and the introduction of long-range guns, with iron-sided ships, and their adaptation as rams, render it probable that in future the line of battle will give way to rapid evolutions by which the vessels will seek to out-manœuvre each other.

L. of bearing. (*Naut.*) The line of bearing is formed by the ships of the fleet when ranged on a line six points from the wind, at equal distances, and with their heads in any direction whatever. The line is called by the name of that tack upon which, if the ships were to haul to the wind together, they would form the line ahead. For example: suppose the wind N, and the ships in a line W.N.W. and E.S.E. of each other; this is the *starboard* line of bearing, whether the ships are going free, or close-hauled upon the *port tack*.

L. of Defence. (*Fort.*) The line of the top of the scarp

of any work receiving flank defence; or that line together with its prolongation to the flanking work.

L. of Dip. (*Geol.*) The strata which form the crust of the globe are rarely horizontal, but incline to some point of the horizon, and rise to the opposite point; a line drawn through these points is called the line of their *dip*.

L. of Fire. (*Gun.*) The line formed by the axis of the piece produced. Whenever the gun is not laid point-blank, the line of fire forms an angle with the line of sight. This is called the *angle of elevation*.

L. of Intrenchment. (*Fort.*) When an army is encamped for a brief space of time in the open field, or engaged in offensive operations against a beleaguered town, it is not considered necessary to construct a continuous series of works, which are termed lines of intrenchment, for its defence; but a few redoubts and breastworks, thrown up here and there, are deemed sufficient for the protection of any weak part of the position that may be easily approached and assailed by the enemy's forces. Circumstances, however, may occur, under which an army is compelled to remain entirely on the defensive, when continuous lines of intrenchment, or a series of redoubts skilfully disposed, must, of necessity, be thrown up for its protection. All field-works of this kind consist of a parapet of earth about seven or eight feet high, with a banquette behind it, and a ditch in front of it; the earth which is taken out of the ditch being used in making the parapet. This part of the work should be three or four feet thick at least, if required for a protection against musketry only; but if it is intended to withstand a fire from field-pieces, it should be 12 feet in thickness. The inner and outer slopes of the parapet should be revetted with turf; and a row of palisades or sharpened stakes should be fixed at the foot of the counterscarp. The outline of the work depends entirely on the nature of the ground along which the intrenchments are to be thrown up. The best form for a continuous breastwork of great length in an open country is that of a series of redans, each formed by 2 faces about 150 ft. in length, meeting in a salient angle of 60°, the extremities of the adjacent faces of each pair of redans being connected by a curtain extending about thrice their length on 2 faces, which meet in a point a little in advance of the straight line along which the curtain would otherwise be constructed, forming an angle of 135° or 140°. When the lines of intrenchment run along the side of a river or road, and it is consequently impossible to construct them after the manner just described, from want of room to throw out the salient angles of the redans so many feet in advance of the curtains that connect them, a breastwork, resembling a set of steps in form, and consisting of a long face and a short face successively, inclined to each other in salient and reëntering angles of 100°, may be thrown up. Care must be taken to dispose the lines of direction of the faces of the works in either case in such a manner that it may be difficult for the enemy to obtain positions from which they could enfilade them with artillery. In the form of intrenchment first described, the entrances should be in the centre of the curtains; and in the zigzag lines of breastwork they should be formed in the reëntering angles. Detached works, constructed on any elevations that can be secured about the position occupied by an army, are considered better for its defence, provided that they are not at too great a distance from each other than a continuous line of parapet, as the troops are able to issue readily from them to form an extensive front for offensive operations against the enemy, and to retreat with equal facility and safety, if compelled to do so; while it is a matter of great difficulty to do either when the only means of ingress and egress are afforded by the narrow entrances in the curtains connecting the redans or the reëntering angles of the zigzag line of parapet, on which the fire of the enemy would be immediately concentrated. In addition to this, if the enemy penetrate a continuous line of intrenchments at any point, the whole line is at once turned; but they cannot advance between detached redoubts without being exposed to a galling and destructive cross-fire from them.

L. of Operation. (*Mil.*) In strategy, the line of communication from the original sources of supplies or base of operations to the army.

Lines of Partition, (*Her.*) are so called from the field

1 Horizontal; 2 Angled; 3 Bevilled; 4 Escartele; 5 Nowy; 6 Arched or Enarched; 7 Double arched; 8 Wavy; 9 Invected; 10 Engrailed; 11 Crenellee; 12 Battled or Embattled; 13 Nebuly; 14 Potent; 15 Indented; 16 Dancettee; 17 Dovetailed; 18 Raguly; 19 Rayonnee.

Fig. 1591. — LINES OF PARTITION.

or surface of the escutcheon being *parted* or divided by them, (Fig. 1591.) They are 19 in number, and are most frequently used to diversify in various manners the boundaries of ordinaries or charges. Thus, an ordinary bounded by serrated lines is said to be *indented*; if by undulating lines, *wavy*, &c. When an ordinary has two sides, and is only varied on the upper, it is said to be *super-ingrailed, super-invected*, &c.; if only on the lower, *sub-ingrailed*, &c.

Line, *v. a.* [Lat. *linum*, flax, lint, linen.] To cover on the inside with linen or other suitable material; to put in the inside. — To place along by the side of anything for guarding; to strengthen by additional works or men. —To cover; to add a covering; to strengthen with anything added.

Lineage, (*lin'e-aj,*) *n.* [Fr. *lignage*, from *ligne*, line; Lat. *linea*.] Descendants in a line from a common progenitor; race; progeny; family; house.

Lin'eal, *a.* [Fr. *lineal*; Lat. *linealis*, from *linea*, a line.] Composed of lines; delineated.

—In a direct line from an ancestor; hereditary; derived from ancestors.

—Allied by direct descent.

"For only you are *lineal* to the throne."—*Dryden.*

—In the direction of a line; as, *lineal* measurement.

Lineal'ity, *n.* State of being lineal, or in the form of a line.

Lin'eally, *adv.* In a direct line.

Lin'eament, *n.* [Fr. *linéament*; Lat. *lineamentum*, from *linea*, a line.] One of the lines which mark the features or countenance; feature; form; make; the outline or exterior of a body or figure, particularly of the face.

Lin'ear, *a.* [Fr. *linéaire*; Lat. *linearis*, from *linea*, a line.] Pertaining to a line; consisting of lines; in a straight direction.

(*Bot.*) Like a line; slender; as, a *linear* leaf.

(*Math.*) A term applied in various (more or less technical) ways, but usually to magnitude of one dimension or to functions of the first degree in a certain set of variables or facients.

Linear Advance. (*Steam-engine.*) The amount by which the stroke of the piston has made the valve to travel. — *Linear perspective.* See PERSPECTIVE.

Lin'ear-en'sate, *a.* (*Bot.*) Longsword-shaped.

Lin'ear-shaped, *a.* In the form of a line.

Lin'eate, Lin'eated, Lined, *a.* (*Bot.*) Marked with lines.

Linea'tion, *n.* See DELINEATION.

Lin'ed-gold, *n.* Gold lined with copper or some other metal; gold-leaf affixed to a leaf of some other metal.

Line Creek, in *Georgia*, enters the Whitewater Creek between Coweta and Fayette cos.

Line Creek, in *Kentucky*, a P. O. of Pulaski co.

Line Creek, in *S. Carolina*, a P. O. of Laurens dist.

Line Lex'ington, in *Pennsylvania*, a post-village of Montgomery co., adjoining Bucks co., abt. 13 m. N.N.E. of Norristown.

Lin'en, *n.* [Fr. *lin*; Ital. *lino*; Ger. *lein*; Lat. *linum*; Gr. *linon*, flax, lint.] (*Manuf.*) A general name for a cloth of very extensive use, made of flax, and differing from cloths made of hemp only in its fineness. The manufacture of linen is of so ancient a date that its origin is unknown. At a very early period linen cloths were made in Egypt, the cloth wrappings of the mummies being all composed of this substance. In the time of Herodotus linen was exported from Egypt; it also formed the dress of the Egyptian priests, who wore it at all their religious ceremonies; hence they were called *linen wearing* by Ovid and Juvenal. Linen passed from Egypt to the Romans, but not until the time of the emperors, when the Roman priests began to wear linen garments. Linen was also used as a material for writing; the Sibylline books, and the mummy bandages covered with hieroglyphics, are instances of this use of the fabric. Linen and woollen cloths formed the only material for dresses during the Middle Ages; and fine linen was held in very high estimation, the manufacture being carried to the greatest perfection in Germany and Brabant. Cotton, on account of its cheapness, has taken the place of linen for many purposes; but the best paper cannot be manufactured without linen. In the process of manufacture, the flax-fibres are first steeped and freed from woody particles. (See FLAX.) Very little machinery was used in the manufacture of linen cloth till recently. After being freed from the woody particles, the distaff and spinning-wheel were used in order to make the thread or yarn, and the hand-loom was employed for the purpose of weaving the cloth. About the middle of the 18th cent., the inventions of Hargreaves and Arkwright were first applied to the manufacture of linen, at Leeds. (See COTTON MANUFACTURE.) When brought to the spinning-mills, the flax is in small bundles, weighing a few pounds each. The first process is called *scutching*, by which the fibres are subjected to a sort of combing action, in a machine. They are next *heckled*, an operation by which they are cleaned, the coarser parts being removed and the rest arranged in a parallel direction to each other. This used to be done with the *heckle*, a sort of large comb with iron teeth; but the operation is now effected by a rotating machine, on the outer circumference of which the flax is fixed, and drawn against or between a series of sharp teeth. The fibres pass through six heckling-machines in succession, each of which has finer teeth than the one preceding it. After being heckled, the flax is divided into portions, selected according to their fineness, &c. The next process is that of *drawing*, similar to the carding process in the cotton manufacture. (See CARDING-MACHINE.) In this operation the flax is doubled and carded repeatedly, till it presents the appearance of a smooth glossy band, about an inch in width, called a *sliver*. All the good portion of the flax at this point is called *line*, and all the irregular short fibres, *tow*. This tow is not the rough substance generally known by the name: the latter is the refuse of hemp. Flax tow can be drawn, doubled, carded, and spun into yarn of coarse quality. The principal object in drawing the heckled fibres is to form a sliver of uniform thickness, or such that a foot in length taken at any one place will be equal to a foot in length taken at any other place, or as nearly so as possible. The drawn sliver is next taken to the *roving*-frame. The use of this machine is to give the sliver another drawing, also a slight twist, and to wind it upon a bobbin. These processes are all preparatory for the spinning of the yarn. This is effected on the bobbin-and-fly principle, and the flax spinning-frame acts similarly to the *throstle* used in cotton-spinning. Flax, however, differs from cotton, wool, and silk, as it is required to be wet while under the process. Formerly it was wetted with cold water, but it is now found that finer yarn can be produced when warm water is used. In general, the rove or twisted sliver, before it passes through the retaining rollers, is led through a trough of water kept hot by steam. The spun yarn is applicable either for making thread, or for weaving into linen cloth. The quality of flax is denoted by numbers expressing the number of *leas* in a pound weight, — a lea being a measure of 300 yards. Thus, No. 50 has 50 leas, or 15,000 yards. Flax is seldom spun finer than No. 200, which contains 60,000 yards. No. 200 is applicable for making cambric of fine quality. The manufacture of linen was introduced into the U. States by the establishment of a large mill in 1834 at Fall River, Mass., and the industry, since that time, has become largely extended.

Lin'en, *a.* Made of linen; as, a *linen* blouse. — Resembling linen cloth; white; pale.

Lin'en-draper, *n.* He who deals in linen.

Lin'en-scroll, *n.* (*Arch.*) An ornament used to fill panels, and so called from its resemblance to the convolutions of a folded napkin. It was much used during the 16th century.

Lin'eolate, *a.* (*Bot.*) Marked with fine or obscure lines.

Lin'er, *n.* A vessel belonging to a regular line of packets.

Line Port, in *Tennessee*, a village of Stewart co.

Lines'ville, in *Pennsylvania*, a post-borough of Crawford co., on the Pitts., Shen. & Lake Erie R.R., 14 m. W. of Meadville. Has some manufactures and a good local trade. *Pop.* (1897) 660.

Line'ville, in *Pennsylvania*, a small village of Lancaster co.

Ling, *n.* [Du. *leng*.] (*Ichth.*) The *Lota molva*, a valuable European fish, belonging to the *Gadidæ* (Cod-fish family), abundant on most parts of the British coasts and elsewhere throughout the northern seas, and in value almost equalling the cod. In addition to the generic characters of the family, it possesses the following especial one, namely, that it has a chin with one or two barbules upon it. The body of the ling is a little more elongated than the hake, being usually from three to four feet long, sometimes more, and has been known to weigh as much as 70 lbs. The back and sides are of a gray color, somewhat inclining to olive, although occasionally cinerous; the under portion of the body silvery; ventrals, white; dorsal and anal fins, edged with white; and, lastly, the caudal marked near the end with a transverse black bar, the extreme tip, like the other fins, being white. The ling is naturally an inhabitant of the northern seas, like the rest of its family. Great quantities of them are taken round the Western Islands, in the Orkneys, and on the Yorkshire and Cornish coasts. The mode of fishing for ling is by means of hand-lines and long-lines; and besides a portion that is consumed fresh, the fish are split from head to tail, cleaned, salted in brine, washed and dried. The demand, however, often falls short of the quantity cured; and thus the fishermen are poorly requited for their toil and outlay. The ports of Spain are the markets generally supplied, and so important an article of commerce was it considered that an Act for regulating the price of ling, cod, hake, &c., was passed. The air-bladders of the ling are, like those of the cod, prepared separately, and are sold under the name of *sounds*. The liver yields an oil similar to cod-liver oil, which is used as a lamp oil

Fig. 1592.—LING (*Gadus molva*).

in Shetland and elsewhere. Mr. Yarrell observes of it: "In Zealand, the principal fishing for ling is from May to August. On the Yorkshire coast, the young are called *drizzles*. In Cornwall, they are caught in January and February, and their favorite haunts are about the margins of the rocky valleys of the ocean. The ling is exceedingly prolific and of most voracious appetite, feeding on young fish, not sparing anything that has life, and the prey is swallowed whole; so that no great art is required to catch it. It is tenacious of life and survives great injury." Two other species from the coasts of Europe have been described.

(*Bot.*) A species of plants, genus *Calluna*. The name is also applied in China to *Trapa bicornis*.

Linganore', in *Maryland*, a P. O. of Frederick co.

Linganore' Creek, in *Maryland*, enters the Monocacy River in Frederick co.

Lin'gard, JOHN, the Roman Catholic historian of England, was B. at Winchester, in 1771. He was educated at the college of Douay, in France, and on its removal to England, during the French revolution, accompanied it thither. He commenced his laborious literary career in 1805, by a series of Letters on Catholic Royalty, con-

Charles Linnæus

1707–1778

tributed to a north-of-England newspaper. The work on which his fame rests, is his *History of England, from the first Invasion by the Romans to the Accession of William and Mary, in* 1688; the first editiou of which appeared hetween 1819–1825. It was subsequently considerably enlarged, and has now passed through six editions, having deservedly attained the rank of a standard work. Based, for the most part, on original researches; abounding in solid learning and acute suggestion; written in a lucid, manly, unaffected style, it is esteemed one of the hest text-books on English history yet written. While looking at ecclesiastical affairs and persons from the Roman Catholic point of view, Dr. *L.* has the merit of not overpassing the limits of fairness and moderation in his treatment of controverted matters. He was author also of the *History and Antiquities of the Anglo-Saxon Church.* The dignity of cardinal was offered to Dr. *L.*, and declined. D. at Hornby, where he had lived since 1811, in July, 1851.

Lin'gel, *n.* [Dim. of Lat. *lingua*, the tongue.] A little tongue, or thong of leather.

Lin'gen, or Lin'ga Isle, an island of the Eastern Archipelago, off the N.E. coast of Sumatra, 100 m. from Singapore, on the equator; Lat. 0° 20′ S., Lon. 104° 40′ E. *Ext.* About 50 m. long, and 30 m. at its greatest breadth. It has a healthy climate, and produces fruit and poultry in abundance. The inhabitants are Malays. *Pop.* 3,000.

Lin'ger, *v. n.* [Sax. *langian*, to draw out; Old Ger. *lengian*, from *lang*, long.] To remain or wait long; to be slow; to delay; to loiter; to tarry. — To he slow in deciding; to he in suspense; to hesitate. — To remain long in any state.

Lin'gerer, *n.* One who lingers.

Lin'gering, *a.* Drawing out in time; remaining long; protracted.

—*n.* A delaying; a remaining long: tardiness; protraction.

Lin'geringly, *adv.* Witb delay; slowly; tediously.

Lin'get, *n.* [Fr. *lingot.*] A mass of unwrought metal; an ingot. (R.)

Lin'glestown, In *Pennsylvania*, a post-village of Dauphin co., abt. 8 m. N.E. of Harrisburg.

Lin'go, *n.* Language; tongue; speech. (Vulgar.)

Lingua, (*lin'gwa,*) *n.* [Lat., a tongue.] (*Zoöl.*) The name of an organ situated within the labium or emerging from it, by which insects, in many cases, collect their food and pass it dowu the pharynx, which is situated above its root.

Lin'gua-den'tal, *a.* [Lat. *lingua*, a tongue, and *dens, dentis*, a tooth.] Formed or uttered by the joiut use of the tongue and teeth, as the letters *d* and *t*.

—*n.* A sound formed by the tongue and teeth.

Lin'gua Franc'a, *n.* (*Philol.*) The dialect spoken chiefly along the European and African coast of the Mediterranean. It is a species of corrupt Italian, mingled with words of other languages, and may be termed the Creolo tongue of the Mediterranean.

Lingual, (*lin'gwal,*) *a.* [Lat. *lingua*, a tongue.] Pertaining to the tongue.

—*n.* A sound pronounced by the tongue, as *l*.

Lin'guiform, *a.* (*Zoöl.*) Applied to the tongue of an insect, when it is quite distinct from the labium, usually retracted within the mouth, short, and shaped something like a vertebrate tongue.

Lin'guist, *n.* [Fr. *linguiste.*] A person skilled in languages.

Linguis'tic, or Linguis'tical, *a.* [Fr. *linguistique.*] Pertaining to linguistics.

Linguistics, (*lin-gwis'tiks,*) *n. sing.* The comparative and philosophical study of languages; the science which treats of the origin, various senses, and application of words.

Lin'gulate, *a.* (*Bot.*) Linguiform.

Ling'worts, *n. pl.* (*Bot.*) Same as Heathworts. See Ericaceæ.

Lin'gy, *a.* Strong; active; tall. — Idle; loitering. — Supple; flexible. (Local Eng.)

Linhares, (*leen-ya'rees,*) a town of Brazil, on the river Doce, abt. 30 m. above its moutb in the Atlantic.

Linig'erous, *a.* [From Lat. *linum*, flax, and *gero*, to bear.] Bearing or producing flax.

Lin'iment, *n.* [Fr.; Lat. *linimentum*, from *lino, linitum.*] (*Med.*) An oily substance of a consistence intermediate between an ointment and oil, but so thin as to drop. The term is also applied to a spirituous or other stimulating application for external use.

Lin'ing, *n.* The covering of the inner surface of anything, as of a garment or a box. — That which is withln.

—Act of drawing lines upon, or of marking with lines.

Link, *n.* [Ger. *gelenk*, a joint, a ring, a link, from *lenken*, to bend; Sw., Goth. *lanka*, to connect, to join together.] A single ring or division of a chain. — Anything doubled and closed like a link. — A chain; anything connecting. — Any single constituent part of a connected series, as of an argument. — A torch made of tow or hards, &c., and pitch.

(*Steam-engine.*) One of the flat or round pieces of Iron, with round holes at each end, which are nsed to connect together, by bolts, different parts of the mechanism of the engine. — *Link-motion* and apparatus for reversing steam-engines: it is used in locomotive engines instead of the reversing forks, and consists of a link with a slot from end to end, into which a guide-block fits, and is connected to the slide-valve rod: the rods of the two eccentrics are connected one to each end of the link, which is raised or lowered, or held in a central position, hy apparatus attached to the centre of it, moved by the reversing lever. When the link is in a central position with regard to the slide-valve rod, the guide-block remains stationary, as it is then at the centre upon which the link vibrates. Wheu the link is up, the guide-block is at the lower end, and the slide receives motion from tho backward eccentric. When the link is down, it receives motion from the forward eccentric.

Link, *v. a.* To join or connect, as by links: to complicate. — To unite or connect by something intervening or in another manner.

"*Link* towns to towns with avenues of oak." — *Pope.*

—*v. n.* To be connected.

Link'boy, or Link'man, *n.* A boy or man that carries a torch to accommodate passengers with light.

Linklaen, (*link-lān',*) In *New York*, a post-township of Chenango co.

Linköping, (*lin'che(r)-ping,*) a town of Sweden, and cap. of dist. of the same name, on the Stoeng, which here flows into Lake Roxeu, 110 m. S.W. of Stockholm. It is regularly built, with fine market-places and public squares, but the houses are mostly of wood. The cathedral, a Gothic edifice, is one of the finest in Swedeu, and contains many monuments of illnstrious personages *L.* also possesses a library of over 30,000 vols. Its trade is considerable. *Pop.* estimated at 6,300.

Lin'lithgo, in *New York*, a post-office of Columbia co.

Linlithgow, or West Lothian, (*lin'lith-go,*) a co. of Scotland, hounded on the N. by the Frith of Forth, and having tbo cos. Mid-Lothian, Lanark, and Stirling on the E., S., and W.; *area*, 127 sq. m., of which tbree-fourths are arable. It is triangular in shape, and though the surface is varied, there are no hills of any consequence. In the S. part of the co. the ground is marshy, but elsewhere the soil is fertile. *Rivers.* Almond and Avon. *Towns.* Linlithgow, Queensferry, Bathgate, are the principal. *Min.* Coal, limestone, lead, freestone, and ironstone. *Prod.* The nsual cereals; also turnips and potatoes, of which extensive crops are raised. The chief articles of traffic are salt, lime, freestone and coal. *Pop.* estimated at 42,500.

Linlithgow, a town of Scotland, cap. of the above co., on a lake of the same name, 18 m. W. of Edinburgh. It was founded in the 12th century, and contains the ruins of the palace in which queeu Mary Stuart was horn in 1542. *Pop.* 4,000.

Linn, in *Illinois*, a township of Woodford co.

Linn, in *Iowa*, an E. co.; *area*, about 720 sq. m. *Rivers.* Cedar and Wapsipinicon rivers, and several considerable creeks. *Surface*, diversified; *soil*, remarkably fertile. *Cap.* Marion. *Pop.* (1895) 49,905.

—A towusbip of Cedar co.

—A township of Dallas co.

—A township of Linn co.

Linn, in *Kansas*, an E. co., adjoining Missouri; *area*, about 637 sq. m. *Rivers.* Osage river and Sugar creek. *Surface*, generally level; *soil*, very fertile. *Min.* Coal. *Cap.* Mound City. *Pop.* (1895) 16,278.

—A post-township of Washington co.

Linn, in *Kentucky*, a village of Greenup co., about 120 m. E.N.E. of Frankfort.

Linn, in *Missouri*, a N. co.; *area*, about 620 sq. m. *Rivers.* Grand river, and Locust, Yellow, Wolf, and Elk creeks. *Surface*, generally level; *soil*, fertile. *Cap.* Linneus. *Pop.* (1890) 24,121.

—A post-village and township, cap. of Osage co., about 22 m. S.E. of Jefferson City.

Linn, in *Oregon*, a N.W. central co.; *area*, about 2,700 sq. m. *Rivers.* Willamette, Santiam, and Mackenzie rivers. *Surface*, diversified, the Cascade Range forming tbe E. boundary; *soil*, very fertile, especially along the streams. *Cap.* Albany. *Pop.* (1897) about 17,500.

Linn, in *Wisconsin*, a township of Walworth county.

Linnæ'a, *n.* [In honor of *Linnæus*, the celebrated Swedish naturalist.] (*Bot.*) A genus of plants, order *Caprifoliaceæ.* They are trailing evergreen herbs, widely disseminated throughout the N. temperate zone. *L. Borealis*, tbe Twin-flower, is a solitary species. It has long, creeping, filiform stems, rooting and branching their whole length, and covering the ground in large pods. Its flowers are rose-colored and very fragrant.

Linnæ'an Sys'tem, *n.* (*Bot.*) The order or methodical arrangement of plants adopted by Linnæus, the Swedish naturalist, early in the 18th century. This system had the most surprising success, on account of its extreme simplicity, and the singular facility which it affords for attaining a knowledge of the names of plants. Up to that time each species was named by a characteristic phrase, in which the distinctive characters were frequently not included. These phrases were so long, that it was very difficult to retain any number of them in the mind. By the Linnæan system, a proper or generic name was given to each group or genus; and each species of these genera was designated by a specific name added to the generic. By this ingenious contrivance, the study of botany, then very extensive, was quickly simplified. — See Botany.

Linnæ'us, Charles, or Carl Von Linné, one of the greatest systematic botanists and naturalists the world has ever seen, was b. in Sweden in 1707. Sweden is justly proud of having given birth to Linnæus. His father was a poor clergyman in a rural district, who could scarce afford to give his son an education for a profession, and was at one time nearly apprenticing him to a shoemaker; and yet we see this son in after-years, by dint of his own genius and talents, rising to the rank of a nobleman, and exercising, even while alive, a most extraordinary and universal influence over the whole science of Natural History. During the earlier years of his life he endured many privations and much poverty; but his extensive acquirements procured him numerous friends, and, in 1741, at the age of 34, he succeeded in being appointed to the professorship of medicine at the university of Upsala, where he had studied in his youth; Rosen was professor of botany, a chair which Linnæus would have preferred, but by an amicable arrangement the former lectured on medical subjects, while the latter taught Natural History. Previous to his appointment to this chair Linnæus had travelled through Lapland, where he had been sent by the Academy of Sciences for the purpose of exploring the natural history of that arctic region; he had visited and examined the great mines of Sweden, where he acquired a good knowledge of mineralogy; he had explored the natural history of Dalecarlia, for which purpose he had been sent by the governor of that province; he had visited Denmark, Germany, Holland, and England, and had thus laid up a vast store of knowledge in all the three kingdoms of nature. The extent of this knowledge may be judged of from his *Systema Naturæ*, a work which has now been before the world for more than a century; and which, notwithstanding that our acquaintance with the objects of nature has increased a hundred-fold since his time, is almost indispensable to every naturalist even at the present day. His acquirements in Natural History were universal; still it is in Botany that he has obtained most success and his greatest glory. His arrangement of plants by the sexual system, or by the number, disposition, &c., of the stamina and pistils, maintained the pre-eminence over all rival systems till very lately; and even now, though superseded in a great measure by the natural method of Jussieu, retains a most useful place in the study of Botany. The binomial nomenclature which he introduced into Botany and Zoölogy, or the use of trivial or specific names appended to the generic, to distinguish the different species of animals and plants, is one of the most important helps to the advancement of the study of Natural History that has ever been discovered, and which alone would have immortalized the name of Linnæus. In 1747 *L.* was appointed physician to the king; in 1753 he was created a Knight of the Polar Star; and in 1757 he was raised to the rank of nobility. D. 1778.

Linn City, in *Oregon*, a village of Clackamas co., on the Willamette River, opposite Oregon City.

Linn Creek, in *Missouri*, a post-vill., cap. of Camden co., abt. 50 m. S.S.W. of Jefferson City.

Lin'net, *n.* [Fr. *linot*; A. S. *linetwege.*] A genus of small birds of the family *Fringillidæ*, nearly resembling the true finches, gold-finches, &c. The bill is short, straight, conical, and pointed; the wings long, and somewhat pointed; the tail forked. The species are widely distributed in the northern, temperate, and arctic regions, but much confusion has arisen concerning them, from the difference between the plumage of the breeding-season and that of the greater part of the year. The common *L.* (*L. cannabina*), or Gaeatea Redpole, is common in almost every part of Europe, and extends over Asia to Japan. In size it is about equal to the chaffinch. In its winter plumage, its prevailing color is brown, the quill- and tail-feathers black with white edges; in the nuptial-plumage, the crown of the head and the breast are bright vermilion color, and a general brightening of color takes place over the rest of the plumage. This change of plumage causes it to be designated the brown, gray, or rose *L.*, according to the season of the year and the sex. The sweetness of its song makes it everywhere a favorite. It sings well in a cage, and readily breeds in confinement; but the brightness of the nuptial-plumage never appears. The *L.* abounds chiefly in somewhat open districts, and seems to prefer uncultivated and furze-covered grounds. Its nest is very often in a furze-bush or hawthorn-hedge; is formed of small twigs and stems of grass, nicely lined with wool or hair; the eggs are four or five in number, pale bluish-white, speckled with purple and brown. Linnets congregate in large flocks in winter, and in great part desert the uplands, and resort to the sea-coast. — The Mealy Redpole (*L. canescens*) is also a widely distributed species, and is found in N. America, as well as in Europe and Asia, chiefly in very northern regions. In size, it is nearly equal to the Common Linnet. By some it is regarded as a larger variety of the Lesser Redpole or Common Redpole (*L. linaria*, or *Ægiothus linaria*). The forehead, throat, and lore, are black; in the spring-plumage, the crown of the head is deep crimson; the general color is brown of various shades. This species is common in all the northern parts of the world. Audubon says few birds exhibit a more affectionate disposition than this; and he enjoyed the pleasure of seeing several on a twig feeding each other by passing a seed from bill to bill, and one individual actually receiving food from two of his companions at the same time.

Fig. 1593.
LINNET, or LESSER REDPOLE OF AMERICA.

Lin'neus, In *Maine*, a post-township of Aroostook county.

Linneus, in *Missouri*, a post-village, cap. of Linn co., abt. 116 m. N.W. of Jefferson City.

Linn Grove, in *Iowa*. See Lynn Grove.

Linn Grove, in *Indiana*, a post-office of Adams co.

Linnhe, (Loch,) (*lin'he,*) an arm of the sea on the W. coast of Scotland, between the cos. of Argyle and Inverness. *Ext.* 20 m. long; breadth 8 m. It has several branches, which take the names of Lochs Etive, Leven, and Creran.

Linn's Valley, in *California*. See LYNN'S VALLEY.
Linn'ville, in *Missouri*, a village of Jefferson co., abt. 40 m. S.W. of St. Louis.
Linnville, in *Ohio*, a post-village of Licking co., abt. 37 m. E. of Columbus.
Linn'ville River, in *N. Carolina*, enters the Catawba River from Burke co.
Lin'seed, Lint'seed, *n.* (*Bot.*) The seed of the flax-plant. See LINUM.
Lin'seed-oil, *n.* See LINUM.
Lin'sey, *n.* Linsey-woolsey.
Lin'sey-wool'sey, *a.* Made of linen and wool;—hence, vile; mean; of different and unsuitable parts.
—*n.* A stuff made of linen and wool mixed.
Lin'stock, *n.* A staff of wood with a match at the end of it, used by gunners in firing cannon.
Lint, *n.* [Sax. *linet;* Lat. *linteum*, a linen cloth, from *linum*, flax.] Flax.—Linen scraped into a soft substance, and used for dressing wounds and sores.
Lin'tel, *n.* [Fr. *linteau;* Sp. *lintel*, from O. Lat. *limentum*, from *limen*, a threshold, the head- or foot-piece of a door.] (*Arch.*) The head-piece of a door-frame or window-frame; the part of the frame that lies on the side-pieces.
Lin'ton, in *Indiana*, a post-town of Greene co., about 88 m. S. W. of Indianapolis. *Pop.* (1897) 1,110.
—A township of Vigo co.
Lin'ton, in *Iowa*, a twp. of Allamakee co.
—A village of Des Moines co., abt. 21 m. N. by W. of Burlington co.
Lin'ton, in *Ohio*, a township of Coshocton co.
Lin'ton, in *Oregon*, a village of Multnomah co., on the Willamette River, abt. 5 m. below Portland.
Lin'ton Mills, in *Ohio*, a post-office of Coshocton county.
Lin-tsing', a city of China, province of Shan-tung, 70 m. W. of Tse-nan-foo. It has numerous mosques and temples, one of the latter containing 9 towers, besides a colossal golden idol. It is said to be quite a commercial city. *Pop.* unknown.
Li'num, *n.* [Lat., flax.] (*Bot.*) The most important genus of the ord. *Linaceæ*. The liber-fibres of *L. usitatissimum*, when prepared in a certain way, constitute *flax*, of which linen fabrics are made. Linen, when scraped, forms *lint*, which is so much used for surgical dressings. The short fibres of flax which are separated in the course of its preparation, constitute *tow*. The seeds of the flax-plant are called *linseed*. The seed-coat contains much mucilage, and the nucleus of the seed oil. The oil may be readily obtained from the seeds by expression; the amount depends on the method adopted, and varies from 18 to 27 per cent. *Linseed-oil* is especially remarkable for drying rapidly when applied to the surface of any body exposed to the air, and thus forming a hard transparent varnish. This property of drying quickly is much developed by previously boiling the oil, either alone or with some preparation of lead. The cake left after the expression of the oil is known as

Fig. 1594. — PERENNIAL FLAX, (*Linum perenne.*)

oil-cake, and is much used as food for cattle. When powdered it is commonly sold as *linseed-meal*, which is much used for making poultices and for other purposes. The linseed-meal, however, as directed to be used in the Pharmacopœia, is merely linseed powdered; hence it contains the oil, which is not present in ordinary meal.
Linus. The traditional bishop of Rome, succeeding Peter. D. A. D. 80.
Lin'ville, in *Nor. Car.*, a post-township of Mitchell co.
Lin'wood, in *Minnesota*, a post-township of Anoka co.
Linwood, in *Ohio*, a post-village of Hamilton co.
Linwood, or LINWOOD STATION, in *Pennsylvania*, a post-village of Delaware co., about 4 m. S.W. of Chester.
Linwood, in *Wisconsin*, a township of Portage co.
Linz, or **Lintz,** the capital of Upper Austria, on the Danube, 100 miles W. of Vienna. It is well built on both sides of the Danube, connected by a bridge, and fortified by a circle of 32 forts. The houses are handsomely built and ornamented, and the streets are wide though poorly paved. Among its institutions are the Lyceum, to which is attached a public library of 40,000 vols., a provincial academy of arts, military schools, &c. *L.* has a large imperial factory of broad-cloths, carpets, and other woollen stuffs. *L.* has many other factories for manufacturing woollens, cottons, silks, gold-lace, &c. The navigation of the Danube brings a lively trade to *L.*
Li'on, *n.* [Fr.; Lat. *leo, leonis*; Gr. *leon, leontos.*] (*Zoöl.*) This rapacious animal, erroneously described by the ancients as the king of beasts, belongs to the family of the *Felidæ*, of which it is the type. The dental formula of the lion may be thus scientifically expressed:

$$\text{Incisors } \frac{6}{6}, \text{ canines } \frac{1-1}{1-1}, \text{ molars } \frac{4-4}{3-3}; \text{ total } 30.$$

When called into action, these teeth act like the antagonistic blades of a pair of scissors upon the substance submitted to their cutting edges. The canine teeth are very long and large. The feet of the lion, like the rest of the cat family, exhibit one of the most beautiful conformations of nature. In walking, only the soft parts touch the ground; and hence their tread is noiseless. The lion thus glides along with a stealthy pace until it crouches within proper distance, when it springs with fearful velocity and force upon its unsuspecting prey. Another adjunct of terror with regard to this animal is the fearful roar which it emits at the moment it pounces on its prey; its unhappy victim being deadened, as it were, with fright at the same moment as it feels its

Fig. 1595. — THE LION.

enemy's talons and murderous teeth. The other generic characteristics of the animal will be found given under the article FELIDÆ. Formerly only one species of the lion was admitted by zoölogists; but of late, as discovery has opened fresh fields for investigation, it would appear that there are several degrees and varieties of this animal. At one time they must have been, from the frequent allusions made to them in Scripture, tolerably abundant in Syria, Palestine, and Egypt; but at the present day they have totally disappeared from those countries. Of all the different varieties which have been observed by naturalists, the African lion (*Leo Africanus*) is by far the finest, most powerful, and the most ferocious. Of this there are three different specimens, which may be thus enumerated,—the Barbary lion, from Barbary and North Africa; the Senegal lion, from Senegal and the west of Africa; and, lastly, the Cape lion, from S. Africa and the Cape of Good Hope. The general prey of the African lion consists of the larger herbivorous quadrupeds; and there are few of these which it is unable to master. When aroused, lions retreat slowly; and if no cover is near, when they have got to a sufficient distance, they bound away at a prodigious rate. They seldom, if ever, invite conflict with man, always trying to retreat; but when they are shot at, and are wounded, they then turn on their pursuer with fearful ferocity. The color of the African lion is generally a tawny yellow, like the general class *Leo;* the only exception being the Cape lion, which is of a more brownish color. Of Asiatic lions there are three varieties,—the Bengal, the Persian, and the maneless lion of Guzerat. The first of these is smaller in size, with a less extensive mane, and it is usually of a lighter color than the African. It also does not possess the same degree of courage which distinguishes the latter. The Persian lion is characterized by the pale-yellow color of his fur. The maneless lion of Guzerat is distinguished from the other species of lions by its being nearly destitute of that appendage, the mane, which is a striking feature of the African and Beugal lions. This variety is found in Guzerat, along the banks of the river Somberuuttee, near Ahmedabad, extending through a large tract of country about 40 m. in length. See FELIDÆ.

(*Astron.*) See LEO.

(*Her.*) A beast, of which the figure is very commonly borne as a charge. The attitudes in which the lion is represented are very various. See COUCHANT, GARDANT, PASSANT, RAMPANT, REGARDANT, SALIENT, SEJANT, &c.

—An object of peculiar interest or curiosity; as, "the *lion* of the day." — *Worcester.*
Li'on-ant, *n.* The ant-lion. See MYRMELEON.
Lioned, (*li'unst,*) *a.* (*Her.*) Adorned with lion's heads, as a cross.
Li'oncel, *n.* (*Her.*) A young lion.
Li'onel, *n.* A young lion.
Li'oness, *n.* The female of the lion kind.
Li'onet, *n.* A young or a little lion.
Li'onism, *n.* The act of attracting notice, as a lion.
Li'onize, *v. a.* To make a lion of; to cause to be an object of interest or curiosity. — To exhibit the objects of curiosity to.
Li'on's-foot, *n.* (*Bot.*) See LEONTOPODIUM.
Li'on's-leaf, *n.* (*Bot.*) See LEONTICA.
Li'on's-tail, *n.* (*Bot.*) See LEONURUS.
Li'on's-tooth, *n.; pl.* LION'S-TEETH. (*Bot.*) See LEONTODON.
Li'onville, in *Pennsylvania*, a post-village of Chester co., abt. 31 m. W. by N. of Philadelphia.
Lip, *n.* [A. S. *lippa;* Lat. *labium.*] (*Anat.*) The outer edge or border of the mouth. The lips are formed by muscular fibres, glands, and cellular tissue, covered by mucous membrane. They owe their extremely red color to the thinness of the covering membrane, and their sensitiveness to an abundant supply of minute nervous fibres. They are not unfrequently affected with cancer. (See CANCER.) The lips form part of the organs of speech, and are necessary to the pronunciation of certain letters, which are hence called *labials* or *lip-letters.*

(*Bot.*) Same as LABELLUM, *q. v.*
—*v. a.* To kiss; to touch with the lips.
Lipari Islands, (*lip'a-re,*) a group of volcanic islands in the Mediterranean, 12 in number, on the N. coast of Sicily, prov. of Messina; Lat. between 38° 20′ and 38° 55′ N., Lon. 14° 15′ and 15° 15′ E. There are 7 principal islands, — Lipari, Vulcano, Stromboli, Salini, Panaria, Felicudi, and Alicudi. They are all mountainous, rising abruptly on the W. side, and shelving gradually towards the E.; and in addition to this uniformity, each island has a high, isolated rock off the N. shore. The climate is salubrious, and air refreshing, though storms and earthquakes are frequent. Where the volcanic substances have become decomposed so as to form soil, it is very fertile. *L.*, the principal island, and from which the group takes its name, is about 18 m. in circumference, and is much cultivated, producing grapes, figs, and olives in large quantities. *Min.* Pumice-stone, which it sends to all parts of the world, sulphur, soda, and nitre. *Pop.* 16,000. Its principal town is of the same name, and has a population of about 1,000.
Lipar'is, *n.* [Gr. *liparos*, elegant, shining; a term characteristic of these plants.] (*Bot.*) A genus of plants, order *Orchidaceæ*. The principal American species is *L. lilifolia*, the Tway-blade, found in wet woods from Canada S. to the Carolinas, and W. to Ohio; flowers from 10 to 20, in a terminal, rather showy raceme.
Lipar'ocele, *n.* (*Med.*) A fatty tumor.
Lip'-devo'tion, *n.* Prayers uttered by the lips without the desires of the heart.
Lipetzk, (*le-petzk'.*) a town of European Russia, govt. Tambov, on the Voronetz, 80 m. W. of Tambov, and founded by Peter the Great in 1700. It contains mineral springs, and is a great resort for visitors during the summer months. *Manuf.* Woollen cloths. *Pop.* abt. 13,500.
Lip'ic Acid, *n.* (*Chem.*) One of four fixed fatty acids remaining in the retort when oleic acid is distilled with nitric acid.
Lip'-good, *a.* Good in words, but not in practice. (R.)
Lip'-labor, *n.* Labor or action of the lips without concurrence of the mind; words without sentiments.
Lip'less, *a.* Without lips.
Lip'let, *n.* A little lip.
Lip'ogram, *n.* [Gr. *leipo*, to leave out, and *gramma*, a letter.] (*Lit.*) A species of verse characterized by the exclusion of a certain letter, either vowel or consonant. The earliest author of lipogrammatic verse was the Greek poet Lasus (born 538 B. C.); and it is recorded of one Tryphiodorus, a Græco-Egyptian writer of the same period, that he composed an Odyssey in 24 books, from each of which, in succession, one of the letters of the Greek alphabet was excluded. Fabius Claudius Gordianus Fulgentius, a Christian monk of the 6th century, performed a similar feat in Latin. In modern times, the Spaniards have been most addicted to this laborious frivolity, and Lope de Vega has written five novels, from each of which one of the vowels is excluded.
Lipogrammat'ic, *a.* See LIPOGRAM.
Lipo'ma, *n.* [Gr. *lipos*, fat.] (*Surg.*) A soft, indolent tumor, arising from a luxuriance of fat in the cellular membrane.
Lipothym'ic, *a.* Tending to swoon or faint.
Lipoth'ymous, *a.* Swooning; fainting.
Lipoth'ymy, *n.* Swoon; fainting-fit.
Lip'pe, a river in Germany, rising 3 m. N.E. of Lippspring, and after a W. course of 100 m., joining the Rhine at Wesel.
Lipped, (*lipt,*) *a.* Having lips; having a raised or round edge like a lip.

(*Bot.*) Same as LABIATE.
Lip'pe-Det'mold, a German principality, between Lat. 51° 47′ 30″ and 52° 11′ N., Lon. 8° 35′ and 9° 20′ E., bounded on the W. and S. by Westphalia, on the E. and N. by Hanover, Brunswick, Waldeck, and Hesse Cassel; *area*, 445 square miles. The country is generally hilly, especially in the S.W., where the Teutoburger Wald separates the basins of the Rhine and the Weser. The climate is one of the mildest and most agreeable in N. Germany, and the soil is very fertile in the valleys. The chief occupation of the inhabitants is agriculture and the rearing of cattle, sheep, and swine. The chief towns are Detmold, the cap., and Lemgo. *Rivers.* Weser and the Werra. *Manuf.* Linens, woollens, glass, paper, &c. *Min.* Iron, marble, lime, and salt. *L.* has also a large export trade in timber. The Teutoburger Wald is famous as the region where the Roman legions of Varus were annihilated by Arminius, the German chief, A. D. 10. *Pop.* 111,352. — DETMOLD, cap. of the above state, situated on the Werra, 47 m. S.W. of Hanover, consists of an old and new town, the latter of which is well built, and adorned with gardens and public walks. Among its public buildings are the palace, a fine castellated edifice, and the public library. *Pop.* 6,202.
Lip'pe-Schaum'burg. See SCHAUMBURG-LIPPE.

Lip'pi, Fra Filippo, one of the greatest Italian painters, was the son of Tommaso Lippi, a hutcher of Florence, where he was b. about 1412. Early left an orphan, he was placed in the monastery of the Carmen in 1420, and lived there twelve years. He showed great taste for drawing, and probahly studied the great works of Masaccio in the Brancacci chapel. He is said to have painted in the cloister a companiou fresco to one of Masaccio's, but whatever he did there has since perished. The usual story of his life is that he left the monastery in 1430 and went to Ancona; was there captured by pirates and sent as a slave to Africa; by his skill in drawing obtained his liberty iu 1435, and went to Naples, and shortly after returned to Florence; that he executed great works at Florence, Arezzo, Prato, and Spoleto; that at Prato he seduced a young maiden, Lucrezia Buti, who was being educated in the convent, and sat to him for a Madonna, and carried her off; that this brought him into endless trouble, and that at last he was poisoned. Considerable doubt is now thrown upon many of the gravest points of this story. It is certain that Fra Filippo did not leave the Carmelite monastery till 1432, and that throughout his life he retained the appellation of Fra, or Frater; his capture is believed to be a myth; there is no evideuce of his living at Ancona or at Naples; the tale of the seduction rests solely on the testimony of Vasari, as does that of the poisoning. It is certain that, although he had more commissions as a painter than he could execute, he was almost constantly struggling with poverty in consequence of having a number of female relatives dependent on him. In 1442 he was appointed chaplain to the convent at San Giovannino at Florence, and five years later rector of San Quirico at Legnaia. As an artist he belongs to the school of Masolino, Angelico, and Masaccio, and his works show that he was incessantly active and progressive to the last. Among his most famous works are the altarpiece of the Barbadori chapel; a Coronation of the Virgin, painted in 1441, and now in the Academy of Arts, Florence; frescoes of scenes from the lives of St. Stephen and John the Baptist, in the Duomo of Prato, painted in 1456–65; the Transit of St. Bernard, in the same church; and frescoes in the cathedral of Spoleto. There are many fine pictures of Fra Filippo in the galleries of Florence, Munich, Berlin, and in the British National Gallery. Died at Spoleto, 1469. A monument was there erected to him by Filippino Lippi, his reputed son hy Lucrezia Buti, at the expense of Lorenzo the Magnificent.

Lip'pia, *n.* [In honor of *Augustus Lippi*, a French physician.] (*Bot.*) A genus of plants, order *Verbenaceæ*. They are shrubs or prostrate herbs, with opposite leaves; heads on axillary peduncles. The principal American species is *L. nodiflora*, the Fog-fruit, a perennial plant, with small purplish-white flowers, fouud throughout the Middle, S., and W. States.

Lip'pitude, *n.* [Lat. *lippitudo*, from *lippus*, bleareyed.] (*Med.*) The disease commonly called *bleared-eyes*, consisting in a puriform exudation from the margin of the eyelids, which often causes them to adhere together after sleep.

Lipp'stadt, a town of Germany, 38 m. from Munster; *pop.* 5,000.

Lip'-wisdom, *n.* Wisdom in talk without practice; wisdom in words not supported by experience.

Lip'-work, *n.* Lip-labor.

Lip'yl, (Oxide of.) (*Chem.*) An hypothetical body, supposed by Berzelius to form the base of oils and fats, and to unite with two equivalents of water to form glycerine at the moment of decomposition. *Form.* C_3H_2O.

Liq'uable, *a.* That may he melted.

Liqua'tion, *n.* [L. Lat. *liquatio*, from *liquo*, *liquatus*, to make liquid, to melt.] Act or operation of melting; liquefaction. — The capacity of being melted.

(*Metal.*) The act or process of separating for fusion two metals unequally fusible; eliquation.

Liquefa'cient, *n.* (*Med.*) A medicinal agent, which seems to have the power of liquefying solid depositions. To this class mercury, iodine, &c., have heen referred by some. — *Dunglison.*

Liquefaction, (*lik-we-fāk'shun,*) *n.* [Lat. *liquefactio.* See Liquefy.] (*Chem.*) The act or operation of melting or dissolving, or the conversion of a solid into a liquid by the agency of heat. When heat is applied in sufficient quantity to any solid body, it changes its form and becomes liquid. In the case of ice, this change is called liquefaction; hut in the case of metals it is more frequently called *fusion*. Under the combined influence of pressure and great cold, nearly all the gases have heen liquefied. Bodies require very various degrees of temperature for hquefaction. Mercury, for example, fuses at 39° F. below zero; while wrought-iron requires a temperature as high as 3,280°. See Gases, Liquefaction of.

Liq'uefiable, *a.* That may be melted.

Liq'uefier, *n.* That which liquefies or melts any solid substance.

Liq'uefy, *v. a.* [Fr. *liquefier*, from Lat. *liquefacio* — *liqueo*, to be fluid or liquid, and *facio*, to make.] To melt; to dissolve; to convert from a fixed or solid form to that of a liquid; to melt by the sole agency of heat. —*v. n.* To become liquid; to he melted.

Liques'cence, Liques'cency, *n.* [Lat. *liquescentia.*] Aptness to become liquid, or to melt.

Liques'cent, *a.* [Lat. *liquescens*, from *liquesco*, to become fluid.] Becoming liquid; melting.

Liqueur, (*lik-yure',*) *n.* [Fr.] A palatable spirituous cordial composed of water, alcohol, sugar, and some aromatic infusion extracted from fruits, seeds, &c. Different liqueurs vary according to the proportions of sugar and alcohol contained in them. Among the French they are divided into three classes. First, the *ratafias*, or simple liqueurs, in which the sugar, the alcohol, and the aromatic substance are in small quantities. Among these are anise-water, noyau, and the apricot, cherry, and other ratafias. The second division consists of the oils, or fine liqueurs, with more saccharine and spirituous matter, as anisette, curaçoa, &c. The third are the creams, or superfine liqueurs, such as rosoglio, maraschino, Dantzic water, &c. In some cases, the same aromatic infusion may give its name to two different liqueurs, according to the proportion of their constituent materials; as *eau de noyau* and *crême de noyau.*

Liq'uid, *a.* [Lat. *liquidus*, from *liqueo.*] Fluid; not fixed or solid; watery; in the form of water. — Soft; clear; smooth, as melody. — Pronouuced without a jar; smooth, as certain letters.

—*n.* A letter which has a smooth, flowing sound, or which flows smoothly after a mute, as *l* and *r* in *bla*, *bra*. *M* and *n* are also called liquids.

(*Phys.*) A fluid; a material substance the particles of which have a perfect freedom of motion, without any sensible tendency to approach to or recede from one another, except by the action of some external power. Liquidity, as a condition of matter, is therefore comprehended iu the condition of fluidity. (See Fluid.) The particles of a liquid are held together with considerable force, notwithstanding their freedom of motion, since a small quantity of a liquid has a tendeucy to take a spherical form when at a distance from any substance for which its particles have greater affinity than for one another. This is particularly apparent in mercury, oil, and water. The first of these, upon being allowed to drop on a table, separates itself into globules; and the two others take a similar form when a small quantity of either is suspended from the extremity of a pointed object.

Liquid Air. See Gases, Liquefaction of.

Liquidambar, (*lik'wid-ăm'bar,*) in Bot., a genus of balsamiferous trees, constituting the nat. ord. *Altingiaceæ*, or *Balsamifluæ*. There are three species, which are natives of the warmer parts of India, N. America, and the Levant. *L. Orientale* yields the *liquid storax* of the shops; this is obtained from the inner bark, which is afterwards used by the Turks for the purpose of fumigation, and is the *cortex thymiamatis*, or *storax-bark* of pharmacologists. In Cyprus the tree is called *xylon effendi*, the "wood of our Lord." *L. styraciflua*, an American tree, yields by incision a fluid balsamic juice, called *liquidambar*, or *copalm balsam*. *L. altingia* (Fig. 96), a native of Java, yields a similar fragrant balsam. In their effects and uses, these products resemble the balsams of Peru and Tolu, benzoin, &c.

Liq'uidate, *v. n.* [Fr. *liquider;* It. *liquidare;* L. Lat. *liquido*, *liquidatus.*] To dissolve; to clear from all obscurity; to diminish or lessen; to settle; to adjust. — To ascertain or reduce to precision in amouut; to pay; to settle, adjust, and satisfy, as a debt.

Liquida'tion, *n.* [Fr.] The act of liquidating; act of settling and adjusting debts, or ascertaining their amounts, or the balance due.

Liq'uidator, *n.* [Fr. *liquidateur.*] He or that which liquidates or settles.

Liquid'ity, *n.* [Fr. *liquidité.*] Quality of being fluid or liquid; thinuess.

Liq'uidize, *v. a.* To reduce to the liquid state.

Liq'uidly, *adv.* In a liquid manner; smoothly.

Liq'uidness, *n.* The quality of being liquid; fluency.

Liq'uor, *n.* [Fr. *liqueur;* Lat. *liquor*, from *liqueo*, to be liquid.] A liquid or fluid substance; — commonly applied to spiritnous fluids. — See Liqueur.

Liquor Am'nii, *n.* (*Chem.*) The liquid contained in the membrane euveloping the fœtus of most mammiferous animals. It contains mucus, albumen, grape-sugar, and the chlorides, sulphates, and phosphates of sodium and potassium in aqueous solution.

Liquor of Cadet, Alcassin, Oxide of Cacodyl, *n.* (*Chem.*) A volatile and very poisonous liquid formed on heating arsenious acid with acetate of potash. It has an extremely disagreeable odor, and its vapor is a powerful irritant to the eyes and nose.

Liq'uorice, *n.* See Glycyrrhiza.

Li'ra, *n.* [Lat. *libra.*] An Italian silver coin of greater or less value according to time and place. The Tuscan lira was equal to 80 French centimes; the Austrian lira, or *zwanziger*, was about the same value. The present Lira Italiana, or Lira nuova, of the Italian kingdom is equal to the French franc, and is divided into 100 centimes = 20 cents.

Liria, (*ler'e-a,*) a town of Spain, prov. of Valencia, 20 m. N.W. of Valencia. It is situated between two hills, and has a neglected appearance. *Manuf.* Linens, earthenware, and brandy. The marble quarried near *L.* is celebrated for its whiteness and fine grain. *Pop.* estimated at 9,800.

Lir'icon-fau'cy, *n.* (*Bot.*) The Lily of the Valley. See Convallaria.

Lirioden'dron, *n.* [Gr. *leirion*, a lily; *dendron*, a tree.] (*Bot.*) A genus of plants, order *Magnoliaceæ*. They are trees with large and fragrant flowers. The principal American species is *L. tulipifera*, the Tulip-tree, White Wood, or Poplar, a fine tree, and one of the most remarkable of the American forests. It flourishes in all parts of the U. States, and in the W. usually attains the height of 125 feet, with a perfect straight and cylindrical trunk. Leaves dark-green, smooth, truncate at the end, with two lateral lobes, 3 to 5 inches in length and breadth, on long petioles. In May and June it puts forth numerous large and brilliant flowers, greenish-yellow, orange within, solitary. The wood is valuable as a substitute for pine.

Liroc'onite, *n.* [Gr. *leiros*, pale, and *konis*, dust.] (*Min.*) A hydrated arseniate of copper, occurring crystallized in obtuse rectangular pyramids of a sky-blue or verdigris-green color, in Cornwall, at Wheal Multrell, WhealGorland, and WhealUnity, and also in Hungary. The name has reference to the paleness of the streak yielded by the mineral, compared with its natural color.

Lis'bon, [Portuguese, Lisboa (*lees-bo'a*); anc. *Olisipo.*] The capital of Portugal, province of Estremadura on the Tagus, near its mouth; Lat. 38° 42′ 26″ N., Lon. 9° 8′ 25″ W. The city is partly built on the shores of the Tagus, and on several small hills, and presents a magnificently picturesque appearance from the river. Including the suburbs, it extends aht. 5 m. along the river. The E., and older, part is composed of narrow, crooked streets, badly paved, with high, old-fashioned and half ruined houses, monuments of the earthquake of 1755; though this portion suffered least on that occasion. The most beautiful part is called the New Town, stretching along the Tagus, and is crowded with palaces. The principal public squares are, the Praco do Commercio, 565 feet long, and 570 broad; and the Praco do Rocio, 1,800 feet long, and 1,400 broad. The churches are profusely decorated, and some of them are built of marble. Among other architectural curiosities the most important is the Alcantara Aqueduct, which supplies all the public fountains and wells of the city. It brings water from springs abt. 3 leagues N.W. of the city. Its course is partly underground, but as it crosses the deep valley of the Alcantara near Lisbon, it is carried over 35 marble arches for a length of 2,400 feet. In one place it is 260 feet high, and remained uninjured at the great earthquake in 1755. *L.* contains a large number of educational and scientific institutions, among which are the royal academy of sciences, founded in 1778, a naval academy, and an academy of engineering; also a society for the promotion of national industry. The national public library of *L.* contains 150,000 vols.; the library of the Cortes, 50,000 vols., and a theological library of San Vincente de Fora, of 18,000 vols. The harbor, or road, of *L.* is one of the finest in the world; and the quays, which extend nearly 2½ m. along the banks, are at once convenient and beautiful. The foreign trade of Lishon, formerly of considerable importance, has rapidly declined since the emancipation of Brazil. Indeed, the produce of Portugal now sent to foreign countries is almost entirely conveyed in foreign ships. The exports comprise wine, oil, fruit, and salt; among the imports are woollens, cottons, silks, metals, colonial produce, and furs. The manuf. of *L.* are inconsiderable, consisting chiefly of silk fabrics, jewelry, paper, and soap; there are also sugar-refineries, tanneries, and potteries; and its jewellers and goldsmiths are among the most expert in Europe; hut its hackwardness is owing principally to a want of energy and industry. The climate of *L.* is variable, but, on the whole, healthy and genial. *Pop.* (1897) 328,000.

Lis'bon, in *Arkansas*, a post-village of Union co., about 12 m. E. of El Dorado.

Lis'bon, in *California*, a village of Placer co., about 14 m. N.E. of Auburn.

Lis'bon, in *Connecticut*, a village and township of New London co., about 20 m. N. by E. of New London.

Lis'bon, in *Georgia*, a post-village of Lincoln co., about 105 m. N.E. of Milledgeville.

Lis'bon, in *Illinois*, a post-village and township of Kendall co., about 51 m. S.W. of Chicago.

Lis'bon, in *Indiana*, a post-village of Noble co. about 135 m. N.N.E. of Indianapolis.

Lis'bon, in *Iowa*, a post-town of Linn co. *Pop.* (1897) 850.

Lis'bon, in *Louisiana*, a post-village of Claiborne co.

Lis'bon, in *Maine*, a post-town and township of Androscoggin co. *Pop.* (1897) 3,220.

Lis'bon, in *Maryland*, a post-village of Howard co., about 40 m. N.W. of Annapolis.

Lis'bon, in *Michigan*, a post-village of Kent co., about 16 m. N.N.W. of Grand Rapids.

Lis'bon, in *Missouri*, a post-village of Howard co.

—A village of Lafayette co.

Lis'bon, *New Hampshire*, a post-town and township of Grafton co., about 81 m. N. by W. of Concord. *Pop.* (1897) 2,110.

Lis'bon, in *New Jersey*, a village of Burlington co., about 22 m. S.S.E. of Trenton.

Lis'bon, in *New York*, a post-town and township of St. Lawrence co. *Pop.* (1897) 3,895.

Lis'bon, in *Ohio*, a village of Clarke co., about 11 m. E.S.E. of Springfield.

Lis'bon, in *Pennsylvania*, a village of Venango co., about 14 m. S. of Franklin.

Lis'bon, in *South Carolina*, a post-office of Laurens co.

Lis'bon, in *Virginia*, a post-village of Bedford co., about 150 m. W. by S. of Richmond.

Lis'bon, in *Wisconsin*, a township of Juneau co.

—A township of Waukesha co.

Lis'bon, *n.* A sort of sweet wine exported from Lishon, Portugal.

Lis'bon Center, *New York*, a post-village of St. Lawrence co., about 9 m. E. of Ogdensburg.

Lisbon Falls, in *Maine*, a post-village of Androscoggin co., on the Maine Central R.R., 11 m. S.E. of Lewiston; has pulp mills and other industries. *Pop.* (1897) 1,620.

Lisburn (*liz'burn*), a town of Ireland co. of Antrim, prov. of Ulster, on the Lagan, 8½ m. S.S.W. of Belfast. *L.* is one of the handsomest, best-huilt, and cleanest towns of the N. of Ireland. *Manuf.* Linens, damask, &c. *Pop.* 11,000.

Lisburn, in *North Carolina* a village of Sampson co.

Lisburn, in *Pennsylvania*, a post-village of Cumberland co., about 9 m. S.W. of Harrisburg.

Lish, *a.* Active; strong. (*Local Eng.*)

Lisieux, (*le-sco'*,) a town of France, dep. Calvados, on the Orbee and the Gassey, 28 m. from Caen. *Manuf.* Cottons, linens, flannels. *Pop.* 13,123.

Liskeard, (*lis-kard'*,) a town of England, in Cornwall, 16 m. from Plymouth. *Manuf.* Serges and tanning. In the neighborhood are tin, copper, and lead mines. *Pop.* 7,000.

Lisle, (*leel*,) a town of France, dept. of Vaucluse, on an island in the Sorgues, a tributary of the Rhone, 12 m. S.E. of Avignon. *Manuf.* Woollen fabrics and silks. *Pop.* 7,168.

Lisle, the cap. of the French dep. of Nord. — See LILLE.

Lisle, in *Illinois*, a post-village and township of Du Page co.; formerly known as LISLE STATION. *Pop.* (1897) 720.

Lisle, in *Missouri*, a village of Osage co., about 12 m. S.W. by W. of Jefferson City.

Lisle, in *New York*, a post-village and township of Broome co.

L'Islet (*lee-lā'*), a S.E. co., prov. of Quebec, adjoining Maine on the S.E., and washed by the St. Lawrence river on the N.W. *Area*, about 1,220 sq. m. *Capital City*, St. Jean Port Joli.

—A village of prov. Quebec, former cap. of the above co., on the St. Lawrence river, about 48 m. below Quebec.

Lis'more, one of the Western Islands, on the coast of Scotland, in Argyleshire, 7 m. from Oban.

Lismore, an episcopal city of Ireland, co. of Waterford, on the Blackwater, 26 m. from Cork. Its castle is a magnificent pile. It is the birthplace of Congreve the dramatist, and Boyle the philosopher. *Pop.* 2,300.

Lisnaskea, (*lis-nas'ka*,) a market-town of Ireland, co. Fermanagh, abt. 10 m. S.E. of Enniskillen; *pop.* 900.

Lisp, *v. n.* [Sax. *wlisp, wlips.* lisping; Ger. *lispeln*, to whisper, to lisp.] To speak with a vicious utterance, as in pronouncing *th* for *s*.

—*v. a.* To pronounce with a lisp.

—*n.* The act of lisping, as in uttering an aspirated *th* for *s*.

Lisp'er, *n.* One who lisps.

Lisp'ingly, *adv.* With a lisp.

Lis'sa, a town of Prussian Poland, near the borders of Silesia, 44 m. from Posen. *Manuf.* Woollens, leather, and tobacco. *Pop.* 10,840, of whom nearly half are Jews. The Russians, under Peter I. (the Great), defeated the Swedes near this town, in Posen, at the junction of the Punca and the Sossa, Oct. 8, 1708. The Swedish general Löwenhaupt, with inferior numbers, repulsed the Russians at the first charge, Oct. 7. The battle was continued Oct. 8; the Russians advanced no less than five times; numbers at last prevailed, and Löwenhaupt passed the Sossa during the night, having with 10,000 men maintained an arduous conflict with 40,000 Russians during two days.—See LEUTHEN.

Lissa, (anc. *Issa*,) a mountainous island in the Gulf of Venice, near the coast of Austrian Dalmatia, 33 m. from Spalatro. Off this island, July 20, 1866, the Austrian fleet, commanded by Admiral Tegethoff, defeated the Italian fleet with great loss.

Lis'som, Lis'some, *a.* Lithesome; supple; strong; agile. (Local Eng.)

List, *n.* [Sax. *list*; It. *lista*, selvedge, or border; Fr. *lice, lisse*; L. Lat. *licia*, an enclosure.] A strip of cloth; a fillet; the outer edge, border, or selvedge of cloth. — A roll, register, or catalogue.

pl. The inclosed field, or piece of ground, wherein the ancient knights held the jousts and tournaments. It was so called from being surrounded with pales, barriers, or stakes, as with a list or border, like a piece of cloth. Some of these were double, one for each cavalier, separating them from each other, so that they could not approach within a spear's length. Hence, to enter the lists is used figuratively to denote engaging in a contest.

(*Arch.*) A narrow moulding; a FILLET, *q. v.*

(*Naut.*) The inclination of a vessel to one side, as when laden heavier on that side than the other.

"A *list* to port, or a *list* to starboard." — *Dana.*

(*Navy.*) The Binnacle-list, or Sick-list, is a report containing only the names and grades of officers and men excused from duty by the surgeon of a naval vessel or station. It derives its name from its being usually affixed to the binnacle, and is intended for the information of the 1st lieutenant and officer of the deck. The sick report is made out every morning for the information of the commanding officer, and contains the names, grades, diseases, and conditions of all officers and men who by reason of physical disability have been excused from duty by the surgeon.

List, *v. a.* To register in a list or catalogue; to enroll. To enlist; to engage in the public service, as soldiers. To inclose for combat; as, to *list* a field. — To sew together, as strips of cloth, so as to make a parti-colored show; to form a border to. — To cover with a list, or with strips of cloth. — To listen.

—*v. n.* To engage in the public service by enrolling one's name in a list or register; to enlist. — To incline; to be propense; to desire or choose. — To listen; to hearken.

List, (Civil.) See CIVIL LIST.

Lis'tel, *n.* (*Arch.*) The same as LIST, ANNULET, or FILLET, *q. v.*

List'en, *v. n.* [A. S. *hlystan* or *gehlystan*; Icel. *hlusta*, to listen.] To attend closely, with a view to hear; to hearken; to give ear to; to listen secretly. — To obey; to yield to advice; to follow admonition.

List'ener, *n.* One who listens; a hearkener.

List'er, *n.* One who makes a list or roll.

Lis'tera, *n.* [From Mr. *Lister*, an English naturalist.] (*Bot.*) A genus of plants, order *Orchidaceæ*. The American species, *L. cordata*, the Tway-blade, is a delicate little plant, with minute, greenish-purple flowers, growing in woods and sphagnous swamps, among mountains, &c., throughout the northern U. States and British N. America.

List'ing, *n.* The act of one who lists. — A strip of cloth; a list. — The act of cutting away the sappy edge of a board. — *Brande.*

List'less, *a.* Indifferent; heedless; careless; inattentive; uninterested; languid; weary.

List'lessly, *adv.* Without attention; heedlessly.

List'lessness, *n.* State of being listless; inattention; heedlessness; indifference to what is passing and may be interesting.

Listow'el, a market-town of Ireland, co. of Kerry, abt. 17 m. N.N.E. of Tralee; *pop.* 2,500.

Listz, (*lēst*,) FRANZ, a celebrated pianist, B. in the village of Raiding, Hungary, 1811, made his first public appearance in a concert in his ninth year, and was afterwards placed under Czerny, Salieri giving him lessons in harmony. After eighteen months of zealous study, he played in a concert with success, and was taken to Paris, where he performed before the Duke of Orleans, and soon became a great favorite in that capital. In 1825 an opera of his was produced, but did not attract. Having made several successful tours through France and England, he, in 1825, produced an opera, *Don Sanche, ou le Château des Amours*, which did not command success. He at last heard Paganini, and resolved he would become the Paganini of the pianoforte. His compositions are chiefly valuable for having contributed to raise the art of piano-playing to a height of brilliancy before unattained, while his own creative powers on that instrument are so marvellous as to place him in the highest rank of great performers. He was promoted Commander of the Legion of Honor in 1861. In the same year he went to Rome, became a great favorite of the pope, took ecclesiastical orders in 1865; and from that time the Abbé Listz has devoted himself to the composition of church music. As a performer, Listz excels in the production of difficult and novel effects. His works number several hundred, and belong to almost every department of the art. D. at Bayreuth, 1886.

Lit'any, *n.* [Gr. *litania*, a supplication.] (*Eccl.*) In the Roman Catholic and some other Christian churches, a general supplication for the removal of any calamity by which a church, community, people, or nation may be afflicted. As to the form in which litanies are made, namely, in short petitions by the priest, with responses by the people, St. Chrysostom derives the custom from the primitive ages, when the priest began and uttered by the spirit some things fit to be prayed for, and the people joined in the intercessions, saying, "We beseech thee to hear us, good Lord." Several of these forms were afterwards written down, and were the original of the present litanies. About A. D. 400, litanies began to be used in processions, the people walking barefoot, and repeating them with great devotion. — In the Roman Catholic Church, three litanies are especially in use — the *L. of the Saints* (which is the most ancient), the *L. of the name of Jesus*, and the *L. of Our Lady of Loretto*. Of these, the first alone has a place in the public-service books of the church, on the rogation-days, in the ordination service, the service for the consecration of churches, the consecration of cemeteries, and many other offices. Although called by the name of *L.* of the saints, the opening and closing petitions, and indeed the greater part of the *L.*, consist of prayers addressed directly to God; and the prayers to the saints are not for their help, but for their intercession on behalf of the worshippers. The *L.* of Jesus consists of a number of addresses to our Lord under his various relations to men, in connection with the several details of his passion, and of adjurations of him through the memory of what he has done and suffered for the salvation of mankind. The *L.* of Our Lady of Loretto resembles both the above-named litanies in its opening addresses to the Holy Trinity, and in its closing petitions to the "Lamb of God, who taketh away the sins of the world;" but the main body of the petitions are addressed to the Virgin Mary under various titles, some taken from the Scriptures, some from the language of the Fathers, some from the mystic writers of the mediæval Church. Neither this *L.* nor that of Jesus has ever formed part of any of the ritual or liturgical offices of the Catholic Church, but there can be no doubt that both have in various ways received the sanction of the highest authorities of the Roman Church. — In the Prayer-Book of the English Church, the *L.* is retained; but although it partakes of ancient forms, it differs from that of the Roman Church, and contains no invocation of the Virgin or the saints. It is divided into four parts, — invocations, deprecations, intercessions, and supplications, in which are preserved the old form of alternate prayer and response. It is no longer a distinct service, but, when used, forms part of the morning prayer.

Litch'i, *n.* (*Bot.*) See NEPHELIUM.

Litch'field, in *Connecticut*, an extreme N.W. co., adjoining Massachusetts on the N. and New York on the W.; *area*, abt. 900 sq. m. *Rivers.* Housatonic, Shepang, and Farmington rivers, besides numerous smaller streams. *Surface*, broken and in some places mountainous; *soil*, moderately fertile. There is much excellent grazing-land, however, and this county generally produces more butter than any other in the State. *Min.* Iron ore in abundance. *Cap.* Litchfield. *Pop.* 53,542.

—A post-borough and township, cap. of the above co., about 31 m. W. of Hartford. *Pop.* (1897) 1,080.

Litchfield, in *Illinois*, a thriving city of Montgomery co., about 46 m. S. of Springfield. *Pop.* (1897) 6,200.

Litchfield, or LEITCHFIELD, in *Kentucky*, a post-village, cap. of Grayson co.

Litchfield, in *Maine*, a post-town and township of Kennebec co., about 11 m. S.S.W. of Augusta. *Pop.* (1897) 1,180.

Litchfield, in *Michigan*, a post-village and township of Hillsdale county, about 12 miles N.W. of Hillsdale.

Litch'field, in *New Hampshire*, a township of Hillsborough co.

Litch'field, in *New York*, a post-township of Herkimer co.

Litch'field, in *Ohio*, a post-village and township of Medina county, about 10 miles W.N.W. of Medina.

Litch'field, in *Pennsylvania*, a post-village and township of Bradford county, about 14 m. N.N.E. of Towanda.

Lit de Justice. (*Fr. Hist.*) See BED OF JUSTICE.

Lit'eral, *a.* [Old Fr. *literal*; It. *litterale*, from Lat. *litera*, a letter.] According to the letter; primitive; real; not figurative or metaphorical. — Following the letter or exact words; not free, as a translation. — Consisting of letters.

Lit'eralism, *n.* That which is in accordance with the letter or the exact words.

Lit'eralist, *n.* One who adheres to the letter or exact words.

Literal'ity, *n.* Original meaning. (R.)

Lit'eralize, *v. a.* To render literate. (R.)

Lit'erally, *adv.* In a literal manner; according to the primary and natural import of words; not figuratively. — With close adherence to words; word by word.

"I have performed the episode too *literally*." — *Dryden.*

Lit'eralness, *n.* Quality or state of being literal.

Lit'erary, *a.* [Lat. *literarius*, from *litera*, a letter.] Pertaining to letters or literature; respecting learning or learned men; derived from erudition, as reputation. — Furnished with erudition; versed in letters. — Consisting in letters, or written or printed compositions.

Lit'erary Property, *n.* See COPYRIGHT.

Lit'erate, *a.* [Lat. *literatus*.] Lettered; learned. — Literary.

—*n.* One who has received an education at a university or college; a man educated but not graduated.

Litera'ti, *n. pl.* [Lat. pl. of *literatus*, learned; It. *litterati*.] In general, learned men, or men of letters. — In China, it is applied to all such as are able to read and write their own language; and is also the name of a particular sect, composed principally of the most learned men of that country, and called the *jukias*, or learned. The literati alone are capable of being made mandarins.

Litera'tim, *adv.* [L. Lat., from *litera*, a letter.] Letter for letter.

Litera'tor, *n.* A teacher of letters or literature; a schoolmaster.

Lit'erature, *n.* [Old Fr.; Fr. *littérature*; Lat *literatura*, from *literæ*, letters.] In a general sense, the entire results of knowledge and fancy preserved in writing; but, in the narrower use to which ordinary custom restricts it, we draw a distinction between literature and positive science, thus exempting from the province of the former one extensive branch of our studies. And, in a still more restricted sense, the word *literature* is sometimes used as synonymous with *polite* literature, or the French *belles-lettres*. — Taken in its widest signification, it is usual to divide *L.* into several distinct parts, according to periods or countries, or its different kinds. Thus we have the literature of the ancient world, of the Middle Ages, and of modern times; the literature of Greece, Rome, &c.; prose literature; poetical literature, and so on. Under the names of the different countries will be found an account of their literature. The history of *L.* is a subject of vast extent and importance, and demanding for its execution a union of some of the highest faculties. It demands an extensive and minute acquaintance with books on the greatest variety of subjects; a power of critically discerning their various merits; a knowledge of their different authors; and a power of tracing the dependence or bearing of one work upon another. To *L.*, "in the most especial manner, belongs poetry, and, next in degree, narrative and descriptive history; then reasoning and pure speculation, in so far as they influence the actions of human life; finally, wit and eloquence, provided they do not evaporate in the fleeting breath of words, but display themselves in the enduring form of written productions." (*Schlegel.*) — The main object of literary history is to show the general progress and phases of intellectual development, and of æsthetic and moral culture. Political history deals chiefly with events, literary history with thought; each merges into the other, and they are necessarily connected in any complete narrative. If we contemplate the tree of collective knowledge and art, with its branches ramifying through all ages and tongues, through all gradations of mental culture, we find that it may be traced more particularly to ten nations. Our eye is first captivated by the flowery fields of Greek literature and art, the conspicuous beginning of all mental culture. On examining it more closely, we are carried back into Oriental regions, where the stupendous monuments of Hindostan, the gigantic ruins of which stand forth as the relics of a former world, meet our wondering gaze on the firmest rock of this primordial world. Moses laid the foundations of the temple of Hebrew prophecy, the glory of which irradiated the olden poetic and sacred traditions of Persia with a kindred refulgence as far as it can be discerned amid the impure admixtures of Arab creeds. Both elements of mental culture, Greek and Oriental, after passing through the earnest Roman world, flow into Christian ages, in which a new living stem of noble intellect, grafted on the old northern stock, has shot forth with great vigor among the four most cultivated nations of the west, — the Italians, French, Spaniards, and English, — in poetry and criticism, in arts of every kind, and in philosophy,

both true and false. The German mind forms the connecting bond of this intellectual development of the four great Romanic nations; inasmuch as it has been the cause and main stay of the great intellectual burst throughout Europe. "The spiritual culture of those four nations rests on what we have already more than once characterized as the four elementary powers of common objective perception; accordingly, we see in the Italians imagination and a love of art; in the French, reason and oratory; in the English, keen perception and historic powers; and in the Spaniards, intense nationality and poetical feeling. But the German mind explores the more profound hidden springs of the inner life, where those elementary forces no longer appear disunited, but the entire power of living consciousness, both in thought and art, proceeds from one common root." (Schlegel's *History of Literature.*)—From the difficulty of the undertaking, it is not to be wondered at that works on general *L.* are so rare. Even to take up the *L.* of a particular people, or time, or science, is a labor that few are equal to; but some excellent works on these departments exist, and those on the *L.* of the different countries are referred to in these articles. The classical and mediæval writers have rendered scarcely any service to this department, except by leaving materials. The classics contain only scattered and detached materials for a literary history, partly in biographies of poets, philosophers, orators, &c.; partly in criticisms and extracts from their writings. The nearest approach to a history of *L.* among the ancients occurs in a single chapter of Quintilian (B. x. c. i.), in which he passes rapidly over the names and characters of the poets, orators, and historians of Greece and Rome. Paterculus, also, in a remarkable passage, shows from historical instances how great men are found to cluster together at particular times and in particular places. The father of literary history is the celebrated Conrad Gesner, whose work, *Bibliotheca Universalis* (1545–55), contains vast stores of knowledge on the subject of authors and their writings, arranged, however, not in chronological, but in alphabetical order. An Italian Jesuit, Possevin, made a somewhat nearer approach to a work of this kind in his *Bibliotheca Selecta*, published at Rome in 1593. Still, notwithstanding these works, Bacon might with justice deny that, up to his time, any real history of letters had been written; and he compares the world lacking this to a statue of Polyphemus deprived of his single eye. He gives the outlines of a scheme which should contain "the antiquities and originals of knowledges, and their sects, their inventions, their traditions, their divers administrations and managings, their flourishings, their oppositions, decays, depressions, oblivions, removes, with the causes and occasions of them, and all other events concerning learning throughout the ages of the world." Such a history, he says, would "make learned men wise in the use and administration of learning." No one has presumed to fill up the outline which Bacon himself could but sketch. The *Prodromus Historiæ Literariæ* of Peter Lambeck, which was published in Hamburg in 1659, was an attempt to frame a universal history of letters; but he was unable to carry it farther than the times of Moses and Cadmus. In 1688, Daniel Morhof, professor at Kiel, in Holstein, published his well-known *Polyhistor*, a work of great erudition and judgment, and which in the next age received considerable additions at the hands of Fabricius. "In his review of books," says Hallam, "in every province of *L.*, Morhof adopts a sufficiently chronological order; his judgments are short, but usually judicious; his erudition so copious that later writers have freely borrowed from the *Polyhistor*, and in many parts added little to its enumeration. But he was more conversant with writers in Latin than the modern languages; and in particular shows a scanty acquaintance with English literature. Another century elapsed before another great work of this kind appeared. The *Origine, Progressa, e Stato attuale d'ogni Letteratura* of Andrés, a Spanish Jesuit, was published at Parma (1782–99), in five vols. 4to. It is an extraordinary performance, embracing both ancient and modern literature in its full extent. His learning is very extensive, but not, generally speaking, profound, and his style is rather diffuse and indefinite; but his taste is correct, and his general views not injudicious. The work of J. G. Eichhorn — *Geschichte der Literatur von ihrem Anfange bis auf die neuesten Zeiten* (1805–11), (2d edition, 12 volumes. Göttingen, 1818)—is more methodical and specific than any that had preceded it, but shows a less thorough acquaintance with science and the modern languages than with Oriental and theological literature. Of subsequent general literary histories, the most important are Wachler's *Handbuch der Geschichte der Literatur* (3d edition, 4 vols., 1833), and Grasse's *Handbuch der Allgemeinen Literaturgeschichte* (1837–55) The first great work on the literary history of any particular country is that of Tiraboschi, of Italy. It appeared in 1772–82, in 12 vols. 4to, and comes down to the close of the 17th century. In full and clear exposition, in minute and exact investigation of facts, Tiraboschi has few superiors; and such is his good sense in criticism, that we must regret the sparing use he has made of it." (*Hallam.*)—A writer, inferior in reputation, but who devotes more attention to the analyzing of works than Tiraboschi, is Corniani, whose *Secoli della Letteratura Italiana dopo il suo Risorgimento* was published in 9 vols. (1804–13). The French author Ginguéné has also written a history of Italian *L.* (1811–19). Sismondi's *History of the L. of Southern Europe* is a pleasing and popular work, yet by no means superficial or unsatisfactory. There is no esteemed complete history either of French or English *L.* The colossal literary history of France, undertaken by the Benedictines in 1733, is still unfinished. In 1857, Demogeot published a brilliant summary in 1 vol. Warton's *History of English Poetry*, extending only to the reign of Elizabeth, has remained a favorite book. Hallam's *Introduction to the L. of Europe in the 15th, 16th, and 17th Centuries* is a work hardly surpassed, in respect of learning and philosophical criticism, by any literary history. In Germany, Brucker, Tennemann, Buhle, and others, have written histories of philosophy. Vilmar is the principal general historian of German *L.*; Bouterwek, of modern poetry and eloquence (1801–19); Wilhelm von Schlegel, of dramatic *L.* (1800–11); and Ferdinand Wolf, of Spanish and Portuguese *L.* (1859). The most authoritative history of Spanish *L.* is that by George Ticknor (3 vols., 1849).—The love of *L.* is one of the most marked characteristics of an advanced civilization; and it exercises an important influence on practical life, on the destiny of nations, and on the progress of ages. As civilization becomes diffused, the *L.* of a country comes more and more into sympathy with ordinary life. Nor does *L.* lose anything by being thus brought into contact with common life; for those works are ever the best and most useful which speak to the feelings and sympathies of the great mass of the people. Too frequently and too long have *L.* and life been completely alienated from each other, like two distinct worlds, having no interests, no sympathies in common, to the great injury of both. *L.* has been despised in the eyes of the world; and the world has been too much overlooked by men of letters. "The isolation of the learned as a distinctive body," says Fred. Schlegel, "from the great mass of the people, is the most formidable object in the way of national civilization. The various innate inclinations, nay, the very conditions and circumstances of men, should, to a certain extent, coöperate, if the productions of the mind are to be perfected or appreciated." . . . "The products of the mind cannot really be said to have any other fertile soil in which to take root than those sentiments common to all noble-minded and God-seeking men; and with these, the genuine patriotism and national reminiscences of a people whose accents they breathe and whose welfare they are intended to promote." (*Dictionary.*) One effect of this great spread of *L.* in the present day is to be regretted. The great demand upon the powers of distinguished men of letters, and the temptation to satisfy the cravings of the public, lead to the production of works not thoroughly matured; and hence there is in the *L.* of the present day a lamentable amount of loose thinking and careless writing. Nor is there that proportion of works of an enduring nature that might be expected. The remarks that have been levelled at *L.* as a profession are no longer applicable to it. In this, as in any other walk of life, talent will invariably command success.

Litera'tus, *n.*; *pl.* LITERATI. [Lat.] A man of letters; one of the learned; a man of erudition,—generally used in the plural.

Lith'arge, or LYTHARGYRUM, *n.* [Gr. *lithargyros*, from *lithos*, a stone, and *argyros*, silver; probably from its silvery appearance.] (*Chem.*) Fused oxide of lead. See LEAD, (OXIDE OF.)

Lith'ate, *n.* (*Chem.*) A salt resulting from the combination of lithic with a base.

Lithe, (*lith,*) *a.* [Sax. *lith, hlith*; Old Ger. *lind*, soft, tender, gentle.] Pliant; flexible; limber.

Lithe'ness, *n.* Flexibility; pliability; limberness.

Lithe'some, *a.* Flexible; pliant; nimble; limber.

Lith'gow, in *New York*, a post-village of Dutchess co., abt. 75 m. S. by E. of Albany.

Lith'ia, *n.* [Gr. *litheios*, of stone.] (*Chem.*) The oxide of LITHIUM, *q. v.*

(*Med.*) Same as LITHIASIS, *q. v.*

Lith ia-mi'ca, *n.* (*Min.*) See LEPIDOLITE.

Lithi'asis, *n.* [From Gr. *lithos*, a stone.] (*Med.*) The formation of stone, gravel, or concretions in the human body. (See CALCULUS.)—Also an affection in which the eyelids are edged with small, hard, and stone-like concretions.

Lith'ic, *a.* (*Med.*) Pertaining to a stone in the bladder.

L. Acid. (*Chem.*) Same as URIC ACID, *q. v.*

Lith'ium, *n.* [Gr. *lithos*, a stone;—from having been found in the mineral kingdom only.] (*Chem.*) One of the alkaline groups of metals, of which potassium, sodium, casium, and rubidium are the other members. It closely resembles these metals in most of its properties, forming an alkali by its union with oxygen, decomposing water at ordinary temperatures, and having so low a specific gravity that it will float in the lightest known fluid. It is found in nature, in available quantities, in triphyline, petalite, and lepidolite; and from the experiments of Messrs. Bunsen and Kirchhoff, it appears to be very widely distributed in minute quantities in mineral springs, soils, and the ashes of plants. The oxide lithia, LiO, forms a hydrate like potash and soda. It differs from them by being less soluble in water, by not deliquescing in air, and by acting on platinum at a high temperature. The salts of lithia are colorless. The *nitrate* is very soluble and deliquescent; the sulphate is soluble, and forms fine crystals; the carbonate is sparingly soluble, giving an alkaline reaction. The chloride of lithium crystallizes in cubes, and is very deliquescent and soluble in alcohol; therein differing from the chlorides of potassium and sodium. The salts of lithia, when exposed on platinum wire to the inner blowpipe flame, color the outer flame a brilliant red. It will be seen from the above brief description, that lithia forms the connecting link between the alkalies and the alkaline earths. Lithia, and its salts, have remained without any practical value from the time of their discovery, in 1817, by Arfwedson, until a few years since, when Dr. Garrod introduced its use in cases of gout and stone. Its action on the uric concretions is much more rapid than that of the salts of potassium and sodium. It is generally exhibited in the form of aërated carbonate or effervescing citrate. *Equiv.* 6·5 : *sp. gr.* 0·59 ; *symbol*, Li.

Litho'bius, *n.* (*Zoöl.*) A genus of chilopod Myriapoda, distinguished by the orbicular head, long forty-jointed antennæ, and sixteen rings. They feed upon insects and worms, run rapidly, and are found everywhere under rubbish. They are called Earwigs in this country—a name more generally applied to the *Forficulariæ*, q. v.

Fig. 1596.
AMERICAN EARWIG, LITHOBIUS.

Lithobib'lion, *n.* [Gr. *lithos*, and *biblion*, a book.] Same as LITHOPHYL, *q. v.*

Lith'ocarp, *n.* [Gr. *lithos*, and *karpos*, a fruit.] (*Pal.*) Petrified fruit.

Lithocol'la, *n.* [Gr. *lithos*, and *kolla*, glue.] A cement for stone-work.

Lithoerom'ics, *n. sing.* [Gr. *lithos*, and *chroma*, color.] The art of painting in oil upon stone, and taking impressions upon canvas.

Lithoden'dron, *n.* [Gr., from *lithos*, and *dendron*, a tree.] A name sometimes given to coral on account of its resembling a petrified branch.

Lithoder'mic, *n.* [Gr. *lithodermos*, with strong skin.] (*Zoöl.*) In the system of Cuvier, a genus of Apodal Echinoderms, characterized by an oval body compressed posteriorly, of which the surface is covered with a layer of calcareous granules which form a very hard crust.

Lithofrac'teur. See BLASTING.

Lithogen'esy, *n.* [Gr. *lithos*, and *genesis*, origin.] (*Nat. Hist.*) The science of the origin of minerals, and of the causes of their forms, qualities, &c.

Lithog'enous, *a.* [Gr. *lithos*, and *gennao*, to produce.] (*Zoöl.*) Applied to polyps which form coral.

Lith'oglyph, *n.* [Gr. *lithos*, and *glypho*, to engrave.] The art of engraving on gems; lithoglyptics.

Lithog'lyphite, *n.* (*Geol.*) A fossil which presents the appearance of being engraved.

Lithoglyp'tics, *n. pl.* Same as LITHOGLYPH, *q. v.*

Lithograph, (*lith'o-graf,*) *v. a.* [Gr. *lithos*, a stone, and *grapho*, to write.] To trace letters or figures on stone, and transfer them to paper, &c.

—*n.* A print from a drawing on stone.

Lithog'rapher, *n.* One who practises lithography.

Lithograph'ic, or **Lithograph'ical,** *a.* Pertaining to lithography.

Lithograph'ically, *adv.* By lithography.

Lithog'raphy, *n.* [Gr. *lithos*, and *graphē*, a writing, from *graphō*, to write.] The art of tracing letters, figures, or other designs, on stone, and of transferring them to paper by impression. The process is a chemical one, based entirely on the antipathy which exists between water and oil, or grease of any kind, and which prevents them from entering readily into combination. This will be seen from the description of the method by which lithographic printing is effected; and as the impressions are taken from a plain and even surface, which is prepared to receive printers' ink in some parts and to reject it in others, it differs entirely from ordinary printing from movable type and wood-engravings, on the one hand, in which the impression is derived from projecting pieces of the original surface, between which spaces have been cut away by the graver,—and from printing from steel and copper plates on the other, in which the impression is obtained from hollow lines that are sunk below the surface by the corrosive action of acid and by the etching-needle and engraver. The invention of the art is due to a German, Alois Sennefelder, who first practised it about 1795, and introduced it into Germany two or three years after. The stone on which designs for lithographic printing are drawn is brought principally from Bavaria. It is a kind of calcareous slate, soft and porous, and of a pale gray or yellowish color. It is dug from the quarries in large blocks, which are sawn or split into layers, varying from one inch to three inches in thickness; but great care is required in the operation, as the stone is of a brittle nature. To render them fit for the artist's use, the surface of the slabs must be made perfectly level and even, and this is done by rubbing or grinding the face of one stone on that of another,—a little fine sand moistened with water having been placed between them to facilitate the operation. Stones treated in this manner are said to be grained, a granulation having been produced on the surface which can be made either fine or coarse, as may be required. These are used in the production of prints, in imitation of drawing in chalk and pencil; but for the imitation of writing and etching, in which sharp and well-defined lines are required, and the production of prints in *chromo-lithography*, the surface of the stone must be rendered as smooth as possible, and polished, by rubbing it with pumice-stone and water. The lithographic chalk and ink which are used in the execution of drawing and writing on the stone, are both made of a mixture of tallow, white wax, soap, and shell-lac, which is colored by the addition of a little lampblack, to allow the artist to see the effect of his work while the drawing is in progress. A little Venice turpentine is generally added to these ingredients when it is desired to produce lithographic ink, and there is some little difference in the proportions in which they are mixed for each composition respectively. The whole

is melted and blended together over a slow fire, and the mixture is then poured into moulds, in which it is allowed to dry and harden for use. The chalk is moulded in the form usually adopted for crayons, and it is used in its dry state; but the ink is rubbed on a palette, like any ordinary water-color, and applied to the stone by means of a pen or camel-hair pencil. The soap which is used in the above compositions causes them to be soluble in water, and when the design is completed, it must therefore be fixed on the stone. This is done by pouring a weak solution of nitrous acid over it, which has the effect of destroying the soluble nature of the composition by combining with the soap and neutralizing its properties, so that the chalk or ink is no longer liable to injury from the application of water to the stone. After this the stone is delivered to the printer, who damps the surface with water rendered slightly acidulous by the addition of a very small quantity of nitrous acid. As the stone is porous, all the parts which are untouched by the greasy ink or chalk imbibe the water readily; but the design remains perfectly dry, on account of the greasy nature of the composition with which it has been executed; since grease and water will not combine. A roller charged with printing-ink is now passed over the stone, and as oil enters largely into the composition of printing-ink, the ink will be absorbed immediately by every part of the design; but it will have no effect whatever on the wetted portions of the stone which are untouched by the chalk or ink, and will pass over them, leaving them perfectly clean and unsoiled. A piece of paper which has been previously damped is then laid on the stone, and an impression of the drawing or writing is obtained in the usual manner by the aid of a printing-press. Another method of preparing a stone for lithographic printing is to cover the surface with a coating of gum-water colored with a black or red pigment. The design is then executed with an etching-needle, which scrapes away the coating of colored gum wherever it is applied, and allows the surface of the stone to appear through it, giving the drawing or etching the appearance of having been executed in white on a black or red ground, as the case may be. Oil is then applied to the stone, which readily imbibes it through the openings made in the ground by the etching-needle. After this the ground is washed off, and impressions are taken from the stone in the manner already described. Drawings executed in black and white on a tinted ground, or in three tints, as it is usually termed, are imitated in lithography by printing two impressions on the same piece of paper from two different stones. From one of these the design, which is drawn upon it with chalk in the usual manner, is obtained, and the tint is produced from the other by means of coloring-matter, the parts which are to appear white in the impression having been scraped out before any impressions are taken from the stone. In printing from two or more stones, the printer must take care that the impressions register accurately, or fit exactly together; that is to say, that the imprint of the second and following stones, if more than two be used, as in chromo-lithography, may fall exactly on that part of the surface of the paper on which the imprint of the first has been received. In chromo-lithography (from the Greek *chroma*, color) the process is similar; but each color and tint required in the picture is imprinted from a separate stone. In the first place the design is traced on stone, in outline, and from this impressions are taken, which are transferred to other stones, and serve to guide those who are employed in preparing them for the work in hand in placing the various colors in their proper positions, so that the successive imprints may blend and harmonize together, and so produce a picture that is pleasing in its general effect when the whole have been applied to the paper. Accurate copies of the outline have been transferred to as many stones as may be required, the lights and shadows of the drawing are produced on two of them, in what may be termed washes of sepia and neutral gray, and these form the second and third stones from which imprints are taken. Others are charged in the requisite parts with the primary tints that appear in the drawing, and those that are necessary to modify these and blend them together. The sharp, dark, finishing touches, and the final coat, consisting of a sort of glaze or wash which softens and subdues the tints that have been already laid on, are placed on others, and the whole are applied to the paper in succession in the order required. It will be seen that the process is one which demands great nicety in its execution, and that the greatest skill and care are necessary in preparing the stones and insuring perfect accuracy of register, without which the picture produced would be entirely spoiled, as the edge of one color would lap over and encroach on the space allotted to another, and the work would be blurred in tint and indistinct or ill-defined in outline. Trade circulars, and specimens of MS. and handwriting, which are often given in biographical works, are written in lithographic ink, on what is called transfer-paper, and the writing is afterwards transferred from the paper to the stone. The paper is unsized, but a thin coating of gum, prepared in a particular manner for the purpose, is spread over the side which is intended to be written upon. When the ink is dry, the paper is damped on the reverse side, and laid with the writing downwards on a polished stone. The moisture that has been applied to the back of the paper partially dissolves the gum, and the paper can be removed, leaving the gum and the writing beneath it upon the stone. The next step in the process is to wash away the gum, after which impressions can be taken from the stone in the usual manner. Impressions of maps, charts, armorial bearings for book-plates, and designs of a similar nature, are taken from engravings executed on steel or copper plates in lithographic ink, and transferred to polished stone while the ink is still wet. Maps printed in this manner are but little inferior to those which are printed from the plate itself, and they can be produced at a far cheaper rate, owing to the tediousness of the process of printing from plates compared to that of printing from stone. When the engraving is of small size, several impressions can be ranged side by side, in rows, and taken off at once by a single stroke of the press. When the work is very large, the transfer may be made to a plate of zinc instead of stone, as stones of considerable size are liable to break under the pressure that is brought to bear on them. The transfer is made, and impressions are taken from zinc plates in the same way as from stone. On account of the substitution of zinc plates for stone, the term zincography is applied by some to this kind of printing from a plane metal surface. With regard to the preparation of drawings on stone, it should be remarked that stones ought to be selected that are perfectly free from flaws, and of a sufficient degree of hardness. They should also be free from scratches; and to secure similarity of texture throughout the work, the granulation of the stones should be uniform all over the surface for drawings in imitation of chalk and pencil. The metal aluminum has of late years come into use as a substitute for lithographic stone, and presents advantages which promise to make it supplant the stone in lithographic work. The unyielding character of the stone renders it necessary to print drawings upon this material on a flat press, and necessarily at slow speed. The aluminum plate, on the contrary, can be bent to fit the surface of a rotary press, and impressions may, therefore, be made at double the usual speed. This advantage, and the cheapness and adaptation of the metal, is rapidly giving it supremacy over stone in the lithographic process.

Lith'oid, Lithoid'al, *a.* [Gr. *lithos*, and *eidos*, form.] Resembling a stone.

Lith'olabe, *n.* [Gr. *lithos*, and *lambareo*, *labein*, to seize.] (*Surg.*) An instrument for holding fast the stone in the bladder while lithontriptic instruments act upon it. — *Dungtison.*

Litholog'ic, Litholog'ical, *a.* Relating to lithology.

Lithol'ogy, *n.* [Gr. *lithos*, and *logos*, a discourse.] The natural history of stones.

(*Med.*) A treatise on concretions.

Lith'omarge, *n.* [Gr. *lithos*, and Lat. *marga*, marl.] (*Min.*) Stone-marrow. A hydrous silicate of alumina of various colors, generally associated with magnesian minerals. The term has, however, been applied by mineralogists to several substances, some of which are mere products of the decomposition of other minerals.

Litho'nia, in *Georgia*, a village of De Kalb co., about 20 m. E. of Atlanta.

Lithontrip'tic, *n.* and *a.* [Gr. *lithos*, a stone, and *tribo*, I wear away.] (*Med.*) A term which was used to denote certain medicines which were believed to have the power of dissolving calculi in the bladder. They were chiefly preparations of alkalies, which, by correcting the acid state of the urine, tended to alleviate the pain; but experience has abundantly proved that they possess no power of breaking up or dissolving the stone. The term is now generally applied to such medicines as are useful in counteracting the formation of calculi.

Lithontrip'tor, *n.* (*Surg.*) An instrument for breaking calculi in the bladder, so as to reduce them to small particles which may admit of being passed along with the urine, and thus render the operation of lithotomy unnecessary.

Lithoph'agi, *n. pl.* [Gr. *lithos*, and *phago*, I eat.] (*Zoöl.*) Molluscous animals which bore into stones.

Lithoph'agous, *a.* (*Zoöl.*) Eating stones or gravel, as the ostrich.

Lithophos'phor, *n.* [Gr. *lithos*, and *phosphoros*, giving light.] A stone which becomes phosphoric by heat.

Lithophotog'raphy, *n.* [Gr. *lithos*, *phos* — *photos*, light, and *grapho*, to engrave.] The art of producing prints from lithographic stones, by means of photographic pictures developed on their surface.

Lith'ophyl, *n.* [Gr. *lithos*, and *phyllon*, a leaf.] (*Pal.*) A fossil leaf, or the figure of a leaf on fossils; lithobiblion.

Lith'ophyte, *n.* [Gr. *lithos*, and *phyton*, a plant.] A polyp which has a stony axis, — as distinguished from the keratophytes, or horny polyps.

Lithoph'ytous, Lithophyt'ic, *a.* (*Geol.*) Belonging to lithophytes.

Lithop'olis, in *Ohio*, a post-village of Fairfield co., about 18 m. S.E. of Columbus.

Lithosper'mum, *n.* [Gr. *lithos*, a stone, and *sperma*, seed; the seeds being hard and shining like little pebbles.] (*Bot.*) A genus of plants, order *Boraginaceæ*. They are annual or perennial herbs, or shrubs, generally with a thick, reddish root; flowers spikod or racemed, bracted, white or yellow. The most important American species are, the *L. officinale*, the Officinal Gromwell; *L. latifolium*, the Broad-leaved Gromwell; *L. arvense*, the Corn Gromwell, or Wheat-thief, bearing white flowers; and *L. canescens*, the Puccoon, bearing yellow flowers.

Lith'otint, *n.* [Gr. *lithos*, and Eng. *tint*.] A stone tint, dye, or color. — A process by which the effect of a marked or tinted drawing can be obtained on stone by the aid of lithography.

Lith'otome, *n.* [Gr. *lithos*, and *tome*, a cutting.] (*Surg.*) An instrument used in lithotomy, to cut the bladder.

(*Nat. Hist.*) A stone so formed naturally as to have the appearance of having been cut artificially.

Lithotom'ic, or Lithotom'ical, *a.* Pertaining to lithonomy.

Lithot'omist, *n.* One who practises lithotomy.

Lithot'omy, *n.* (*Surg.*) [Gr. *lithos*, and *tome*, a cutting, *temnō*, *tamein*, to cut.] The operation, art, or practice of cutting into the bladder, in order to extract one or more stones or calculi from it. In the article Urinary Organs we shall give an account of the nature and formation of these substances; while here we shall notice shortly the operation that is generally had recourse to in order to remove them. It is first of all necessary to ascertain the actual existence of the stone in the bladder, and that it is not encysted, or adherent to any portion of its substance. This is done by introducing a metallic instrument, called a *sound*, through the urethra into the bladder, by which the stone may be felt, and a sound produced by striking it. Several methods have been recommended of extracting the stone; but there are only two of them that can be adopted with any propriety; one of these is called the "high operation," from being performed immediately above the pubes. There are, however, several objections to this mode of operation, and it is now rarely adopted, except for some special reason, as where there is disease of the urethra. The other is called the "lateral operation," on account of the prostrate gland and neck of the bladder being cut laterally. In this case the incisions are made in the perinæum, and the neck and lateral part of the bladder laid open, so as to allow of the extraction of the stone; it is to be removed by the finger, if possible, and if not, by a forceps. Where large, it is sometimes necessary to crush the stone, and take it away piecemeal; in every instance the cavity of the bladder ought to be examined with the finger, to ascertain that there is no other stone present. Where numerous, they may be removed with a scoop; and if broken down, tepid water should be injected, so as to remove every portion of the calcareous matter, and prevent a nucleus remaining for the formation of a future stone. The after-treatment is simple; the wound is left open or only covered with some simple ointment, and in a dependent position, that the urine may flow freely through it. The patient is to be kept quiet, and on a low regimen, and diluted drinks administered; and any symptoms of inflammation are to be met by prompt antiphlogistic treatment. In the course of two or three days the urine begins to flow by the urethra, and is soon wholly discharged in that way.

Lith'otriptist, *n.* One who breaks or extracts stones from the bladder.

Lith'otriptor, or **Lith'otritor,** *n.* (*Surg.*) See Lithotrity.

Lithot'rity, (sometimes Lithotripsy.) *n.* [Gr. *lithos*, a stone, and *teiro*, I break into pieces.] (*Surg.*) The operation of breaking into pieces a calculus in the bladder by means of instruments passed into that organ through the urethra, so that the fragments may be discharged through the latter, and thus the performance of the operation of lithotomy rendered unnecessary. This is one of the great triumphs of modern surgery, and although the importance of such an operation has been recognized from the earliest time, Civiale, a French surgeon, who commenced his researches in 1817, but did not perform his first operation till 1824, is entitled to be regarded as the discoverer of lithotrity. The operation consists in passing a pair of strong sliding forceps, furnished with teeth, through the urethra into the bladder, and laying hold of the calculus, when the lower limb of the forceps is fixed in a vice, and the upper struck smartly with a hammer, so as to break the stone. The instrument is then withdrawn, and the fragments are afterwards voided with the urine. Instead of being hammered, the stone may be crushed, as it is the mode of operation which is now the most approved, the stone being grasped by the blades of the instrument shown in Fig. 1597, called the *tithotriptor*, one blade acting on the other by means of a screw. *Litholapaxy*, the method now in use by almost all surgeons, was recommended by Dr. Bigelow, of New York, in 1878, as an outcome of the teachings of Dr. Otis, who found it possible to introduce instruments of larger size. It differs from lithotrity only that the operation may be completed at one sitting. *L.* is usually much less dangerous than lithotomy.

Fig. 1597.

Lith'otype, *n.* A stereotype-plate obtained by the process of Lithotypy, *q. v.*

—*v.a.* To stereotype plates by the process of Lithotypy.

Lithot'ypy, *n.* [Gr. *lithos*, stone, and *typos*, type.] The act or process of making a peculiar kind of stereotype-plates, by pressing into a mould taken from a page which has been set up, a composition of gum-shellac and sand of a fine quality, together with a little tar and linseed-oil, all in a heated state. A plate is thus formed, which, though soft at first, becomes, when thrown into cold water, as hard as stone, and having, from the sand which it contains, a stony texture; — hence the name.

Lith'oxyle, *n.* [Gr. *lithos*, and *xylon*, wood.] Petrified wood.

Lithuania, (*lith-u-ai'ne-a.*) The former name of an extensive tract of country lying between Poland and Prussia, and now comprised in the Russian governments of Wilna, Grodno, and Minsk. It is very flat, generally sandy, and intersected by vast marshes and bogs. Occupied in 1009 by a savage people whose origin is un-

known, *L.* was conquered by the Sword-bearers and the Knights of Jerusalem, in the 13th century. Having united the independent tribes, and concentrated his power, Ringold assumed the title of grand-duke in 1230, and was succeeded by his son, Mendog, who embraced Christianity in 1255, though he abjured it in 1255. Witenes acquired the supreme power in 1282, which he transmitted to his son Ghedemin in 1315. Jagellou came to the throne in 1381; and on the condition of receiviug in marriage Hedwige, daughter of the king of Poland, together with the crown of that couutry, he consented to become a Christian, and was baptized, with his nobles and many of his subjects, Feb. 14, 1386. By the treaty of Lublin, in 1569, the two countries were formally united. Part of it passed with Poland under the sway of Russia, Feb. 17, 1772, and the remainder in March, 1794. An insurrection, which was soon suppressed, occurred in 1831. The peasants took part with Russia during the Polish revolt of 1848.

Lit'igable, *a.* Subject to litigation.

Lit'igant, *a.* [Fr., from Lat. *litigans.*] Contending in law; engaged in a law-suit.

—*n.* A person engaged in a legal contest or law-suit.

Lit'igate, *v. a.* [Lat. *litigo, litigatus — lis, litis,* strife, dispute.] To contest iu law; to debate by judicial process.

—*v. n.* To carry on a law-suit.

Litiga'tion, *n.* [L. Lat. *litigatio.*] The act or process of litigating, or of carrying on a suit in a court of law or equity for the recovery of a right or claim; a judicial contest.

Litigious, (*li-tid'jus.*) *a.* [Fr. *litigieux;* Lat. *litigiosus,* from *litigium,* a dispute. See LITIGATE.] Wrangling; contentious; inclined to judicial contest; giveu to the practice of contending in law.—Disputable; controvertible; subject to contention.

Litig'iously, *adv.* In a contentious manner.

Litig'iousness, *n.* Quality of being litigious: a disposition to engage in or to carry on law-suits; inclination to judicial contests.

Li'viz, or **Lit'itz,** in *Penna.*, a post-borough of Lancaster co., 8 m. N. of Lancaster. *Pop.* (1897) 1,520.

Lit'mus, *n.* (*Chem.*) A blue coloring-matter obtained from the *Roccella tinctaria,* and moistened with a solucion of carbonate of potash. The chemical character of this convenient test deserves investigation. It is much used by chemists as a rough test for the presence of free acid or alkali in a solution or gaseous mixture. It is generally used in the form of litmus-paper, which is prepared in the following manner:—Common commercial litmus is digested in water until n deep-blue solution is formed. It is then filtered, and pieces of bibulous paper are dipped into it and dried. It often happens that litmus itself contains alkaline matter; in which case it will be necessary to add dilute acid until the blue color just begins to burn, when a few drops of the alkaline litmus solution should be added to restore the balance. Blue litmus-paper is burnt red by acids. Reddened by being suspended for a few secouds over the fumes of acetic acid, it serves as a test for alkalies, which restore it to its original color. It is hardly necessary to direct the student to keep litmus-paper out of the reach of the light and acids or alkaline fumes.—See ROCCELLA.

Li'totes, *n.* [Gr. *litos,* plain.] (*Rhet.*) A figure, according to the Greek and Latin rhetoricians, in which an affirmative is expressed by the negative of the contrary; it is, therefore, a species of irony in the ancient seuse of the word, in which less is expressed than what is intended to be conveyed to the mind of the reader or hearer. Thus, "a citizen of no mean city" means "of an illustrious city." It is a figure constantly employed to soften what might otherwise appear obnoxious iu self-commendation.

Litram'eter, *n.* [Gr. *litra,* and *metron,* a measure.] An iustrument to ascertain the specific gravity of liquids.

Li'tre, Li'ter, *n.* [Fr. *litre,* from Gr. *litra,* a measure of capacity.] The French standard measure of capacity in the decimal system. The litre is a cubic decimetre; that is, a cube, each of the sides of which are 3·937 English inches; it contains 61·027 English cubic inches. Four and a half litres are a close approach to the English imperial *gallon.*

Lit'ter, *n.* [Fr. *litiere,* from *lit,* a bed, contracted from Lat. *lectus,* a bed or couch.] A bed of straw, fern, or other dry substance which is placed under horses and cattle, in the stables, cow-houses, farm-yards, &c., for the purpose of keeping the animals clean and warm, and providing a supply of manure. For this latter object all sorts of dry materials ought to be carefully collected and stacked for winter use.

—A brood of young pigs, puppies, kittens, and other quadrupeds.

—A vehicle formed with shafts, supporting a bed between them, in which a person may be borne by men or by a horse, is called a litter. In the latter case it is usually called a *horse-litter;* and a similar carriage in India is called a *palanquin,* when borne by men, and *howdah* when borne by elephants. Litters or palanquins were in use among the ancient Egyptians. They were borne upon the shoulders of men (Fig. 1598), and appear to have been used for carrying persons of consideration short distances on visits, like the sedan chair of after-centuries in Europe. In *Cant.* iii. 9, we find a word which occurs nowhere else in Scriptnre, and is applied to a vehicle used by king Solomon. This word is rendered "chariot" in the English version, although uolike any other word so rendered in that version. It literally means a *moving couch,* and is generally conceived to denote a kind of sedan, litter, or rather palanquin, in which great personages and women were borne from place to place. The name, as well as the object, immediately suggests that it may have been nearly the same thing as the *moving throne* or *seat* of the Persians.

Fig. 1598. — EGYPTIAN LITTER.

It consists (Fig. 1599) of a light frame fixed on two strong poles, like those of our sedan-chair. The frame

Fig. 1599. — PERSIAN LITTER.

is generally covered with cloth, and has a door, sometimes of lattice-work, at each side. It is carried by two mnles, one between the poles before, the other behind. These conveyances are used by great persons when disposed for retirement or ease during a journey, or when sick or feeble from age. But they are chiefly used by ladies of consideration in their journeys. In Arabia, or in the countries where Arabian usages prevail, two camels are usually employed to bear the *takht-ravan,* or litter, and sometimes two horses. When borne by camels, the head of the hindmost of the animals is bent

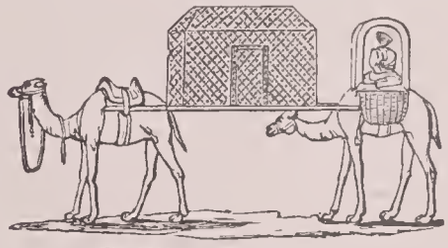


Fig. 1600. — ARABIAN LITTER.

painfully down under the vehicle. This is the most comfortable kind of litter, and two light persons may travel in it.

Lit'ter, *v. a.* To strew or scatter straw, hay, &c., as a bed for horses, &c.; to supply with litter: to cover with straw or hay.—To scatter over carelessly with shreds, fragments, and the like.

—*v. n.* To bring forth young, as swine and other small quadrupeds.

Litterateur, (*lĕ-tă-rā-tur',*) *n.* [Fr.] One who makes literature his principal occupation; a literary man.

Lit'terings, *n. pl.* (*Weaving.*) Sticks used to keep a web stretched on a weaver's beam.

Littermore', or LETTERMORE, an island of Ireland, in Kilkinan Bay, off the coast of Connaught.

Litternul'lin, an island of Ireland, in the Atlantic Ocean, about 27 m. W. by S. of Galway.

Lit'tery, *n.* Covered with, or consisting of, litter.

Lit'tle, *a.,* (*comp.* LESS, LESSEA, *sup.* LEAST.) [A. S. *lytel;* Du. *luttel.*] Small in size or extent; not great or large; diminutive; as, a *little* house.—Short in duration; as, a *little* rest, a *little* sleep.—Small in quantity or amount; as, a *little* food.—Of small dignity, power, or importance.

"He was a very *little* gentleman."—*Clarendon.*

—Of small force or effect; slight; inconsiderable.

—*n.* A small portion, quantity, or amount; a small space; anything small, slight, or of inconsiderable importance; not much.

—*adv.* In a small degree; not much; in a small quantity or space of time; in small degree; slightly;—sometimes preceded by *a.*

Lit'tle Bea'ver, in *Pennsylvania,* a township of Lawrence co.

Lit'tle Bea'ver Riv'er, in *Ohio,* enters the Ohio River from Columbian co., near the borders of Pennsylvania.

Lit'tle Black Riv'er, rises in Ripley co., in *Missouri,* and enters Current River in Randolph co., Arkansas.

Lit'tle Blue Creek, in *Missouri,* flows into the Missouri River from Jackson co. In Oct., 1864, a force of Confederates, under General Stirling Price, was here attacked by a body of Union troops, commanded by Gen. Curtis, and after n contest of several hours were compelled to fall back to Big Blue Creek, another small affluent of the Missouri in Jackson co. Here they took a strong position, but were soon driven from it with heavy loss by Gen. Pleasanton's cavalry, and then retreated into Arkansas.

Lit'tle Blue Riv'er, in *Indiana,* enters Blue River in Shelby co.

Lit'tle Bra'zos, in *Texas,* enters the Brazos River from Robertson co.

Lit'tle Brewster Island, in *Massachusetts,* an island and light-house at the N. side of the entrance to Boston Harbor. It exhibits a revolving-light 82 feet above sea-level. Lat. 42° 19′ 48″ N., Lon. 70° 53′ 30″ W.

Lit'tle Brit'ain, in *Pennsylvania,* a post-village and township of Lancaster co.

Lit'tle Bro'kenstraw Creek, in *Pennsylvania,* enters the Big Brokenstraw Creek from Warren co.

Lit'tle Bush'kill Creek, in *Pennsylvania,* enters Bushkill Creek in Pike co.

Lit'tle Cha'zy Riv'er, in *New York,* enters Lake Champlain from Clintou co.

Lit'tle Chuck'y, in *Tennessee,* a P. O. of Greene co.

Lit'tle Chute, (*shoot,*) in *Wisconsin,* a post-village of Outagamie co., abt. 105 m. N.N.E. of Madison.

Lit'tle Clear'field Creek, in *Pennsylvania,* enters Clearfield Creek in Clearfield co.

Lit'tle Coal Riv'er, in *W. Virginia,* formed in Boone co. by the union of the Pond and Spruce forks, enters Coal River in Kanawha co.

Lit'tle Comp'ton, in *Missouri,* a post-village of Carroll co., abt. 18 m. S S.W. of La Clede.

Lit'tle Comp'ton, in *Rhode Island,* a post-township of Newport co.

Lit'tle Coo'ley, in *Pennsylvania,* a post-office of Crawford co.

Lit'tle Cataw'ba Riv'er, in *N. Carolina,* enters the Catawba, or Great Catawba River, in Gaston co.

Lit'tle Creek, in *Delaware,* a hundred of Kent county.

Lit'tle Creek, in *Kentucky,* a post-office of Pike co.

Lit'tle Creek Lodge, in *Delaware,* a post-office of Kent co.

Lit'tle Cum'berland Island, in *Georgia,* an island and light-house at the S. side of the mouth of Santilla River. It exhibits a fixed-light 53 feet above sea-level. Lat. 30° 58′ 30″ N., Lon. 81° 37′ W.

Lit'tle Cuyahoga Riv'er, (*kī-a-ho'ga,*) enters Cuyahoga River in Summit co.

Lit'tle Dar'by Creek, in *Ohio,* enters Darby Creek abt. 14 m. S.W. of Columbus.

Lit'tle Detroit', in *Illinois,* a post-village of Tazewell co., abt. 70 m. N. of Springfield.

Lit'tle Doe, in *Tennessee,* a post-office of Johnson co.

Lit'tle Ea'gle, in *Kentucky,* a post-office of Scott co.

Little Eau Claire Riv'er, (*o-klair',*) in *Wisconsin,* enters the Wisconsin River from Marathon co.

Lit'tle Egg Har'bor, in *New Jersey,* a township of Burlington co.

Lit'tle Egg Har'bor Bay, in *New Jersey,* an inlet of the Atlantic Ocean, between New Inlet and Barnegat Bay.

Little Egg Harbor River, in *New Jersey,* rises in the S. central part of Burlington co., and flows S.E. between Burliugton and Atlantic cos., into Little Egg Harbor.

Little Elk'hart Creek, in *Indiana,* enters the St. Joseph River in Elkhart co.

Little Falls, in *Minnesota,* a post-village, cap. of Morrison co., about 35 m. N. by W. of St. Cloud. *Pop.* (1895) 5,116.

Little Falls, in *New Jersey,* a post-village of Passaic co., about 4 m. S.W. of Paterson.

Little Falls, in *New York,* an important town of Herkimer co., on the Mohawk river, Erie canal, N. Y. Central and West Shore R.Rs., 21 m. E. by S. of Utica; has immense water power, extensive industries, and a vast trade in cheese and other dairy products. *Pop.* (1897) about 10,000.

Little Falls, in *Wisconsin,* a township of Monroe co.

Little Flat, in *Kentucky,* a village of Bath co.

Little Flat Rock Creek, in *Indiana,* enters the Flat Rock River, abt. 7 m. N.W. of Greensburg.

Little fort, in *Illinois.* See WAUKEGAN.

Little Gap, in *Pennsylvania,* a P. O. of Carbon co.

Little Genesee', in *New York,* a post-village of Allegheny co., about 250 m. W. by S. of Albany.

Little George'town, in *W. Virginia,* a post-office of Berkeley co.

Little-go, *n.* In the English universities, a cant word applied to a public examination about the middle of the course; so called because it is less strict than the final one.

Little Grant, in *Wisconsin,* a post-twp. of Grant co.

Little Green Lake, in *Wisconsin,* a lake of Marquette co., abt. 4 m. S. of Green Lake. It covers an area of abt. 2 sq. m. The waters are very deep, and remarkably pure, and the surrounding scenery is extremely fine.

Little Gun'powder, in *Maryland,* a village of Baltimore co.

Little Guyandotte (*gī-an-dŏt'*), in *West Virginia,* a river rising in the mountains of Wyoming co., and flowing N.W. into the Ohio river in Campbell co.

Little Hick'man, in *Kentucky,* a post-office of Jessamine co.

Little Hock'ing, in *Ohio,* a post-village of Washington co. *Pop.* (1897) 395.

Little Junia'ta, in *Pennsylvania.* See JUNIATA.

Little Kanaw'ha River, in *West Virginia,* rises in the mountains of Webster co., and flowing a general N.W. course through Braxton, Gilmer, Calboun, Wright, and Wood cos., enters the Ohio river at Parkersburg.

Little Lake, in *California,* a village and township of Mendocino co., about 22 m. N.W. of Ukiah.

Little Lake, in *Louisiana,* a lake on the boundary-line between Jefferson and La Fourche parishes, connected with Barataria Bay.

Little Lot, in *Tennessee,* a post-village of Hickman co.

Lit'tle Loy'alsock Creek, In *Pennsylvania*, enters the Loyalsock Creek in Sullivan co.
Little Ma'honey, in *Pennsylvania*, a township of Northumberland co.
Little Ma'honing Creek, In *Pennsylvania*, suters the Mahoning Creek in Indiana co.
Little Marsh, in *Pennsylvania*, a post-village of Tioga co., abt. 110 m. N.N.W. of Harrisburg.
Little Meadows, in *Pennsylvania*, a post-office of Susquehanna co.
Little Mi'ami River, in *Ohio*, enters the Ohio River abt. 6 m. above Cincinnati.
Little Missou'ri River, rises in the N.E. part of Wyoming, and traversing a portion of Montana, enters Dakota, and joins the Missouri river about Lat. 47° 30′ N., Lon. 102° 15′ W.
Little Missouri River, in *Arkansas*, rises in Elk co., and flowing S.E. enters the Washita river, about 15 m. N. of Camden.
Little Mount, In *Kentucky*, a post-vill. of Spencer co.
Little Moun'tain, in *Pennsylvania*, a mountainous ridge in Columbia co., S. of and parallel to Catawissa Mountain.
Little Mud'dy, In *Illinois*, a village of Franklin co., about 140 m. S.S.E. of Springfield.
Little Mun'cy Creek, in *Pennsylvania*, enters Muncy Creek in Lycoming co.
Little Mus'kingum River. In *Ohio*, enters the Ohio River abt. 8 m. above Marietta.
Lit'tleness, *n.* State or quality of being little; smallness of size or bulk; meanness; want of grandeur or dignity; penuriousness.
Little Obi'on River, in *Kentucky*, enters the Mississippi River from Hickman co.
Little Ocmul'gee, in *Georgia*. See Ocmulgee.
Little Ogee'chee, in *Georgia*. See Ogeechee.
Little Os'age, in *Missouri*, a post-village of Vernon county.
Little Otter, in *W. Virginia*, a P. O. of Braxton co.
Little Pigeon River, (*pij'un,*) in *Tennessee*, enters the French Broad River from Sevier co.
Little Pi'ney Creek, in *Missouri*, enters the Gasconade River from Pulaski co.
Little Placentia, (*pla-sen'she-a.*) a seaport of Newfoundland, on the S.E. extremity of the island, abt. Lat. 47° 18′ N., Lon. 53° 58′ W.
Little Plym'outh, in *Virginia*, a post-village of King and Queen co.
Little Port, in *Iowa*, a post-office of Clayton co.
Little Prairie Ronde, in *Michigan*, a post-office of Cass co.
Little Racoon' Creek, in *Indiana*. See Racoon River.
Little Rai'sin River, in *Michigan*, enters the Raisin River in Monroe co.
Little Red River, in *Arkansas*, rises in Van Buren co., and flowing a general S.E. course, enters White River in White co.
Little Rest, In *New York*, a post-office of Dutchess co.
Little River, in *Alabama*, enters the Alabama River from Monroe co.
Little River, in *California*, a P. O. of Mendocino co.
Little River, in *Florida*, an unimportant village of Suwannee co.
Little River, In *Georgia*, enters the Oconee River in Morgan co.
—Enters the Savannah River, bet. Lincoln and Columbia cos.
—Enters the Withlacoochee River in Lowndes co.
Little River, in *Indiana*, rises in Allen co., and flowing S.W., enters the Wabash in Huntingdon co.
—A post-office of Allen co.
Little River, in *Kentucky*, enters the Cumberland River in Trigg co.
Little River, in *Louisiana*, enters the Washita River at Harrisonburg, in Catahoula par. Abt. 25 m. above its month it expands into Catahoula Lake, which covers an area of about 50 sq. m.
Little River, in *N. Carolina*, enters Cape Fear River in Cumberland co.
—Enters the Yadkin river in Richmond co.
—Enters the Neuse river in Wayne co.
Little River, in *S. Carolina*, enters the Savannah River in Abbeville dist.
—Enters Broad River in Fairfield dist.
—Enters the Saluda in Newberry dist.
Little River, in *Tennessee*, enters the Holston River from Blount co., abt. 12 m. S.W. of Knoxville.
Little River, in *Texas*, formed by the confluence of the Leon and Lampasas rivers, in Bell co., and flows S.E into the Brazos, near Nashville.
Little River, in *Virginia*, enters Goose Creek in Loudon co.
—A post-office of Floyd co.
Little River Harbor, in *Maine*, an arm of Machias Bay. On the N. side is a fixed light, abt. 23 ft. above sea-level. Lat. 44° 33′ N., Lon. 67° 6′ W.
Little River Village, in *Maine*, a village of Androscoggin co., abt. 30 m. S.S.W. of Augusta.
Little Rock, in *Arkansas*, a city, seat of justice of Pulaski co., and the cap. of the State, on the Arkansas river, about 300 m. from its mouth, and 1,065 m. W.S.W. of Washington; Lat. 34° 40′ N., Lon. 83° 10′ W. The town is finely located on a bluff, or headland, which rises 50 feet above the river, and is surrounded by a fertile and properous region. It contains many fine and substantial buildings, besides the State Arsenal and State Penitentiary. *Pop.* (1897) about 30,000.
Little Rock, in *Illinois*, a post-town and township of Kendall co., about 27 miles W.S.W. of the city of Chicago.
Little Rock, in *South Carolina*, a post-village of Marion co.
Little Sa'ble, in *Michigan*, a township of Mason county.
Little Saint Joseph's River, rises in Hillsdale co., Michigan, and flowing S. into Ohio, enters the St. Joseph's River of the Maumee, in Fulton co.
Little Salt Creek, in *Indiana*, enters Salt Creek in Monroe co.
Little Sandus'ky, In *Ohio*, a post-village of Wyandot co., about 54 m. N.N.W. of Columbus.
Little San'dy Creek, in *New York*, enters Lake Ontario from Oswego co.
Little Schuylkill River, (*skool'kil,*) in *Pennsylvania*, enters the Schuylkill River at Port Carbon.
Little Scio'to River, in *Ohio*, enters the Ohio River about 8 m. above Portsmouth.
Little Sew'all Moun'tain, in *W. Virginia*, a post-office of Greenbrier co.
Little Sioux, in *Iowa*, a post-township of Harrison co.
Little Sioux River, in *Iowa*. See Inyan Yankee River.
Little So'dus, in *New York*, a village of Cayuga co., about 30 m. N. of Auburn.
Little Sodus Bay, in *New York*, an inlet of Lake Ontario, in Cayuga co. It receives the Little Sodus River.
Lit'tlestown, in *Pennsylvania*, a post-village of Adams co., about 30 m. S.W. of York.
Little Stur'geon, in *Wisconsin*, a post-village of Door co., about 10 m. W. of Sturgeon Bay.
Little Suamico, in *Wisconsin*, a small river flowing into Green Bay from Oconto co.
—A post-village of Oconto co.
Little Thib'et, or **Bul'ti,** a territory lying on the Upper Indus beyond the Himalaya, and forming a sort of debatnblo land betwecn India and Tartary. It is immediatsly to the north of the Valley of Cashmere, with which it has been politically connected by conquest. It occupies about 8,000 sq. miles, extending in N. Lat. bet. 34° 30′ and 36°, and in E. Lon. bet. 75° and 77°. With an average elevation of about 7,000 ft. above the sea, *B.* is surrounded by mountains of nearly the same height nbove its own level. Hence the temperature is such that only snow falls in what ought to be the rainy season, though in summer the thermometer ranges nt noon from 70° to 90° F. European fruits are said to be plentiful. The inhabitants are of the Mongolian race, and chiefly Mohammedans. The only town of importance is Iskardoh, which sometimes gives its name to the whole country.
Little Tallapoo'sa, rises in Carroll co., Georgia, and flowing S.W. into Alabama, joins the Tallapoosa in Randolph co.
Little Toby's Creek, in *Pennsylvania*, enters Clarion River from Elk co.
Lit'tleton, or **Lyt'telton,** Thomas, a celebrated English judge, and writer on law, was b. at Frankley, in Worcestershire. He studied at the Temple, was appointed one of the judges of the Common Pleas, in 1466, and continued to enjoy the esteem of his sovereign, Edward IV., and the nation, until his death, at an advanced age, in 1481. The memory of Judge *L.* is preserved by his celebrated treatise on *Tenures*, which is written in Norman-French, and is esteemed the principal authority for the law of real property in England. This work has been commented on by Coke, Sir M. Hale, Lord Chancellor Nottingham, and other eminent lawyers.
Lit'tleton, in *Iowa*, a small village of Buchanan co., 10 m. N.W. of Independence.
Littleton, in *Illinois*, a post-village and township of Schuyler county, about 66 miles N.W. of Springfield.
Littleton, in *Maine*, a post-township of Aroostook county.
Littleton, in *Massachusetts*, a post-village and township of Middlesex county, about 31 miles W.N.W. of Boston.
Littleton, In *N. Carolina*, a post-village of Halifax co., about 78 m. N.E. of Raleigh.
Littleton, in *New Hampshire*, a post-village and township of Grafton county, about 90 miles N. by W. of Concord.
Littleton, In *New Jersey*, a village of Morris co., abt. 5 m. N. of Morristown.
Littleton, in *Virginia*, a post-village of Sussex co., about 55 m. W. of Norfolk.
Littleton Depot, in *N. Carolina*, a vill. of Warren county.
Little Trav'erse, in *Michigan*, a village, former cap. of Emmett co., on the N. shore of Little Traverse Bay, about 215 m. N. of Lansing.
Little Traverse Bay, in *Michigan*, an inlet of Lake Michigan, in Emmett co.
Little Tur'key, in *Iowa*, a P. O. of Chickasaw co.
Little Utica, in *New York*, a post-village of Onondaga co.
Little Val'ley, in *Minnesota*, a post-office of Olmstead co.
Little Valley, In *New York*, a post-village and township, cap. of Cattaraugus co., about 38 miles E. of Dunkirk.
Littleville, In *New York*, a village of Livingston co.
Little Wabash' River, In *Illinois*, rises in Effingham co., and enters the Wabash River between White and Gallatin cos.
Little Walnut Creek, in *Ohio*, enters the Scioto in Pickaway co.
Little Waraju', in *Minnesota*, enters St. Peter's or Minnesota River from Blue Earth co.
Little Watts Island, in *Maryland*, an island and light-house in Chesapenke Bay, at the W. extremity of Pocomoke Bay. It exhibits a fixed light 40 ft. above sea-level.
Little Wolf, in *Wisconsin*, a post-township of Waupaca co.
Little Wolf River, in *Wisconsin*, enters Wolf river in Waupaca co.
Little Yad'kin, in *North Carolina*, a village of Stokes co.
Little Yadkin River, in *North Carolina*. See Yadkin.
Little York, in *California*, a village and township of Nevada co., about 40 m. E. of Marysville.
Little York, in *Illinois*, a post-village of Warren co.
Little York, in *Indiana*, a post-village of Washington co.
Little York, in *New Jersey*, a post-village of Hunterdon co.
Little York, in *New York*, a post-village of Cortland co.
—A village of St. Lawrence co., abt. 30 m. S. of Ogdensburg.
Little York, in *Ohio*, a post-village of Montgomery co., about 70 m. W.S.W. of Columbus.
Lit'toral, *a.* [Lat. *littoralis.*] Belonging to the shore.
Littorale, or **Litorale,** (*lit'to-ral,* or *lit'to-ra-lai,*) a district of the Austrian empire, extending along the N. coast, from Fiume to Dalmatia; *area*, 150 sq. m. It includes the towns of Trieste, Fiume, and Buccari.
Litur'gic, or **Litur'gical,** *a.* Pertaining to liturgy
Litur'gics, *n. sing.* The doctrins or theory of liturgies.
Lit'urgist, *n.* One versed in or attached to a liturgy.
Lit'urgy, *n.* [Gr. *leitourgia*—*leitos,* public, from *laos,* the people, and *ergon,* work, service.] A form of public devotion; a form of prayer and thanksgiving to be used in public worship.
Lit'uus, *n.* [Lat.] (*Geom.*) The name given by Cotes to a spiral, of which the characteristic property is that the squares of the radii vectores are reciprocally proportional to the angles which they respectively make with a certain straight line given in position, and which is an asymptote of the spiral.
(*Roman Antiq.*) A crooked staff, resembling a crozier, used by the augurs in quartering the heaveus. The origin of the word is uncertain.
Liudprand, bishop of Cremona in the 10th century, is distinguished as a diplomatist and historian. He was sent on two embassies to Constantinople; first in 946 by Berengarius, then regent of Italy, and again, in 969, by the Emperor Otho I. to the usurper Phocas. He was also employed by Otho in 962 on a mission to the Pope, John XII., and assisted at the council of Rome, at which John was deposed. *L.* was one of the most learned men of his time, and has left a very amusing narrative of his embassy to the East, besides a history of the Emperor Otho the Great, and a history of Italy between 862–964. D. at Cremona, probably about 970. The works of *L.* form part of the great series of Pertz, entitled *Monumenta Germaniæ Historica*, and have been recently republished in a separate form. They are our chief authority for the period they treat of.
Livadia, (*le-vai'de-a,*) (anc. *Libadeia,*) a town of Greece, nomarchies of Attica and Bœotia, on the little stream Hercyno, 60 m. N.W. of Athens, and 3 m. W. of the Copaic Lake. Here are the famous cave and oracle of Trophonius, and the fountains of Lethe and Mnemosyne.
Live, *v. n.* [A. S. *lybban, leofian;* Du. *leven:* Ger. *leben.*] To have existence or being to exist; to be in a state of animation; to be alive. — To subsist; with *on* or *by.* — To remain; to continue. — To abide; to dwell; to have settled residence in any place; to be permanent. — Not to perish; to have the principles of vegetable life. — To pass life or time in a particular manner with regard to habits or condition; as, to *live* up to the dictates of reason. — To continue in life. — To enjoy life; to be in a state of happiness. — To feed; to be nourished and supported in life: to be maintained in life; to be supported, as by one's labor. — To remain undestroyed. — To float; not to sink or founder, as a ship.
—*v. a.* To lead; to pass; to continue in, constantly or habitually. — To act habitually in conformity to; as, to *live* one's prayers.
—*a.* Having life, having respiration and other organic functions in operation, or in a capacity to operate; not dead; having vegetable life. — Containing fire; ignited; not extinct; as, a *live* coal. — Vivid, as color. — Quick; active; in earnest; as, a *live* man.
Live'lihood, *n.* Means of living; maintenance; support; subsistence; sustenance.
Live'liness, *n.* Quality or state of being lively or animated; sprightliness; vivacity; animation; spirit. — An appearance of life, animation, or spirit.
"That *liveliness* which the freedom of the pencil makes appear." *Dryden.*
—Briskness; activity; effervescence, as of liquors.
Live'long, (*liv'long*), *a.* Tedious; long in passing; as, the *livelong* day.
(*Bot.*) See Sedum.
Live'ly, *a.* Vivacious; brisk; active; alert; nimble. — Sprightly; animated; spirited; gleeful; airy; gay; jocund. — Representing life; as, a *lively* imitation of nature in poetry or painting. — Vivid; as, the *lively* colors of the prism.
—*adv.* Briskly; vigorously. — With strong resemblance of life.
Livenza, (*le-vain'dsa,*) a river of North Italy, rising in Udine, and, after a course of 70 m., falling into the Adriatic Sea, 28 m. N.E. of Venice.
Live'-oak, *n.* (*Bot.*) See Quercus.
Live Oak, in *Texas*, a S. by E. co.; *area*, about 1,100 sq. m. *Rivers.* Rio Trio, San Miguel, and Neuces rivers. *Surface*, generally level; *soil*, fertile. *Cap.* Oakville. *Pop.* (1897) about 2,350.
Liv'er, *n.* [A. S. *lifer;* Ger. *leber;* Dan. *lever.*] (*Anat.*) The greatest gland in the body; it is the secreting organ

by which the bile is formed. It is situated in the right hypochondriac and epigastric regions, below the diaphragm, and is of a reddish-brown color. Its form is irregular, being convex on the upper surface, and, irregularly concave below, very thick behind, and very thin in front, and in the adult it generally weighs from three to four pounds. It is divided into two principal lobes, the right and left — the former of which is by much the larger. They are divided on the upper side by a broad ligament, and below by a considerable depression, or fossa. Between and below these two lobes is a smaller lobe, called *lobulus Spigelii*. To the left it has the fissure for the lodgment of the ductus venosus; on the right, the fissure for the vena cava. The lobulus caudatus is a tail-like process of the liver, stretching downwards from the middle of the right lobe to the lobulus Spigelii. The liver, like the other viscera of the abdomen, receives an investment from the lining membrane of that cavity, — the peritoneum, which being reflected from it at different points, forms broad bands, connecting the liver with the surrounding parts. An investment of areolar tissue is also spread over the organ, extending into the interior, and forming thin but dense sheaths to the vessels and canals, called the capsule of Glisson. The blood-vessels of the liver are the hepatic artery and veins, and the vena portæ; the

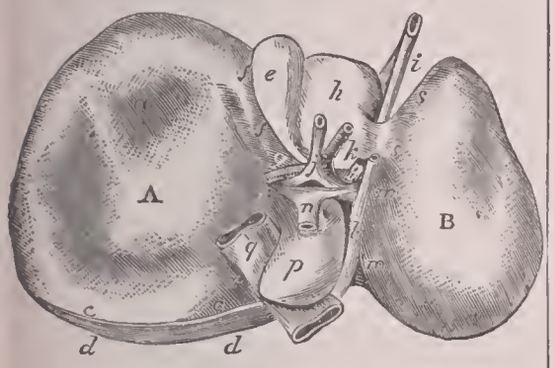


Fig. 1601. — THE LIVER.

A, right lobe; B, left lobe; *a*, depression for colon; *b*, depression for right kidney and capsule; *cc*, coronary ligament, inferior layer; *dd*, surface uncovered by peritoneum; *e*, gall-bladder; *ff*, fissure for gall-bladder; *gg*, transverse fissure; *h*, lobulus quadratus; *i*, umbilical vein; *j*, hepatic duct; *k*, hepatic artery; *l*, ductus venosus; *mm*, fissure for ductus venosus; *n*, vena portæ; *o*, lobulus caudatus; *p*, lobulus Spigelii; *q*, inferior vena cava; *r*, fissure for inferior vena cava; *ss*, longitudinal fissure.

lymphatics are numerous, and the nerves are supplied from the pneumogastric and phrenic, and the hepatic plexus. The proper tissue of the liver is composed of a great number of granular bodies, of the size of millet, and called lobules, of a foliated appearance. The liver thus receives two kinds of blood, — arterial, by means of the hepatic artery, in small quantity, destined principally for the nourishment of the glands; and venous, by the vena portæ, in much larger quantity, from which the bile is principally formed. The tributary branches, by the junction of which the main trunk of the portal vein is formed, comprise the veins which receive the blood from the stomach and intestinal canal, the spleen, pancreas, and gall-bladder. From these various sources, then, venous blood is poured into the liver up the vena portæ, which divides and subdivides, like an artery, till it reaches the interlobular spaces, forming a freely anastomosing network throughout the organ, and constituting the interlobular veins. From these interlobular veins proceed, on every side, minute capillaries, which form dense networks, that seem to make up nearly the whole substance of the lobules. Through the capillaries the blood passes into *intra*-lobular veins, of which one, with its outspread branches, occupies the centre or axis of each lobule; and these intra-lobular veins, by successive junction and conflux, make up the trunks of the hepatic veins by which the blood of the portal vein, after secreting the bile, is carried from the liver. The secretion of bile (see BILE), through the chief and most obvious of the functions of the liver, is not the only one which it has to perform; for recent discoveries have shown that important changes are effected in certain constituents of the blood, in its transit through this gland, whereby they are rendered more fit for their subsequent purposes in the animal economy. From the labors of M. C. Bernard, it appears that the low form of albuminous matter conveyed from the alimentary canal by the blood of the portal vein, requires to be submitted to the influence of the liver before it can be assimilated by the blood. The liver also possesses the remarkable property of forming sugar out of the principles in the blood which contain no trace of saccharine or amylaceous matter. The excretory apparatus of the liver consists of the hepatic, common, and cystic ducts, and the gall-bladder. The biliary ducts commence by small twigs in each lobule, and join, forming, where they emerge from the gland, the hepatic duct. This duct, after passing down for a short distance, is joined at an angle by the cystic duct from the gall-bladder. The common duct thus formed is called the *ductus communis coledochus*, and empties itself into the duodenum. The retention of the materials of the bile in the blood acts like a poison upon the nervous system, and if the suspension of secretion is complete, death soon takes place. Much of the cerebral disturbance accompanying dyspepsia, some forms of which are popularly known as "liver complaint," is doubtless due to deficiency of the biliary secretion, and the non-elimination of certain deleterious constituents. For diseases of the liver, see BILE, DYSPEPSIA, HEPATITIS, &c.

Liv'er, *n.* One who lives. — One who lives in any particular manner with respect to virtue or vice, happiness or misery; as, a Christian *liver*, a loose *liver*.

Liv'er-color, *a.* Of the color of the liver; dark red.

Liv'ered, *a.* That has a liver; — chiefly used in composition; as, white-*livered*.

Liv'er-grown, *a.* Having a large liver.

Liveried, (*liv'er-id,*) *a.* Wearing a livery, as servants.

Liv'er-leaf, *n.* (*Bot.*) Same as LIVERWORT.

Liv'ermore, in *California*, a post-town of Alameda co., about 30 m. N. by E. of San José. *Pop.* (1897) 1,540.

Liv'ermore, in *Kentucky*, a post-village of McLean co., about 22 m. S. of Owensborough.

Liv'ermore, in *Maine*, a post-township of Androscoggin co. *Pop.* (1897) 1,180.

Liv'ermore, in *Pennsylvania*, a post-borough of Westmoreland co., about 18 m. N. E. of Greensburg.

Liv'ermore Cen'ter, in *Maine*, a post-village of Androscoggin co., about 24 m. W. by N. of Augusta.

Liv'ermore Falls, in *Maine*, a post-village of Androscoggin co. *Pop.* (1897) 1,240.

Liv'er of Sul'phur, *n.* (*Chem.*) A brown-red mass, sometimes used in medicine, prepared by fusing two parts of carbonate of potash with one of sulphur. It is a compound of tersulphide of potassium, hyposulphite of potash, and sulphate of potash.

Liv'erpool, a fortified seaport of England, and, next to London, the most populous town of the British islands, in the co. Lancaster, on the Mersey, about 4 m. from the Irish Sea, 32 m. W. by S. of Manchester, 202 m. N.N.W. of London by railway; Lat. 53° 24′ 48″ N., Lon. 3° 0′ 1″ W. It has a length of about 8 miles, and a breadth of about 3½ at its widest points. *L.* stretches along the river, and has docks and basins having an aggregate water-area of nearly 400 acres, and extending for 9 m., erected at a cost of $65,000,000. Among the largest of the docks are the Brunswick, Albert, Waterloo, Prince's, Clarence, Nelson, Victoria, Trafalgar, Collingwood, Wellington, Stanley, Huskisson, Sandon, Salisbury, Canada, &c. The streets are mostly spacious, airy, and some of them elegant. The older parts of the town have been greatly improved, while the public buildings are formed in a style of elegance and splendor suitable to the taste and opulence of its inhabitants. The principal of these are the Town-Hall, erected at a cost of upwards of $550,000 (occupying the side of a square, the other three sides being formed by the Exchange Buildings, the lower story of which is an arcaded walk), Corn-Exchange, Lyceum, Athenæum, Wellington Rooms, Infirmary, Workhouse, Bluecoat-School, Dispensary, and Asylum for the Blind. Besides these, there is St. George's Hall, built

Fig. 1602. — LIVERPOOL.

in the Corinthian order, and containing the assize-courts, a concert-room, and a hall for public meetings. The churches and chapels are numerous, and many of them of great architectural beauty. There are also places of worship for almost every denomination. The charitable institutions are also numerous and well conducted. Among these may be noticed the Dispensary for distribution of medicines to the poor sick; an hospital for decayed seamen and their widows and children; the Sailor's Home; a ladies' charity for the relief of poor married women in childbed; a penitentiary for unfortunate women; the Strangers' Friend Society, and several others. The institutions established for literary and scientific purposes are, the Royal Liverpool Institution, where public lectures are given; to this institution are attached a philosophical apparatus and a museum of natural curiosities. A botanic garden was also established in 1801; the Liverpool College, a fine building in the Gothic style, and the Mechanics' Institute. In the centre of the area before the town-hall is a group of bronze statuary, supposed to be the largest in England, to commemorate the death of Lord Nelson. There is also a statue erected to the Duke of Wellington. The Custom-House is a plain building. The Corn-Exchange is spacious, fronted with stone. The commerce of Liverpool is most extensive; and it is to this, rather than to manufactures, that it owes its importance. It has, however, sugar-refineries, breweries, roperies, glass-works, brass and iron foundries, soda-works, and manufactures of watches and jewelry. Ship-building is carried on to a considerable extent. The trade of Liverpool to all parts of the globe is very great, and has been largely extended by the construction and arrangement of the docks. Nearly all the raw cotton imported into Great Britain is brought into it; and from it an immense emigration takes place every year. *L.* possesses 5 noble public parks, which have a very striking appearance. *L.* is by railway connected with all the great towns of England and Scotland; by steam with the principal ports of Europe, America, Africa, India, and Australia, and with the principal sea-ports of Ireland and Scotland; while its canal-system also gives it connection with the principal inland towns of England. Tonnage in and out of *L.* (including Birkenhead), for year ending June, 1897, was about 10,000,000 tons. A tunnel under the Mersey connects *L.* with Birkenhead. *Pop.* (1897) about 602,500.

Liv'erpool, a seaport town, capital of Kent co., New Brunswick, on the Richibucto Harbor.

Liv'erpool, a seaport town, cap. of Queen's co., Nova Scotia, on the Mersey river, abt. 75 m. S.W. of Halifax.

Liv'erpool, in *Illinois*, a post-village and township of Fulton co., on the Illinois river, abt. 38 m. below Peoria.

Liv'erpool, in *Indiana*, a village of Lake co., about 155 m. N. N.W. of Indianapolis.

Liv'erpool, in *New York*, a post-village of Onondaga co., on Onondaga Lake, about 5 m. N. N.W. of Syracuse.

Liv'erpool, in *Ohio*, a village of Madison co., about 25 m. N.W. of Columbus. Now called ROSEDALE.
—A post-village and township of Medina co., about 120 m. N. N. E. of Columbus.

Liv'erpool, in *Penna.*, a post-borough of Perry co., on the Susquehanna river, about 29 m. above Harrisburg.
—A village of York co., about 6 m. N. of York.

Liv'erpool, (Cape,) the name of two headlands of British N. America: 1, at the S. side of the entrance of Lancaster Sound, abt. Lat. 74° N., Lon. 78° W.; 2, is in the Arctic Ocean, immediately S.W. of Cape Bathurst, Lat. 70° N., Lon. 129° W.

Liv'er-wort, *n.* (*Bot.*) See HEPATICA.

Liv'ery, *n.* [Fr. *livrée*, from *livrer*, to deliver up; in L. Lat. *liberuta*, that which is given; It. *livrea*, and Sp. *librea*, livery, from Lat. *libero, liberatus*, to free, deliver, or release a debt.] The distinctive dress given by masters to their male servants. It is said to be derived from the custom of the early kings of France of presenting to the servants throughout the palace particular sets of clothes at the royal expense. In the days of chivalry, livery was not any mark of degradation; for the duke's son wore a prince's livery; the earl's son a duke's; and so on. Cavaliers distinguished themselves at tournaments by wearing the livery or badges of their mistresses. For a considerable period, the "retainers" of noblemen wore their masters' livery. Their service lasted for one year, but so formidable did this body become, that no nobleman was at length allowed to retain such followers without license. Licenses and retainers were alike abolished in the reign of Charles II., and, since that period, livery has only been worn by the lower class of male household servants. The coachman is the recognized chief of the liveried corps. A servant in livery is addressed by his Christian name; but when promoted from the servant's hall to the steward's room company, he is distinguished by his surname. The word livery is also applied to the ninety-one companies of the city of London, the members of which wore habiliments in form and color resembling those of the Lord-Mayor and sheriffs.

(*Eng. Law.*) The delivery of possession of lands to those tenants who hold of the king *in capita* or by knight's service. — The name of a writ which lay for the heir of age to obtain possession of the services of his lands at the king's hands.

—*v. a.* To clothe in livery.

Liv'ery-man, *n.*; *pl.* LIV'ERYMEN. One who wears a livery, as a servant. — A freeman of the city of London, who, having paid certain fees, is entitled to wear the distinguishing dress or livery of the company or guild to which he belongs, and also has certain other privileges.

Liv'ery-stable, *n.* A stable where horses are kept or stabled for hire; a mews.

Lives, (*livz,*) *n.*; *pl.* of *life*. See LIFE.

Live Well, in *Tennessee*, a post-office of Anderson county.

Liv'ia-Drusil'la, a Roman empress of the Claudian family, who was first married to Tiberius Claudius Nero, and forcibly taken from him by Augustus, who divorced his own wife in order to marry her. Having no children by the emperor, he adopted her sons by her first husband, one of whom, Tiberius, became his successor. Livia died in the eighty-sixth year of her age, 29.

Liv'ia-Livil'la, grand-daughter of the preceding by her other son, Drusus Germanicus, married her cousin, Drusus, son of Tiberius, and having poisoned her husband in concert with Sejanus, died in a dungeon, 35.

Liv'id, *a.* [Fr. *livide*; Lat. *lividus*, from *liveo*, to be black and blue.] Black and blue; of a lead color; discolored, as flesh by contusion.

Livid'ity, *n.* (*Med.*) A discolored appearance of the skin, either the result of external violence, or of internal disease. When caused by external means, the lividity is called *ecchymosis*. When the result of drowning, or of venous or impure blood getting into the circulation, inducing lividity round the eyes, lips, and on the fingers, the discoloration is called *asphyxia*.

Liv'idness, *n.* State or quality of being livid, or of a black and blue color; lividity.

Liv'ing, *a.* Issuing continually from the earth; run-

ming; flowing; as, *living* springs. — Producing action, animation, and vigor; quickening; as, a *living* faith.

—*n.* Means of subsistence; estate; livelihood. — Power of continuing life.

"There is no *living* without trusting somebody or other in some cases." — *L'Estrange.*

—A benefice, or an ecclesiastical estate, which is granted to some priest or clergyman for term of life, to be enjoyed by him on account of his ministry.

Liv'ingly, *adv.* In a living state.

Liv'ingness, *n.* The state or quality of being alive.

Liv'ingston, ROBERT, an eminent American politician, b. in New York, 1746; in which city he practised the law with great success. He was one of the committee to prepare the Declaration of Independence; was appointed secretary of foreign affairs in 1780; and, throughout the war of the Revolution, signalized himself by his zeal and efficiency in the cause. He was afterwards chancellor of the State of New York; and, in 1801, was appointed by President Jefferson, minister plenipotentiary to France, where, during a residence of several years, he was treated with marked attention by Napoleon, who, on his quitting Paris, presented to him a splendid snuff-box, with a miniature likeness of himself, painted by Isabey. D. 1813.

LIVINGSTON, EDWARD, a distinguished American statesman and the legislator of Louisiana, b. in New York State in 1764. He was a brother of Robert Livingston, chancellor of that State, was educated at Princeton College, and was called to the Bar in 1785. In 1794 he was elected member of Congress, and distinguished himself by his opposition to the Alien and Sedition Bills. He belonged to the party then called Republican, and since Democratic. In 1801 he retired from Congress, and accepted the two offices of Mayor of New York, and attorney-general for the district of New York. In consequence of pecuniary difficulties in the latter office, occasioned by his own negligence and the fraud of an agent, he quitted New York in 1804, thus losing his fair prospects of advancements; and having given up his property to the State, settled at New Orleans. He soon took a high place at the Bar, served under Gen. Jackson against the English, in 1814; and, in 1820, became a member of the legislature of Louisiana, and was employed to revise the municipal law. His next task was to draw up a new code of criminal law for the State, the existing laws being a confused mass of French, Spanish, and English. On this code his fame rests. His manuscript was burnt the night it was finished, and he did the work over again, at the cost of two years' labor. In 1829 he became Senator of the United States, Secretary of State under President Jackson, and, in 1833, ambassador to France; when he succeeded in recovering long-delayed compensation for injuries to American commerce during the empire. While at Paris he was chosen Foreign Associate of the Academy of Sciences. D. 1836.

Liv'ingston, in *Alabama*, a post-village, cap. of Sumpter co., abt. 68 m. S.W. of Tuscaloosa.

Livingston, in *Georgia*, a post-office of Floyd co.

Livingston, in *Illinois*, a N. by E. central co.; *area*, abt. 1,000 sq. m. *Rivers.* Vermilion and Mason rivers, besides many smaller streams. *Surface*, level; *soil*, fertile. *Cap.* Pontiac.

—A post-village and township of Clarke co., abt. 14 m. W. of Terre Haute.

Livingston, in *Louisiana*, a S.E. parish; *area*, about 900 sq. m. *Rivers.* Tickfah and Amité. Lakes Maurepas and Pontchartrain wash its S.E. border. *Surface*, mostly level; *soil*, fertile. *Cap.* Springfield.

Livingston, in *Michigan*, a S.E. co.; *area*, about 576 sq. m. *Rivers.* Shiawassee, Red Cedar, and Huron rivers. *Surface*, undulating; *soil*, very fertile. *Min.* Iron-ore and salt. *Cap.* Howell.

—A village of Livingston co., abt. 40 m. W.N.W. of Detroit.

Livingston, in *Mississippi*, a village of Madison co., abt. 20 m. N. by W. of Jackson.

Livingston, in *Missouri*, a N.W. central co.; *area*, abt. 530 sq. m. *Rivers.* Grand River of the Missouri, and numerous smaller streams. *Surface*, generally level; *soil*, fertile. *Cap.* Chillicothe.

Livingston, in *New Jersey*, a post-village and township of Essex county, about 10 miles west of Newark.

Livingston, in *New York*, a W. co.; *area*, about 540 sq. m. *Rivers.* Genesee River, and numerous smaller streams, besides several considerable lakes. *Surface*, agreeably diversified; *soil*, fertile, especially along the streams. It generally produces more wheat than any other county in the State, except Oneida. *Cap.* Geneseo. *Pop.* (1890) 37,801.

—A post-town of Columbia co. *Pop.* (1897) 2,140.

Livingston, in *Tennessee*, a post-village, cap. of Overton co., abt. 100 m. E. by N. of Nashville.

Livingston, in *Texas*, a post-village, cap. of Polk co., abt. 250 m. E. by N. of Austin.

Liv'ingstone, DAVID, a Scottish traveller and missionary, born at Blantyre, near Glasgow, about 1817. Though descended from a respectable line of Highland ancestors, his parents were in humble circumstances; and his father, who kept a small tea-dealer's shop at Hamilton, is represented by his son, in the autobiographical sketch prefixed to his *Travels*, as having been much too honest and conscientious to become a wealthy man. He died in 1856, having lived to witness the fruits of that love of honest industry, active exertion, and benevolence which he early instilled into the breast of his son. David L. sent as a youth to earn his livelihood in the cotton-mills of Blantyre, was, even at that time, possessed with a genuine love of learning. Enabled by hard labor to purchase the means of gratifying his thirst for information, he pursued his studies at Glasgow during the winter months, resuming his occupation at the mills during the summer vacation of the classes. In this way he contrived to pick up some acquaintance with the classical writers, and at the age of 17 could repeat portions of Horace and Virgil. As he grew to manhood, he resolved to devote himself to missionary life, cherishing a hope that Africa or China would be the scene of his labors. His wishes in this respect were realized; for after having studied medicine a few years, during which period he attended one or two courses of theological lectures by the late Dr. Wardlaw, and having been admitted a licentiate of the Faculty of Physicians and Surgeons, in 1838, he offered himself to the London Missionary Society for missionary work in Africa, and his offer was accepted. Having been ordained to the pastoral office in 1840, he soon after left England for Port Natal, where he became acquainted with his countryman, the Rev. Robert Moffat, one of the most active and enterprising of African missionaries, whose daughter he eventually married; and she accompanied him in his travels until her premature death in 1862. From 1840 till his return to England at the close of 1856, he labored perseveringly as one of the agents of the London Missionary Society at Kuruman, Mabodsou, and other stations in S. Africa, and made several expeditions into the interior. He became acquainted with the language, habits, and religious notions of several savage tribes, and twice crossed the entire continent a little S. of the tropic of Capricorn, from the shores of the Indian Ocean to those of the Atlantic. In May, 1855, the Victoria, or Patron's Gold Medal, was bestowed upon him by the Royal Geographical Society, for having "traversed S. Africa from the Cape of Good Hope by Lake Ngami to Linganti, and thence to the W. coast, in 10° S. Lat." In 1855, Dr. *L.* retraced his steps eastward; and having again traversed those regions as far as Linganti, followed the Zambesi down to its mouths upon the shore of the Indian Ocean, thus completing the entire journey across S. Africa. He returned to England at the close of 1856, having been absent 16 years, during which, while endeavoring to spread the blessings of Christianity among the savages, he had made many important geographical discoveries. In all his various journeyings, Dr. *L.* had travelled over no less than 11,000 miles of African territory; and he had come back laden with sound and useful knowledge: for by his astronomical observations he had determined the sites of

Fig. 1603. — DR. LIVINGSTONE.

numerous places, hills, rivers, and lakes, nearly all of which had been hitherto unknown, while he had seized upon every opportunity of describing the physical features, climatology, and geological structure of the countries which he had explored, and had pointed out many new sources of commerce as yet unknown. It is impossible at present to form a proper estimate of the value of Dr. *L.*'s explorations in S. Africa, considered merely in a commercial point of view. He propounded his views on the question of African civilization by recommending the growth of cotton upon an extensive scale in the interior of that continent, and the opening up of commercial relations with the S. African tribes, as measures likely to contribute to the abolition of the slave-trade, and to advance the cause of civilization. In March, 1858, he returned to Africa, accompanied by a small band of assistants, sent out by the British government. He entered Lake Nyassa, Sept. 2, 1861, and made further explorations. His wife, who had accompanied him in many of his perilous journeys, died of fever at Shupanga, April 27, 1862; and what was termed the Zambesi Expedition was recalled in July, 1863. Dr. *L.* reached London July 20, 1864; and after giving interesting particulars respecting his discoveries, and making arrangements for other explorations, again quitted England in April, 1865. In March, 1867, it was reported that Dr. *L.* had fallen in a skirmish with the natives near Lake Nyassa; but in 1869, a letter dated July, 1868, was received from him, in which he claims to have made several new and important discoveries. This letter, besides giving many very interesting details concerning the regions through which he had travelled, states that the real springs of the Nile rise about 400 m. S. of the most southerly portion of Victoria Nyanza, — in fact, S. of all the lakes, except Bangwealo; and that on April 2, 1867, he discovered Lake Liemba, bet. Lat. 11° and 12° S. Since the above letter nothing positive was known of him until he was discovered far in the interior by Stanley, who was sent out by the *New York Herald* to discover his whereabouts. Dr. *L.* wrote *Travels and Researches in South Africa* (1857), and *Expedition to the Zambesi and its Tributaries* (1865). Died May 4, 1873, at Itaca, Central Africa. In 1874 his remains were brought to England, and interred in Westminster Abbey. His *Last Journals* were published simultaneously in England and the U. S., in 1875. See *Blaikie's Life of.* (Lond. and N. Y., 1881.)

Liv'ingstone, in *Kentucky*, a W. co., adjoining Illinois; *area*, about 360 sq. m. *Rivers.* Ohio, Cumberland, and Tennessee rivers. *Surface*, undulating; *soil*, fertile. *Min.* Limestone. *Cap.* Smithland. — *Pop.* (1890) 9,474.

Liv'ingstoneville, in *New York*, a post-village of Schoharie co.

Liv'ius. See LIVY.

Livonia, (*li-vōl'ni-a.*) [Russ. LIFLIANDŬA; Ger. LIVLAND, or LIEFLAND.] A maritime govt. of European Russia, on the Baltic, having N. the govt. of Revel, E. Lake Peipus, separating it from the govts. of St. Petersburg, Pskov, and Vitebsk, S. Courland, and W. the Gulf of Livonia; Lat. bet. 50° 30′ and 56° 20′ N., Lon. bet. 24° and 28° E. Length, N. to S., 150 m., average breadth, 117 m.; *area*, including the island Œsel in the Baltic, 17,500 sq. m. The coast and the greater part of the surface is flat and marshy, except in the districts of Venden and Dorpat, where there are some hills of considerable elevation; Eierberg, one of these, being nearly 1,100 feet high. The soil is only of moderate fertility, but being abundantly watered, by proper manuring it is rendered very productive. There are several lakes, the principal, Virtsert, 24 m. long, by from 2 to 6 m. in breadth, communicates with Lake Peipus by the Embach. *Rivers.* Dwina, Evst, Bolder-Aa, and Embach. *Prod.* Rye, wheat, barley, and oats. The rearing of cattle is carried on to a large extent. *Manuf.* Cotton and woollen stuffs, glass, sugar, and tobacco. The forests also are an important source of wealth, and supply excellent timber. The fisheries, both on the coast and in the fresh waters, are important. Chalk, alabaster, and other calcareous materials are abundant. *L.* was visited by some Baltic traders from Bremen in 1158. A mission of German monks converted the natives to Christianity in 1186. The Sword-bearers subdued the country in 1237. Kettler, the last grand-master of the order, abdicated his power in favor of Poland in 1561. It was transferred to Sweden by the treaty of Oliva, May 3, 1660. Peter I. (the Great) of Russia, made himself master of the country in 1710, and it was annexed to Russia by the treaty of Nystadt, Aug. 30, 1721. Alexander II. liberated the serfs of Livonia Sept. 24, 1818. *Pop.* 990,784.

Livo'nia, or **Riga, (Gulf of,)** an inlet of the Baltic Sea, between Courland and Livonia; Lat. bet. 57° and 58° 30′ N., Lon. bet. 22° and 24° E. *Ext.* 100 m. long, and 80 broad.

Livo'nia, in *Indiana*, a post-town of Washington co., about 100 m. S. of Indianapolis.

Livonia, in *Michigan*, a post-township of Wayne co.

Livonia, in *New York*, a post-township of Livingston co.

Livorno, (*le-vor'no,*) a town of Italy, in Piedmont, on the Po, 17 m. W.S.W. of Vercelli. It has a trade in cattle and wool. *Pop.* 4,500.

Livraison, (*lēv-rā-zōng',*) *n.* [Fr.] A more or less considerable part of a book published separately; a part; a number. — Delivery of goods by the seller to the buyer.

Livre, (*leev'(r,*) *n.* [Fr., from Lat. *libra*, a pound.] (*Numis.*) An ancient French coin. There were livres of different values, the most important being the *Livre Tournois* (of Tours), which was considered the standard, and the *Livre Parisis* (of Paris), which was equal to $\frac{5}{4}$ths of a livre Tournois. In 1795, the livre was superseded by the franc (80 francs = 81 livres Tournois. — *L.* was also the ancient French unit of weight, and was equal to 17·267 oz. avoirdupois. The kilogramme, of which the gramme is the unit, has taken its place.

Livu'ma, a considerable river of Africa, which falls into the Indian Ocean near Cape Delgado.

Liv'y, (TITUS LIVIUS PATAVINUS,) an illustrious Roman historian of the Augustan age, b. at Patavium (now *Paduu*), a town of N. Italy, B. C. 59, according to Varro, or in 61 according to Cato. The records of his life, like those of many others of the literary men of antiquity, are meagre and unsatisfactory — the materials necessary to form a connected narrative having been supplied by the imaginatious of some of his biographers. After passing the early portion of his life, perhaps in his native town, he appears to have gone to Rome during the reign of Augustus, where his literary talents soon obtained for him the favor and patronage of the emperor. As an admirer of the ancient institutions of his country, Livy attached himself in opinion to the party of Pompey, and considered him as the greatest of statesmen and heroes; but Augustus, entertaining a sincere regard for the historian, did not allow his friendship and patronage to be affected by political opinions, though they seemed to call in question the right by which he ruled the destinies of Rome. Having spent the greater part of his life in the metropolis, he returned in old age to the town of his birth, and there died A. D. 18, in the 77th year of his age. The preceding short statement contains all the authentic facts which have descended to us in connection with the personal history of Livy. Many other particulars are related by writers who profess to record the life of the Roman historian; but these are either altogether illusory, or rest upon evidence which will not bear examination. Livy has erected for himself an enduring monument in his *History of Rome.* This great

work, which he modestly designated *Annales* (Annals), contained the history of the Roman state from the earliest period till the death of Drusus B. C. 9, and originally consisted of 142 books. Only 35 of these have descended to us; of the others, with the exception of two, we possess *Epitomes*, or short summaries, but the

Fig. 1604. — LIVY. (From an antique bust.)

books themselves have been entirely lost. The existing books were brought to light at various times; some of them towards the middle of the sixteenth century, and a fragment of the ninety-first book appeared for the first time in 1772. The hope, so long entertained by the learned, that the lost books would yet be recovered, seems now to have yielded to despair. From internal evidence there appears to be reason for believing that the history was divided by the author into *decades*, or portions each containing ten books. The first *decade*, which embraces the history till B. C. 294, is entire; the second is lost; the third, fourth, and the first five books of the fifth, containing the history from B. C. 219 to B. C. 167, also remain to us. Of the other books nothing has been preserved except some inconsiderable fragments. Livy makes no pretensions to the character of a critical historian, and thus, in some degree, escapes from the charge which may be fairly alleged against him, of not consulting the public records. His style may be pronounced almost faultless; and a great proof of its excellence is, that the charms with which it is invested are so little salient, and so equally diffused, that no one feature can be selected for special eulogy, but the whole unite to produce a form of singular beauty and grace.

Lix'iv'iate, *v. a.* To convert into lye by lixiviation.

Lix'ivia'tion, *n.* (*Chem.*) The process of washing or steeping certain substances in a fluid, for the purpose of dissolving a portion of their ingredients, and so separating them from the insoluble residue. Thus, wood-ash is lixiviated with water to dissolve out the carbonates of soda and potash from the insoluble parts.

Lix'iv'ium, *n.* [Lat., lye.] (*Chem.*) A solution formed by the process of lixiviation; a lye. (o.)

Lixuri, (*leex-oo're,*) a town of Greece, in the island of Cephalonia, 5 m. N. of Argostoli. It is the see of a Greek bishop, and the commercial rival of Argostoli. *Pop.* 6,500.

Liz'ard, *n.* [Fr. *lézard;* Lat. *lacerta.*] (*Zoöl.*) See LACERTIDÆ.

(*Astron.*) See LACERTA.

(*Naut.*) A piece of rope, sometimes with two legs and one or more iron thimbles spliced into it; — used for various purposes.

(*Her.*) The reptile usually so called; or, a beast somewhat resembling the wild-cat, and said to be found in several countries of Northern Europe, represented with brown fur, and large spots of a darker shade.

Liz'ard, in *Iowa,* a township of Pocahontas co.

Lizard Island, an island in the S. Pacific Ocean, lying off the E. coast of Australia; Lat. 14° 40′ S., Lon. 145° E.

Lizard Point, the most S. promontory of England, co. Cornwall, on the British Channel, 23 m. E.S.E. of Land's End; Lat. 49° 57′ 55″ N., Lon. 5° 11′ 17″ W. (Fig. 621.) The Lizard is famous in navigation, from its being the point whence ships take their departure from the Channel. It is surmounted by two light-houses, near each other, with fixed lights, the lantern of one being 225 feet, and the other 221 feet above sea-level.

Lizard River, in *Iowa,* enters the river Des Moines near Fort Dodge.

Lizard Tail, *n.* (*Bot.*) See SAURURUS.

Llama, (*lä'ma,*) *n.* (*Zoöl.*) A genus of ruminant animals, family *Camelidæ.* It bears a strong resemblance to the camel, and may be looked upon as the representative of that animal in this hemisphere, being confined to S. America. Their teeth are very similar to those of camels, but their backs are not furnished with humps; their tails are short and hairy, their toes slender, and their soles narrow and separated in front. In Peru, where they are principally found, they live in a wild state, in herds of sometimes one or two hundred. The ancient Peruvians, however, completely subdued and domesticated the llama as a beast of burden; and to them it answered all the purposes of the camel or dromedary of the Old World. In a wild state, the herd keeps a careful look-out, and when disturbed gallops off with great rapidity. There are two distinct species found in South America — the *Llama vicuna,* and the *Llama guanacu.* They both inhabit the Peruvian Alps, the Pampas, and the mountains of Chili, extending as far as the Straits of Magellan. The former animal, the vicuna, is principally found in the most elevated land and mountains of Bolivia and Chili. This species is quite wild, and hitherto has defeated all attempts of the aborigines to domesticate it; and has an awkward habit of jumping and kicking with its hind legs. The guanaco is the characteristic quadruped of the plains of Patagonia, and is very common over the whole of the temperate parts of South America. They live in herds, but are easily domesticated after being caught. In their habits they resemble a flock of sheep, and, when caught, appear to have no idea of defending themselves. Two other species of llama, which are thoroughly domesticated, are also mentioned by travellers. — the *L. glauca,* which is of a whitish color, and has long slender legs; and the *L. pacos,* which is of a blackish hue, and has

Fig. 1605. — LLAMA.

short legs. The wool of llamas is made into cords and sacks, as well as into stuffs for ponchos, &c.; and in Mexico the bones are converted into instruments for weaving the wool. The dung is also used for fuel. The llama is, however, rapidly disappearing, and its place is being supplied by the more useful and profitable European sheep.

Llanbadarn Fawr, (*lan-bad-arn'vour,*) a town of Wales, co. Cardigan, 1 m. from Aberystwith; *pop.* 13,000.

Llandeilo Fawr, (*lan-dil'lo vour,*) a town of England, in S. Wales, co. Caermarthen, on the Towy, 13 m. E.N.E. of Caermarthen; *pop.* 6,000.

Llandeil'lo Forma'tion, or Flags, *n.* (*Geol.*) This division, forming the base of the Silurian system, consists of hard, dark-colored flags, sometimes slightly micaceous, frequently calcareous, and especially distinguished by containing the large trilobites *Asaphus Buchii* (Fig. 1606), and *A. tyranus.* There are also several genera of mollusca in this deposit; and it is an interesting fact, that, with many extinct forms of testacea peculiar to the lower Silurian rocks, such as orthoceras, pentemerus, spirifer, and productus, others are associated belonging to genera still existing, as nautilus, turbo, buccinum, turritella, terebratula, and orbicula. The *L.* flags are represented in this country by the Utica slates, but it is chiefly in Wales that they exhibit that fissile character which has given them the name of flags.

Fig. 1606. — ASAPHUS BUCHII.

Llanelly, (*lan-eth'le,*) a seaport-town of Wales, county Caermarthen, at the mouth of the Bury River, 13 miles S.E. of Caermarthen. *L.* is situated in the midst of the rich mineral basin of S. Wales. In the neighborhood are several large collieries, which supply excellent coal, large quantities of which are exported to France, Spain, and the Mediterranean. It contains also large copper-works and iron-foundries.

Llangollen, (*lan-goth'len,*) a town of North Wales, co Denbigh, picturesquely situated on the Dee, 22 m. S.W. of Chester. It is a great resort for tourists, on account of the beauty of the famous vale of Llangollen. *Manuf.* Flannels. *Pop.* 6,500.

Lla'no, in *Texas,* a river rising on the N. slope of the Comanche Mountains, and after a general E., N.E., and S.E. course through Kimble and Mason co., enters the Colorado River from Llano co.

—A S. central co.; *area,* about 900 sq. m. *Rivers.* Llano and Colorado rivers, beside several smaller streams. *Surface,* uneven; *soil,* fertile. *Cap.* Llano. *Pop.* (1890) 6,772.

—A post-village, cap. of the above co., on the Llano River, about 70 m. N.W. of Austin.

Lla'nos. [Sp., from Lat *planus,* level.] The name given to the tropical plains of S. America, continuations northward of the forest plains of the Amazon. Their area is about 350,000 sq. m., and the whole are destitute of trees. They consist of low table-lands, nearly barren for the most part, sloping at first, and then ranging at a dead level between the Amazon and the Caribbean Sea. These are called the *Llanos altos.* The larger plains are lower, but also nearly barren, the soil being sand over calcareous rock, without rocks or pebbles. Although without cultivation, grasses and a few bushes cover parts of these plains.—See PAMPAS.

Llanrwst, (*lun-roost',*) a town of N. Wales, co. Denbigh, on the Conway, 12 m. from Conway; *pop.* 4,900.

LL.D. Letters standing for Doctor of Laws, the title of an honorary degree.

Llerena, (*l-yai-rai'na,*) a town of Spain, prov. of Estremadura, 63 m. from Seville; *pop.* 7,000.

Llewellyn, (*lew-el'len.*) In *Pennsylvania,* a post-village of Schuylkill co., about 5 m. S.W. of Pottsville.

Lloyd, or LOYD, (*loid,*) in *New York,* a post-township of Ulster co.

Lloyd, or LOYD, in *Wisconsin,* a post-village of Richland co., about 10 m. N.N.E. of Richland Centre.

Lloyd's List, (*loidz.*) An English periodical publication, which contains a full account of shipping intelligence. It derives its name from Lloyd's coffee-house, in London, long celebrated as the resort of all classes connected either with the mercantile or shipping interest; and is of great importance in supplying full, trustworthy, and early maritime information. It has been in existence since 1716.

Lloyd's Neck, in *New York,* a peninsula of Long Island, between Huntingdon Harbor and Oyster Bay.

Lloyds'ville, in *Ohio,* a village of Belmont co.

Lloyd'town, a village of York co., Upper Canada, abt. 36 m. N. of Toronto.

Llunmayor, (*l-yoo-ma'yor,*) a town of Spain, in the island of Majorca, in the Mediterranean, 18 miles from Palmas: *pop.* 8,000.

Lo, *interj.* [A. S. *la,* from *locian,* to look.] Look; see; behold; observe.

Lo'a, a seaport-town of Peru, at the mouth of a river of the same name; Lat. 21° 30′ S., Lon. 70° W.

Loach, (*lōch,*) *n.* [Fr. *loche.*] (*Zoöl.*) The common name of the genus *Cobitis,* including soft-rayed fishes of the family *Cyprinidæ.* The common Loach of Europe, *C. barbatula* (Fig. 1607), is a small fish, often found secreted under stones in small, shallow, clear streams, and which swims rapidly away when disturbed by moving the stone. It seldom exceeds four inches in length; has six barbules about the mouth; feeds on worms and aquatic insects; and the flesh is accounted excellent. The head, back, and sides are clouded, and spotted with brown on a yellowish-white ground; the fins spotted with dark-brown; and the belly and under surface white.

Fig. 1607. — LOACH, (*Cobitis barbatula.*)

Load, (*lōd,*) *n.* [A. S. *hlod, lad.*] A burden; weight; freight; cargo. — A large quantity borne or sustained; as, a cart-*load.* — That which is borne with pain or difficulty; a grievous weight; an incumbrance; as, a *load* of guilt, a *load* of care. — Oppression or violence of blows.

"And Mnestheus laid hard *load* upon his helm."—*Dryden.*

—A quantity of food or drink that oppresses, or as much as can be borne.

—*v. a.* [Sax., Icel., and O. Ger. *hladen.* to load. See LADE.] To lade; to burden; to freight; to put on or in something to be carried, or as much as can be carried. — To encumber: to lay on or put in that which is borne with pain or difficulty.—To make heavy by something added or appended; as, to *load* a whip. — To bestow or confer on in great abundance, as, to *load* with favors. — To charge, as a gun.

Load'er, *n.* He who loads.

Load'ing, *n.* A cargo; a burden.—Also, anything that makes part of a load.

Load'-line, *n.* (*Naut.*) The supposed line of deepest immersion, when a ship is fully laden. Vessels are usually so built that the immersion shall be deeper aft than forward.

Load'-star, *n.* The pole-star; the cynosure; the leading or guiding star.

Load'stone. See MAGNET, (NATURAL.)

Loaf, (*lōf,*) *n.*; *pl.* LOAVES, (lōvz.) [Sax. *hlaf, laf;* Goth. *hlaifs,* bread, food.] A mass of bread, as it is formed by the baker; a mass or lump, as of sugar; any thick mass.

—*v. n.* To spend time in idleness; to be idle; to lounge. (Low.)

Loaf'er, *n.* [Ger. *läufer,* a runner, from *laufen,* to run.] An idler; an idle lounger; a mischievous person; a vagrant. (An American word.)

Loaf'-sugar, *n.* Refined and compact sugar, discolored by draining, and made in a mould.

Loam, *n.* [A. S. *lam*; Dn. *leem*; Lat. *limus,* slime, mud, from its sticky quality related to lime, *q. v.*] (*Agric.*) A term generally applied to a dark-colored, rich mould, principally composed of dissimilar particles of earth and decomposed vegetable matter. *L.* is moderately cohesive, and therefore neither retentive of moisture, like clay, nor too ready to part with it, like a sandy soil. It is a continued source of carbonic acid, as almost every particle of it is surrounded by an atmosphere of that gas, which is absorbed by the roots of plants, and replaced by atmospheric air, to be again converted into carbonic acid. Upon this transformation, the influence of loam on vegetation may be readily understood, it does not itself nourish plants, but it presents to them a slow and lasting source of carbonic acid, which is absorbed by the roots.

—*v. a.* To cover with loam.

Loam'y, *a.* Consisting of loam; partaking of the nature of loam, or resembling it.

L. Soil. (*Agric.*) A soil in which clay exists; it is

called *heavy* or *light*, as the clay may be more or less abundant; and *sandy*, *gravelly*, or *calcareous*, as these earths predominate respectively in the composition. In general, loamy soils are more fertile than sand or chalk; but the fertility of one soil is always to a certain extent relative to the nature of the subsoil, and to the local climate.

Loami, or LAOMI, in *Illinois*, a post-village and township of Sangamon co., about 15 miles S.W. of Springfield.

Loan, (*lōn*,) *n.* [A. S. *læn*, a loan, gift; Du. *leen*; Ger. *lehen*; Icel. *len*, lien, feudal tenure. See LEND.] Act of lending; a lending. — That which is lent. — Permission to use; grant of the use.

(*Law.*) A contract by which the use of anything is given under condition of its being returned to the owner. A loan is said to be gratuitous when the borrower receives the thing for his own benefit, without payment of hire or reward to the lender. There are two kinds of gratuitous loans, — the one called *mutuum*, for use and consumption, an equivalent in kind to be returned; the other a *commodatum*, which is the loan of a specific thing, to be used and returned *in individuo*. In loan by way of mutuum, the parties stand in the relation of debtor and creditor to each other; in loan by way of commodatum, they are known in law as *borrower* and *lender*. A loan of money is a mutuum; of a horse or book, a commodatum. It is of the very essence of a commodatum, that the loan be gratuitous; for if anything be paid for the use of the chattel, then the contract is one of letting and hiring. In a loan by way of mutuum, the chattel lent becomes the absolute property of the borrower, to do what he pleases with it, and to use it in any way he thinks fit: but in loan by way of commodatum, the temporary right of possession and user only is transferred, and the borrower is consequently obliged to render back the identical thing lent. As regards the borrower, he has a right to receive and hold the thing borrowed; but only as the property of the lender. For many purposes he is, in the eye of the law, in the position of owner; and certain of the rights of an owner are conferred upon him, as against every one but the owner. The borrower has a right to use the article borrowed, but only to use it. He has no more right to lend it than he has to give it away or sell it. He is expected to take as much care of it as if it were his own property under the like circumstances, and is liable for any damage arising from even slight negligence. He is, however, not liable, if the thing be lost through no imprudence or negligence of his. The borrower is not liable for such injury as naturally results from the use of a thing; but, on the other hand, he is bound to pay all the expenses or charges which naturally result from or accompany the use. A lender has no right to compensation for loss through want of the care or skill which he had no right to expect. If he lends a thing for an illegal act, he is no longer a lender in the eye of the law, but an accomplice in the wrong done. If the thing lent be used according to the purpose for which it was lent, and is lost or perishes, not through the default of the borrower, then the owner shall bear the loss. If it be used in any other manner than according to the lending, then, in whatever manner it may perish, if it be not by default of the owner, the borrower shall be liable for the loss. Thus, if a horse is lent for an ordinary ride along the high road, and the borrower takes it off the high road into wet and slippery ground, and the horse slips and breaks his knees, or is otherwise injured, then the borrower must make good the loss. If the borrower keeps the thing borrowed after it is his duty to return it, or after a reasonable time after it has been demanded, then his relation to the lender changes totally, and he becomes liable for any loss or injury that may occur, although wholly without his fault. The borrower has no right to detain the thing borrowed for any antecedent debt due to him, nor can he set up a right to detain the chattel for payment of necessary expenses incurred by him in the keeping and preserving it. In the case of a mutuum, the borrower is bound to restore at a time agreed upon, or within a reasonable period after request, an article of the same kind and quality as the one originally lent to him. This is essential to the character of a mutuum, for if by agreement an article of different kind is to be returned, then the contract is not a mutuum, but an exchange or sale. As the right of property is transferred by mutuum, so is also the risk of loss; and hence if the thing borrowed is destroyed before it can be used, the borrower is nevertheless bound to pay to the lender the equivalent which he owes at the time appointed. Such is loan in its strictly legal signification; but, in common phraseology, the term is used even when compensation is included, which legally comes under the designation of hiring. Money lent at so much per cent. is also called a loan. A loan of money to be used for hire is a loan for use and consumption, the identical thing lent not being intended to be returned, but its equivalent in value and kind.

Public loan, is the name given to money borrowed by the State, which constitutes the NATIONAL DEBT, *q. v.*

Loan'able, *a.* That may be lent. (R.)

Loan'-office, *n.* An office in which loans are negotiated.

Loan'er, *n.* A lender. (R.)

Loan'do, or LOANDA, an island of Africa, immediately off the W. coast of Angola. *Ext.* 20 m. long, average breadth 1 m.

Loanda, Saint Paul de, the chief town of Portuguese West Africa. It lies on a small bay about 210 m. S. of the mouth of the Congo, and has a population of 15,000, including about 2,500 Europeans. The harbor is gradually silting up. A railroad from *L.* runs a considerable distance inland.

Loango, a maritime country of West Africa, extending from Cape Lopez, in Lat. 0° 44′ S., to the river Congo. Forests cover a large portion of the country, which is mountainous in the S.E. On the coast the surface is level and fertile. Formerly the slave-trade was carried on. Now its chief exports are ivory and wax. The inhabitants are skilled in manufacturing baskets, variously dyed mats, grass cloth, &c. At the town of Kabinda, excellent boats and canoes are built. The principal towns are Loango and Kabinda. The Berlin Conference of 1885 divided *L.* between the Congo Free State, Portugal, and France.

Loasa'ceæ, *n. pl.* (*Bot.*) The Chili-nettle family, an order of plants, alliance *Cactales*. DIAG. Distinct sepals and petals, scattered stamens, confluent pendulous ovules, and albuminous seeds. — They are herbaceous plants with stiff hairs, which are sometimes stinging. Leaves without stipules; calyx superior, 4- or 5-parted, persistent; petals 5 or 10, in 2 whorls, often hooded; stamens numerous, in several whorls; ovary inferior, 1-celled, with several parietal placentas, or 1 axile placenta; style 1. Fruit capsular or succulent. Seeds having an embryo lying in the axis of fleshy albumen. The *Loasaceæ* are all natives of North and South America. Several species are cultivated on account of the beauty of their flowers. A Mexican species, *Mentzelia hispida*, possesses a purgative root, which has been used medicinally.

Loath, (*lōth*,) *a.* [A. S. *lath*, hateful, evil.] Disliking; hating; detesting; unwilling; not inclined; reluctant.

Loathe, *v. a.* [A. S. *lathian*, to loathe; O. Ger. *leidlihon*, to abominate.] To hate; to look on with hatred or abhorrence; to abominate. — Particularly, to feel disgusted at food or drink.

Loath'er, *n.* One who loathes.

Loath'ful, *a.* Hating; abhorring. — Abhorring through disgust.

Loath'ing, *n.* Aversion or repugnance to food. — Aversion; abhorrence; disgust.

Loath'ingly, *adv.* In a fastidious or repugnant manner.

Loath'ly, *a.* Hateful; abhorred; exciting hatred. —*adv.* Unwillingly; without liking or inclination. — In a disgusting manner.

Loath'ness, *n.* Unwillingness.

"The *loathness* to depart would grow."—*Shaks.*

Loath'some, *a.* [O. Ger. *leidsam*.] Hateful; abhorred; detestable. — Disgusting; exciting disgust; causing fastidiousness.

Loath'somely, *adv.* In a loathsome manner.

Loath'someness, *n.* The quality of being loathsome, or of exciting disgust, hatred, or abhorrence.

Loaves, (*lōvz*,) *n. pl.* of LOAF, *q. v.*

Lob, *n.* Any one heavy, clumsy, or sluggish.

(*Zoöl.*) A lob-worm. — See LUG-WORM.

—*v. a.* To let fall in a slovenly or lazy manner.

Lo'bate, or **Lo'bated**, *a.* (*Bot.*) Divided into lobes.

Loban, GEORGE MOUTON, COUNT DE, (*lo'bo*,) a general of the French empire, distinguished for his gallantry and his adherence to Napoleon, who called him "the best colonel that ever commanded a French regiment," was born 1770. In the campaign of 1809, he defeuded the little Island of Lobau, from which he took his subsequent title, against the Austrians, completely beat them off, and took his troops, comparatively unhurt, across the Danube. Being wounded at Waterloo, he was sent prisoner to England, where he remained till 1818. Having returned to France, he took part in the revolution of 1830, and was the successor of Lafayetto as commander of the National Guard. He was made a peer and marshal of France in 1831. D. 1839.

Lobau, (*lob'ou*,) a town of N. Germany, in Saxony, 13 m. E S.E. of Bautzen. In its neighborhood, crystals, known by the name of "Lobau diamonds," are found. *Pop.* 4,500.

Lob'au, an Island in the Danube, a few miles below Vienna, at the place where the French passed that river to fight the memorable battle of Aspern, 1809.

Lob'by, *n.* [Ger. *laube*, an arbor; L. Lat. *lobia*, *loubia*, *lobium*.] A covered walk or place. — An opening before a room, or an entrance into a principal apartment; a small hall or waiting-room; a small apartment taken from a hall or entry.

(*Naut.*) In a ship, a small cabin adjoining the bread-room, and appropriated to the use of the surgeon.

—*v. n.* To frequent the lobbies of a house of legislation, for the purpose of influencing the action of the members, or of securing their votes for some favorite bill.

Lob'-cock, *n.* A lob. (Low.)

Lobe, *n.* [Fr. *lobe*; Gr. *lobos*, from *lepo*, to peel.] (*Anat.*) The lower soft part of the ear; a part or division of the brain, or of the lungs, liver, &c.

(*Bot.*) A division of a simple leaf; the cotyledon of a seed.

(*Mach.*) The larger or more prominent part of a cam-wheel.

Lobed, (*lōbd*,) *a.* Having a lobe or lobes.

Lo'belville, in *Tennessee*, a post-office of Perry co.

Lobenstein, (*lo'ben-stine*,) a town of N. Germany, in Saxony, on the Lemnitz, 12 miles S.S.W. of Schleitz. *Manuf.* Woollens. *Pop.* 5,500.

Lob'lolly, *n.* (*Nâut.*) Burgou or burgoo.—See BURGOU.

Lob'lolly-bay, *n.* (*Bot.*) A species of plants, genus *Gordonia*, q. v.

Lob'lolly-boy, *n.* (*Naut.*) A name applied on board ship to the man who assists the medical officers in the *sick-bay* or hospital.

Lob'lolly-tree, *n.* (*Bot.*) See VARRONIA.

Lobelia, *n.* [In honor of *Lobel*, a botanist.] (*Bot.*) The typical genus of the natural order *Lobeliaceæ*. The most important species is *L. inflata* (Indian Tobacco), a native of this country, where it is found in fields and woods. The flowering herb and seeds have been extensively employed, especially in America, for their sedative, antispasmodic, emetic, and expectorant effects. *L.* resembles tobacco in its action, but requires to be used with care, as several fatal cases of poisoning have resulted from its empirical use. *L. syphilitica* is reputed to be efficacious in syphilis. *L. urens* has blistering qualities. To this gen. belongs also the beautiful N. American species called Cardinal-flowers (*L. cardinalis*, *L. fulgens*, &c.), the Buck's-horn (*L. coronopifolia*), and *L. gracilis* (Fig. 1609).

Fig. 1608. — INDIAN TOBACCO, (*L. inflata.*)

Lobelia'ceæ, *n. pl.* (*Bot.*) The Lobelia family, an order of plants, alliance *Campanales*. — DIAG. 2- or more-celled ovary; syngenesious anthers; a stigma surrounded by hairs; and a valvate, irregular corolla. — They are herbs or shrubs, with a milky juice. Leaves alternate and exstipulate; calyx superior; corolla monopetalous; stamens 5, syngenesious; ovary inferior; placentas axile or parietal; style 1; stigma surrounded by a fringe of hairs. Fruit capsular, dehiscing at the apex. Seeds numerous, albuminous. The plants of this order should generally be regarded with suspicion, as many act as acrid poisons. They are chiefly natives of tropical and sub-tropical regions. There are 29 genera and 375 species.

Fig. 1609. — LOBELIA GRACILIS.

Lo'bos, an island of S. America, in the Atlantic Ocean, off the S. coast of Uruguay; Lat. 35° 1′ S., Lon. 54° 39′ W.

Lo'bos, an island of Mexico, in the Gulf of California; Lat. 27° 15′ N., Lon. 110° 46′ W. — Another island, in the Gulf of Mexico, belonging to the prov. of Vera Cruz; Lat. 21° 26′ N., Lon. 97° 8′ W.

Lo'bos Islands, of Peru. See SEAL ISLANDS.

Lob'sconse, or IRISH STEW, *n.* (*Naut.*) A stew composed of small pieces of meat minced with potatoes, onions, &c.

Lob'sided, *a.* See LAPSIDED.

Lobs'pownd, *n.* A prison. Probably a prison for idlers or vagrants.

Lob'ster, *n.* [A. S. *loppestre*, or *lopystre* — *loppe*, a flea, from *hleapan*, to leap, and *stre*, probably for *strec*, strong, mighty.] (*Zoöl.*) A crustaceous decapod animal, belonging to the genus *Astacus*, q. v., (genus *homarus* of Milne-Edwards.) When alive, its general color is a bluish-black, beautifully variegated with paler spots and clouds. Its thorax is smooth, its snout short and serrated, and it has very long antennæ, with two shorter bifid ones between them. The claws and fangs are large, the greater being tuberculated, and the lesser serrated on their anterior edges. It has four pairs of legs; the tail has six joints, and the caudal fin is rounded. The two great claws of the *L.* form its instruments of provision and weapons of defence; they open and close like a pair of nippers, and are very strong. The head of the *L.* is small, and furnished with two eyes, which are projectile or retractile at will. The mouth resembles that of an insect, opens longitudinally, and is furnished with two teeth for the mastication of its food, and between them is a fleshy substance shaped like a tongue. When the young leave the parent lob-

sters, they seek the minute crevices of the rocks and other secure places, and in a few weeks they acquire hard, firm shells. *L.*, like crabs, change their shells every year; previous to this process they appear sick, languid, and restless, and lie torpid and motionless. Three or four days are required before they acquire their new shells, and during that period they are defenceless, and become the prey, not only of fish, but also of such of their own species as are not in a similar condition. While in a soft state, *L.* increase in size; and in comparing the dimensions of an old shell with a new, the latter is found to be one-third larger than the former. When boiled, the *L.* becomes red. In a commercial point of view, the *L.* is perhaps the most important of all the crustaceans, on account of the esteem in which it is held as an article of food, though the meat is rather indigestible. According to most accounts, they are very stationary in their habits, and differ in color and appearance in the different places where they are taken. They are caught in pots, similar to those used in the capture of crabs. *L.* very readily part with their large claws, and when seized by one of them, the animal gives it up at once. When suddenly alarmed by a peal of thunder, or the report of a cannon, they shoot their claws immediately. Considerable time elapses before the lost member is restored, and attains the size of the old one. Our *L.* (*A. Americanus*) has claws much larger in proportion than the European species (*A.*, or *homaris vulgaris*, or *gammarus*). It is found from the coast of New York northward; the best are taken on the rocky shores of New England, N. of Capo Cod.

Lob'ule, *n.* [Fr.] A small lobe.

Lob'-worm, *n.* A thick, sluggish worm, used in angling.

Lo'cal, *a.* [Fr.; Lat. *localis*, from *locus*, a place.] Pertaining to a place, or to a fixed or limited portion of space. — Limited or confined to a spot, place, or definite district.

Local, *n.* [Fr.] Locality. (R.)

Lo'calism, *n.* State of being local; affection for a place. — A word or phrase limited to a particular place.

Local'ity, *n.* [Fr. *localité.*] State of being local; existence in a space, or in a certain portion of space. — Limitation to a county, district, or place. — Position; situation; place; particularly, geographical place or situation.

Localiza'tion, *n.* Act of localizing.

Lo'calize, *v. a.* To make local.

Lo'cally, *adv.* With respect to place; in place.

Locarno, (*lo-kar'no,*) a town of Switzerland, cap. of the canton of Ticino, on the Lago Maggiore, near its N. extremity, 8 m. S.W. of Bellinzona; *pop.* 3,500.

Lo'cate, *v. a.* [Lat. *loco*, *locatus*, from *locus*, a place.] To place; to set in a particular spot or position.

Loca'tion, *n.* [Fr.; Lat. *locatio.*] Act of locating or placing. — Situation with respect to place.

(*Law.*) A contract by which a hire is agreed to be given for the use of anything, or for the labor of any person.

Lo'cative, *a.* (*Gram.*) That case which is expressive of locality.

Loch, (*lok,*) *n.* [Gael. *loch*; Ger. *loch*, a hole; Lat. *locus.*] A lake; an arm of the sea. (Scotland.)

(*Med.*) A lambative.

Lochäber-axe, Lochäber-ax, (*lok-ä'ber-aks,*) *n.* A formidable weapon of war, formerly used by the Scotch Highlanders.

Lochapo'ka, in *Alabama*, a post-village of Macon co., about 53 m. N.E. of Montgomery.

Lochar-Moss, (*lok'ar-moss,*) a bog or morass in Scotland, co. Dumfries, beginning at the Solway Frith, and running into the parish of Dumfries; extent 10 m. long, with a breadth of from 2 to 3 miles.

Loch Broom, (*lok',*) an extensive arm of the sea, in Scotland, between the counties of Cromarty and Ross; Lat. 58° N., Lon. 5° 15' W. It contains numerous islands.

Loche, *n.* See LOACH.

Loches, (*losh,*) a town of France, dept. Indre-et-Loire, 24 m. S.E. of Tours. Its castle was a strong fortress in the time of Louis XI.; and the portion that still remains is used as a prison. *Pop.* 5,793.

Lo'chia, *n.* [Gr. *locheia*, *lochia.*] (*Med.*) A sero-sanguineous discharge following delivery. During the first two or three days it is bloody, but afterwards becomes green-colored (*green waters*), and exhales a disagreeable peculiar odor. The *L.* in different stages have received the names *L. cruenta*, *L. serosa*, and *L. alba* seu *mucosa* seu *lactea.* Its duration, quantity, and character vary according to numerous circumstances. It flows from the part of the uterus which formed a medium of communication between the mother and fœtus, and continues usually from 14 to 21 days.

Lo'chial, *a.* Belonging to the lochia.

Lochie, (*lok'e,*) a town of Scotland, co. of Forfarshire, 2 m. from Dundee; *pop.* 4,000.

Lochle'ven Castle. See LEVEN (LOCH).

Lochnagar, (*lok-na-gar',*) one of the Grampian Hills, Scotland, in Aberdeen co.; *height*, 3,777 ft. above the level of the sea. It is celebrated in Byron's song of "Loch-na-gar."

Loch Sheldrake, in *New York*, a P. O. of Sullivan co.

Lochy, (*lok'e,*) a river of Scotland, in Perthshire, which, after a course of 15 miles, falls into Loch Tay. — Also one in Inverness-shire, falling into the sea near Fort William. — Also a lake, forming one in the chain of the Great Caledonian Glen. *Ext.* 9 m. long, by 1 broad.

Lock, (*lok,*) *n.* [A.S. *loc*, *locc*; Dan. *lukke*, a fastening, *lukke*, to shut, close.] A well-known instrument, used for fastening doors, chests, &c. It may be defined as a kind of fastening, which is only intended to be opened by one particular instrument, called the *key*, or by some secret mode of manipulation. In smith-work the *L.* is considered the masterpiece, as a great deal of art and delicacy is required in contriving and varying the wards, springs, bolts, &c., and adjusting them to the places where they are to be used, and to the several occasions for using them. The earliest *L.* of which the construction

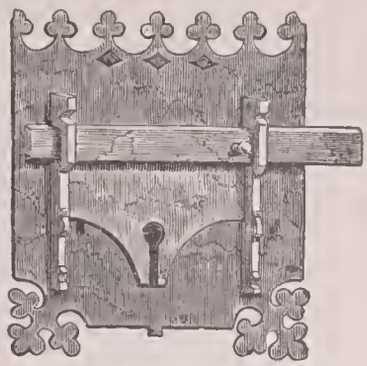


Fig. 1610. — LOCK OF WINCHESTER CATHEDRAL, (ENGLAND.)

is known, is the Egyptian, which was in use 4,000 years ago. It was so made that three pins were dropped into three holes in the bolt, when it was pushed in, and so held fast. They could be raised again by putting in the key through a large hole in the bolt, and raising it a little, so that the pins in the key pushed the locking-pins up out of the way of the bolt. This *L.* had very little security, for it was easy to find the places of the pins by inserting a piece of wood covered with clay or tallow, on which the holes marked themselves; and the depth could be easily ascertained by experiment. The Chinese *L.* is very superior to the Egyptian, and is founded on the same principles as the Bramah *L.*, which was regarded for a long time as the most secure *L.* ever invented. During the Middle Ages, very complicated and ingenious *L.* of various kinds were made, and as much artistic taste was expended upon the ornamentation of their external metal-work (Fig. 1610), as there was skill in the interior mechanism. Such *L.*, however, were not adapted to general use, and they were only found on the caskets of the wealthy. Until comparatively recent times the *L.* in common use were simply a mere bolt, held in its place, either shut or open, by a spring, which pressed it down, and so held it at either end of a convex notch. The only impediments to opening these *L.* were the wards, which the key had to pass before it could turn in the keyhole. The shape of these wards, however, could always be ascertained by inserting a blank key, covered with wax. Thus, a small collection of skeleton keys was all that the lock-picker required. The principle of all modern *L.* is the application of a lever to an interior bolt, by means of a communication from without; so that, by means of the latter, the lever acts upon the bolt, and moves in such a manner as to secure firmly the door or lid from being opened by any push or pull from without. The security of *L.*, therefore, depends upon the number of impediments which can be interposed between the lever, — that is, the *key*, and the bolt. These impediments are generally known by the name of *wards*; but, as we have observed above, they can be opened by a mechanic of equal skill with the lockmaker without the key, unless some further obstacles be added. Various complicated and difficult *L.* have been invented within late years. The first step in advance was the use of the *tumbler-lock.* In this, (Fig. 1611,) instead of the spring-piece and of the notches and curves on the under side previously used, the bolt, A, has two notches on the upper side, which are exactly as far apart as the distance moved by the bolt in locking or unlocking. Behind the bolt, partly seen only — the covered parts being indicated by dotted lines — is the *tumbler*, B, a small plate moving on the pivot, *d*, and having projecting from its face a small square pin, *e*,

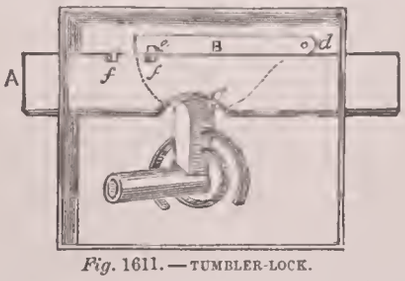


Fig. 1611. — TUMBLER-LOCK.

which, when the bolt is locked or unlocked, falls exactly into one or the other of the small notches, *f*, *f*. It will also be seen that there is in the key a notch, *g*, which corresponds to the outline of the tumbler, as indicated by the dotted lines. This acts upon the tumbler when the key is turned, and raises it so as to lift the pin out of the notch in the bolt, and allows the latter to be moved freely forward until the other notch comes under the pin, when the latter falls into and immediately stops its further progress, and the action of the key must be reversed in order to relieve it again. This very simple application of the tumbler is sufficient to explain the principle which may be, and is varied to an almost endless extent. After the introduction of the tumbler lock, and its improvements by Barron, the first *L.* was the celebrated *L.* originally patented by Joseph Bramah, (q. v.) In the *Bramah lock*, the tumblers are used in a new manner, and the use of wards is entirely abandoned. The ordinary method of shooting the bolt by the action of the bit of the key is also abandoned; a stud attached to the end of a cylindrical barrel mounted in the lock, performs the office of the end of the bit. The Bramah *L.* consists of an outer barrel, which is screwed to, or cast with, the lock-plate, with a cylinder or inner barrel turning within the other. The security of the *L.* depends upon a number of sliders made of plates of steel doubled and sprung open a little, so as to make them move with a little friction in the slits of the cylinder or revolving barrel in which they lie; they are pressed up against the cap of the *L.* by a spiral spring. A deep groove is cut round the barrel, and in each of the sliders is a deep notch which can be pushed down to that place in the barrel by a key slit to the proper depth. When all the sliders are pushed down to that position, the barrel presents the appearance of having no sliders in it. At the place where the groove is, a steel plate made in two pieces, so as to get it on, embraces the barrel; it is provided with notches corresponding to the sliders, and is affixed to the body of the *L.* by screws. When pushed up by the spring, the sliders fill the notches in the plate, and prevent the barrel from turning; but when they are pushed down by the key, the notches in the sliders all lie in the plane of the plate, and so the barrel can turn with the key, and the pin in the end of it turns the bolt. For many years the construction of Bramah's *L.* remained the same, and it was long considered a lock that could not be picked. It was clearly proved, however, that by the tentative process, as it is called, any *L.* can be picked, — that is, by cautiously trying one tumbler after another till they are all freed. Proceeding in this way, Mr. Hobbs, at Boston, in 1851, opened the challenge *L.* with 18 sliders or guards, which had hung in the window of Messrs. Bramah's establishment for years, in the short space of 19 hours; and he would have done it sooner had not one of his instruments broken in the *L.* He afterwards repeated the operation three times within the hour, before the arbitrators. It is a mistake to suppose that impressions cannot be taken from a Bramah *L.* Cotterill's *L.* is on the same principle as Bramah's, the difference being that the sliders, in Cotterill's, are pushed out radially by a very thick key with inclined slits in it. *Letter-locks*, which were in use some years ago, could only be opened by setting a number of rings or discs to a particular combination of letters. It was generally supposed that these *L.* could not be opened by anybody; they were also called *puzzle-locks.* Afterwards it was found that they, too, could be readily opened by the tentative process. The success of Chubb's *L.* arose partly from their superior workmanship, and the use of more tumblers than usual, and from having applied the name "detector" to a certain part of the machinery; thus captivating the public with the idea of discovering whether any one had been tampering with the locks. The "detectors," however, were not able to withstand Mr. Hobbs's mode of picking locks. Among the principal inventions in tumbler-locks, since 1851, may be mentioned the ingenious one of Mr. Hobbs. This beautiful and complicated piece of mechanism, which must be preferred when the most perfect security is required, cannot be described within the limits of this article. Another series of locks are those in which the tumblers or sliders are not moved one way by strings, and the other way by the key. The tumblers, or sliders, or discs, which stop the bolt, are kept in their places by friction only, and will stand anywhere, having their plates lying between them, and being pushed or turned one way in locking, and the other way in unlocking. Among these may be named Andrew's and Robert Newell's American *L.* on the disc principle. A set of *L.* is frequently so arranged for convenience, that the key of one will open none of the others, yet there may be one master-key which is able to open them all. In his *Treatise on Locks*, Mr. Denison, the famous clock-maker of London, remarks that "the casting of the locks of Mr. R. Newell and of Mr. Hobbs of Boston (which have all their heavy parts of cast-iron) is vastly superior to any iron casting we have ever made in England; and on the whole the U. States are evidently far ahead of us in the manufacture of both good and cheap locks." If not limited by the exigencies of this work, the description of many ingenious contrivances lately invented would prove the fact, generally conceded, that we still retain the lead in the art of lock-making. See LOCK, YALE, in SECTION II.

(*Internal Navigation.*) The parts of a canal included between two flood-gates, by means of which a vessel is transferred from a higher to a lower level; or from a lower to a higher. It is also applied to the contrivance by which vessels are maintained at the level of high-tide in harbors exposed to variations of level. See CANAL.

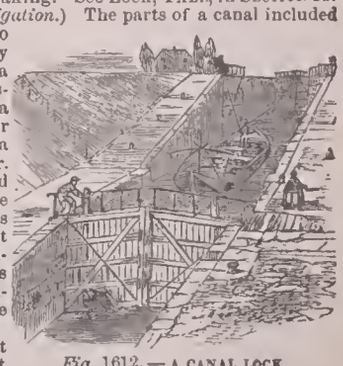


Fig. 1612. — A CANAL LOCK.

(*Gun.*) That part of a musket or fowling-piece which has to do with the ignition of the charge by percussion.

Lock, *n.* [A. S *loce, loca;* Ger. *locke.*] A tuft or ringlet of hair; a tuft of wool, hay, or other like substance.

Lock, *v. a.* To fasten with a lock, as a door. — To fasten so as to impede motion, as wheels. — To shut up or confine, as with a lock; as, *locked* up in jail. — To close fast; as, the frost *locks* up the river. — To encircle or inclose; to embrace closely. — To furnish with locks, as a canal; to coufine; to restrain. — To seize the sword-arm of an antagonist by a peculiar movement.

—*v. n.* To become fast. — To unite closely by mutual insertion.

Lock'age, *n.* The materials for the construction of locks on a canal; also, the construction itself. — Tolls for passing the locks of a canal. — The quantity of water necessary for enabling a vessel to pass through a lock. — The amount of elevation aud descent made by the locks of a canal.

Lock Berlin, In *New York,* a post-village of Wayne co., abt. 4 m. E. of Lyons.

Lock'bourne, in *Ohio,* a post-village of Franklin co., abt. 11 m. S. by E. of Columbus.

Lock'bridge, in *Iowa,* a former township of Jefferson co.

Lock'-chamber, *n.* The space between two lock-gates.

Lock'-down, *n.* A term applied by lumbermen in the United States to a contrivance used to fasteu logs together in rafting.

Locke, (*lŏck,*) John, an eminent English philosopher, b. at Wrington, in Somersetshiro, 1632. He was educated at Westminster and Christchurch College, Oxford, where he distinguished himself by his general proficiency; and finally applied himself to the study of medicine. In 1666 he was introduced to Lord Ashley, afterwards Earl of Shaftesbury, to whom he became serviceable in his medical capacity, and who formed a high opiuion of

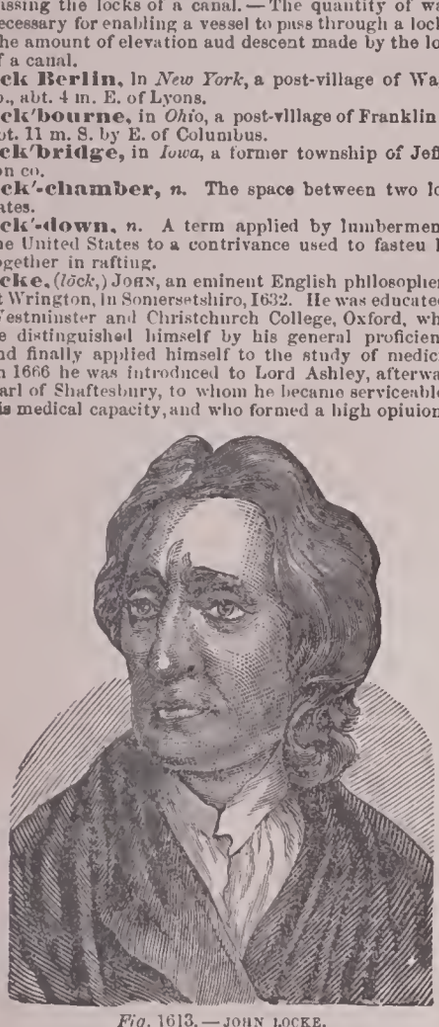


Fig. 1613. — JOHN LOCKE.

his general abilities, and introduced him to the Duke of Buckingham, the Earl of Halifax, and other distinguished men. He also confided to him the superintendence of his son's education; and when, in 1672, Lord Shaftesbury was appointed lord-chancellor, he made *L.* secretary of presentations, and at a later period, secretary to the Board of Trade. On his patron retiring to Holland, to avoid a state prosecution, *L.* accompanied him, and remained there several years. So obnoxious was he to James's government, that the English envoy demanded *L.* of the States, on suspicion of his being concerned in Monmouth's rebellion, which necessitated his temporary concealment. At the revolution he returned to England, and was made a commissioner of appeals, and in 1695 a commissioner of trade and plantations. He resided the last few years of his life with his friends, the Mashams, at Oates, in Essex, and there d., 1704. As a philosopher, *L.* stands at the head of w at is called the

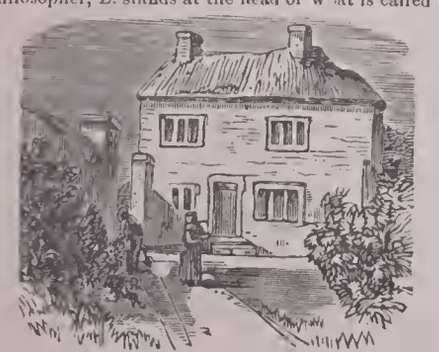


Fig. 1614. — BIRTH-PLACE OF LOCKE.

Sensational School in England. His greatest work is the *Essay on the Human Understanding,* in which he endeavors to show that all our ideas are derived from experience, that is, through the senses, and reflection on what they reveal to us. He also investigates the general character and the association of ideas; the reality, limits, and use of knowledge; the influence of language, and the abuses to which it is liable. This essay was first published in 1690, and became immediately popular. It passed through numerous editions in rapid succession, and was translated into French and Latin. Whatever may be thought of Locke's theories, his Essay has a solid and permanent worth, and will not cease to attract and charm inquirers and lovers of truth. His other works are the *Treatise on Civil Government; Letters on Toleration; On the Conduct of the Understanding; Vindication of the Reasonableness of Christianity.* The grave of *L.*, in the parish of High Laver, (in which the mansion of Oates is,) after long lying neglected and in decay, was repaired and restored in 1865, to the cost of which the French MM. Victor Cousin and Barthélemy St. Hilaire contributed. His Life, by Lord King, was published in 1829. The best complete edition of his works is in 10 volumes (London, 1801 and 1811).

Locke, David Ross, familiar as "Petroleum V. Nasby," born in N. Y. 1833. Educated as a printer, he became connected with several journals. In 1865 he took editorial charge of the *Toledo Blade,* in which he gained great reputation as a humorous writer, and he afterward became a popular lecturer. *L.* commenced his *Nasby Letters* in 1860, and continued them until the close of the war. In 1868 these were re-published as *Swingin Round the Cirkle,* and *Letters from Confederit X-Roads.* They were humorous productions, political in character and dialectical in spelling. Died in 1888.

Locke, in *Indiana,* a village and twp. of Elkhart co.

Locke, in *Michigan,* a post-township of Ingham co.

Locke, in *New York,* a post-town of Cayuga co.

Locked'-jaw, *n.* (*Med.*) See Tetanus.

Locke'ford, in *Cal.,* a post-vill. of San Joaquin co.

Lock'er, *n.* One who, or that which, locks.—Anything closed with a lock, as a drawer, a chest, a cupboard, &c. (*Naut.*) A sort of box or chest made along the sides of ships, for the purpose of stowing away various articles. They are built, as it were, into the ship, and have their various names; as, *bread-locker,* &c.

Locke's Mills, in *Maine,* a post-office of Oxford co.

Lock'et, *n.* [Fr. *loquet,* a latch; It. *lucchetto.*] A catch or spring to fasten a necklace or other ornament. — A little gold case worn as an ornament, often contaiuing a lock of hair.

Lock'hart, In *Indiana,* a township of Pike county.

Lockhart, in *Texas,* a post-village, cap. of Caldwell co., abt. 25 m. S.E. of Austin.

Lock'hart, John Gibson, a Scottish poet and novelist, b. 1794, was auditor of the duchy of Lancaster, and married Sophia, daughter of Sir Walter Scott. He is the author of *Spanish Ballads, Valerius, Adam Blair, Reginald Dalton,* and a *Life of Sir Walter Scott.* D. 1854.

Lock Haven, In *Pennsylvania,* a thriving city, cap. of Clinton co., on the W. branch of the Susquehanna river, about 107 m. N.N.W. of Harrisburg; has extensive lumbering interests. *Pop.* (1897) about 9,100.

Lock'ington, in *Ohio,* a post-village of Shelby co.

Lock'ist, *n.* A follower of John Locke in metaphysical philosophy.

Lock'-jaw, *n.* The same as Locked-jaw.

Lock'-keeper, *n.* One who atteuds the locks of a canal.

Lock'land, in *Ohio,* a post-village of Hamilton co., about 11 m. N.N.E. of Harrisburg. *Pop.* (1897) 3,000.

Lock'less, *a.* Destitute of locks.

Lock'-paddle, *n.* A small shiee giving way to water for filling or emptying the locks of a canal.

Lock'port, in *Illinois,* a post-village and township of Will co., about 32 miles S.W. of the city of Chicago. It is a place of considerable activity, and is growing rapidly. *Pop.* (1897) about 2,600.

Lockport, in *Indiana,* a post-village of Carroll co., 75 m. N. of the city of Indianapolis.

—A village of Fayette co., about 60 m. E. of Indianapolis.

—A village of Vigo co., about 9 m. S.E. of Terre Haute.

—A village of Wayne co., abt. 16 m. W.S.W. of Richmoud.

Lockport, in *Kansas,* a post-office of Haskell co.

Lockport, in *Kentucky,* a post-village of Henry co.

Lockport, in *Louisiana,* a post-village of La Fourche parish, on Bayou La Fourche.

Lockport, in *Michigan,* a township of St. Joseph co.

Lockport, in *New York,* a flonrishing city, cap. of Niagara co., about 306 m. W. by N. of Albany; Lat. 43° 11′ N., Lon. 78° 46′ W. *L.* is admirably situated for extensive inland trade, and is surrounded by a fertile agricultural region. It is well built, and contains some very handsome and substantial edifices. *Pop.* (1897) about 18,200.

Lockport, In *Ohio,* a village of Tuscarawas co., about 100 m. N.E. of Columbus.

—A village of Williams co., abt. 143 m. N.W. of Columbus.

Lockport, in *Pennsylvania,* a village of Clintou co., ou the W. branch of the Susquehanua river, opposite Lock Haven.

—A village of Erie co.

—A village of Northampton co.

—A post-village of Westmoreland co., about 25 miles E.N.E. of Greeusburg. It is sometimes called Lockport Station.

Lockport, in *Tennessee,* a post-village of Wilson co., 36 m. E.N.E. of Nashville.

Lock'ram, *n.* [Fr. *locrenan, locronan.*] A kind of coarse linen.

Lock'-rand, *n.* (*Masonry.*) A binding course.

Lock'-sill, *n.* An angular piece of timber, against which the gates shut at the bottom of a lock.

Lock's Mills, in *Pennsylvania,* a P. O. of Mifflin co.

Lock'smith, *n.* An artificer who makes or mends locks.

Lock's Village, in *Massachusetts,* a post-village of Franklin co., abt. 75 m. W. by N. of Boston.

Lock'town, in *New Jersey,* a P. O. of Hunterdon co.

Lockville, in *N. Carolina,* a village of Chatham co.

Lock'ville, in *Ohio,* a post-village of Fairfield co., abt. 20 m. S.E. of Columbus.

Lock'-up, *n.* A place where persons under arrest are temporarily confined.

Lock'wood, in *New Jersey,* a village of Sussex co.

Locle, (Le,) (*lok'l,*) a town of Switzerland, on the French frontier, cantou of Neufchâtel, 10 m. N.W. of the town of that name. *Manuf.* Watches and lace. *Pop.* 9,365.

Lo'co-descrip'tive, *a.* [Lat. *locus,* a place, and *descriptive.*] Describing a particular place or places.

Lo'co-fo'co, *n.* [Probably from Lat. *loco foci,* instead of a fire.] A lucifer-match. — See Lucifer.

—A cant term formerly applied to the ultra-democratic party in the U. S. The application of the word to this particular political party arose thus: — In 1834, a certain number of the extreme democratic party met at Tammany Hall, New York, and there happening to be a great diversity of opinion, the chairman left his seat, and the lights were extinguished, with a view to dissolve the meeting; but those in favor of extreme measures produced loco-foco matches, rekindled the lights, continued the meeting, and accomplished their object.

Locomo'tion, *n* [Fr.; from Lat. *locus,* a place, and *motio,* motion.] Act or power of removing from place to place.

Locomo'tive, *a.* [Fr. *locomotif.*] Relating or pertaining to locomotion. — Moving from place to place; changing place, or able to change place.

—*n.* A locomotive-engine or steam-carriage.

Locomo'tive-Engine. See Section II.

Locomo'tive Power, *n.* A term denoting, in contradistinction to *stationary power,* any kind of motive force applied to the transport of loads on land, and travelling with the load which it draws. Horses employed to draw carriages or carry loads are locomotive power.

Locomo'tiveness, Locomotiv'ity, *n.* [Fr. *locomotivité.*] Locomotion.

Lo'cris. (*Anc. Hist.*) A small state of Greece, which was enclosed between the Gulf of Corinth on the S., Ætolia on the W. and Phocis on the E.; and extended N. and S. for a little more than 12 m. The Locrians, according to Clinton, were a tribe of Leleges who existed before the time of Amphictyon (b. c. 1521), but derived their name from his grandson Locrus. They soon became intermingled with the Hellenes, and in historical times are distinguished into Eastern and Western Locrians. The eastern Locriaus are mentioned by Homer as accompanying Ajax to the Trojan war, but the western Locrians do not appear till the Peloponnesian war, when they were in a semi-barbarous condition. They promised to assist the Athenians against the Ætolians, b. c. 426, but afterwards submitted to Sparta, and joined the Ætolian League. The Fourth Sacred war was undertaken against them b c. 339, and they, with their allies the Thebans and Athenians, were defeated by Philip II. of Macedon, at Chæronea, Aug. 7, b. c. 338.

Loc'ulament, *n.* (*Bot.*) Same as Loculus.

Loc'ular, *a.* (*Bot.*) Pertaining to a cell.

Loculici'dal, *a.* [Fr. *loculicide:* Lat. *loculus.*] (*Bot.*) Dehiscent through the centre of the back of each cell.

Loc'ulose, Loc'ulous, *a.* [Lat. *loculosus.*] (*Bot.*) Partitioned internally into shells.

Loc'ulus, *n.* [Lat.] A cell or cavity. The term is usually applied to the cells of the ovary.

Lo'cum-te'nens, *n.* [Lat., a place-holder.] A deputy or substitute; one who fills the position of another, and discharges his duties.

Lo'cus, *n.; pl.* Loci. [Lat., place] (*Geom.*) The curve described by a variable point, and the surface generated by a variable curve. Thus the locus of a right line which rests upon three fixed right lines, not in the same plane, is a hyperboloid of one sheet. — The *locus of an equation,* in algebraic geometry, is the curve or surface upon which are situated all the points whose co-ordinates satisfy that equation. In this manner loci are distinguished into *orders;* the order of a locus being simply the degree of the corresponding equation.

Locus in quo, (*lō'kus in kwo.*) [Lat., the place (locality) in which.] A term applied in law to the locality which has been the scene where any event in a case takes place. — *Locus partitus* is another term used to signify the division made between two towns or counties, in order to make trial where the land or place in question lies.

Locusta'riæ, *n. pl.* (*Zoöl.*) The Locust family of Insects, embracing grasshopper-like Orthoptera which have very long, slender antennæ, four-jointed tarsi, and the females have a long ovipositor. The family contains several genera and many species. Locusts are spread all over the globe, and generally appear in great numbers. The produce of whole countries has been destroyed by them, on account of the rapidity with which they multiply. The species found in Europe are rather small, but some of the exotic varieties are large. Their principal food consists of leguminous plants. During spring and beginning of summer they are in their larval state, without wings; but in the latter part of summer they become perfect insects. Locusts, like many other insects belonging to the order *Orthoptera,* have the faculty of producing sounds. They produce a harsh, creaking noise, by acting upon their elytra, or wing-covers, with their hind-legs. On account of the veins being considerably elevated in the elytra, and the inner edge of their thighs being rugose with spines, the rubbing of the one

against the other produces the noise. Of all the locusts, the migratory (*Locusta migratoria*), which belongs to the closely allied family *Acridii* (Figs. 27 and 1615), although a small insect, is one of the most destructive to man. As these insects are produced in great numbers, they soon destroy the vegetation where they are born. After consuming all within their reach, they take flight in swarms to some adjoining district. At times the number of locusts is so great that the sky is absolutely darkened during their passing, and the spots where they alight assume the appearance of a barren waste almost in an instant. These insects appear periodically in several parts of central Europe, in Egypt, Syria, and almost all the S. of Asia, and spread terror and dismay before them. Rewards are offered for the collection of both the eggs and the perfect insects in the S. of Europe. A similar plan is adopted in Turkey and in China. The inhabitants of some countries make use of the large species of locusts as food. They pull off their wings, and fry them in butter or oil, or pickle them. One of the most famous and destructive forms is the Rocky Mountain locust, *Caloptenus spretus*, whose breeding place is in the mountain districts of the West, whence it issues in certain years in extraordinary multitudes, eating all green things as it advances, and converting the fields of Kansas and some adjoining States into barren wastes. For the "Seventeen Year Locust" of the U. S., see CICADA.

(*Script.*) There are ten different names in the Hebrew Bible for insects of this kind; but some of these probably designate different forms or stages in the life of the same species. The Bible represents their countless swarms as directed in their flight and march by God, and used in the chastisement of guilty nations. (*Deut.* xxviii. 38–42; 1 *Kings* viii. 37; 2 *Chr.* vi. 28.) A swarm of locusts was among the plagues of Egypt; they covered the whole land, so that the earth was darkened, and devoured every green herb of the earth, and the fruit of every tree which the hail had left. (*Ex.* x. 4–19.) But the most particular description of this insect, and of its destructive career, in the sacred writings, is in *Joel* ii. 3–10. This is one of the most striking and animated descriptions to be met with in the whole compass of prophecy; and the double destruction to be produced by locusts and the enemies of which they were the harbingers, is painted with the most expressive force and accuracy.

Fig. 1615. — MIGRATORY LOCUST.

The four insects specified in *Joel* i. 4, the Palmer-worm, the Locust, the Canker-worm, and the Caterpillar, are strictly, according to the Hebrew writings, only different forms of locusts, some perhaps without wings. See *Locusts* in U. S., *First Annual Report United States Entomological Committee* (Washington, 1878).

Loens'ta, *n.* [Lat.] (*Bot.*) A term applied to that form of spike which consists of flowers destitute of calyx and corolla, the place of which is occupied by bracts, and has a flexuose rachis that does not fall with the flowers. The Graminaceæ (Fig. 1616) afford examples. Each part of the inflorescence so arranged is called a *locusta*, the structure of which is as follows: at the base are two opposite empty bracts called *glumes*, one of which is attached to the rachis a little above the base of the other; above the glumes are several florets sitting in denticulations of the rachis; each of these consists of one bract called a *pale*, sometimes with the midrib quitting the lamina a little below the apex, and elongated into a bristle; and of another bract facing the first, with its back to the rachis, bifid at the apex, with no dorsal vein, but with its edges inflexed, and a rib on each side at the line of inflexion; and lastly, within those pales are situated two extremely minute fleshy scales (*lodicula*), which are sometimes connate, and stand at the base of the sexual organs.

Fig. 1616.

Lo'cust, in *Pennsylvania*, a township of Columbia co.

Lo'cust Creek, in *Missouri*, rises in Putnam co., on the borders of Iowa, and flowing S. through Sullivan and Linn cos., enters Grand River from Chariton co.

Lo'cust Creek, in *Virginia*, a post-office of Louisa co.

Lo'cust Dale, in *Virginia*, a P. O. of Madison co.

Lo'cust Grove, in *Arkansas*, a village of Stone co.

Lo'cust Grove, in *Georgia*, a post-village of Henry co., about 9 m. S.S.E. of McDonough.

Lo'cust Grove, in *Illinois*, a P. O. of Franklin co.

Lo'cust Grove, in *Iowa*, a township of Jefferson county.

Lo'cust Grove, in *Kentucky*, a small village of Callaway co.

Locus'tic Acid, *n.* (*Chem.*) An acid obtained from the locust, and differing little from acetic acid.

Lo'cust Moun'tain, in *Pennsylvania*, a mountain in the N.E. part of Schuylkill co., forming a part of Broad Mountain.

Lo'cust Spring, in *Illinois*, a village of Macoupin co., abt. 30 m. S.W. of Springfield.

Lo'cust Val'ley, in *New York*, a P. O. of Queen's co.

Lo'cust Val'ley, in *Pennsylvania*, a P.O. of Lehigh co.

Lo'cust-tree, *n.* (*Bot.*) See HYMENÆA.

Locu'tion, *n.* [Fr., from Lat. *locutio*.] Discourse; speech.

Loc'utory, *n.* The apartment in a monastery in which monks were allowed to converse; — hence, sometimes, a room for conversation.

Lo'da, in *Illinois*, a twp. of Iroquois co.; *pop.* abt. 906.

Lode, *n.* [A. S. *lædan*, to lead.] (*Min.*) The technical term for a metalliferous or ore-producing vein. In mining-districts, ore occurs either in mineral veins or in beds. If in the former, the veins are almost invariably found to have one of two or three principal directions, being either nearly parallel to the axis of elevation of the district, at right angles to that direction, or making an angle of 45° with it. The first series are generally called by miners *right-running veins* or *lodes;* the second are *cross courses;* and the third *contra lodes*, sometimes called *counters*. Lodes differ, almost without limit, in length, width, and depth, and also in the nature of their mineral contents.

Lode'-ship, *n.* A kind of fishing-vessel.

Lodes'man, *n.* A pilot for harbor and river duty.

Lode'star, *n.* [Icel. *leidar-stierna*, leading-star.] A name for the pole-star; — written also *loadstar*.

Lode'stone, *n.* Same as loadstone. — See MAGNET (NATURAL).

Lodève, (*lo'daiv,*) a town of France, dept. of Herault, on the Ergue, 30 m. W.N.W. of Montpellier. In *L.* and vicinity, between 7,000 and 10,000 work-people are engaged in the manufacture of woollen cloths for the army. At least three fourths of the population belong to weavers' families. *Pop.* 12,000.

Lodge, (*loj,*) *v. a.* [A. S. *logian*, to place, lodge; Fr. *loger*, from Lat. *locare*, to place.] To set, lay, or deposit for keeping or preservation for a longer or shorter time. — To plant; to infix; to fix; as, to *lodge* an arrow. — To settle in the heart, mind, or memory. — To furnish with a temporary habitation, or with accommodation for one night; to entertain; to harbor. — To cover; to contain for keeping.

—To beat down so as to entangle, as grain.

—*v. n.* To reside; to dwell; to rest in a place. — To rest or dwell for a time. — To fall down and become entangled, as grain.

—*n.* [Fr. *loge*, *logis;* It. *loggia.*] A small house or habitation in a park or forest; a temporary habitation; a small house or tenement appended to a larger; a den; a cave; any place where a wild beast dwells. — A meeting of Freemasons, Odd-Fellows, or other secret society; the place where they meet, or the association itself.

Lodged, *a.* (*Her.*) Lying down.

Lodge'ment, *n.* The same as LODGMENT.

Lodg'er, *n.* One who lodges or who lives at board, or in a hired room, or who has a bed in another's house for a night. — One who resides in any place for a time.

Lodg'ing, *n.* A place of rest for a night, or of residence for a time; a temporary habitation; apartment; rooms hired in the house of another; a part of a house let to another, usually termed *lodgings*. — Place of residence; harbor; cover; place of rest.

Lodg'ment, *n.* [Fr. *logement.*] Act of lodging, or the state of being lodged; a being placed or deposited at rest for keeping for a time, or for permanence. — Accumulation or collection of something deposited or remaining at rest.

(*Mil.*) An encampment made by an army; a work cast up by besiegers during their approaches, in some dangerous post.

Lodi, (*lo'di,*) a town of Italy, province of Milan, on the Adda, 18 m. S.E. of Milan. The church, *della Incoronata*, is said to have been designed by Bramante. *Manuf.* Silks, linens, porcelain, chemicals; it has also an active trade in Parmesan cheese, on account of which an immense number of cows are fed in the vicinity. Lodi is famous for the victory achieved by Napoleon I. against the Austrians in 1796, in which the bridge over the Adda was carried at the point of the bayonet, though swept by Austrian cannon. *Pop.* (1897) 18,940.

Lo'di, in *California*, a post-village in San Joaquin co., on the So. Pac. R. R. *Pop.* (1897) about 1,250.

Lo'di, in *Michigan*, a township of Washtenaw co.

Lo'di, in *New Jersey*, a post-town of Bergen co.

Lo'di, in *New York*, a village of Cattaraugus co.

—A post-town of Seneca co. *Pop.* (1897) 1,728.

Lo'di, in *Ohio*, a township of Athens co.—A post-village of Medina co., about 100 miles N.N.E. of Columbus.

Lo'di, in *South Dakota*, a post-office of Clay co.

Lo'di, in *Tennessee*, a village of Clay co.

Lo'di, in *Texas*, a post-village of Marion co.

Lo'di, in *Virginia*, a post-town of Washington co.

Lo'di, in *Wisconsin*, a village of Calumet co., about 2 m. E. of Chilton.

—A post-village and township of Columbia co., about 20 m. N. by W. of Madison.

Lo'di Bar, in *South Carolina*, a village of Sumter co.

Lodi Center, in *New York*, a post-office of Seneca co.

Lo'ding, in *Illinois*, a post-office of Rock Island co.

Lo'diville, in *Indiana*, a village of Parke co., abt. 16 m. N.W. of Rockville.

Lodoic'ea, *n.* (*Bot.*) A genus of trees, order *Palmaceæ*, to which belongs the Coco de Mer, or Double Cocoa-nut, *L. Sechellarum*, only found in the Seychelles.

Lodome'ria. See GALICIA.

Lodouil'lo, in *Iowa*, a township of Clayton co.

Lodore', in *Virginia*, a post-office of Amelia co.

Lodz, a town of Russian Poland, 75 m. S.W. of Warsaw. Its rapidly-developed cotton- and woollen-cloth manufactures have raised it from an unimportant village (in 1821) of only about 800 people to a population (in 1897) of about 100,000. The trade is chiefly in the hands of Germans.

Lo'ess, *n.* [Ger. *löss.*] (*Geol.*) A local deposit of doubtful origin, consisting of a finely comminuted sand or powdery loam of yellowish-gray color. This sand is chiefly argillaceous matter, with about 15 per cent. of carbonate of lime and as much quartzose or micaceous sand. It often contains hard calcareous concretions in parallel layers. It is unsolidified, and easily washed away. It contains land shells, and sometimes fresh water species. *Succinea elongata* is characteristic of it. It rarely shows signs of stratification, being perfectly homogeneous. It occupies the valleys of the Rhine, Rhone, Danube, &c., and is also abundant in China and in the United States, in the Mississippi valley, where it seems to be of fluviative origin.

Loffoden Isles, (*lo-fo'den,*) a group of islands on the coast of Norway, between Lat. 67° 40′ and 69° 30′ N., Lon. 11° 40′ and 16° 20′ E. There are 5 large and several smaller islands. The principal are Andöen, Langöen, and Hindöen, which is the largest of the group, and, with 6 others, form on the side of the Norwegian continent the Gulf of West Fiord. The coasts of these islands are extremely irregular, and rise into lofty and rugged mountains, covered with perpetual snow, and in many places with glaciers. There are no trees, and only a few stunted shrubs and grass. The only importance of these islands is in their fisheries, which are extensive and very valuable. In the beginning of Feb. the cod-fish set in from the ocean, and occupy the banks in West Fiord. These banks are from 3 to 10 m. out on the Fiord, at a depth of from 60 to 80 fathoms; and the fish crowd so much together while depositing their spawn, that it is said a deep-sea lead is often interrupted in its descent to the bottom through these fish-hills. The fishermen assemble in the month of January at the different stations, and the fish are caught with nets and long lines, set at night and taken up in the morning. This important winter-fishing ends in the middle of April. During the fishing-season these islands are visited by immense numbers of boats from Norway and Finmark. They are exposed to severe tempests, and near the S. of the group is the Maelstrom, a dangerous whirlpool occasioned by the swell of the ocean during the N.W. winds. *Pop.* 4,000.

Loft, *n.* [A. S. *lyft;* Dan., Sw., Ger. *luft;* Icel. *lopt*, the air, the atmosphere, from *lopta*, to raise.] That which is lifted up, raised, or elevated; specifically, a room or space next under the roof; a floor or story above another; a gallery or small chamber raised within a larger apartment, or in a church.

Loft'ily, *adv.* In a lofty manner; on high; in an elevated place. — Proudly; haughtily; with elevation of language, diction, or sentiment; sublimely; in an elevated attitude.

Loft'iness, *n.* State or quality of being lofty; height; elevation in place or position; altitude.—Pride; haughtiness; elevation of attitude or mien; dignity; sublimity; elevation of diction or sentiment.

Loft'y, *a.* [O. Ger. *luftlih*, heavenly, *luftig*, aërial.] Lifted up; high; elevated in place. — Elevated in condition or character. — Proud; haughty; puffed up. — Elevated in sentiment or diction; sublime. — Stately; majestic.

Log, *n.* [Dn. *log*, heavy, slow, unwieldy.] A bulky piece or stick of wood, or timber, unhewed.

(*Naut.*) A machine used to measure the rate of a ship's velocity through the water. The apparatus used is a piece of thin board, forming the quadrant of a circle, about six inches radius, and balanced by a small plate of lead nailed on the circular part, so as to swim perpendicular in the water with the greater part immersed. The *log line* is then fastened to the log by means of two ends, one of which is knotted through a hole in the corner, while the other is attached to a pin fixed in a hole at the other corner, so as to draw out occasionally. The line has previously been divided into certain spaces, which are in proportion to an equal number of geographical miles, as a half or quarter minute is to an hour of time; it is then wound round a reel. The reel being held by one man, and the half-minute glass by another, the mate of the watch fixes the pin, and throws the log over the stern or bows, which then, ceasing to feel the ship's motion, becomes stationary, while the vessel, sailing on, the check, of course, unwinds the line from the reel, and the log, being left stationary behind, continues to draw out more line. At the same instant that the log touched the water the other man turned the glass, so by the time the sand has run through the glass, the amount of line paid out is noted by the previous marks on it: and, according to that, the rate at which the ship is sailing is at once ascertained by merely calculating how many fathoms have passed out in the half-minute. The length between each knot or mark on the line being so proportioned to the time of the glass, that the number of knots unwound while the glass is running down determines the number of miles the ship is sailing in an hour.

Lo'gan, in *Illinois*, a central co.; *area*, abt. 625 sq. m.

Rivers. Salt, Kickapoo, and Sugar creeks. *Surface,* level; *soil,* fertile. *Cap.* Lincoln. *Pop.* (1890) 25,489.
—A post-office of Edgar co.

Lo'gan, in *Indiana,* a post-village and township of Dearborn co., about 24 m. W.N.W. of the city of Cincinnati.
—A township of Fountain co.
—A township of Pike co.

Lo'gan, in *Kansas,* a township of Washington co.

Lo'gan, in *Kentucky,* a S.S.W. co., adjoining Tennessee; *area,* about 544 sq. m. *Rivers.* Red river, and Muddy and Whippoorwill creeks. *Surface,* agreeably diversified; *soil,* fertile. *Cap.* Russellville. *Pop.* (1890) 23,812.

Lo'gan, in *Nebraska,* a village of Clay co.
—A village of Cuming co.

Lo'gan, in *New York,* a post-village of Schuyler co., about 24 m. W. by N. of Ithaca.

Lo'gan, in *Ohio,* a W. central co.; *area* ,about 448 sq. m. *Rivers.* Miami river, and Darby, Mill, and several smaller streams. *Surface,* level or slightly undulating; *soil,* fertile. *Cap.* Bellefoutaine. *Pop.* (1890) 27,386.
—A township of Augusaize co.
—A city, cap. of Hocking co., on Col., H. V. & T. R. R., 50 m. S.E. of Columbus. *Pop.* (1897) 3,450.

Lo'gan, in *Pennsylvania,* a township of Blair co.
—A township of Clinton co.

Lo'gan, in *Utah,* a city, cap. of Cache co., on the Un. Pac. R.R., 97 m. N. of Salt Lake City. *Pop.* (1897) 6,550.

Lo'gan, in *West Virginia,* a S.W. co., adjoining Kentucky; *area,* about 675 sq. m. *Rivers.* Guyandotte river, and Tug Fork of Big Sandy river. *Surface,* mountainous; *soil,* generally fertile. *Min.* Coal and iron. *Cap.* Logan. *Pop.* (1890) 11,101.

Lo'gan, *n.* See ROCKING STONE.

Lo'gan, the English name of a celebrated chief of the Cayuga Indians, B. in 1725. In 1770, he removed from Pennsylvania to Ohio, where, in 1774, his family were massacred by a party of whites. *L.* thereupon initiated a war of vengeance against the settlers of the Far West, in which fearful atrocities were committed. Killed near Lake Erie in 1780.

Lo'gan, JAMES, B. in Ireland, 1674. In 1699 he accompanied W. Penn to Penna., as secretary. He afterwards was chief justice and president of the council, discharging in the latter capacity the duties of governor of the province for two years after the demise of Gov. Gordon in 1736. He bequeathed his collection of 2,000 books to the Philadelphia library, and D. 1751.

Lo'gan, or **Lo'gan Court-House,** in *West Virginia,* a post-village, cap. of Logan co.

Logania'ceæ, *n.* (*Bot.*) The Spigelia or Strychnos family; an order of plants, alliance *Gentianales.* DIAG. Opposite leaves with intervening stipules. They are tropical shrubs, herbs, and trees, with the following characters:—Leaves entire, with stipules, the latter occasionally existing only in the form of a raised line or ridge; calyx 4- to 5-parted; corolla regular, 4- to 5- or 10-cleft; æstivation valvate or convolute; stamens sometimes anisomerous; anthers 2-celled; pollen 3-lobed; ovary 2-, 3-, or 4-celled; style simple below, and with as many divisions above as there are cells to the ovary; stigma simple. Fruit capsular or drupaceo-baccate; placentas axile, ultimately detached. Seeds usually peltate, sometimes winged, with fleshy or cartilaginous albumen. This order is almost universally poisonous, acting on the nervous system, and producing frightful convulsions. The ord includes 22 genera and 162 species.

Lo'ganite, *n.* [Named after W. E. *Logan,* an English mineralogist.] (*Min.*) A hydrated silicato of alumina, magnesia, and protoxide of iron, occurring in the Laurentian limestones of Canada.

Lo'gan Mills, in *Pennsylvania,* a P. O. of Clinton co.

Lo'gan's Creek, in *Missouri,* a village of Reynolds co., about 125 m. S.E. of Jefferson co.

Lo'gan's Ferry, in *Pennsylvania,* a post-village of Allegheny co., on the Allegheny river, about 18 m. above Pittsburg.

Lo'ganport, in *Illinois,* a village of Hamilton co.

Lo'gansport, in *Indiana,* a thriving city, cap. of Cass co., on several R.Rs., 75 m. N. by W. of Indianapolis. It commands an active trade, and contains several manufactories. *Pop.* (1897) 15,200.

Logansport, in *Kentucky,* a post-village of Butler co.

Logansport, in *Louisiana,* a post-town of De Soto parish, about 45 m. S.S.W. of Shreveport.

Lo'ganville, in *Ohio,* a post-village of Logan co.

Loganville, in *Penna.,* a post-village of York co.

Log'arithm, *n.* [Fr. *logarithme,* from Gr. *logos,* ratio, and *arithmos,* number.] (*Math.*) The *logarithms* of numbers may be briefly stated to be the exponents of a series of other numbers, which render the powers of the latter, denoted by the exponents, equal to the former series. In most elementary mathematical works, the definition of the word is thus given: The logarithm of a number, *y*, is such a value of the index *x*, of a *fixed* magnitude, *a*, as will satisfy the equation $y = a^x$: that is, *x* is *defined* to be the logarithm of *y* in a *System of Logarithms* whose *base* is *a*; and the logarithm of *y* will therefore depend entirely upon the quantity *a*, which may be assumed to be any finite magnitude whatever,—*unity* only excepted, on account of every arithmetical power or root of 1 being only 1, which thus prevents that number from obeying the conditions stated above. In order, therefore, to constitute a logarithm, it is necessary that the exponent should refer to a system, or series of numbers, in arithmetical proportion, corresponding to as many others in geometrical proportion. If we take, for example, the series of 10, we have, $10^1 = 10$; $10^2 = 100$; $10^3 = 1{,}000$; $10^4 = 10{,}000$; we thus attain the results that the logarithm of $10 = 1$; the logarithm of $100 = 2$; of $1{,}000 = 3$; and of $10{,}000 = 4$. This can be thus explained, by saying that a logarithm is a mathematical term for a number, by which the magnitude of a certain fundamental ratio is expressed in reference to a fixed fundamental ratio. Thus, in the two runs of arithmetical and geometrical proportion, the numbers thus proceed:

Ar. Pro. 0, 1, 2, 3, 4, 5, 6, &c.
Geo. Pro. 1, 2, 4, 8, 16, 32, 64, &c.

Consequently, if we add 1 and 3 together in the first line, 4 corresponds to 16 (standing under it), which is identical with the multiple of 2 and 8, which stand under the 1 and 3. The upper line in arithmetical proportion forms the logarithms of the lower, in geometrical proportion, and logarithmic tables furnish these intermediate fractions, corresponding with the intermediate numbers in the lower line. A table of logarithms, made according to an assumed basis or fundamental ratio of all numbers to a certain limit, is called a *logarithmic system.* Logarithms were first invented by Lord Napier, Baron of Merchistoun, in Scotland; and were first made known by him in a work published in 1614, under the title, *De Mirifici Logarithmorum Canonis Constructione.* This system was varied by Henry Briggs (a contemporary of Lord Napier), who constructed another system, having for its base the number 10, which, corresponding with our system of numeration, has many advantages over that constructed by Napier, being much more convenient for ordinary purposes of calculation. Briggs calculated his on the fundamental basis of the ratio 10 to 1; consequently, the logarithm of 10 is 1; of 100, 2; of 1,000, 3; and so on. It is, therefore, evident that all logarithms of numbers between 10 and 1 must be more than 0, but less than 1; in other words, must be fractions;—thus, the logarithm of 6 is 0·7781513. Again, all logarithms of numbers between 10 and 100 must be greater than 1, but less than 2; or, that is to say, must be whole numbers, *plus* a fraction; for instance, the logarithm of 95 is 1·9777236. The properties and advantages of logarithms are very great by their utility in facilitating the arithmetical operations of multiplication and division, which, when large numbers are concerned, usually take up much time. If the multiplication of two large numbers has to be effected, it is only necessary to take from the logarithmic tables the logarithms of the numbers in question, add these together, and the result will be the logarithm of the required product. In division, logarithms of the numbers have merely to be deducted from each other and the result will be the *L.* of the dividend. If numbers have to be raised to powers, then *L.* are multiplied; if roots are to be extracted, the logarithms are merely to be divided by the exponent of the root. The integral part of a logarithm is called its *characteristic,* because it shows at once of how many digits the natural number corresponding to the logarithm to which it is prefixed is composed. If, therefore, we know the logarithm of any number, we need only add 1, 2, 3, &c. to its characteristic, in order to obtain the logarithm of a number 10 times, 100 times, or 1,000 times as great. For instance,

log. 73594 = 4·8668 424
log. 7359·4 = 3·8668 424
log. 73·594 = 1·8668 424
log. 7·3594 = 0·8668 424
log. ·73594 = $\bar{1}$·8668 424

In this last example, the negative sign is only placed over the characteristic, as that alone is negative; but the general mode of procedure with regard to these minor logarithms is to give them their arithmetical complements, substituting the real value in the final result. In the Napierian system, the *modulus,* or basis, of the tables is 1; and consequently the Napierian logarithm is easily found from the common logarithms (those of Briggs), by multiplying the modulus of the latter by $1{\cdot}\frac{1}{10}$. The Napierian logarithms are often called *natural logarithms,* on account of the modulus of their system being unity; while the common logarithms of Briggs are called *tabular logarithms,* in contradistinction to the former. The method which was first employed to compile logarithmic tables was founded on the successive extraction of roots, and consequently calculations arose of vast difficulty and tedium; in the present day, however, the method is far more simple, and the computations are thus rendered much more expeditiously. Suppose, for instance, it be required to find the logarithm of any number *x*, by means of converging series. In the first place it must be assumed that $\log.(1+x) = Ax + Bx^2 + Cx^3 + Dx^4$, &c. (1), in which A, B, C, D, &c., are coefficients, like determinates. (See INDETERMINATE COEFFICIENTS.) Therefore, taking another number, *z*, we have, in a simple manner, $\log.(1+z) = Az + Bz^2 + Cz^3 + Dz^4$, &c. (2); then subtracting the second equation (2) from the first (1), we shall have the result:

$$\log.(1+x) - \log.(1+z) = A(x-z) + B(x^2-z^2) + C(x^3-z^3) + \&c. \quad (3)$$

But from the properties possessed by logarithms we know that $\log.(1+x) - \log.(1+z) = \log.\frac{1+x}{1+z} = \log.\left(1+\frac{x-z}{1+z}\right)$; and on our bringing out the equation by the same means as $\log.(1+x)$ was treated in the first equation, we obtain the result that $\log.\left(1+\frac{x-z}{1+z}\right) = A\frac{x-z}{1+z} + B\left(\frac{x-z}{1+z}\right)^2 + \&c.$ Substituting, therefore, this development for $\log.(1+x) - \log.(1+z)$ in the third equation (3), and dividing both by $(x-z)$, there results,

$$A\frac{1}{1+z} + B\frac{x-z}{(1+z)^2} + C\frac{(x-z)^2}{(1+z)^3} + \&c.$$
$$= A + B(x+z) + C(x^2+xz+z^2) + \&c.$$

Now, as this equation is true independently of any particular values of *x* and *z*, let us suppose that $x = z$, and it becomes

$$A\frac{1}{1+x} = A + 2Bx + 3Cx^2 + 4Dx^3 + \&c.;$$

which, on expanding the quantity $\frac{1}{1+x}$ by division, gives

$$A(1 - x + x^2 - x^3 + x^4 - \&c.) = A + 2Bx + 3Cx^2 + 4Dx^3 + \&c.$$

Therefore, by the theory of indeterminate coefficients, we must have the separate equations $A = A$, $-A = 2B$, $+A = 3C$, $-A = 4D$, &c.; and on substituting the resulting values of B, C, D, &c., in terms of A in equation (1), we get,

$$\log.(1+x) = A\left(\frac{x}{1} - \frac{x^2}{2} + \frac{x^3}{3} - \frac{x^4}{4} + \frac{x^5}{5} - \&c.\right)$$

The quantity A, which is still indeterminate, being the modulus; and assigning to it any particular value, we can at once characterize the system which we wish to consider. It would be impossible in the present article to enter at length upon the different theorems for the compilation of logarithmic tables, and nearly as useless, as the tables at present in existence are amply sufficient for all practical purposes. The history and theory of logarithms will be found in Hutton's "Mathematical Tracts," which enter upon the subject at length. The best tables extant are those of Babbage, which are most carefully collated and compiled. For navigation and astronomy, Farley's "Tables of Six-figured Logarithms" are the best. The use and application of logarithms in trigonometry will be found under *Trigonometry.*

Logarithmet'ic, Logarithmet'ical, *a.* The same as LOGARITHMIC.

Logarith'mic, Logarith'mical, *a.* Pertaining to logarithms; consisting of logarithms.

Logarithmic curve. (*Math.*) A curve in the higher branches of analytical geometry, which possesses the property of having its *abscissa* proportional to the logarithms of the correspouding *ordinates.*—See CONIC SECTIONS, and GEOMETRY.

Log'-board, *n.* (*Naut.*) A board or tablet on which is noted the rate of motion of a vessel, as ascertained by the log, together with the course of the moment, the direction of the wind, &c.

Log'-book, *n.* (*Naut.*) A book in which the contents of the log-board are daily transcribed at noon, together with every circumstance deserving notice that may happen to the ship, or within her cognizance, both at sea and in harbor.

Log'-cabin, *n.* A house or hut whose walls are composed of logs laid on each other.

Log'ger, *n.* One whose business is to get, carry, or pile logs; a log-man. (U. S.)

Log'gerhead, *n.* [Dn. *logheid,* unwieldiness.] A dunce; a dolt; a thick-skull.

(*Naut.*) A spherical mass of iron with a long handle, used for heating tar.

To be at loggerheads, to come to blows; to quarrel.

Loggia, (*lod'ja,*) *n.* [It., from Lat. *locus.*] (*Ital. Arch.*) An open arcade, enclosing a passage or open apartment. It is a favorite class of building in Italy and other warm countries. The Loggia de' Lanzi at Florence is one of the finest examples extant; and the Loggia of the Vatican, which are arcaded passages round the interior of the cortile of the palace, ornamented with beautiful paintings and arabesques by Rafaelle and his pupils, are well-known specimens.

Log'-glass, *n.* (*Naut.*) A small sand glass for measuring the rate at which the log-line runs.

Log'-heap, *n.* A pile of logs for firing, in the clearance of land.

Log'-house, Log'-hut, *n.* The same as LOG-CABIN.

Logic, (*loj'ik,*) *n.* [Fr. *logique,* from Gr *logike.*] Considered in its most catholic relations, *L.* is the science of formal and material reasoning. In its strictly formal aspect, logic is the science of the necessary laws of thought; in its material aspect, again, it is the science of the laws of thought applied to practice. In the former sense it is a Science, in the latter it is an Art. In the one sense, thought is regarded as complete, perfect; in the other, it is regarded as limited, imperfect. The formula for material logic is *some is all,* the formula for pure logic is *all is all.* The latter, or *deduction,* is always explicative of the contents of a thought; the former, or *induction,* is always ampliative or adding to the contents of a thought. As it is usual to consider those two phases of human reasoning apart, in the following brief outline, *pure logic,* or Deduction, will first be treated of, and next *applied logic,* or Induction.—1. *Pure Logic,* or *Deduction.* It is necessary to observe that no progress in logic can be made without the preliminary assumption of the facts of psychology. In other words, the existence of sense, perception, memory, association, and so forth, lies at the basis of every process of reasoning. Pure logic is an *à priori* science, not an *à posteriori* one, for it deals exclusively with those truths on which all experience depends, rather than those truths which form the substance of experience itself. The system of doctrine owes its existence to Aristotle, who not only indicated its outlines, but he virtually created the science. In the progress of its history it has received various minor modifications and additions from various philosophers; but until Sir William Hamilton's time no logician made material improve-

ments on it from the days of the Stagyrite himself. It is usual to divide formal logic into three parts: — 1. *Concepts* or *notions*; 2. *Judgments*; 3. *Reasonings*. In other words, the formation of general notions, the decision whether these concepts agree or not, and the drawing of one such judgment from another. These parts in their order; and first of *Concepts*. This, by the way, is the most important part of logic, and one on whose laws the entire science may be regarded as in a great measure depending. What, then, is a concept? It is the result of an act, known as *conception*, which includes the comprehension of the various qualities of an object up to unity. Notions, again, are rather the apprehension of these qualities than the final building up of them, which belongs exclusively to conception The two terms, however, are frequently used synonymously. When the mind, after surveying a series of objects, draws away (*abstrahère*), or abstracts a number of qualities from those objects, and classifies them, arranges them into orders or genera, generalizes them, in short, and gives a name to each class so formed, the process of conceiving or forming concepts may be said to have been gone through. It is obvious that a considerable variety will take place in the character of the concepts so formed; some will be more general, some will be less general, though all will be reducible to genera and species. Thus, the individual or single objects, as *this horse*, *that man*, being the names of so many facts or things on which logic is supposed to operate, belong neither to genus nor species, and are properly beyond its domain altogether. The lowest species (*infima species*) can never be a genus. The highest genus (*summum genus*) can never be a species. The subaltern genera (*genus subalternum*) are genera to those beneath them, and species to those above them. Thus, *Socrates* is an infima species, *being* is a summum genus, and *man* is a subaltern genus to Socrates and being. If we regard the *Quantity* of a concept, we recognize the classes or things of which it may be predicated, or the characters of which it is made up. In the former case, we regard the Extensive Quantity of concepts; in the latter, their Intensive Quantity. Thus, in the expression *man*, or *rational animal*, if I abstract the *rational* from *animal*, I thereby diminish the intensive or internal quantity of the concept, but increase its extension. For the term *animal* covers a much greater number of objects than *man*. The leading words that are employed in designating the quantity of concepts are, for their extension, *class* or genus; for their intension, *mark*, note, attribute, character. We amplify the extension of concepts by abstraction or generalization; we amplify their intension or comprehension by determination. We resolve the extension of a notion by division; we resolve its intension by definition. Hence an individual notion cannot be divided (*in-dividuum*), and a simple, or definite notion (*de-finitum*) cannot be defined. Again, as the characters of a concept may be more or less firmly seized by consciousness, more or less perfectly grasped, we have the logical *Quality* of concepts, or their relative clearness or distinctness, and their obscurity or indistinctness. The peculiar form which a concept assumes when recalled by the mind, brings us abreast of the most important controversy in all speculation, — that of Nominalism and Realism. Leibnitz's answer to this question is the one now adopted by all intelligent logicians. It is, that when concepts are recalled, we either comprehend the essential marks contained under the notion, or we only comprehend a few of those marks at the time, though we assume we know them. In the former case it is *intuitive* or notative knowledge we have of the notion, in the latter case it is *symbolical*. In the third place, concepts may be mutually compared as to their *Relation*, which consists in the reciprocal comparison of their various attributes. That is to say, that notions can only be compared as to their mutual extension, and as to their mutual comprehension one with another. So much for the doctrine of Concepts. We proceed now to the second part of logic; namely, *Judgments*. A judgment is the affirmation that two concepts can or cannot be reconciled, or (more correctly, that two concepts, a concept and a thing, or two individual things) agree or disagree. As we have just recognized a certain quantity, quality, and relation among Concepts, so we must now recognize a quantity, quality, and relation as affecting Judgments. This is why it was remarked some time ago, that the thorough comprehension of the doctrine of Concepts may be regarded as the thorough comprehension of the master principle of logic. In the judgment, *Socrates is rational*; *Socrates* is called the subject, *rational* the predicate, and *is* the copula. But in numerous propositions the copula is not expressed, it is merely understood. The first great distinction of judgments is taken from their quantity, or their relation of subject and predicate, as reciprocally whole and part. Is the predicate viewed as the containing whole? The judgment is pronounced an extensive one. Is the subject regarded as the containing whole? The judgment is an intensive or comprehensive one. Thus, in the proposition, *All plants grow*, if we view *grow* as the containing whole, we have a proposition in extension, as *All plants belong to the class of growing objects*. And if, in the same proposition, we view *plants* as the containing whole, we have a proposition in Comprehension, as, *The attribute or mark of growing belongs to all plants*. But judgments have a certain quality as well as quantity, according as the subject and predicate reciprocally agree or disagree, affirm or deny, in the quantities of extension and intension. In reference to their quantity and quality together, propositions are usually designated by the vowels A, E, I, O. The Universal Affirmative are denoted by A, the Universal Negative by E, the Particular Affirmative by I, and the Particular Negative by O. Or, to employ the mnemonic lines of Petrus Hispanus:

Asserit A, negat E, sed universaliter ambæ;
Asserit I, negat O, sed particulariter ambæ.

But these four species of proposition are obtained solely by determining the *quantity of the subject alone*, together with the quality of both subject and predicate. Now this is where the importance of Sir William Hamilton's "thorough-going quantification of the predicate" comes in. He proposes *not only to quantify the subject, but the predicate also*. Eight species of proposition are thus evolved, which, taking A and I for universal and particular, as in the Aristotelic notation, but extending them to either quality, and marking affirmation by an *f*, and negation by an *n*, we have the following sets of propositions:

Affirmatives.

1. Toto-total = AfA = All X is all Y.
2. Toto-partial = AfI = All X is some Y. (A)
3. Parti-total = IfA = Some X is all Y.
4. Parti-partial = IfI = Some X is some Y. (I)

Negatives.

5. Toto-total = AnA = Any X is not any Y. (E)
6. Toto-partial = AnI = Any X is not some Y.
7. Parti-total = InA = Some X is not any Y. (O)
8. Parti-partial = InI = Some X is not some Y.

Of all these judgments, 6 and 8 are the weakest, yet it is always possible to allege that *any man is not some brute*, or that *some man is not some brute*. Yet it must be acknowledged, that, though these propositions are conceivable, they are of little practical utility. The third great division of judgments is their relation, or the coincidence or non-coincidence of subject and predicate. This relation is either simple or conditional. On the former alternative the proposition is *Categorical*, on the latter — inasmuch as the condition lies either in the subject alone or in the predicate alone, or in both the subject and predicate — it is *Hypothetical*, *Disjunctive*, or *Dilemmatic*. So there are four kinds of relation between the subject and predicate of a proposition, which may be exemplified as follows. *A is B* is the formula for a categorical judgment; *If B is, A is*, is an hypothetical one; *D is either B or C or A* is a disjunctive one, and *if X is A, it is either B or C*, is a dilemmatic one. We may remark in conclusion, on this part of our subject, that the Aristotelic doctrine of the categories and of the predicables, as properly extra-logical, of course finds no place here. The third grand division of logic is *Reasoning*, or Syllogism, or the process by which one judgment is derived from another or more. And as in Concepts and in Judgments, we have here recurring again the old relations of quantity, quality, relation, it must not be forgotten that the essence of syllogism consists in the production of a new and distinct judgment, not in the *truth* of any one of the given judgments. The *Premises* are the two given propositions or the antecedent, and the *Conclusion* is the proposition sought, or the consequent. The premise which announces the general rule is called the *Major*, the one which announces the application of the general rule is called the *Minor*, and the *Middle term* is that with which the two extremes of the conclusion are separately compared. The three propositions of a syllogism are frequently correctly expressed by the *Sumption*, *Subsumption*, and the *Conclusion*. Now there are two kinds of inference, — immediate and mediate. When we can decide at once, as soon as we understand the terms of the two propositions involved, whether they agree or disagree, the inference is termed *immediate*; but when we require to go in quest of a third or *middle* judgment or term with which each of the other judgments may be compared, the inference is called *mediate*. For example, — All good rulers are just, therefore no unjust rulers can be good, is a specimen of immediate inference; and, — All consumptions are mortal; this disease is a consumption, therefore this disease is mortal, is an example of mediate reasoning. The different sorts of immediate inference can be pursued no further here. There is a general canon for conducting Mediate reasoning, which may be thus expressed. The agreement or disagreement of one judgment with another is ascertained by a third judgment, inasmuch as this, wholly or by the same part, agrees with both or with only one of the conceptions to be compared. There are a number of general rules for the proper construction of syllogisms, which may be conveniently condensed as follows. Distribute the middle term (*i. e.*, take it in its widest signification), let there be no fourth, and both premises must be neither particular nor negative. The conclusion then will follow the worst part (as "some flowers are blue"), and will neither distribute nor deny unless when the premises do so. All mediate influence is properly one, — that often called by logicians the categorical, for the conditional and hypothetical syllogisms are all reducible by immediate inference. The regular syllogism, then, regarded as to its essential form, comes now to be considered. And first of the *figure*, or the position of the middle term in the premises, and of the *mode* or mood, or the formal value of the three judgments of a syllogism as to their quantity, quality, and relation. There is only one figure according to some logicians, three according to others, and four according to a third party. These are as follows: where S represents the subject, P the predicate of the conclusion, and M the middle term. Fig. I. — MP, SM, ∴ SP. Fig. II. — MP, SM, ∴ SP. Fig. III. — MP, MS. ∴ SP. Fig. IV. — PM, MS, ∴ SP. The terms alone being here stated, the quantity and quality, indeed the Mood of the whole of the syllogisms, remain to be filled up; in other words, between M and P, for example, we may place either a negative or affirmative copula, and we may prefix either a universal or a particular sign to P. The Moods are ordinarily applied to each figure by the three letters which severally denote the quantity and quality of each judgment. Thus, AII, Fig. I., reads as follows, which can be readily verified by turning back to the mnemonic lines which were given under Judgments. All M is P; some S is M; therefore some S is P. And EIO, Fig. II., reads, — No P. is any M; some S is M; therefore some S is no P. IAI, Fig. III., reads, — Some M is some P; all M is some S; therefore some S is some P; and so on. A few mnemonic lines of considerable convenience have been invented which serve to point out the various moods in each of the four figures, according to the old notation. They are as follows: — Fig. I. — bArbArA, cElArEnt, dArII, fErIOque prioris. Fig. II. — cEsArE, cAmEstrEs, fEstInO, bArOkO secundæ. Fig. III. — tertia, dArAptI, dIsAmIs, dAtIsI, fElAptOn, bOkArdO, fErIsO, habet; quarta insuper addit. Fig. IV. — brAmAntIp, cAmEnEs, dImArIs, fEsApO, frEsIsOn. There will be found 19 legitimate modes in the whole of these figures, but 62 according to Sir W. Hamilton's extended notation, (for which see above to his extended judgments.) Before leaving this part of the subject, it may be well to state that the first figure is the most perfect, that is to say, it exemplifies best the Aristotelic dictum *de omni et nullo*, or whatever is affirmed or denied of a class may be affirmed or denied of any part of that class. To take an example. All plants need light; sunflowers are plants; therefore sunflowers need light. Some logicians, as Aristotle, Kant, and Sir William Hamilton, throw overboard all the figures but the first, and with them of course annihilate reduction. Reduction is the process by which the other figures are brought under the form of the first figure. This is usually effected by changing the order of the terms, or, where that cannot be done, by substituting a privative conception (as "unwise," for example) for a positive judgment, and then changing the order of the terms by conversion as it is called. As often occurs, many a piece of reasoning, being without subjects or predicates expressed, belongs properly to no figure. There have been, in all, three peculiar schemes of syllogistic notation, — those of Lambert, Euler, and Sir William Hamilton. The last is by far the simplest and most complete, but cannot be exhibited here. A conditional or hypothetical syllogism contains, of course, a conditional or hypothetical judgment; and a disjunctive syllogism contains a disjunctive judgment. These have all been disposed of as belonging properly to immediate inference. When syllogisms are taken in their external form, we have three species of reasoning, which require some elucidation. There is first the *Epicheirema*, or reason-rendering syllogism; there is secondly the *Sarites*, or chain-argument, as the Germans call it; and there is thirdly the *Enthymeme*, with one premise suppressed. To illustrate, the Epicheirema is — B is A, but C is B, for it is D; therefore, C is also A. The Sarites is — A is B, B is C, C is D, D is E; therefore A is E; — reduced to B is C, A is B; therefore, A is C; — C is D, A is C; therefore, A is D; — D is E, A is D; therefore, A is E. The Enthymeme, as a kind of colloquial argument, needs but little illustration here. All these species of reasoning have various forms. Besides these, there are the *Monosyllogisms*, where the reasoning is viewed as an independent whole; the *Prosyllogisms*, whose conclusion is a premise in a given syllogism; and the *Episyllogism*, whose premise is a conclusion in a given syllogism. These arguments very frequently occur in life. It should not be forgotten, however, that the syllogism is the type of all reasoning. So much for formal logic. — II. *Material Logic*, or *Induction* (the Epagoge of Aristotle), signifies, properly, the drawing of a general law from a sufficient number of particular cases. It is distinguished from pure logic by bearing wholly for the *matter*, or facts, or truth of its objects; while the former is occupied entirely with the correctness of the *form* of thought. And here, at the outset, it is necessary to take a distinction, which may be of great use afterwards. There is what is called a *perfect* induction, and an *imperfect* one. The perfect one is when the investigator has been able to examine *all* the particular instances on which this law is founded. The imperfect induction, again, forms ninety-nine one-hundredths of all inductive reasoning, and mounts at once from the *some* cases in which the law holds to the *all*. Perfect induction was denominated by Bacon *res puerilis*, as it on very few occasions can *add* anything to what one is already in possession of. Indeed, it is often taken up under the formal syllogism. The latter, again, *imperfect* induction, is the peculiar kind of all ordinary scientific induction. And the great canon or principle, which is itself a principle of induction, on which this form of material science rests, is the constancy and uniformity of nature's laws; or, more articulately expressed, it runs thus, — *under the same circumstances, and with the same substances, the same effects always result from the same causes*. Material, or applied logic, to fulfil its aim, must have attained: 1, to as true statements as possible respecting the objects with which it deals; 2, it must be able to define those objects with as much clearness and precision as possible; 3, it must be able to indicate the extent of those objects; and, 4, it must exhibit its results in a systematic manner. These preliminary obligations being imposed upon it, it requires, in the second place, to be able to answer the following four leading questions: — 1. How are the causes of phenomena to be distinguished among a multitude of other phenomena, all open to observation? 2. How are causes to be discovered which are less open to observation than the effects produced by them? 3.

When should an incomplete enumeration of facts be deemed sufficient, and on what principle? 4. How should new laws be expressed and recorded? These questions in their order. — How the causes of phenomena are to be distinguished. It must be here observed, respecting causation, what the scholastic writers never forgot, that it is properly all the associated causes, the con-causes, as it is sometimes phrased, that make up what is ordinarily denominated "the cause" of a thing. And every event has more than one cause when strictly analyzed. Yet men, nevertheless, inquire for "the cause" of a phenomenon, and justly enough; for what they want is the most influential agent in the production of the result. It requires no labor, beyond "simple enumeration," to enable one to discover such very uniform and regular laws as the recurrence of the tides, and the law that all weighty bodies fall. But it requires a great degree of patient observation and research to discover that the one phenomenon is connected with the moon's influence, and that the other depends on the higher law of gravitation. All men open to the observation of these phenomena had a rude notion of the tides and of falling bodies, but it required a Newton to complete the theory of both the phenomena. The chief rules which regulate the inquiry after causes are the following: — 1. While the same effect may sometimes arise from different causes, yet the cause must always be sought among the invariable concomitants of the effect. 2. If an effect is not produced under certain circumstances, this either indicates the absence of the cause, or the presence of a counteracting one. 3. The cause is often suggested by analogy. 4. The cause is often indicated by the variation of degree of the effect. 5. The more forms of the effect that are studied, the greater is the probability of finding out the cause. 6. A suspected cause may be tested by allowing it to operate under less complicated circumstances. 7. Where complications exist, every cause should be noted and registered down to the minutest detail. So much for the answer to the first question. — 2. Causes are sometimes discovered which are not obvious, even after careful observation and detailed experiment, by what is called Anticipation. Such was Oken's discovery of the vertebrate character of the skull of the reindeer, which he stumbled over during an excursion to the Hartz Mountains. Such, too, was Gœthe's discovery of the morphology of plants, — that the various parts of a plant are only metamorphosed leaves. The facts of an induction being given, a "Conception," as it is sometimes called, must step in, in order to afford a provisional support or temporary cause to the phenomena. Again, Conceptions not wholly correct may often serve for a Colligation of facts until a better Colligation is afforded those facts. Thus, the *circular* motion of the heavenly bodies was for a long time only a conception; now it is known they move in elliptical orbits. — 3. This third question has in a great measure been answered by the preliminary observations on the laws of nature. As soon as a process of induction has been completed, it then forms the ground for a legitimate induction. Analogy depends upon the principle that the same qualities may be assigned to distinct but similar objects, provided those qualities can be shown to accompany the points of resemblance in those objects, and not their points of difference. Thus, if we remark the analogy between man and tree, and observe that they both grow gradually to a certain height, after which they both decay, and that both depend for their subsistence on receiving appropriate food, moisture, and air, we have noted those qualities which belong to them in common. But if we proceed further with our analogy — "carry out our analogy," as the phrase is — we go wrong; for man is not stationary like a tree, neither does he grow up conically, and has no "bravery" of leaves. Reasonings involving chance may likewise be admitted into inductive philosophy, for chance is just the amount of probability with which we expect one or other out of two or more uncertain events. The laws that govern this department of "probabilities" are various, and cannot be entered upon here. — 4. New laws may be expressed, — 1. by applying fresh definitions to old words; 2. names possessing an explanation of their own may have new ideas attached to them; 3. entirely new names may be invented, but accompanied always with a precise definition; 4. chemistry affords excellent examples of the mode of forming new names. The principles of inductive reasoning are afforded (*a*) by the senses, (*b*) by instruments, which constitutes properly observation, (*c*) by the testimony of others, (*d*) by the aggregate observations of men. No logical principle can be put into practice without the possibility of conscious or unconscious *Error*. Where error is consciously unfolded, it is for the purpose of deceiving others, and is properly a Sophism; where it is unfolded unconsciously, we deceive ourselves and fall into a Paralogism. In either case we commit what logicians denominate a *Fallacy*. The causes and occasions of error arise as follows: — 1. In the general circumstances which govern the intellectual character of the individual; 2. in the constitution and habits of his powers of thought, feeling, and desire; 3. in the language which he employs; 4. in the nature of the objects upon which he is engaged. Again, the fallacies which men are guilty of are properly of two classes, — formal and material. The formal fallacy most frequently occurs in the regular syllogism, and usually arises from the vice of having four instead of three terms. Under this genus are comprised three species. The material fallacy is the most frequent. It arises from making a universal conclusion where we are not warranted to do so by the premises, or from a notion which is not in reality a middle term, we infer a conclusion. Some five or six fallacies belong to this genus. The various degrees of belief, according to Aristotle, are, 1. problematical, 2. assertory, or 3. demonstrable, — in other words, are the results of opinion, belief proper, and science. 1. The problematical judgment is neither subjectively nor objectively true; it is neither maintained with complete certainty by the mind, nor can the object about which we judge be truly represented. Meanwhile, it is mere opinion, but it may afterwards become matter of proof, and then this opinion is elevated to demonstrable truth. Every great discovery is at first a problem, or a thing to be proved; and it depends on the sagacity and genius of the investigator whether it is to take its place among the proven theorems of knowledge. The best course of conduct for us under doubtful circumstances, historical records about which there is conflicting testimony, and so forth, are all of this problematical character. — 2. In the next place, the assertory kind of knowledge is one of which we are fully persuaded ourselves, but cannot lay down the grounds for our belief so as to compel men to side with us. It is subjectively true, but not objectively certain. We have what is called "a moral persuasion" of it, but cannot exhibit the common grounds of our conviction. — 3. Demonstrative knowledge, again, is either subjectively or objectively true, or both. It may either be certain in itself, as an axiom in mathematics, or conditionally certain, as, The sun will rise to-morrow, if the laws of nature maintain their constancy.

Log'ical, *a.* Pertaining to logic; used in logic; as, *logical* subtilties.
—According to the rules of logic, as a conclusion.
—Skilled in logic; versed in the art of thinking and reasoning; discriminating; rational; relating to reason; according to reason.

Log'ically, *adv.* According to the rules of logic.

Logician, (*lo-jish'an,*) *n.* [Fr. *logicien.*] A person skilled in logic.

Logis'tic, Logis'tical, *a.* [Fr. *logistique.*] (*Math.*) Belonging to logistics, or sexagesimal arithmetic.

Logis'tics, *n. pl.* [Gr. *logistikos,* skilled in arithmetic.] (*Math.*) The Sexagesimal Aritumetic, *q. v.*

Log'-line, *n.* (*Naut.*) See Log.

Log'-man, *n.* See Logger.

Logoc'racy, *n.* [Gr. *logos,* a discourse, and *krateo,* to rule.] A government in which words are the ruling power.

Log'ogram, *n.* A word-letter, phonetically used to represent a word by way of brevity, as *t* for *it.*

Logog'rapher, *n.* One who practises logography, or is skilled in it.

Logograph'ic, Logograph'ical, *a.* Belonging to logography.

Logog'raphy, *n.* [Gr. *logos,* a word, *grapho,* I write.] A method of reporting speeches without having recourse to short-hand. It was put in practice during the French revolution. About twelve reporters arranged themselves round a table, each of them having a long slip of paper numbered before him. The first three or four words were taken down by the writer of No. 1; and as soon as they were spoken, he gave notice to his neighbor by touching his elbow, or some other sign. No. 2 then passed the sign to No. 3; and so on till the first line of each slip was completed, when No. 1 commenced the second line. When filled up, all the slips were placed parallel to each other, and formed a single page. Logography was not found to answer in practice; it required too great attention and quickness for correctness. It was first employed in the National Assembly, in Oct., 1790, and continued till the 10th August, 1792, when Louis XVI., with his family, took refuge from the insurrection in the Assembly, and occupied the box of the logographers; from that time it was discontinued.
(*Printing.*) A mode of printing with types expressing entire words or common radicals and terminations, instead of single letters. It was used for a short time in the English *Times* printing-office, but soon abandoned. It is described in a book published by H. Johnson in 1783.

Log'ogriph, *n.* [Gr. *logos,* and *griphos,* a riddle.] A species of riddle in vogue among the French (whose language is peculiarly adapted to it), in which the original word (whole) is to be discovered by guesses at other combinations of letters included in it. Thus, the word *plate* includes the various combinations tale, teal, pate, peat, peal, pale, leap, &c.

Logomachist, (*lo-gom'a-kist,*) *n.* One who contends on, or about words.

Logomachy, (*lo-gom'a-ky.*) *n.* [Gr. *logos,* word, speech, and *mache,* battle, strife.] A war of words; contention in words merely, or rather, a contention about words.

Logom'eter, *n.* (*Chem.*) A scale for measuring chemical equivalents.

Logomet'ric, *a.* (*Chem.*) Noting, or relating to, a logometer.

Lo'gos, *n.* [Gr., the word.] (*Theol.*) In theological language, Logos, or the Word, is applied to the Son of Man. The Jews used the term *memra,* which corresponds to logos, or word, but as synonymous with Jehovah, or as denoting the mere token or symbols of the Divine presence. There are eminent critics, however, who are of opinion that the Targumists employed this word to denote the future Messiah. The term 'logos,' as used by Plato, is rather ambiguous. It is uncertain whether by it he means to denote a distinct intelligent being, or merely the divine attributes of deity. "St. John," says Professor Burton, "was as far as possible from being the first to apply the term logos to Christ. I suppose him to have found it so universally applied, that he did not attempt to stop the current of popular language, but only to keep it to its proper channel, and guarded it from extraneous corruptions." He holds that it is one of the peculiar objects of St. John's Gospel to show in what sense the term *logos* can properly be applied to Christ. Mystical notions regarding the logos were derived, by the Christian Platonists, from the school of Alexandria, and hence many of the Fathers maintained that the Logos was an attribute of God, and that this attribute became the person of the Son, and was afterwards united to Jesus Christ. The Unitarians consider the word logos to be applied either to God himself, or to certain of his attributes, as reason or intelligence. The Arians look upon the Logos as an emanation from the Supreme Being, superior to all other created beings, and which supplied the place of a human soul in Christ. Dr. Lardner, in his *Letter on the Logos,* states that he was at first favorable to the doctrine that the Logos was the soul of Christ; but being at a loss to conceive how that high being, the highest of God's creatures, should gain any exaltation by receiving, after his resurrection and ascension, a bright resplendent human body, and being made lord and king of men, the judge of the world, and higher than the angels, to whom he was vastly superior before, abandoned this hypothesis as throughout inconceivable and irreconcilable to reason. Trinitarians regard the term as being specially appropriate to Christ, who is a revelation of God the Father unto men.

Log'otype, *n.* (*Print.*) Two or more letters cast in one piece, as ff, ffl, æ, &c.

Log'-rolling, *n.* The act of rolling logs; — mutual assistance in rolling logs to the river after they are felled and trimmed; — as practised by the lumbermen of Maine. — A cant term for a system of manœuvring or mutual coöperation in legislating, &c., to carry favorite measures. (U. S.)

Logroño, (*lo-grōn'yo,*) a town of Spain, prov. of Logroño, on the Ebro, 60 m. E. of Burgos, and 158 m. N. E. of Madrid. It is surrounded by walls, and has a college, manufactures of leather, hats, &c., besides several tanneries and distilleries. It has also a good trade in rural produce. *Pop.* 11,500. Edward the Black Prince defeated Henry of Trastamara, brother of Peter I. (the Cruel), of Castile, at this place, April 3, 1367. Before the battle the Castilians encamped at Najara, and the allies at Navarrette, and it is sometimes named after these two places.

Log'town, in *California,* a mining village of El Dorado co., abt. 10 m. S. by W. of Placerville.

Log'town, in *Georgia,* a village of Upson co., abt. 9 m. S.S.E. of Thomaston.

Log'wood, a very valuable dyestuff, consisting of the cuttings or raspings of the wood of the *Hæmatoxylon campechianum,* a tree growing in Mexico and the neighboring countries. It is extensively employed for dyeing black with alum; but acids change the color to red immediately. Its dyeing properties are due to its containing a crystalline matter called *hæmatoxylon,* which is straw-yellow in its pure state, but assumes a brilliant red under the influence of oxygen and alkalies.

Lohr, (*lore,*) a town of Bavaria, on the Maine, 20 m. N. W. of Würtemberg. *Manuf.* Paper; and there are also iron-works. *Pop.* 4,000.

Loim'ic, *a.* [Gr. *loimos,* contagious.] (*Med.*) Relating to the plague, or to contagious disorders.

Loin, *n.* [A. S. *lend,* a haunch, *lendenu,* the loins; Ger. *lenden;* Fr. *longe;* Lat. *lumbus.*] (*Anat.*) The loins are the region of the kidneys, the space on each side of the back bone, between the lowest of the false ribs, and the upper portion of the haunch bones, or the lateral portions of the lumbar region; called also the reins. — The back of an animal cut for food; as, a *loin* of pork.

Loing, (*lwăng,*) a river of France, rising at St. Colombe, dept. of Yonne, and after a course of 70 m., falling into the Seine at Moret. It feeds the canals of Briare and Loing, by means of which the Seine communicates with the Loire.

Loire, (*lwaw,*) [anc. *Liger,*] the principal river of France, which flows through the centre of it in a W. direction, and falls into the Bay of Biscay, 40 m. below Nantes. It rises in Mount Gerbier de Joncs, on the W. declivity of the Cevennes, in the dept. of Ardèche, about Lat. 44° 38′ N., Lon. 4° 30′ E., at an elevation of 4,593 ft. above the sea. Its general direction is N.N.W. to near Orleans, after which it flows W.S.W. to its mouth, near Paimbœnf, in Lat. 47° 15′ N., Lon. 2° 15′ W. Its entire course is estimated at 670 m., of which 512 are navigable. Below Nantes it is between two and three miles wide; but its navigation in the lower part of its course is rendered difficult by shallows and numerous islands. Its rate of descent averages 4 ft. a mile. Its current is everywhere rapid, and its inundations are frequently productive of much damage; to prevent which, extensive embankments have been erected below Orleans. The tide of the *L.* rises to about 5 miles below Nantes. At one time the depth of the water at its mouth was 18 ft. at ebb-tide; now it is only from 6 to 9 ft. The lower course of the *L.* is adorned by wooded islets. It receives about 40 affluents, of which the principal are the Loir, on the right; and the Allier, Cher, Indre, and the Vienne on the left.

Loire, a dept. in the S.E. of France, adjoining the depts. of the Rhone and Isère. *Area,* 1,920 sq. m. *Desc.* It is generally mountainous, being partly traversed by the Cevennes, and partly by the mountains of the Forez. The basin of the Loire, which flows through this dept., is rather an unfruitful valley, but the mountains are rich in iron and lead, and the coal-fields of the dept. are the richest in France. *Prod.* Corn, potatoes, and hemp. There are also some excellent mineral springs. *Manuf.* Silk, iron, steel, glass, cottons, laces, &c. *L.* is also

noted for the rearing of silk-worms. The chief towns are St. Etienne, Roanne, Rive de Gier, and Mouthrison. *Pop.* 537,108.

Loire, (Haute, or Upper,) a dept. in the S.E. of France, situated to the S. of the preceding, and adjoining the depts. of Puy-de-Dôme, Ardèche, and Lozère; Lat. bet. 44° 45′ and 45° 24′ N., Lon. 3° and 4° 40′ E. *Area*, 1,805 sq. m. *Desc.* Mountainous, covered hy the Cevennes, — Mount Mazan, one of its peaks, rising to an elevation of 5,793 ft. Tho soil is generally unfertile, and agricnlture is very backward. Sufficient produce, chiefly wheat and rye, is grown for home consumption; also wine, but the latter is of an inferior quality. Bees nre kept, and silk-worms are extensively reared. *Min.* Coal, gypsum, antimony, and potter's clay. *Manuf.* Lace, silks, paper, and leather. *Principal rivers.* Loire and Allier. *Chief towns.* Le Puy, the cap., Brioude, and Yssingeaux. *Pop.* 312,661.

Loire, (Inférieure, or Lower,) a dept. in the W. of France, formerly included in the prov. of Brittany, bordering on the Atlantic, having N. the depts. of Morbihan and Ile-et-Vilaine, E. Maine-et-Loire, S. Vendee; Lat. between 46° 50′ and 47° 50′ N., Lon. 1° and 2° 30′ W. *Area*, 2,730 sq. m. The river Loire has its mouth in this dept., which it intersects from E. to W. near its centre. *Desc.* The interior is, on the whole, flat, but the N.E. and S.E. is somewhat hilly. The country, on the S. bank of the Loire, is much more fertile than that on the N., and it is nearly all under culture. There are also some fine forests. Salt marshes are numerous in the W. *Rivers.* Indre, Sevre-Nantaise, Maine, and Moine, all affluents of the Loire. *Prin. towns.* Nantes, the cap., Châteaubriant, Ancenis, Paimbœuf, and Savenay. *Prod.* Grain, and pale wines. Bees are largely kept, and cattle extensively reared. *Min.* Coal, iron, salt, and turf. The coast-fisherles and general export trade of the dept. is very extensive. *Manuf.* Sail-cloth, rope, glass, porcelain, &c. *Pop.* 598,598.

Loiret, (*lwaw'rai,*) a river of France, in dept. of Loiret, rising 2 m. from Orleans, and after a course of 10 m. joining the Loire near Orleans. It is navigable for boats almost to its source.

Loiret, a central dept. of France, having N. Eure-et-Loire, Seine-et-Olse, and Seine-et-Marne; E. Yonne; S. Nievre and Cher; W. Loir-et-Cher; Lat. between 45° 13′ and 46° 18′ N., Lon. 3° 42′ and 4° 45′ E. *Area*, 2,640 sq m. *Surface*, for the most part level; but in the N. there is a chain of hills separating the basins of the Loire and the Seine. The Loire traverses the S. half of the dept., generally in a W. direction. S. of the Loire the country is marshy, uncultivated, and unfertile; but in other parts it is very productive, particularly in the W. districts. Agriculture is in a forward state. *Prod.* Grain, wine, saffron, and timber. Apples are largely cultivated; bees and fowls are abundant; and the herds of sheep and cattle are excellent. *Manuf.* Cloths, woollen caps, cottons, leather, paper, and beet-root sugar. *Rivers.* Loire, Loiret, Cosson, Beuvron. *Prin. towns.* Orleans, Gien, Montargis, and Pithiviers. *Pop.* 357,110.

Loir-et-Cher, (*lwaw'a-shair',*) a dept. of France, between Lat. 47° 15′ and 58° 10′ N., Lon. 0° 30′ and 2° 15′ E., having N. Eure-et-Loire, E. Loiret and Cher, S. Indre and Indre-et-Loire, W. Sarthe. Length, N.W. to S.E., 80 m.; breadth varying from 20 to 45 m. *Area*, 2,360 eq. m. The Loire intersects the dept. from E. to W. nearly in its centre. The dept. is almost uniformly level, broken only by vine-hills of trifling elevation The N. part is more fertile than the S., three-fourths of which is occupied by marshes, heath, and forests, the last of which cover 1/6th of the entire surface. The principal towns are Blois, Romorantin, and Vendouil. *Rivers.* Loire, Cher, Bouncheure, and Cosson. *Prod.* Corn, fruits, hemp, wine, and vegetables of all sorts. Sheep and horses are reared, and are both numerous and excellent. *Min.* Iron, turf, and alabaster; but the most valuable mineral is flint, of which the most extensive beds in France are in this dept. *Manuf.* Woollens, lenther, glass, paper, gloves, &c. *Pop.* 275,757.

Loi'ter, *v. n.* [Du. *leuteren*, to linger.] To tarry; to saunter; to be slow in moving; to be dilatory; to spend time idly.

—*v. a.* To consume in idleness, carelessness, or inaction.

Loi'terer, *n.* A lingerer; one who delays, or is slow in motion; an idler; one who is sluggish or dilatory.

Loi'teringly, *adv.* In a loitering manner.

Loja, or Loxa, (*lo'ha,*) a town of Spain, in Andalusia, prov. of Granada, 26 m. W. of Granada, and 92 S.E. of Seville. The town stands on the S. of the Sierra Nevada. It was formerly of great military importance, being the key to Granada. On the S. extremity are the ruins of a Moorish castle, once of great strength and celebrity. *L.* is at present quite a thriving place, and has 21 woollen factories, and 3 paper-mills. *Pop.* 25,900

Loja, or Loxa, (*lo'ha,*) a town of Ecuador, dept. of Assuay, on the Tapotillo River, abt. 280 m. S. by W. of Quito; Lat. 4° S., Lon. 79° 24′ W.

Lok, Lo'ki, *n.* [Ger. *locken*; Icel. *loki*, from *locka*, to allure, to entice.] (*Scandinavian Myth.*) A malevolent deity, corresponding to the Ahriman of the Persians, who is represented to be at war with both gods and men, and originating all the evil with which the universe is desolated. In the *Edda* (the great poem of the Norwegian nation) he is described as the great serpent which encircles the earth, and as having given birth to Hela, or Death, the queen of the infernal regions.

Loke, *n.* A private road or path. — The wicket or hatch of a door. (Local Eng.)

Lokeren, (*lo'ker-en,*) a town of Belgium, prov. of E. Flanders, on the Deurne, 12 m. N.E. of Ghent. *L.* is a well-built town, with numerous schools and benevolent institutions. It is celebrated for its linen fabrics, and has also manufactures of cottons, flannels, lace, and tobacco. It has also a considerable trade in corn, flax, and linens. *Pop.* 16,912.

Lol'a Mon'tez, Maria Dolores Porris Y Montez, b. 1820, at Limerick, Ireland; was the daughter of a Spanish lady and of an Irish officer. Lola made an unsuitable marriage, and, leaving her husband, appeared as a dancer on the Paris stage. She became the mistress of the king of Bavaria, and for 2 years, until his abdication, lived in royal magnificence, being made Countess of Landsfeld. She then married an English gentleman; deserted him; exhibited herself in America; married again in Californiа; opened a theatre in Australia; lectured in London on her own adventures; and d. an outcast in the U. States, 1861.

Lol'igo, *n.* (*Zoöl.*) See Squid.

Lol'inm, *n.* [Celtic, *lolva*; a name applied to one of the species.] (*Bot.*) A genus of plants, order *Graminaceæ*. The principal American species are *L. perenne*, the Daruel Grass; and *L. temulentum*, the Poisonous Darnei.

Loll, *v. n.* [Icel. *loll*, *lolla*, sloth, *lolla*, to do sluggishly.] To lean idly or listlessly; to recline; to lean; to lie at ease; as, to *loll* on a couch. — To hang out, said of the tongue.

—*v. a* To thrust out, as the tongue.

Lol'lards, *n. pl.* [Ger. *lollard*, *lollhard.*] (*Eccl. Hist.*) The origin of this term, applied to a religious sect of the 14th century, is by some authorities derived from the German *lallen*, *lollen*, or *lullen*, "to sing in a low voice;" and by others is referred to Walter Lollard, who was burned alive at Cologne in 1322. The early Lollards tended the sick and followed the dead to the grave, chanting in mournful tones. They were constituted a religious order through the influence of Charles, Duke of Burgundy, in 1472. Julius II. conferred further privileges upon them in 1506. The term was afterwards applied by the partisans of the Church to the heretics and schismatics of the day generally; and the followers of Wickliffe in England are frequently stigmatized under the name of *Lollards*.

Lol'lardism, *n.* The principles of the Lollards.

Lol'lers, *n. pl.* The same as Lollards.

Lol'lipop, *n.* A kind of sweetmeat easily dissolved in the mouth.

Lom'bard, *n.* (*Geog.*) A native of Lombardy. — A term anciently used in England for a banker or mouey-lender. The name is derived from the Italian merchants, the great usurers or money-lenders of the Middle Ages, principally from the cities of Lombardy.

Lombard'ic, *a.* Of, or relating to Lombardy, or to the Lombards.

L. Architecture. See Romanesque Architecture.

Lombard'o-Venet'ian Kingdom. See Lombardy.

Lombardy, (*lum'bar-de.*) [Ital. *Lombardia.*] A country of N. or Upper Italy. The name, though properly applicable only to the vale of the Po, is commonly given to the whole tract of country between the frontiers of Switzerland and Tuscany. The plains of *L.*, always remarkable for their fertility, were originally peopled by the Siculi, who were expelled by a tribe of the Celtæ about B. C. 1400. The Etruscans established their authority over the country about B. C. 1000, and retained it until expelled by the Gauls B. C. 506, when it received the name of Gallia Cisalpina. It was ravaged by Attila in 452, became subject to the Heruli in 476, was conquered by the Ostrogoths in 489, by the troops of the E. empire under Narsee in 554, and by the Longobardi, from whom it received its name, in 568. The empire of the Longobardi was terminated by Charlemagne in 774, when *L.*, with the rest of the peninsula, was annexed to his territories, and in 843 formed the Frankish kingdom of Italy, which was ruled by its own kings till it submitted to Otho I. (the Great) in 961. The cities gradually adopted independent forms of government, each possessing separate laws and customs. In 1002 they elected Ardouin, Marquis of Ivrea, as king, in opposition to the Germans, who nominated Henry II., and the country was in consequence involved in war till the death of Ardouin in 1015. On the death of Henry II. (the Holy), in 1024, the Lombards again made futile efforts to obtain an independent sovereign. A civil war between the "gentlemen" of Lombardy and Eribert, Archbishop of Milan, commenced in 1035, and lasted till Conrad the II. (the Salic) promulgated his feudal edict in 1037. Milan became a republic in 1107, and Lodi, Cremona, Verona, Genoa, Pavia, and other cities, soon followed her example, and asserted their new-born independence by rushing into civil war. During the 11th and 12th centuries they united to form the Lombard leagues against the German emperors, and were afterwards desolated by the contentions of the Guelphs and Ghibellines, which they sought to escape by purchasing protection from Charles of Anjou, king of Naples (1266–1285). The history of *L.* is, after this period, the history of the several republics of which it was composed, until the peace of Aix-la-Chapelle, in 1748, by which the greater part of the country was attached to the house of Austria. In 1796, Bonaparte erected *L.* into the Transpadane republic, which was incorporated with the Cisalpine republic in 1797, and formed part of the Italian republic in 1802, and of the kingdom of Italy in 1805. The *Lombardo-Venetian Kingdom* was created by the allies, and given to Austria, in lieu of her Flemish territories, by the treaty of Paris, 1815. In 1848 *L.* revolted from Austria, and joined the king of Sardinia, but it was reduced to subjection by the battles of Custoza, in 1848, and of Novara, in 1849. By the peace of Villa-Franca, in 1859, the emperor of Austria ceded nearly all Lombardy to the emperor of the French, who transferred it to Victor Emmanuel, king of Sardinia, and the remainder was incorporated with Italy in 1866. There is now no official division called *L.*, the country having been parcelled out into the provs. of Bergamo, Brescia, Como, Cremona, Mantua, Milan, Pavia, and Soudrio. *Pop.* (1897) 3,795,000.

Lom'bardy, in *Georgia*, a small village of McDuffie co., about 75 m. E.N.E. of Milledgeville.

Lom'bardy Grove, in *Virginia*, a village of Mecklenburg co.

Lom'blem, an island in the Malay Archipelago, lying to the E of Flores; Lat. 8° 20′ S., Lon. 123° 40′ E. *Ext.* 40 m. long, with an aver. breadth of 16. *Pop.* Unknown.

Lom'bok, an island of the Malay Archipelago, in the group known as the Sunda Islands. It is separated from the island of Bali by the Straits of Lombok, and from the Sumbawa by the Straits of Allas. Lat. bet. 8° 12′ and 9° 1′ S., Lon. 115° 44′ and 116° 40′ E. *Area*, estimated at 1,400 sq. m. The N. and S. coasts are each traversed by a chain of mountains, some of which are volcanic, and covered with forests. The peak of *L.*, in the N., reaches an elevation of 8,000 ft. The interior is a fertile valley, populous, and well cultivated. *Prod.* Rice, cotton, coffee, and maize, about 20,000 tons of the former being annually exported; and abundant supplies of cattle, hogs, poultry, and vegetables are exported from Ampannam on the W. coast. A considerable trade is carried on with Java, Borneo, and other Malay islands. *Chief towns.* Lombok, Ampannam, and Mataram; the last is the residence of the rajah, who is tributary to the sultan of Bali. *Pop.* 250,000.

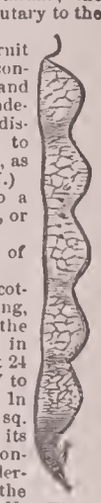


Fig. 1617.

Lom'ent, *n.* [Lat. *lomentum.*] (*Bot.*) A fruit similar to a legume, excepting that it is contracted in the spaces between each seed, and there separates into distinct pieces; or is indehiscent, but divided by internal spurious dissepiments, whence it appears at maturity to consist of many articulations and divisions, as in the Tick-trefoil or Desmodium, (Fig. 1617.)

Lomenta'ceous, *a.* (*Bot.*) Applied to a plant whose fruit is a loment; belonging to, or resembling a loment.

Lomi'ra, in *Wisconsin*, a post-township of Dodge co.; *pop* about 1,781.

Lomond, (Loch,) (*lo'mond, lok,*) a lake of Scotland, between the cos. Dumbarton and Stirling, its most S. extremity being 6¼ miles N. of the town of Dumbarton. It is the largest lake in Scotland, and is of triangular shape, about 24 m. in length N.N.W. and S.S.E., and from 7 to 8 miles in its widest part along its S. coast. In the N. it is only 1 m. in breadth. *Area*, 45 sq. m. Its depth varies from 60 to 600 feet, and its surface is only 22 feet above sea-level. It contains 30 islands, some of which are of considerable size, and well wooded. The scenery of the lake is varied and magnificent. Around the N. portion of the loch are high, wild, and picturesque mountains, Ben Lomond on the E., and the Gramplan Hills on the W. The glens between the mountains are well wooded, and contain many elegant residences. At the S. the country is low, and very fertile. It receives several streams, of which the Endrick is the largest. The river Leven carries off its own superfluous waters, and discharges them into the Frith of Clyde near Dumbarton.

Lo'monite, *n.* (*Min.*) The same as Laumonite, *q. v.*

Lomonosof, (*lo'mo-no-sov',*) Michael, a Russian poet, and the father of modern Russian literature, b. at Kholmazov, 1711, was the son of a fisherman, and, having fled from his father, took refuge in a monastery, where he received his education, which he afterwards improved at a German university. In 1741 he returned to his native country, and became member of the Academy of Petersburg, and professor of chemistry. In 1761 he was honored with the title of councillor of state. The odes of *L.* are greatly admired for originality of invention, sublimity of sentiment, and energy of language; and compensate for the turgid style which, in some instances, has been imputed to them, by that spirit and fire which are the principal characteristics in this species of composition. Pindar was his great model. He enriched his native language with various kinds of metre. His works, in 3 volumes 8vo., consist of pieces in verse and prose, the last being chiefly philosophical dissertations. Died 1765.

Lomza, (*lom-za',*) a town of Russian Poland, govt. of Augustovo, on the Narev, a tributary of the Vistula, 85 miles N.E. of Warsaw. It contains a college and an arsenal. *Manuf.* Cloths, linens, and paper. *Pop.* 6,043.

Lonacon'ing, in *Maryland*, a post-village of Alleghany co., about 16 m. W. by S. of Cumberland.

Lonado, or **Lonato,** (*lo-na'to,*) a town of Italy, prov. of Brescia, 13 m. E.S.E. of Brescia. It is walled, and defended by a castle. *Manuf.* Silk twist, and saltpetre. *Pop.* 7,000. It is remarkable as the scene of a victory gained by Napoleon I. over the Austrians in 1796.

Londerzeel, (*lone'dair-zail,*) a town of Belgium, prov. of S Brabant, 12 m. from Brussels; *pop.* 5,000.

London, (*lŭn'dŭn.*) [Lat. *Londinium*; Fr. *Londres.*] The metropolis of the British empire, and the most populous, wealthy, and commercial city of the world. It is situated partly and principally on the N. bank of the Thames, in the co. of Middlesex, and partly on its S. bank in the co. of Surrey, its suburbs extending into several other cos., and is abt. 45 m. above the river's mouth. The site on the N. side is high and dry, but on the S. it is so low as to be under the level of the highest tides, though, by a well-constructed system of drainage, it is kept perfectly free from wet. The sub-soil is a hard clay, known to geologists by the name of *London clay*,

lying in the middle of the great chalk basin, extending from Berkshire to the E. coast. In several places the clay is covered by thick beds of gravel. Exclusive of the City of London (properly so called) the metropolis comprises the city and liberties of Westminster, the parliamentary boroughs of Tower Hamlets, Finsbury, Hackney, Marylebone, Southwark, Lambeth, Kensington, Chelsea, and Greenwich, and other contiguous districts, which, though formerly distinct, are now combined to form the huge agglomeration of streets and houses called LONDON. To attempt in this article more than a brief sketch of the leading features of this "Modern Babylon" would exceed our just limits. Its length E. from Plumstead in Essex, to its W. boundary Hammersmith, in Middlesex, on the N. bank of the Thames, may be estimated at 19 m.; its breadth, N. to S., or from Hampstead, in Middlesex, to Camberwell, co. Surrey, at 14 m.; while its circumference is not less than 40 m. The united area of the city proper, Westminster city and liberties, &c. (excluding the divisions of Greenwich, Chelsea, and Kensington,) is 31,498 acres. The N. and S. portions of London are connected by bridges, viz., those of London, Southwark, Blackfriars, Waterloo, Hungerford, Westminster, Vauxhall, Chelsea, Wandsworth, Putney, and Hammersmith, besides several railway bridges. Communication is also maintained subterraneously by the Thames Tunnel and subway. The city is divided into several hundred parishes, and contains about 500 churches belonging to the Anglican communion, irrespective of several hundred others belonging to various denominations. This, the E. central division of the metropolis, may be termed the centre of commerce not only of the British empire, but of the world at large. What is legally termed the port of *L.* extends about 7 m. below London Bridge beyond Blackwall; though the *actual* port, consisting of the upper, middle, and lower pools, does not reach beyond Limehouse. Independent of the river accommodation thus afforded for shipping, a series of vast inland docks extends from the Tower to nearly opposite Greenwich. The *West India Docks*, the largest of these, (opened in 1802,) comprise about 295 acres, a fourth part of which is water area, the rest being occupied with quays and warehouses of great magnitude. There is, also, here an export and import dock, with ample room for 500 large merchantmen. The *London Docks*, abt. 1½ m. below London Bridge, cover about 100 acres of ground, of which nearly a third part is water. The vaults beneath the warehouses have cellarage for 65,000 pipes of wine, and one of them has an area of 7 acres. The tobacco warehouses are, also, very extensive. The *E. and W. India Docks*, smaller than the before-mentioned, and situate further down the river, have a depth of 23 feet, with a water-area of 30 acres. The *Commercial Docks*, on the S. side of the river, contain a water-surface of 40 acres; and the *St. Katharine's Docks*, just below the Tower, enclose 24 acres, all being surrounded by extensive warehouses. The shipping frequenting the port ranks next in extent to that of Liverpool. The city proper was formerly walled, with large entrances or gates, one only of which—Temple Bar, dividing the cities of London and Westminster—remained until 1877. The noticeable public buildings of the city are the Tower of London (*q. v.*); the Royal Mint; St. Paul's Cathedral (*q.v.*); the General Post-Office; the Guildhall; Mansion House; the halls of the various livery companies, or trade guilds; the Bank of England (covering 8 acres); Royal Exchange; Stock Exchange; Corn Exchange; Coal Exchange; Custom-House; East India House, &c. The city is intersected with railroads both above and below ground. In a radius of one mile round the Bank of England is found, perhaps, the busiest, and certainly, during business-hours, the most densely crowded spot on the globe. Proceeding W., and

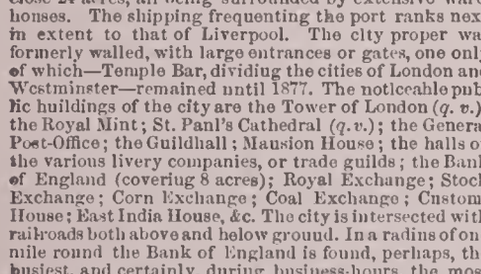


Fig. 1618. — BANK OF ENGLAND.

arrived at Temple Bar at the E. extremity of the great thoroughfare, the Strand, we find on the right the Temple, with its beautiful gardens extending to the river's edge, and on the left, the other great Inns of Court, Lincoln's Inn Fields, &c. Further on, into Westminster, is the grand division of the metropolis known as the *West-End*, the court, fashionable, and literary quarter — the *London* of polite society. Here are the Houses of Parliament, the various government offices, National Gallery, theaters, royal and other palaces, the many parks (see HYDE PARK), club-houses, picture-galleries; the British Museum, Westminster Abbey, Kensington Gardens, &c. Further north, the Regent's Park, Zoological Gardens, London University, Royal College of Surgeons, and literary institutions and public edifices greet the eye in numbers. Markets, hospitals, asylums, &c., are spread over this metropolis in great profusion: and it is estimated that not less than 4,000 churches, chapels, and places devoted to divine worship, flourish within its precincts. A magnificent roadway of granite, called the Thames Embankment, from 100 to 200 ft. wide, extending on both sides of the river from Westminster to Blackfriars Bridge, was commenced in 1864, upon which were erected, in 1878, the Cleopatra obelisk and the handsome National opera-house. The city proper is under the jurisdiction of a lord-mayor and courts of aldermen and common council, together forming the richest municipal corporation in the world, and exercising supreme jurisdiction within the liberties.—*Manuf. L.* presents itself under too many aspects to be called a manufacturing city; yet it is the seat of many, and of some very extensive, manufactures, several of which have their distinct quarters. Among the principal are those of silk, engines, machinery, sugar, liquors, soap, chemicals, leather, gold and silver ware and jewelry, coach-building, ship-building, &c. The brewing of ale and porter is conducted on a gigantic scale, the yearly consumption of these articles in the metropolis alone averaging 44,000,000 gallons. *L.* ranks higher as a literary even than as a commercial center. It is, essentially, the focus of British science and civilization—the world's metropolis.—Nothing is known of *L.* previous to the invasion of the Romans; but we learn from Tacitus (*Annal.*, lib. xiv., cap. 33) that so early as the reign of Nero it was an important emporium. After the establishment of the Saxon dominion, *L.* is supposed to have become the capital of the E. Saxon kingdom. Eventually it became the capital of the entire kingdom, and, after the Norman conquest, received a charter, the original of which is still preserved as the palladium of the city's liberties. The history of *L.* thenceforward is one of continual progression, although at different periods severely visited by fires, pestilence, &c. In 1381, Wat Tyler's rebellion was suppressed by the citizens, commanded by Sir William Walworth, then lord-mayor. In the 15th century, *L.* began to make marvellous strides, and in the 16th, it vied with Venice, Genoa, and Amsterdam, both in extensive foreign commerce and in the opulence of its citizens. During the reign of Charles II., the city was partly desolated, first by the ravages of the Great Plague, and shortly after, in 1666, by what is known in history as the *Great Fire of London*, which destroyed 13,200 houses, 90 churches, and many public buildings; the property destroyed being estimated at the enormous sum, in those days, of $50,000,000. After this calamity, ancient *L.* being a thing of the past, the modern city arose upon its ruins. In 1780, the metropolis was the scene of dreadful riots, incited by a fanatic nobleman, Lord George Gordon, against the Roman Catholic inhabitants. In 1878, after 25 years of litigation, the magnificent domain of Epping Forest, containing nearly 6,000 acres of splendid woodland, situated upon the very skirts of East London, was added to the park area of *L.* Under the Local Government Act of 1888, a new county was defined, consisting of parts of the counties of Middlesex, Surrey, and Kent, under the title of the county of London, a county council being provided for this district, and the preceding jurisdiction of the city of London and the authorities of the three counties abolished. *Pop.* (1901) 4,536,063.

Lon'don, a thriving town, cap. of Middlesex co., prov. of Ontario, on the Thames, about 76 m. W. of Hamilton. It commands an extensive trade. *Pop.* (1897) 34,960.—In *Ind.*, a p.-v. of Shelby co., about 15 m. S.E. of Indianapolis.—In *Ky.*, a p.-v., cap. of Laurel co., about 100 m. S.S.E. of Frankfort.—In *Mich.*, a p.-twp. of Monroe co.

Lon'don, in *Ohio*, a city, cap. of Madison co., about 25 m. W. by S. of Columbus. *Pop.* (1897) 3,710.

—A village of Adams co.

Lon'don, in *Pennsylvania*, a post-village of Mercer co., abt. 142 m. W.N.W. of Harrisburg.

Lon'don Bridge, in *Virginia*, a post-village of Princess Anne co., abt. 100 m. S.E. of Richmond.

Lon'don Brit'ain, in *Pennsylvania*, a township of Chester co.

Lon'don City, in *Illinois*, a village of Fayette co., abt. 14 m. E. of Vandalia.

London Clay, *n.* (*Geol.*) See LONDON.

Lon'donderry, CHARLES WILLIAM STEWART, MARQUIS OF, b. at Dublin, 1778; served under Sir R. Abercrombie, and under Sir John Moore and Sir A. Wellesley, in the Peninsula. He was English ambassador at Vienna, and minister-plenipotentiary at its Congress. By his marriage with Miss Vane he succeeded to immense estates in Durham, and devoted himself to their improvement and to the welfare of his tenantry. He wrote the *Story of the Peninsular War* and some other works. D. 1854.

LONDONDERRY, ROBERT STEWART, MARQUIS OF, an Irish statesman, b. 1769, distinguished himself in the Irish parliament; and, on his father's creation as Earl of Londonderry, became Viscount Castlereagh. As such he took a prominent part in Irish politics, and especially in the matter of the Union, after which he represented his native county, Down, in the Imperial Parliament. Under Pitt he became secretary of war, fought a duel with Canning, and became secretary for foreign affairs. He, as well as his brother Charles, represented England at the Congress of Vienna. He ended his life by suicide, 1822.

Londonderry, or **Derry,** (*lun'dun-der-re,*) a mar.t. co. in the N. of Ireland, prov. of Ulster, having N. Lough Foyle and the Atlantic Ocean; E. Antrim, and Lough Neagh; S. Tyrone; W. Donegal. *Area*, 810 sq. m. The surface is generally mountainous and irregular, particularly in the centre and S., Sawell on the S. border being 2,236 feet high. Elsewhere it is generally low. The soil is of a mixed character, the greater part, with the exception of the alluvial spots on the banks of the several rivers, and of a considerable open district which stretches S. to Tyrone, being ill suited for wheat, or indeed for any cereal crop. Agriculture has of late years been much improved; in fact, it is considerably in advance of the majority of Irish cos. *Rivers.* Foyle, Bann, and Roe. *Prod.* Potatoes form the principal crops. In some parts oats, barley, wheat, and flax are cultivated, and rye on the higher soils. *Manuf.* Linen is the great staple of this co. There is a considerable export and import trade at the towns of Derry and Port Rush, which is the seaport of Coleraine. The principal towns are Londonderry, Coleraine, and Newtown-Limavady. This co. is almost wholly owned by London livery companies, to whom it was granted by James I. of England after the rebellion of its chiefs. Hence the prefix of *London* to its ancient name.

LONDONDERRY, the capital of the above county, is pleasantly situate on the Foyle, 120 m. from Dublin; Lat. 54° 59′ 6″ N., Lon. 7° 19′ W. It contains, within the walls, four main streets, which cross at right angles, and form, with the smaller streets and lanes, a sort of parallelogram. The ground on which the town stands is hilly. The old walls, flanked with bastions, which were built in the year 1614, still remain in fine repair, and are an ornament to the place. The principal buildings are the cathedral, a Gothic structure, built in the year 1633, and having a tower and a spire 178 feet high; a bishop's palace, a deanery, various places of worship, schools, a mechanics' institute, jail, an infirmary, a small theatre, a linen-hall, town-hall, district lunatic asylum, union workhouse, custom-house, and barracks; also, a Doric column, surmounted by a statue, erected in honor of the Rev. G. Walker, who defended the city during its memorable siege. It has an extensive trade with the West Indies and the United States. The harbor is deep, wide, and tolerably secure. This town is of great antiquity, and has often suffered from the effects of war. In 1688 it was besieged by king James II. from December, 1688, till August, 1689, when the siege was raised. *Pop.* (1897) 34,150.

Lon'donderry, a seaport-town of Colchester co., in Nova Scotia, on the N. side of Cobequid Bay, about 55 m. N. of Halifax.

Lon'donderry, in *New Hampshire*, a post-town and township of Rockingham co., about 6 m. S. of Manchester. *Pop.* (1897) 1,310.

Lon'donderry, in *Ohio*, a post-town and township of Guernsey co., abt. 90 m. E. by N. of Columbus.

—A village of Ross co.

Lon'donderry, in *Pennsylvania*, a township of Bedford co.

—A post-township of Chester co.

—A township of Dauphin co.

—A township of Lebanon co.

Lon'donderry, in *Vermont*, a post-township of Windham co.

Lon'don Grove, in *Pennsylvania*, a post-township of Chester co.

Lon'don-pride, *n.* (*Bot.*) A species of SAXIFRAGA, *q. v.*

Lon'doner, *n.* A native of London.

Lon'donism, *n.* A mode of speech peculiar to London.

Lon'donize, *v. a.* and *v. n.* To conform to the manners and characteristic usages of London.

Lone, *a.* [Icel. *lon*, a breaking off, intermission, neglecting, *latalon*, to leave off, to neglect.] Single; solitary; having no company. — Retired; unfrequented; — Standing by itself; not having others in the neighborhood; as, a *lone* house. — Single or unmarried, or in widowhood.

—*n.* A lane. (Local Eng.)

Lone Jack, in *Missouri*, a post-village of Jackson co., abt. 29 m. S.E. of Independence.

Lone Rock, in *Wisconsin*, a post-village of Richland co., abt. 43 m. W. by N. of Madison.

Lone Star, in *California*, a village of Placer co., abt. 6 m. N. of Auburn.

Lone Tree, in *Illinois*, a post-village of Bureau co., abt. 110 m. N. by E. of Springfield.

Lone'liness, *n.* Solitude; retirement; seclusion from company. — Love of retirement; disposition to solitude.

Lone'ly, *a.* Solitary; at a distance from company or neighbors; without society. — Retired; unfrequented; sequestered. — Addicted to solitude or seclusion from company; as, a *lonely* bachelor.

Lone'some, *a.* Solitary; secluded from society.

Lone'somely, *adv.* In a dismal or lonesome manner.

Lone'someness, *n.* State of being lonesome or solitary; solitude.

Long, *a.* [A.S. and Ger. *lang*, long; Lat. *longus*; Fr. *long.*] Extended; produced; drawn out in a line, or in the direction of length. — Drawn out or extended in time; as, a *long* while, *long*, *long* ago. — Extended to any certain measure; as, a yard *long*, a mile *long*. — Tedious; as, a *long* tale. — Dilatory; as, he is *long* in coming. — Continued in a series to a great extent; as, a *long* line of ancestors. — Protracted; as, a *long* note, a *long* syllable. — Lingering or longing; extensive; extending far in prospect or into futurity.

"Many a *long* look for succor."—*Dryden.*

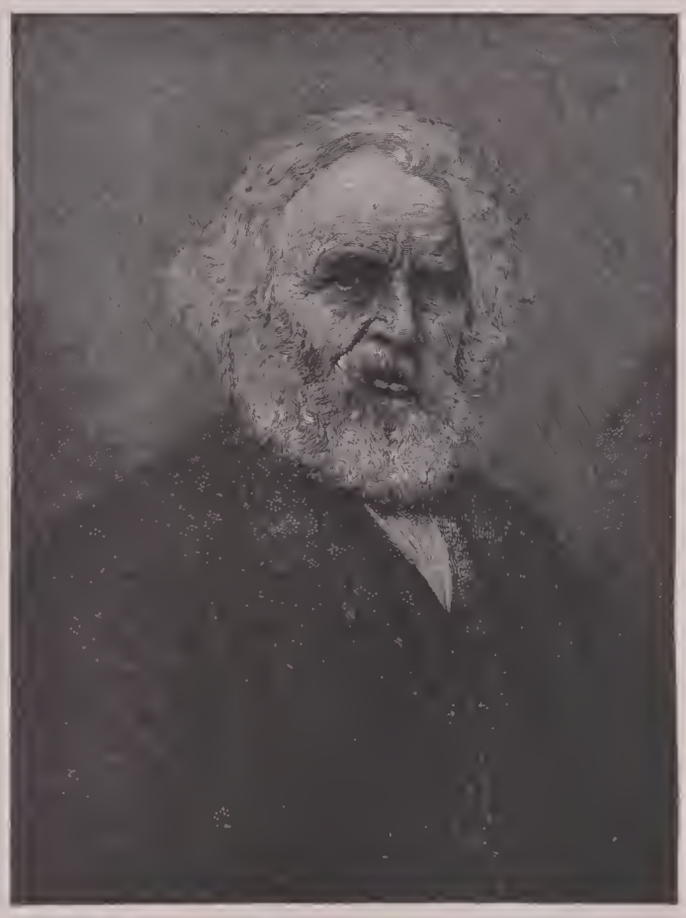
—*n.* (*Mus.*) A character of this form 𝅜, the length of which in common time is equal to four semibreves or eight minims.

—*v. n.* [A. S. *langian*, to draw out, to long, to crave; Icel. *langa*, to yearn, to wish for.] To desire earnestly or eagerly; — followed by *for* or *after*, or by an infinitive.

—To have a preternatural craving or eager appetite.

Long-a-com'ing, in *New Jersey*, a vill. of Camden co.

Long, De. See ARCTIC SEA.



Henry Wadsworth Longfellow

1807–1882

Lon'gan, *n.* (*Bot.*) The pulpy fruit of the *Nephelium longan*. — See NEPHELIUM.

Longanim'ity, *n.* [Lat. *longanimitas*; Fr. *longanimité*.] Forbearance; patience; equanimity.

Long Bar, in *California*, a village and township of Yuba county, about 14 miles east by north of Marysville.

Long'-boat, *n.* (*Naut.*) A large and strong boat, formerly the largest carried by a ship; but it has now generally given place to the launch.

Long Branch, in *Missouri*, a post-village of Monroe co., abt. 60 m. N.N.E. of Jefferson City.

Long Branch, in *New Jersey*, a post-town of Monmouth co. See SECTION II.

Long'-breathed, *a.* That is not easily exhausted of breath; long-winded.

Long Cane Creek, in *Georgia*, enters Chattahoochee river from Troup co.

Long Cane Creek, in *South Carolina*, enters Little river in Abbeville dist.

Long Creek, in *Iowa*, a township of Decatur co.

Long Creek, in *North Carolina*, enters Catawba river from Mecklinburg co.

—Enters Rocky river from Stanley co.

Long Creek, in *Virginia*, a post-office of Louisa co.

Long Dick's Creek, in *Iowa*, enters the Shikagua or Skunk river in Jasper co.

Longe, *n.* Same as LUNGE (*q. v.*).

Long Ed'dy, in *New York*, a post-village of Sullivan co.

Lon'ger, *n.* One who desires or longs for earnestly.

Longer (*lŏng'ger*), comp. of LONG (*q. v.*).

Longev'ity, *n.* [Fr. *longévité*, from Lat. *longa vita*, long life.] Length or duration of life.—Great length of life; long life.—There are various statements on record of individuals who attained to an abnormal length of life, including the well-known instances of Thomas Parr, said to have reached 152 years of age; Henry Jenkins, whose age is given as 169, and the Countess of Desmond, accredited with 140 years. A critical investigation of these cases, however, has thrown great doubt on their credibility, the evidence in their favor being the reverse of scientific. Sir G. C. Lewis, in *Notes and Queries* (1862), professed disbelief in any case of a life exceeding 100 years, and though it is now certain that he was mistaken in this conclusion, yet there is no satisfactory evidence of the truth of any of the extraordinary ages claimed. The evidence said to exist in registers has in many cases been proved to refer to two persons of the same name. In one noted case, Carr, of Shoreditch, said to be 207, it was found that a 2 had been written over the 1. As regards tombstones, there is one instance of 309 being carved, which was most probably an ignorant chiseller's way of making 39. The ancient traditions of patriarchal life extending to many centuries are based on the very reverse of scientific evidence, and instead of life in the past being longer than it is at present, the opinion is entertained that human life has been lengthening since the Psalmist gave its higher limit to three score and ten. The average length of life has certainly been on the increase in civilized countries for several centuries. If it be asked, how shall long life be attained, a dozen theories might be given, all of which have been set at naught by facts. Great austerity did not carry off St. Anthony, who is said to have survived until 105. On the other hand, the luxuries of court-life did not prevent Titian from living to paint a fine picture at 96. There is a striking diversity in the longevity of animals and plants. While 40 is a very long life for a horse, an eagle has been known to live nearly a century a sea-anemon lived in an aquarium for 59 years, and Sir John Lubbock's queen ant lived in captivity for nearly 15 years. A sluggish life is apt to be the longest, and it is probable that some species of trees live for over 2,000 years. According to mortality tables employed by insurance companies, the expectation of life is greater in the Semitic than in the Anglo-Germanic races; less in the colored people of the U. S. than the whites.

Longe'val, *a.* [Lat. *longus*, and *ævum*, age, life.] Long-lived.

Longe'vous, *a.* [Lat. *longævus*.] Living a long time; of great age.

Long Falls Creek, in *Kentucky*, a village of McLean co.

Long'fellow, HENRY WADSWORTH, an American poet, b. in Portland, Me., 1807, son of Stephen *L.*, a distinguished member of the bar in that city. At the age of 14, he entered Bowdoin College, where he graduated in 1825. During his college life he wrote several pieces, some of which possessed in great perfection the characteristics which have rendered him so universal a favorite. Among them are, the *Burial of the Minnesink*, and the *Hymn of the Moravian Nuns of Bethlehem at the Consecration of Pulaski's Banner*. After leaving college, a short season was spent by the poet in the law-office of his father; but he was speedily appointed to a professorship of modern languages, in Bowdoin College, and travelled several years in Europe to prepare himself more perfectly for its duties. His travels included Spain and Germany; and an essay on the *Moral and Devotional Poetry of Spain* was published on his return, in which he inserted his translation of Manrique's Spanish poem on the death of his father. In 1833 these productions were published in a volume in Boston, along with translations of the sonnets of Lope de Vega and other poets. The sketches of his foreign travels, published in the work called *Outre Mer*, were also the fruit of these wanderings. In 1839 the poet transferred his residence to the university of Cambridge, near Boston, where he had been chosen as the successor of Professor Ticknor in the professorship of modern languages and literature. A second visit to Europe, and a considerable residence abroad, followed upon this appointment. That he might return more eminently fitted for it, he visited Denmark, Sweden, Holland, and Switzerland. *Hyperion*, a romance, was one of the prose-poetical fruits of this period of foreign travel,—a work combining truths and realities of personal experience and history, with much imaginative and romantic illustration. It was not, however, till 1839 that any of Longfellow's poetical productions were given to the public in a volume — *The Voices of the Night* — published at Cambridge, and containing his early poems, some translations from the Spanish, and some of the very finest of all the productions of his

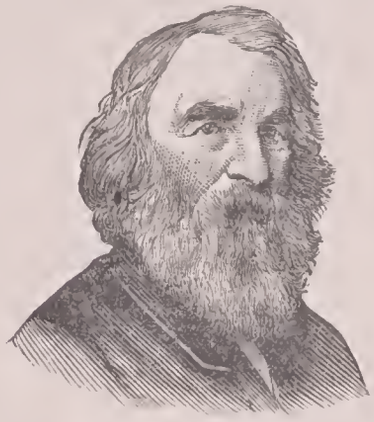


Fig. 1619. — LONGFELLOW.

genius, such as *The Psalm of Life*, and especially the *Excelsior*. This is certainly one of the most beautiful poems in the English language. In 1842 *L.* published a little volume of ballads and other poems, and a few pieces on slavery. The *Spanish Student* was published in 1843; the *Belfry of Bruges*, in 1846; *Evangeline*, one of the most beautiful of his poems, in 1847. The *Belfry of Bruges* contained those very beautiful pieces entitled *Sea-weed*, and the *Rain in Summer*. In 1850 appeared *The Seaside and the Fireside*, containing the beautiful poem *Resignation*, and that on *The Building of the Ship*, closing with an apostrophe of admiration to the American Union, and of confidence in its perpetuity. In 1851 *L.* published the very beautiful poem, illustrating so richly, quaintly, and with so much tender feeling, the Middle Ages in Europe, entitled *The Golden Legend*. The play has much of the sweetness and tenderness of sentiment and character exhibited in *Evangeline*, and the highest lessons and impulses of the legends of the early and later monastic ages are drawn out in the characters and incidents. The manners of the olden times are exquisitely sketched; saints, scholars, singers, students, doctors, princes, peasants, monks, priests, devils, revellers; the cathedral, street, and town and country life; the plays of sacred festivals and miracles; all the striking elements and features of the ages of superstition passing into faith — are revealed and relieved in exquisitely beautiful language, verse, and imagery. Deep and earnest lessons of piety and moral wisdom are set like fountains welling in a quiet meadow, sprinkled with violets and daisies. In 1855 *L.*'s genius revealed itself in an entirely new and original production, entitled *The Song of Hiawatha*, founded on the scenery, traditions, characteristics, manners, and life of the aboriginal Indian tribes of America, viewed indeed in their most poetical light, but yet illustrated with exceeding beauty of truth as well as fiction. The ruder, coarser, savage traits of character and life are not drawn, or are transfigured with the beauty of poetic language and ideal sentiment; and the poem is a singularly beautiful combination of Indian idylls, aboriginal Arabian Nights' Entertainments, a Greek Homeric Odyssey of Indian story, with a human being of supernatural endowments, but a human heart and feelings, and a social loving life; and the growth of an Indian love, and the course of an Indian wooing and wedding, and years of happy domestic enjoyments, with tragedies of life and death intermingled,—all exquisitely blended in an atmosphere of imagination and of feeling, so pure, so elevated, so lovely, with lights so strangely rich and glowing, that it is as if an Aurora Borealis of shining incidents and creatures were passing before the vision. The genius that indited the rhyme of the *Ancient Mariner*, and the poem of *Christabel*, might have been employed upon these pages; but, with wonderful art and beauty, the natural and supernatural are so mingled together, in such childlike simplicity of narrative, and with such sweet beguiling melody, that the reader is carried along as in a delightful dream of wonder, quite willing to believe the story true. In the hands of an inferior poetical artist, the measure of this poem must have been monotonous without rhyme; but the style is so artless, the rhythm so true and perfect, the language so pure and chaste, the imaginative quality so constant, the images of natural and rural scenery so lovely and attractive, and the changes of the poem in landscape, event, and character so original, varied, and novel, that the absence of the music and melody of rhyme only gives scope to other elements of beauty, while music and melody are in every line. The genius of the poet Collins, in the *Ode to Evening*, could hardly have thrown into language more beautiful pictures, or with sweeter melody, or in a higher style of pure poetical imagination. Gentleness and tenderness of feeling, an uninterrupted sympathy with all the cheerfulness and joy of nature, a familiar interpretation of its meaning, a quiet ease, truthfulness, and accuracy in description, minuteness of detail, along with the perpetual light of imagination, characterize the whole poem — a poem of legends and traditions, wild and wayward, with the odors of the forest upon them, and the dew of meadows, and the smoke of wigwams ascending, and the human heart interpreted. Hiawatha's childhood, Hiawatha's fasting, Hiawatha's friends, Hiawatha's sailing, Hiawatha's wooing, the Son of the Evening Star, the Ghosts, the Famine, are exquisitely wrought portions of a work which certainly has no rival in the volumes of modern poetry; there being no other attempted poem of the kind in existence. In 1858 *L.* published *The Courtship of Miles Standish*, a poem in hexameters, full of character and beautiful description, accompanied with a number of shorter poems, entitled *Birds of Passage*. Of these, the *Prometheus*; *The Ladder of St. Augustine*; *The Two Angels*; *Daylight and Moonlight*; and *The Warden of the Cinque Ports*, are perhaps the most strikingly beautiful, and the best examples of the characteristic qualities of *L.*'s productions. Among his later works are *Tales of a Wayside Inn* (1863); *Flower de Luce* (1866); a translation of *Dante* (1868); *New England Tragedies* (1868); *The Divine Tragedy* (1872); *Three Books of Song* (1872); *Aftermath* (1873); *The Hanging of the Crane* (1874); *The Masque of Pandora* (1875); and *Keramos* (1878). The poet resided at Cambridge, in a fine old country-house, surrounded by a beautifully cultivated landscape—the house celebrated as having been at one time Washington's head-quarters in the Revolutionary War. D. March 24, 1882.

Long'ford, an inland co. of Ireland, prov. of Leinster; *area*, 421 sq m. *Soil*, generally fertile, though much interspersed with morasses. *Rivers*. Shannon, Inny, Camlin, and the Fallen. *Prod.* Oats, potatoes, and butter. Grazing farms are numerous. *Chief towns*. Longford, Granard, and Ballymahon.

LONGFORD, the cap. of the above co., on the Camlin, 65 m. N.W. of Dublin; *pop.* 4,535.

Long Glade, in *Virginia*, a P. O. of Augusta co.

Long Grove, in *Illinois*, a post-village of Lake co., abt. 30 m. N.W. of Chicago.

Long'-headed, *a.* Far-seeing; sagacious; clear-sighted.

Long Hill, in *New Jersey*, a post-office of Morris co.

Lon'gicorn, *n.* [Lat. *longus*, long, and *cornu*, a horn.] (*Zoöl.*) In the system of Latreille, one of a tribe of Coleopterous insects, or Beetles (Figs. 16, and 1620), which are readily distinguished by the great length of the antennæ, and by the first three joints of the tarsi being furnished with a brush. The larvæ mostly reside in the interior of trees, or under the bark; and are either wholly destitute of feet, or have them very small. Both

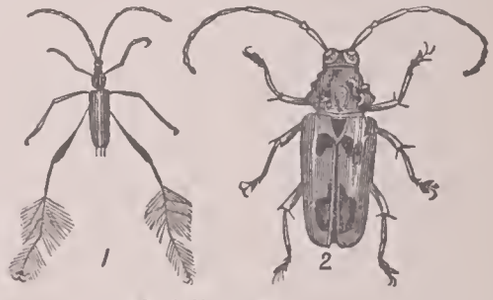


Fig. 1620. — LONGICORNES.

1, Cerambyx hirtipes; 2, Trachyderes rigrofasciatus.

in their larval and perfect state, but particularly in the former, they do much injury to vegetation. Some of the tropical species are brilliantly colored; and some are remarkable for exhaling an agreeable musky odor.

Longiman'ous, *a.* [Fr. *longimane*.] Having long hands.

Longim'etry, *n.* [Lat. *longus*, long, and Gr. *metron*, a measure.] The art or practice of measuring distances.

Long'ing, *n.* An eager desire; a craving, or preternatural appetite.

Long'ingly, *adv.* With eager wishes or appetite.

Lon'ginus, DIONYSIUS, a celebrated Greek critic and philosopher of the 3d cent., but whether b. at Athens, or in Syria, is uncertain. In his youth he travelled for improvement to Rome, Athens, and Alexandria, and attended all the eminent masters in eloquence and philosophy. At length he settled at Athens, where he taught philosophy, and where he also published his inimitable *Treatise on the Sublime*. His knowledge was so extensive, that he was called *the living library*; and his fame having reached the ears of the celebrated Zenobia, queen of Palmyra, she invited him to her court, intrusted to him the education of her two sons, and took his advice on political affairs. But this distinction proved fatal to him; as after the surrender of Palmyra, Aurelian basely put him to death, for having advised Zenobia to resist the Romans, and for being the real author of the spirited letter which the queen addressed to the Roman monarch. His death took place in 273. He met his fate with calmness and fortitude, saying to his friends, "The world is but a prison: happy therefore is he who gets soonest out of it, and gains his liberty."

Longipen'nes, *n. pl.* [Lat. *longus*, and *pennæ*, wings.] (*Zoöl.*) Cuvier's name for a fam. of aquatic birds, whose wings are remarkably long, their powers of flight proportionally great, and their habits entirely marine. The beak is hooked at the top, and the hind toe is wanting. The *Albatross* furnishes an example.

Longiros'tres, *n. pl.* [Lat. *longus*, and *rostrum*, a beak.] (*Zoöl.*) The name given by Cuvier to a tribe of wading-birds, divided into families and genera, and distinguished principally by the length and tenuity of their bills.

Long'ish, *a.* Somewhat long; moderately long.

Long Is'land, one of the Bahama Islands; Lat. 23° 41′ N., Lon. 75° 19′ W. *Area*, about 200 sq. m.

Long Island, an island of British North America, in Hudson's Bay; Lat. 55° 5′ N., Lon. 79° W.

Long Island, an island and coast-guard station of Ireland, in Roaring-water Bay, abt. 6 m. N.N.W. of Cape Clear.

Long Island, in *Alabama*, a post-office of Jackson co.

Long Island, in *New York*, an island in the Atlantic Ocean, between Lat. 40° 33′ and 41° 0′ N., and Lon. 72° and 74° 2′ W. Long Island Sound separates it from Connecticut, as does East River from New York. It is about 115 m. in length, by a maximum breadth of 20 m. *Surface*, broken and hilly, without any great elevations. The coast is indented with numerous bays and inlets, of which Gardiner's and Great Peconic bays, in the N.E. part of the island, extend 30 m. inland. *Soil*, very fertile. It is divided into King's, Queen's, and Suffolk cos., (*q. v.*) At the village of Flatbush, August 27, 1776, the American forces, under Gen. Putnam, were defeated by the English, under Gen. Howe.

Long Island City, in *New York*, a city of Queen's co., at the W. end of Long Island, opposite the upper part of N. Y. city. It is separated from Brooklyn on the S. by Newtown creek. It is now incorporated in Greater New York.

Long Island Sound, a large body of water lying between Long Island and New York, and Connecticut, abt. 110 m. long, and varying from 2 to 20 m. wide. On the W. it is connected with the Atlantic by a strait called the East River, New York Bay, and the Narrows, and on the E. by a narrow passage called the Race. The principal rivers flowing into the Sound from the mainland are the Housatonic, Connecticut, and Thames. It is in the route of a very large and important trade between the city of New York and the East, and is navigated by numerous regular lines of packets and steamers. There are 15 light-houses on its coasts.

Longis'simus Dor'si, *n.* [Lat., the longest (muscle) of the back.] (*Anat.*) A muscle of the back, which rises from the posterior surface of the os sacrum and transverse and oblique processes of the lumbar vertebræ, and is inserted by small double tendons into the posterior and inferior part of all the transverse processes of the vertebræ of the back, sending off also bundles of fibres to all the ribs between their tubercles and angles. Its use is to support the spine, and bend it backwards and to one side.

Longitude, *n.* [Fr., from Lat. *longitudo.*] See LATITUDE.

Longitud'inal, *n.* A railroad-sleeper lying in a parallel line with the rails.

—*a.* [Fr. and Sp. *longitudinal.*] Running lengthwise, as distinguished from transverse or across; extending in length.

Longitud'inally, *adv.* In the direction of length.

Long John, in *Illinois*, a village of Will co., abt. 33 m. S.W. by W. of Chicago.

Long Keys, the name of three small islands in the Bay of Honduras; Lat. 17° 10′ N., Lon. 88° 48′ W.

Long Keys, one of the Bahama Islands, at the E. side of the S.W. entrance to Crooked Passage; Lat. 22° 35′ N., Lon. 74° 20′ W.

Long King Creek, in *Texas*, enters Trinity River in Polk co.

Long Lake, in *Minnesota*, a P. O. of Hennepin co.

—A township of Crow Wing co.

Long Lake, in *New York*, a post-township of Hamilton co.

Long-legged Plower, *n.* (*Zoöl.*) See HIMANTOPUS.

Long-legs, *n. pl.* (*Zoöl.*) A family of insects. See PHALANGITA.

Long Loch, a loch in the W. of Scotland, extending N. from the Frith of Clyde for about 20 miles, between the counties Dumbarton and Argyle. Its average breadth is from 1 to 2 miles, and its banks, consisting for the most part of steep acclivities, abound in striking and picturesque scenery.

Long Marsh, in *Maryland*, a former post-office of Queen Anne co.

Long Meadow, in *Massachusetts*, a post-town and township of Hampden co., about 4 m. S. of Springfield. *Pop.* (1897) 2 250.

Long'-measure, *n.* The measure of length; lineal dimensions.

Longobar'di. (*Hist.*) The name of this German tribe of barbarians is derived either from the length of their beards or from the circumstance of their inhabiting the plains beside the Elbe — *börde*, or *bord*, signifying a "fertile plain by the side of a river." They are stated by the ancient authors to have been a branch of the Suevi; but Paul Warnefrid, who wrote in the time of Charlemagne, and was himself a Longobard, asserts that they originally migrated from Scandinavia. They first appeared in history during the reign of Augustus, when they were settled between the Elbe and Oder, and but little more was heard of them until the reign of Justinian I. (527–565), by whom they were invited into Noricum and Pannonia. Under their chief, Alboin, they invaded Italy in 568, and speedily reduced the greater portion of the country to subjection, establishing the kingdom of Lombardy, which composed the modern states of Venice, the Tyrol, the Milanese, Piedmont, Genoa, Mantua, Parma, Modena, Tuscany, a large portion of the Papal States, and the greatest part of the kingdom of Naples. — See LOMBARDY.

Longobucco, (*lon-go-book'ko,*) a town of Italy, prov. of Calabria Citeriore, 19 m. E.N.E. of Cosenza. The town lies in a deep valley, very little cultivated, and the inhabitants are chiefly employed in working metals and burning charcoal. *Pop.* 9,887.

Longo'la, in *Minnesota.* See LANGOLA.

Long Par'liament. (*Eng. Hist.*) It was summoned by Charles I., met at Westminster, Tuesday, Nov. 3, 1640, and continued its sittings until it was dissolved by Cromwell, April 20, 1653. The journal of this Parliament terminates Tuesday, April 19. It was said of this Parliament, that "many thought it would never have a beginning, and afterwards that it never would have an end."

Long Plain, in *Massachusetts*, a post-office of Bristol county.

Long Point, in *Illinois*, a post-village and township of Livingston co., about 105 miles N.N.E. of the city of Springfield.

Long Point, or LONG POINT SHOALS, in *Massachusetts*, a point of land and light-house, at the entrance of Provincetown Harbor. It exhibits a fixed light, 25 feet above sea-level; Lat. 42° 2′ 10″ N., Lon. 70° 10′ 35″ W.

Long Point Grove, in *Illinois*, a township of Cumberland co.

Long Pral'rie, in *Illinois*, a post-office of Wayne co.

Long Prairie River, in *Minnesota*, rises in Douglas co., and flowing E. and N. enters the Crow Wing River in Todd co.

Long Prim'er, *n.* (*Printl.*) A kind of printing-type, of a size between small pica and bourgeois.

Long's Bar, in *California*, a mining village of Yuba co., on the Yuba River, abt. 110 m. N.N.E. of Benicia.

Long'shore-man, *n.* [An abbreviated form of *alongshoreman.*] A lumper or stevedore employed in loading and discharging ships. — Also, any laborer employed on a wharf.

Long'-sight, *n.* Long-sightedness.

Long'-sighted, (*-sīt'ed,*) *a.* Able to see clearly at a great distance, but not objects near at hand.

—Having the faculty of seeing things afar off; hence, acute; penetrating; far-seeing; sagacious.

Long'-sightedness, *n.* The faculty of perception of things at a distance.

(*Med.*) A visual defect, wherefrom objects near by are seen dimly and confusedly, while those at a far distance are perceived distinctly.

Long's Mills, in *North Carolina*, a post-office of Randolph co.

Long's Peak, *Colorado*, a prominent peak of the Rocky Mountains; Lat. 40° 10′ N., Lon. 106° W.; *height*, 14,271 feet.

Long'-stop, Long'-stopper, *n.* (*Games.*) In Cricket, one who is stationed behind the wicket to stop balls impelled to a long distance.

—*v. n.* To stop a ball driven to a long distance.

Longs'town, in *Pennsylvania.* See NEW BERLIN.

Long'street, JAMES, an American Confederate general, b. in South Carolina, about 1821, after receiving a college education, entered West Point Academy as a cadet in 1838, and after graduating, entered the U. S. army. He served with distinction in the Mexican war, participating in the battles of Monterey and Contreras, in 1847, and after obtaining his captaincy, was brevetted major after the battle of Molino del Rey and the assault upon Chapultepec, where he was severely wounded. After serving for some time in Texas, *L.* was appointed, in July, 1858, paymaster in the regular army, which position he held till the outbreak of the Civil War. Resigning his commission and joining the Confederates, June 1, 1861, *L.* was appointed to the command of the 4th brigade of Gen. Beauregard's 1st corps, near Centreville, and was present at the defeat of the National army at Bull Run, July 21st. During the early part of 1862, he was made maj.-gen., and earned great celebrity under Gen. Lee, in the campaigns against Gens. Pope, McClellan, and Burnside. After the battle of Fredericksburg, Dec. 13, 1862, Gen. *L.* was given the command of a corps d'armée, with the rank of lieut.-gen. With this force he took an active part in the battles of Chancellorsville (May 2–5, 1863) and Gettysburg (July 1–3); and the gallantry and skilful generalship he displayed on all occasions, caused him to be regarded as one of the leading generals in the Confederate army. In the battle of the Wilderness (May 5, 6, 1864), Gen. *L.* was dangerously wounded, occasioning his retirement for some months from active service. After the fall of Richmond he surrendered, and lived retired until 1869, when he was appointed Collector of Customs at New Orleans, and in 1880 Minister to Turkey. Died Jan. 2, 1904.

Long Street, in *Georgia*, a village of Pulaski co., abt. 45 m. S. of Milledgeville.

Long Street, in *Louisiana*, a post-office of De Soto co.

Long Street, in *N. Carolina*, a post-village of Moore co.

Long Street, in *S. Carolina*, a village of Lancaster district.

Long'-sufferance, *n.* Patience; forbearance; resignation.

Long'-suffering, *a.* Patient under difficulties or provocations; submitting to trials; bearing crosses with fortitude.

—*n.* Patient endurance for a long time; meekness under provocation.

Long Swamp, in *Pennsylvania*, a post-township of Berks co.

Long'-tail, *n.* A dog having his tail uncut; hence, *cut-* and *long-tail*, a cant term for one or other, taken from dogs which belonged to men not qualified to hunt, having their tails cut.

Long-tongued, (*long'tungd,*) *a.* Babbling; tattling; loquacious; garrulous.

Long Town, in *Oregon*, a post-precinct of Lane co.

Longué, (*lon'gā',*) a town of France, dept. of Maine-et-Loire, 12 m. S. of Baugé. *Manuf.* Linen cloth. *Pop.* 4,700

Longueil, (*long-gul',*) a village and parish of Chambly co., Lower Canada, abt. 4 m. N.E. of Montreal.

Longue Pointe, or LONG POINT, (*long pwant',*) a village of Montreal co., Lower Canada, about 6 miles N. of Montreal

Longueville, (*lŏng-vēl',*) the name of a noble French family, the principal of whom are — FRANCIS D'ORLEANS, son of the celebrated Dunois, died 1491. His son, of the same name, at whose instance, in 1505, the county of Longuevillo was erected into a dukedom by Louis XII., died 1512. His brother, LOUIS, a combatant at the battle of the Spurs and at Marignano, died 1516. — CLAUDE, killed at the siege of Pavia, 1525. — LEONARD, at whose instance the dukes of Longueville were allowed the title of princes of the blood royal by Charles IX., died 1571. — HENRY, who commanded against the Leaguers, and in 1589 won the battle of Senlis, died 1595. His son, of the same name, served under Louis the XIII., and was afterwards imprisoned with Condé and Conti, as partisans of the Fronde, died 1663. — The wife of the latter, ANNE GENEVIEVE, sister of the great Condé, distinguished for her part in the wars of the Fronde, died in a religious retirement. — The last of the family were two sons of Henry and Anne, the eldest of whom died in a convent, 1694; and the second, C. PARIS, was killed at the Rhine, 1672.

Lon'gus, a Greek author, of whom we have four books of pastorals in prose, entitled *The Loves of Daphnis and Chloë*, much admired for their elegance and simplicity. He is supposed to have lived about the 4th or 5th century.

Lon'gus col'li. [Lat., the long (muscle) of the neck.] (*Anat.*) A muscle situated close to the anterior and lateral parts of the vertebræ of the neck. It rises from the three superior vertebræ of the back, and also connected by tendons with the four last vertebræ of the neck, being inserted into the fore part of the second vertebræ of the neck, near its fellow. Its use, when acting singly, is to move the neck to one side; but when both act, they serve to bring the neck directly forward.

Long Valley, in *Penna.*, a post-village of Monroe co.

Long View, in *Arkansas*, a post-office of Ashley co.

Long View, in *Kentucky*, a post-vill. of Christian co.

Long'ville, in *California*, a post-village of Plumas co., abt. 34 m. N. of Quincy.

Long'-waisted, *a.* Having a long waist; — used of persons.

—Long from the shoulder to the lower extremity of the waist; — said of dress; as a *long-waisted* coat.

Long'ways, *adv.* Same as LONGWISE.

Long'-winded, *a.* Long-breathed; — hence, prolix; tedious; tiresome; boring; as, a *long-winded* speech, a *long-winded* orator.

Long'wise, Long'ways, *adv.* Lengthwise. (R.)

Long'wood, the place in St. Helena, 6 m. from James's Town, assigned by England to Napoleon I., and one of the most unhealthy in the island. Napoleon died there, May 5, 1821.

Longwood, a locality in Upper Canada, on the River Thames, where the English were defeated by a body of American troops under Capt. Holmes, March 4, 1814.

Longwood, in *Kentucky*, a village of Union co.

Longwood, in *Missouri*, a post-village of Pettis co., abt. 27 m. W.S.W. of Booneville.

Longwood, in *Virginia*, a post-office of Rockbridge co.

Longwy, (*lawng've,*) a fortified town of France, dept. of Moselle, on the Belgian frontier, 32 m. N.N.W. of Metz. It was, in 1792, taken by the Prussians, and again by the Allies in 1815. *Pop.* 3,800.

Lonicera, or HONEYSUCKLE, *n.* [In honor of Adam *Lonicer*, a physician of Frankfort, in the 16th century.] (*Bot.*) A genus of plants, order *Caprifoliaceæ*. They are erect or climbing shrubs, with opposite and often connate leaves. The species grow in any common soil, and are readily increased by cuttings taken off in autumn and planted in a sheltered situation. The principal American species are, *L. hirsuta*, the Hairy Honeysuckle; *L. parviflora*, the Small-flowered Honeysuckle; *L. grata*, the Evergreen Honeysuckle; and *L. ciliata*, the Fly Honeysuckle. *L. periclymenum*, the Woodbine Honeysuckle, is a native

Fig. 1621. — LONICERA PARVIFLORA.

or Europo, but much cultivated here. It bears beautiful yellow and red flowers, which are very fragrant and succeeded by red berries.

Lonoke, in *Ark.*, an E. cent. co.; formed in 1873 from Prairie and Pulaski cos. *Soil*, fertile, producing large crops of corn and cotton. *Cap.* Lonoke.

Lons-le-Saulnier, (*lawngs-ler-sole'ne-ai,*) a town of France, dept. of Jura, on the Solvan, 50 m. S.E. of Dijon. It is the entrepôt of the agricultural produce, iron, timber, and wines of the dept. *Pop.* 10,848.

Loo, *n.* [Etymol. unknown.] (*Games.*) A game at cards divided into *limited* and *unlimited* loo. It is a game the complete knowledge of which can easily be acquired; it is played in two ways, both with 5 and 3 cards, dealt from a whole pack, either first 3 and then 2, or by one at a time. It is a good round game, at which any number may play, especially at the 3-card game. After 5 cards have been dealt to each player another is turned up for trump; the knave of clubs generally, or sometimes the knave of the trump suit, as agreed upon, is the highest card, and is styled *pam;* the ace of trumps is next in value, and the rest in succession, as at Whist. Each player has the liberty of changing his cards for others from the pack. He may exchange any of the 5 cards dealt, or throw up the hand, in order to escape being looed. They who play their cards, either with or without changing, and do not gain a trick, are *looed;* as is likewise the case with all who have stood the game, when a flush or flushes occur; and each, excepting any player holding *pam*, of any inferior flush, is required to deposit a stake, to be given to the person who sweeps the board, or is divided among the winners at the ensuing deal, according to the number of tricks made by each. For instance, if every one at dealing stakes half a dollar, the tricks are entitled to 10 cents each; every player who is looed paying half a dollar, which, together with the dealer's stake, forms the next pool. But sometimes it is arranged that each person looed shall pay a sum equal to what happens to be on the table at the time. Five cards of a suit, or 4 with *pam*, compose a *flush*, which sweeps the board, and yields only to a superior flush, or the elder hand. When the ace of trumps is led, it is usual to say, "*Pam be civil;*" the holder of which last-mentioned card is then expected to let the ace pass.

—*v. a.* To win at loo; as, to *loo* every trick.

Loo'bily, *adv.* In an awkward, clumsy, gauche manner; like a looby.

—*a.* Clumsy; lubber-like; awkward.

Loo'by, *n.* [Icel. *lubbi.* See LUBBER.] A lubber; an awkward, clownish, clumsy fellow; a dolt.

Looch, *n.* (*Med.*) A medicine to allay cough; a lambative or linctus. (Also written *loch.*)

Loo-Choo (*loo-tchoo'*), or **Liu-Kiu Islands,** a group of islands which form an integral part of the empire of Japan, extending at irregular intervals S.W. from Kyushu in Japan toward Formosa, and constituting the Japanese prefecture of Okinawa. There are in all 37 islands, mostly small, the only two of considerable size being Oshima and Okinawa. They extend through a length of 80 miles and an average breadth of 12 to 15, their total area being 1,863 sq. miles. Their population is small, being but 160,000 in all. The people closely resemble the Japanese, and are evidently of the same descent. These islands are said to possess a delightful climate and very fertile soil. Sugar is largely grown, the sago palm is cultivated, and rice, millet, cotton, tobacco, indigo and tea are raised, with a variety of fruits. The food of the people is largely sweet potatoes, fish and pork, each family keeping its pig. The capital is Shinri, in Okinawa. Its port, Nafa, is unsafe in anchorage, but Oshima has a good harbor. These islands were conquered by the Prince of Satsuma in 1609, and long paid him an annual tribute. China has a claim upon them, based on an earlier conquest, but has made no effort to enforce it, and they remain in the undisturbed possession of Japan.

Loodianah, a town of British India, cap. of the district Samnora, 110 m. from Lahore, in Lat. 30° 55′ N., Lon. 75° 54′ E. *Pop.* about 47,200.

Loogoo'tee, in *Indiana*, a post-town of Martin co., on B. & O. S. W. R. R., 34 m. E. of Vincennes. *Pop.* (1897) 1,150.

Loof, *n.* and *v. n.* (*Naut.*) See LUFF.

Look, *v. n.* [*imp.* and *pp.* LOOKED (*lookt,*).] [A. S. *locian, glocian;* Ger. *lugen,* (dial. ; allied to *light;* Ger. *leuchten,* to light; Lat. *laceo;* Sansk. *ruch,* to shine. See LIGHT.] To seem; to appear to have a particular appearance; as, she *looks* well, the weather *looks* threatening. — To direct the eye toward an object with the intention of seeing it; — with *to, at, on,* or *upon, after, for,* or *toward.*

"We shall not *look upon* his like again." — *Shaks.*

—To direct the intellectual eye; to apply the mind or understanding; to consider; to examine; — preceding *on, to,* or *at*; as, to *look at* a subject in its proper light. — To endeavor to see; to strive to keep the eye on; hence, to expect; to watch; to take care; — used with *for* and *after;* as, to *look after* one's own interests. — To direct the eye into and beyond; hence, to solve; to penetrate to determine; — with *through.* — To direct the sight round and about, or on all sides; hence, to watch closely; to act warily; to be cautious and circumspect; — often with *about* or *before.*

"*Look before* you ere you leap." — *Butler*

—To expect; to anticipate, as the appearance of any thing; as, to *look* for death to come. — To examine; to investigate; to inspect narrowly: — before *into*; as, to *look into* the state of political affairs. — To examine piecemeal, or one by one; to observe with close scrutiny; preceding *over*; as, to *look over* the items of an account. — To have a particular direction or situation; to front; to face; to present, as a point of view; as, the garden *looks* to the south. — Behold; observe; see; take notice; — used in an imperative sense to direct attention.

"*Look,* how the floor of heaven is thick inlaid with patines of bright gold." — *Shaks.*

(NOTE. *Look* is used with *on* or *at*, when the present object is mentioned; if it is absent, with *for;* if distant, *after.*)

To look about, to look around on all sides, or in various directions.

"I *look about* to see how few friends I have left." — *Pope.*

To look about one, to be vigilant or on the alert; to be guarded, watchful, or circumspect.

"It will import those men who dwell careless to *look about them.*" *Decay of Piety.*

To look after, to attend; to take care or charge of; to act as protector or guardian of; as, to *look after* children. — To expect; to anticipate; to be in an expectant or waiting state. — To search; to seek; to go in quest of; as, to *look after* a gold mine.

To look down on, or *upon,* to view with supercilionsness; to treat with indifference, contempt, or disdain; as, a well-dressed woman *looks down upon* a meanly clad one.

To look for, to await; to expect; as, to *look for* an answer by return of mail.—To seek; to search; to attempt to find; as, to *look for* a needle in a haystack.

To look into, to examine; to sift; to inspect closely; to observe or scrutinize narrowly.

"It is very well worth a traveller's while to *look into* all that lies in his way." — *Addison.*

To look on, to respect; to esteem; to regard; as, *I look on* you as a friend.

"If a maid ere a wife become a nurse,
Her friends would *look on* her the worse." — *Prior.*

—To consider; to conceive of; to think; to view.

"I *looked on* Virgil as a succinct, majestic writer." — *Dryden.*

—To be a more idle spectator or bystander.

"I'll be a candle-holder, and *look on.*" — *Shaks.*

To look out, to be on the watch; as, a sailor *looks out* for land.

"Is a man bound to *look out* sharp to plague himself?" — *Collier.*

—To search; to seek; as, a merchant *looking out* for customers.

To look to or *unto,* to watch; to take care of.

"Let this fellow be *look'd to;* . . . have a special care of him." *Shaks.*

—To depend upon with confidence of receiving something; to rely upon with expectation of getting profit or satisfaction; as, *to look to* a husband for payment of his wife's debts.

To look through, to see or comprehend with accuracy; to penetrate and solve with the visual or intellectual eye; as, *to look through* a piece of humbug.

—*v. a.* To see; to behold; to have the sight or view of.

"*Look* here, upon this picture, and on this." — *Shaks.*

—To influence by looks or presence; as, to *look down* an upstart.

"A spirit fit . . . to *look* the world to law." — *Dryden.*

—To express, unfold, or convey by a look.

"She sigh'd, and *look'd* unutterable things." — *Thomson.*

To look in the face, to front, face, or meet with open courage; as, he *looked* his peril *in the face.*—*To look out,* to discover by quest or seeking; to search for; to select; to pick out; as, to *look out* a good crew or company.—*To look up a thing,* to seek for it and find it; as, to *look up* the vouchers of an account; to *look up* a person's house.

—*n.* Sight; gaze; glance; cast of countenance; air of the face; aspect; mien; manner; appearance; as, a high-bred *look*, a hang-dog *look.*

"Her modest *looks* the cottage might adorn." — *Goldsmith.*

—Act of looking, seeing, or beholding.

"Then on the crowd he cast a furious *look.*" — *Dryden.*

—Watch; view; observation.

Look'er, *n.* One who looks. — *Looker-on,* a mere spectator; an idle observer; a bystander; one who looks on without being concerned.

Look'ing, *n.* Seeking; searching; investigating.

Looking for, expectation; anticipation; as, a "*looking-for* of judgment." — *Heb.* x. 27.

Look'ing-glass, *n.* A mirror; a glass which reflects the form of the looker in it. See MIRROR.

Looking-glass River, in *Michigan,* rises in Shiawassee co., and flowing W., enters Grand River in Ionia county.

Look'out, *n.* A vigilant watching for any object or event. — The place whence such watch is directed.—One who is engaged in looking for; a sentry; a patrol; a vidette; a watchman.

Lookout, in *Missouri,* a village of Cole co., abt. 15 m. W. of Jefferson City.

Lookout Creek, rises in Dade co., Georgia, and flowing N. into Tennessee, enters the Tennessee River a few miles below Chattanooga.

Lookout Valley, in *Georgia,* a dist. of Walker co.

Lool, *n.* (*Metal.*) A kind of cupel or vessel used as a receptacle for the washings of metallic ores.

Look'out Mountain, in *Georgia,* a high eminence overhanging the Tennessee River, a few miles from Chattanooga. The Confederate force, under Gen. Bragg, holding this mountain, was attacked, Nov 24, 1863, by a strong National corps, commanded by Gen Hooker, who, after desperate fighting, succeeded in dislodging the enemy; the latter retreating, leaving behind them their camp equipage. On the 25th, the Union flag was hoisted on Pulpit Rock, (Fig. 1622,) on the summit of the mountain. This important advantage secured to the National army the unimpeded navigation of the river to Chattanooga.

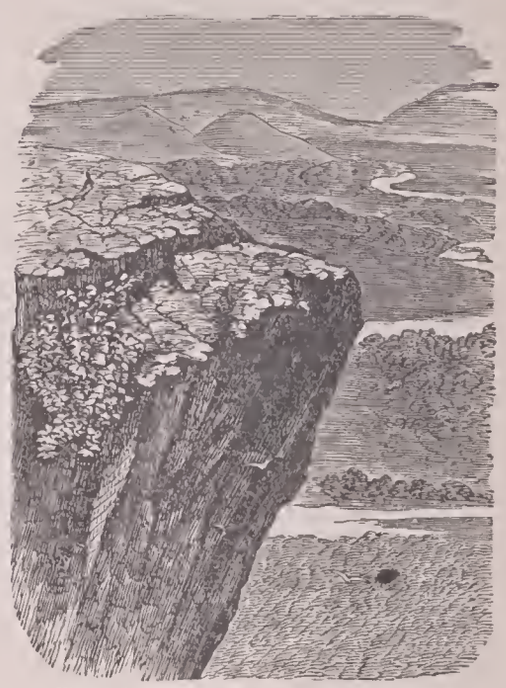


Fig. 1622. — PULPIT ROCK, LOOKOUT MOUNTAIN.

Loom, *n.* [A. S. *geloma, loma;* O. Ger. *lomi, luomi,* tools, utensils; A. S. *gelôme,* frequently, *lomhc,* frequent, *gelomlæcan,* to use frequently. Allied to Ir. *lamh,* the hand; Gr. *lambunō,* to take hold of.] A frame or machine in which a weaver works out threads into cloth. See WEAVING.

(*Naut.*) That part of an oar which turns within the row-lock.

—The dim outline of anything far distant; as, the *loom* of the land, seen far out at sea.

—In some English counties, a inn; a hearth; a chimney-corner.

(*Law.*) A personal chattel. See HEIRLOOM.

Loom'ing, *n.* The indistinct and magnified appearance of general objects seen in particular states of the atmosphere. See MIRAGE.

Loo'mis, in *Indiana,* a village of Whitley co., abt. 26 m. W.N.W. of Fort Wayne.

Loon, *n.* [A. S. *lun,* poor; Fr. *luin, liuin,* idle, lazy; Scot. *loon.*] A sorry fellow; a scoundrel; a rascal.

(*Zoöl.*) The great northern Diver, Colymbus glacialis. See COLYMBIDÆ.

Loonee, (*loo-ne',*) a river of W. India, rising in Lat. 26° 37′ N., Lon. 74° 46′ E.; and after a course of 320 m. falling into the Runn of Cutch, in Lat. 24° 42′ N., Lon. 71° 11′ E.

Loop'-head, a promontory and light-house of Ireland, in Munster, at the N. side of the entrance of the Shannon. It has an elevation of 232 feet, and exhibits a fixed light; Lat. 52° 33′ 39″ N., Lon. 9° 36′ W.

Loosahatch'ee River, in *Tennessee,* rises in Fayette co, and flowing W. and S.W. through Shelby co., joins the Wolf River N. of Memphis.

Loosascoo'na, or LUSUSCOO'NA, in *Mississippi,* a small river flowing into the Yallobusha River in Yallobusha co.

Loos Creek, in *Missouri,* a post-village of Osage co., abt. 18 m. E.S.E. of Jefferson City.

Loos'ing Creek, in *N. Carolina,* enters the Chowan River from Hertford co.

Loo'neyville, in *New York,* a post-office of Erie co.

Loop, *n.* [Ir. *lub,* a loop; Gael. *lub, luib,* a bend, a noose; Du. *loopen,* to run.] A folding or doubling of a string, or a noose through which a lace or cord may be run for fastening. — A small, narrow opening; a loop-hole.

(*Iron-works.*) A part of a block of cast-iron melted off for the forge or the hammer.

Loop'er, *n.* (*Zoöl.*) A kind of caterpillar; canker-worm; span-worm.

Loop'-hole, *n.* (*Mil.* and *Fort.*) A small opening in the walls of a fortification or in the bulkhead of a ship, through which small arms or other weapons are discharged at an enemy.

—A hole or aperture that gives a passage; a passage for escape; means of escape.

Loop-holed, (*loop-hōld,*) *a.* Full of holes or openings for escape, or for discharges of missiles.

Loop'ie, Loop'y, *a.* Deceitful; crafty. (Scotland.)

Loop'ing, *n.* (*Metall.*) The running together of the matter of an ore into a mass when the ore is heated only for calcination.

Loose, *v. a.* [A. S. *lysan;* Du. *verlossen;* Ger. *erlösen;* Gr. *luo, luso,* to let loose, deliver, redeem.] To untie or unbind; to free from any fastening. — To relax. "The joints of his loins were *loosed.*" (*Daniel.*) — To release from imprisonment; to liberate; to set at liberty. — To free from obligation, or from anything that binds or shackles — To relieve; to free from anything burdensome or afflictive. — To disengage; to detach.

—*v. n.* To set sail; to leave a port or harbor.

Loose, *a.* [A. S. *leas:* Du. and Fris. *los;* Icel. and Goth. *laus.*] Unbound; untied; unsewed; not fastened or confined. — Not tight or close, as clothes; as, a *loose* fit. — Not close or compact.

"With horse and chariots rank'd in *loose* array." — *Milton.*

—Not dense, close, or compact. — Not concise; lax. — Not precise or exact; vague; indeterminate. "If an author be *loose* and diffuse in his style." (*Felton.*) — Not strict or rigid; as, *loose* morality. — Unconnected; rambling; as, a *loose* argument. — Unengaged; not attached or enslaved — with *from* or *of*. — Lax of body; not costive. — Wanton; unrestrained in behavior; dissolute; unchaste; as, *loose* company. — Containing unchaste language; as, a *loose* print or conversation.

To break loose, to gain liberty by violence or force.

To let loose, to free from any restraint; to put at liberty; to set at large.

Loose'ly, *adv.* Not fast; not firmly; that may be easily disengaged. — Without confinement; without bandage. — Without union or connection. — Irregularly; wantonly; dissolutely; unchastely. — Negligently; carelessly; heedlessly.

Loos'en, *v. a.* [Old Ger. *lösjan;* Goth. *lausjan.*] To make loose; to free from tightness, tension, firmness, or fixedness.

—To render less dense or compact.

—To free from restraint.

—To remove costiveness from; to relax, as the bowels.

—*v. n.* To become loose; to become less tight, firm, or compact.

Loose'ness, *n.* The state of being loose or relaxed. — A state opposite to that of being tight, fast, fixed, or compact. — State opposite to rigor or rigidness; laxity; levity; irregularity; habitual deviation from strict rules. — Habitual lewdness; unchastity. — Flux from the bowels; diarrhœa.

Loose'-strife, *n.* (*Bot.*) See LYTHRACEÆ.

Loos'ish, *a.* Somewhat loose.

Loov'er, *n.* (*Arch.*) The same as LOUVER.

Lop, *v. a.* [W. *llab*, a stroke; Du. *labben*, to cut.] To cut off, as the top or extreme part of anything; to shorten by cutting off the extremities: to cut off, as exuberances; to separate, as superfluous parts. — To cut partly off and bend down. — To let fall; to drop; as, a horse *lops* his ears.

—*n.* Branches cut from trees.

Lope, *n.* A stride; a leap. (Local, U. S.)

Lo'pe de Ve'ga, whose full name was LOPE FELIX DE VEGA CARPIO, was born at Madrid in 1562. Lope, a man of adventurous disposition, led a very active life till he had attained middle age. After having been secretary to the duke of Alva, he was obliged to conceal himself for a time in consequence of a duel; he next served as a soldier, and narrowly escaped shipwreck in the Armada. On the death of his second wife, he took holy orders; but this step, though it removed him from business, did not slacken his literary activity. He was one of the most prolific of all authors, composing with a rapidity which, while it implied extraordinary talents, made it impossible that his works should possess high merit, either in design or in execution. Besides writing epics and many other kinds of poems, he produced a number of dramas, so great as to be almost incredible. He himself states it at upwards of fifteen hundred; and more than five hundred plays attributed to him are actually in print. They embrace all the varieties of kind which are to be found among the works of his successor Calderon; and they abound both in snatches of wit and poetical fancy, and in ingenuity of dramatic invention. Though Lope was not the founder of the Spanish Drama, he was the first who made its romantic irregularities attractive through force and originality of genius. While Cervantes, who was fifteen years his senior, was neglected and starving, the writings of Lope procured for him overflowing wealth, and a popularity such as hardly ever was gained by any other living poet. D. 1635.

Lo'pez, FRANCISCO SOLANO, Dictator of Paraguay, b. 1827, was the son of Don Carlos Antonio Lopez, ex-president of that country. After receiving a thorough education, which was completed in England, *L.*, in 1853, was sent by his father to Europe to ratify treaties of commerce which had been concluded by Paraguay with England, France, and Sardinia. After leading a dissipated life in the French capital, he returned to his native country, bringing along with him a Madame Lynch, an Irishwoman, who had become his mistress. His father dying in Sept., 1862, *L.*, on the 16th of the month following, was proclaimed his successor. Having been trained in the odious school of political despotism founded by the tyrant Francia, and faithfully followed by his successor, *L.* set about governing Paraguay after the fashion of an Oriental autocrat; or, on the principle that the interests of his native country meant simply the interests of Lopez. Conspiracies soon arose, superadded to by his arrogant interference with neighboring powers, which involved him in constant difficulties. On the 11th Nov., 1864, *L.* initiated the struggle which ended so unhappily for himself, by authorizing the capture by a Paraguayan war-vessel of a Brazilian mail-steamer, declaring its passengers to be prisoners of war. This outrage was speedily followed up by the entry of a Paraguayan force into the Brazilian prov. of Matto Grosso, on the 14th of Dec. of the same year, which succeeded in capturing several towns, and, on April 10, 1865, Cuyaba, the cap. of the province. Meanwhile, Gen. Flores, president of the republic of Uruguay, had on the 22d of Feb. concluded an alliance with Brazil against Paraguay. Whereupon, *L.*, without awaiting a formal declaration of war, seized an Argentine vessel near Asuncion. A few days after, the Paraguayans entered the Argentine territory, and captured the city of Corrientes, 14th of April. Two days later, the Argentine government issued a declaration of war, which was responded to by Paraguay on the 18th. A long and fluctuating war followed, marked with sanguinary episodes and desperate fighting on both sides. During the early part of 1870, *L.* met with reverse after reverse, and finally, on the 1st of March, after being utterly vanquished by a Brazilian force on the Aquidavan River, he was slain while attempting to escape, by a Brazilian lancer. Shortly afterwards, his mistress, the notorious "Madame" Lynch, with her 4 sons, and the mother and sisters of *L.*, were also captured. *L.* was a man of limited information, and brutal instincts. He found Paraguay a paradise, and left it a desert. His career throughout was a "Reign of Terror." Cruelties the most detestable were committed on his own family, subjects, and foreigners alike. He was essentially a ferocious despot, and a mean one. Saving physical courage, he had not a redeeming quality. On the very day of his death, his mother thanked God for the mercy He had vouchsafed in ridding the world of such a monster, — she and her daughters having been repeatedly flogged by his orders, an iniquity intended to be further perpetrated on the day on which he died.

Lophidæ, (*lŏf'i-de,*) *n. pl.* (*Zoöl.*) The Angler family, embracing acanthopterygian fishes that are usually without scales, or these are replaced by bony plates, or grains bearing spines, and whose carpal bones are elongated, forming a sort of arm to support the pectorals. Eight genera and about forty species have been described. — The genus *Lophius* has the head and mouth enormously large, two dorsals, the anterior rays distant, and forming long filaments bearing fleshy slips. — The American Angler, Fishing-frog, or Goose-fish, (*L. Americanus*, CUV.), of the Atlantic, is from two to three feet long, and attains a weight of 70 pounds in some instances. It is exceedingly voracious, and its enormous mouth enables it to swallow fishes about as large as itself. Large seabirds, as gulls, are frequently found whole in its stomach.

Lophiodon, *n.* [Gr. *lophos*, a crest, and *odoas*, tooth.] A genus of fossil Perissodactyle Mammalia, remains of which have been found in the Eocene strata. The teeth present annectant affinities between *Tapirus* and *Rhinoceros*. The last two premolars are more simple in Lophiodon than in *Tapiras;* the inner side exhibiting one cone in the former, and two in the latter genus. It was, however, more nearly allied to *Tapirus* than to *Palæotherium* and *Rhinoceros*.

Lophio'la, *n.* [Gr. *lophos*, a crest; alluding to the crested petals.] (*Bot.*) A genus of plants, order *Liliaceæ*. Leaves ensiform; flowers, corymbose. *L. Americana*, the Golden Crest-flower, is found in sandy swamps and pine barrens in New Jersey.

Loph'ius, *n.* (*Zoöl.*) See LOPHIDÆ.

Lophobran'chiates, *n. pl.* [Gr. *lophos*, and *bragchia*, gills.] (*Zoöl.*) An order of osseous fishes, comprehending those in which the gills are in the form of small tufts, and disposed in pairs along the branchial arches; as in the pipe-fish and the hippocampus (Fig. 1292).

Lop'per, *n.* One who lops.

—*v. n.* To coagulate: to turn sour, as milk.

Lop'ping, *n.* That which is cut off; the act of cutting off; the cutting off of all the branches of a tree, except the crop, or leading shoot.

Lop'sided, *a.* See LAPSIDED.

Loquacious, (*lo-kwa'shas,*) *a.* [Lat. *loquax, loquacis*, from *loquor, loqui*, to speak.] Talkative; garrulous; given to continual chatter. — Speaking; noisy. — Apt to blab and disclose secrets; tattling.

Loqua'ciously, *adv.* In a loquacious manner.

Loqua'ciousness, *n.* Loquacity; talkativeness.

Loquacity, (*lo-kwas'ity,*) *n.* [Fr. *loquacité;* Lat. *loquacitas.*] Quality of being loquacious; talkativeness; garrulity; the habit or practice of talking continually or excessively.

Lo'quat, *n.* (*Bot.*) The fruit of the *Eriobotrya japonica*, a rotaceous plant.

Lora'do, in *Arkansas*, a village of Greene co.

Lorain', in *Ohio*, a N. co., bordering on Lake Erie; *area*, about 540 sq. m. *Rivers.* Black, Rocky, and Vermilion rivers. *Surface*, diversified; *soil*, fertile. *Cap.* Elyria. *Pop.* (1890) 40,295.

—An important town of Lorain co., on Lake Erie, at mouth of Black river, on 2 R. R. lines; has large manufactures and extensive shipments of coal. *Pop.* (1897) abt. 10,000.

Loraine', in *Illinois*, a township of Henry co.

Loraine', in *New York*, a post-township of Jefferson co.; also spelled LORRAINE. *Pop.* (1897) 1,250.

Lora'mie, in *Ohio*, a post-village of Shelby co.

Lor'amie's Creek, in *Ohio*, enters the Miami river about 3 m. above Piqua.

Lo'ran, in *Illinois*, a post-village of Stephenson co.

Lorantha'ceæ, *n.* (*Bot.*) The Mistletoe family, an order of plants, alliance *Asarales.* — DIAG. A 1-celled ovary and definite ovules, with a naked nucleus. They are parasitic shrubby plants; leaves commonly opposite, exstipulate, grecnish; flowers perfect or dicecious; calyx superior, with 3–8 divisions, æstivation valvate, — sometimes the calyx is absent; stamens equal in number to, and opposite the lobes of the calyx; ovary inferior, 1-celled, with 1–3 ovules, erect or suspended, and a free central placenta; fruit commonly succulent, 1-celled, with a solitary seed; embryo in fleshy albumen, with radicle remote from the hilum. The plants of this order are more remarkable for their curious mode of growth than for their useful properties. One species, *Loranthus tetrandus*, native of Chili, produces a black dye. The order includes 23 genera and 412 species.

Loran'thus, *n.* (*Bot.*) The typical genus of the order LORANTHACEÆ, *q. v.*

Lor'ate, *a.* [Lat. *loratus.*] (*Bot.*) Shaped like a thong or strap. — *Gray.*

Loranca-de-Tahuña, a small town of Spain, in New Castile, 13 m. from Guadalajara; *pop.* 2,000.

Lorca, (anc. *Cliocroca,*) (*lor'ka,*) a town of Spain, prov. of Murcia, on the Guadalentin, a tributary of the Segura, 42 m. W.S.W. of Murcia, 116 miles E.N.E. of Granada. Lat. 27° 25′ N., Lon. 1° 22′ W. The vale of *L.* is remarkable for picturesque beauty and great fertility. The town is divided into Upper and Lower. The former is the old or Moorish town, and is irregular and mean in appearance, but the Lower or new town is much more regularly laid out, and better built. Next to Murcia, *L.* is the most important town of the prov. *Manuf.* Saltpetre, linens, thread, and soap. In 1802 the town was almost destroyed by the bursting of the reservoir which supplied the vale of *L.* with water, 6,000 lives being lost on that occasion, besides 24,000 cattle, 600 houses, and other property destroyed. *Pop.* 40,000.

Lorcha, (*lortch'a,*) *n.* (*Naut.*) The name of a coasting vessel in the Chinese seas.

Lord, *n.* [A. S. *hlaford, laford*, nourisher, guardian, master, from Goth. *hlaifs*, bread, and *vardjan*, to keep, to guard.] (*Feud.* and *Eng. Law.*) In feudal times, the lord (*seigneur*) was the grantor or proprietor of the land, who retained the dominion or ultimate property of the feud or fee; and the grantee, who had only the use or possession of the land, was styled the feudatory or vassal. A person who has the fee of a manor, and consequently the homage of his tenants, is called the *lord of the manor*. The superior lord is styled *lord paramount;* and his tenants, if they grant a portion of the land to other tenants, while they remain tenants in reference to the lord paramount, are lords in reference to their own tenants, and are hence styled mesne or middle lords. *Lord in gross* is one who is lord, not by reason of any manor, as the king in respect to his crown. *Very lord* is he who is immediate lord to his tenant; and very tenant he who holds immediately of his lord. Thus, where there is a lord mesne, he is very lord to his tenant, and not the lord paramount. Lord is also a mere title of dignity attached to certain official stations, which are sometimes hereditary, but sometimes only official or personal. All who are noble by birth or creation, otherwise called *lords of parliament*, and peers of the realm, are styled lords. The five orders of English nobility constitute the lords temporal, distinguished from the prelates of the Church, who constitute the lords spiritual in the House of Lords. (See PARLIAMENT.) Lord is also applied to persons holding certain offices; as, the Lord Chief-Justice, the Lord-Mayor, &c. It is likewise given by courtesy to the younger sons of dukes and marquises, and to the eldest sons of earls.

(*Script.*) In the translation of the Scriptures, Lord is used, without much discrimination, for all the names applied to God; but when it represents the great name of Jehovah, it is printed in small capitals. In the New Testament it is applied to Jesus Christ, the term in the original Greek being *kurios* (owner or master).

—*v. a.* To invest with the dignity and privileges of a lord.

—*v. n.* To act as a lord; to domineer; to rule with arbitrary or despotic sway;—generally followed by *it* or *over*.

Lord Hood's Island, in the Pacific Ocean; Lat. 21° 30′ S., Lon. 135° 33′ W.

Lord Howe's Islands, a group in the Pacific Ocean; Lat. 5° 30′ S., Lon. 159° 24′ E. — The name of another group in the Pacific; Lat. 31° 30′ S., Lon. 159° 10′ E. — Also, the name of one of the Sandwich islands.

Lord'liness, *n.* Quality of being lordly; dignity; high station; pride; haughtiness.

Lord'ling, *n.* A little or diminutive lord.

Lord'ly, *a.* Becoming a lord; pertaining to a lord.

—Proud; haughty; imperious; despotic; domineering; arrogant.

—*adv.* Proudly; imperiously; despotically.

Lordo'sis, *n.* (*Anat.*) A name given to curvatures of the bones in general, and particularly to that of the vertebral column forwards.

Lord's Day, *n.* See SABBATH.

Lord'ship, *n.* State or quality of being a lord; a title of honor given to noblemen under the rank of duke; a titulary compellation of judges and certain other persons in authority and office. — Dominion; power; authority. — Domain; the territory of a lord, over which he holds jurisdiction; a manor.

Lord's Sup'per, *n.* (*Eccl.*) One of the sacraments of the Christian religion, so called from its being instituted at supper by Jesus Christ, whom his disciples styled the Lord or Master. It receives also the names of Eucharist and Communion, (*q. v.*) With the exception of the Friends, all sects of Christians, however different their views as to its nature, agree in celebrating it as one of the most sacred rites of religion.

Lords'town, in *Ohio*, a post-township of Trumbull co.

Lord's Val'ley, in *Pennsylvania*, a post-village of Pike co.

Lord'ville, in *New York*, a post-office of Delaware co.

Lore, *n.* [A. S. *lar;* Du. *leer;* Ger. *lehre*, learning.] Learning; doctrine; instruction; also, tradition.

(*Zoöl.*) The space between the bill and the eye, which in some birds is bare, but is more generally covered with feathers.

Lorena (*lo-ra'-na*), a town of Brazil, about 130 m. N.E. of São Paulo.

Lore'na, in *South Carolina*, a P. O. of Lexington co.

Lore'na, in *Texas*, a P. O. of McLennan co.

Loren'zo de Med'icl. See MEDICI.

Lore'to (*lo-ra'to*), a town of Bolivia, about 36 m. S.E. of Trinidad.

Loreto, (*lo-ra'to.*) a town of Mexico., capital of Lower California; Lat. 26° 12′ N., Lon. 112° 7′ W.

Loreto, (*lo-rai'to,*) a town of Italy, prov. of Abruzzo Ulteriore, 3½ m. S.E. of Civitn di Penare; *pop.* 7,000.

Loret'ta, or LORETTEE, in *Minnesota*, a post-village of Houston co., abt. 10 m. W. of La Crosse, Wisconsin.

Lorette', *n.* [Fr.] An appellation given to a female belonging to a class of Parisian intriguantes who exist by prostitution, being usually maintained by wealthy lovers. The name has been given to this class from their usually residing near the Church of Notre Dame de *Lorette*. They are often confounded with the *Grisettes* (q. v.); but the latter form a totally distinct class.

Loret'to, a town of Italy, province of Ancona, on an eminence, 3 m. from the Adriatic, and 12 m. S.E. of Ancona. This place is chiefly celebrated as the site of the sanctuary of the Blessed Virgin Mary, called the *Santa Casa*, or Holy House. The Santa Casa is reputed to be the house, or a portion of the house, in which the Virgin lived in Nazareth, which was the scene of the Annunciation, of the Nativity, and the residence of our Lord with his mother and Joseph, and which, after the Holy Land had been finally abandoned to the infidel on the failure of the Crusades, is believed to have been miraculously translated, first, in 1291, to Fiume in Dalmatia, and thence, Dec. 10, 1294, to Recanati, whence it was finally transferred to its present site. Its name (Lat. *Domus Lauretana*) is derived from Laureta, the lady to whom the site belonged. Although numberless pilgrims resort to the sanctuary, and although indulgences have been attached by Julius II., Sixtus V., and Innocent XII. to the pilgrimages, and to the prayers offered at the shrine, yet the truth of the legend is no part of Catholic belief, and Catholics hold themselves free to examine critically its truth, and to admit or to reject it according to the rules of historical evidence.

Loret'to, in *Kentucky*, a post-village of Marion co., abt. 50 m. S.S.E. of Louisville.

Loret'to, in *Pennsylvania*, a post-village of Cambria co., abt. 6 m. E.N.E. of Ebensburg.

Loret'to, in *Virginia*, a post-village of Essex co., abt. 70 m. N.E of Richmond.

Lorgnette, (*lorn-yet',*) *n.* [Fr.] An opera-glass. (R)

Lorgues, (*lorg.*) a town of France, dept. of Var, on the Argens, 6 m. S.W. of Draguignan. *Manuf.* Woolleus, linens, and hempen cloth. *Pop.* 5,500.

Lori'ca, *n.* (*Anc. Armor.*) A cuirass or crest of mail, made of leather and set with plates of metal in various forms, chiefly in rings like a chain, used by the Roman and Greek soldiers. (See Figs. 194 and 1623.)

Fig. 1623. — LORICA, AS WORN BY THE ROMAN EMPERORS.

Lor'icate, *v.a* [Lat. *lorico, loricatus*, from *lorica*, a leather cuirass, from *lorum*, a thong.] To clothe in mail; to harness; to plate over; to spread over, as a plate for defence. — To cover with a coating or crust, as a chemical vessel.

—*a.* Covered or plated over; covered with a dull series of oblique scales like a coat of mail.

Lorica'tion, *n.* [Lat. *loricatio.*] The act or operation of covering anything with a coating or crust for defence.

L'Orient, (*lor'e-a*), a seaport-town of France, dept of Morbihan, at the confluence of the Scorff, with the Blavet at the head of the bay of Port Louis, about 3 m. from the Atlantic, and 29 N.W. of Vannes. The harbor is ample, secure, and of easy access, and bordered by fine quays, on which are large and commodious buildings. Like Brest, it is a natural dockyard; as a port of war it ranks third, and as a port of construction it ranks first. More ships of war are now built at L'Orient than at any other port in France, and the greater number of the imperial iron-clads were constructed here. The town is clean and regularly built; the streets are wide, straight, and well paved; and the houses well constructed and handsome. L'Orient has a school of naval artillery, a school of hydrography, established in 1771, a large commercial coll., an agricultural society, and several other literary and scientific institutions. *Manuf.* Chiefly hats, linen, gold-lace, and earthenware. Its trade has lately begun to increase. The chief exports are wax, honey, butter, corn, cattle, and pilchards, the latter being taken in great quantities on the adjacent coast. *Pop.* 37,655.

L'Original, (*lo-reen'yal,*) a village of Prescott county, prov. of Ontario, cap. of the united cos. of Prescott and Russell, on the Ottawa River, abt. 60 m. W. of Montreal.

Lor'imer, *n.* [Fr. *lormier.*] A word, now obsolete, which signified a bridle-maker, or one who made bits, spurs, and metal mounting for military bridles and saddles.

Lor'in, in *Illinois*, a village of Stephenson co.

Lo'riot, *n.* (*Zoöl.*) See ORIOLE.

Loris, *n.* (*Zoöl.*) A genus of quadrumanous animals, allied to Lemurs. They have a short muzzle, slender body, no tail, large approximating eyes, and rough tongue. Two species only are known, both of which are natives of the East Indies, the SHORT-LIMBED LORIS (*Lemur tardigradus*) (Fig. 1624) and the SLENDER LORIS (*Lemur gracilis*) (Fig. 1625); the latter is remarkable for the disproportionate length of its limbs, and especially of its fore-arms. They are nocturnal and arboreal in their habits; they subsist on insects, occasionally on small birds or quadrupeds, and have an excessively slow gait. During the day they sleep clinging to a branch; at night they prowl among the forest boughs in quest of food. Nothing can escape the scrutiny of their large glaring orbs, or the tenacity of their grasp; and when they have marked their victim, they cautiously and noiselessly approach it till it is within their reach.

Fig. 1624. SLOW-PACED LEMUR, (*Loris tardigradus.*)

Fig. 1625. — SLENDER LORIS, (*Lemur gracilis.*)

Lorn, *a.* [A. S. *leoran*, to pass, to depart. See FORLORN.] Lost; forsaken; lonely; desolate.

Lorraine. (*Hist.*) Originally a portion of the German Empire. It was conquered by Clovis I. in 491, and apportioned to Lothaire II, receiving from him the name of Lotharingia, or Lothair-regne, the kingdom of Lothaire, in 855. It was erected into a duchy in 916. France and Germany contended for its possession, and, in 959, agreed to divide it into Lower and Upper Lorraine. Lower Lorraine, which formed part of the Netherlands, is divided between Belgium and Holland. The Alsatian line of dukes in Upper Lorraine, founded by Albert of Alsace in 1044, continued in power till the duchy was annexed to the French crown. By the treaty of Vienna, concluded Nov. 18, 1738, the duchy of Tuscany was exchanged for the duchies of Lorraine and Bar, which were ceded to Stanislaus I. (Leczinski) during his life. He died Feb. 23, 1766, when Lorraine was reunited to France. It is now subdivided into the departments of the Meuse, Moselle, Meurthe, Vosges, and some of the cantons of the Lower Rhine. The inhabitants are of German origin, but speak the French language, with the exception of the district lying between Metz and the Vosges, which is called *German Lorraine*. The latter territory, after having been occupied by the German armies in the Franco-Prussian war of 1870–71, was, by the treaty of peace of May, 1871, ceded to Germany.

Lorraine, in *N. York*, a vill. of Jefferson co.

Lo'ry, *n.* (*Zoöl.*) A tribe of birds composed of several genera, closely allied to the Parrots; remarkable for their very soft beaks. They are to be found in most of the islands of the Indian Archipelago, and in Australia.

Fig. 1626. BLACK-CAPPED LORY.

Los'able, *a.* That may be lost.

Los Alamos, a town of Mexico. See ALAMOS.

Los'ange, *n.* The same as LOZENGE, *q. v.*

Los Angeles, a town of Chili, abt. 96 m. E. of Concepcion; Lat. 71° 31′ W.

Los Angeles, (*loce an'jeh-les,*) in *California*, a S.E. co. bordering on the Pacific Ocean; area, abt. 4,000 sq. m. *Rivers.* San Gabriel, Rio de Los Angelos, and numerous smaller streams. *Surface*, finely diversified, the Coast-range intersecting the S.W. part; *soil*, fertile, and the climate is remarkable for its salubrity. Corn and cotton are cultivated to great advantage, and the co. contains hundreds of extensive vineyards, which produce more wine than any other co. in the State. *Min.* Silver, salt, limestone, and building rock. About 6 m. from Los Angeles there is a remarkable spring covering about two acres, from which pitch boils up in great abundance. *Cap.* Los Angeles. *Pop.* (1890) 101,454.

—A city, cap. of the above co., on a small river of its own name, about 350 m. S.E. of San Francisco. It was originally called PUEBLO DE LOS ANGELOS, *City or Habitation of the Angels*, from its delightful climate, and the beauty of the surrounding scenery. *Pop.* (1897) about 60,000.

Los Angeles River, or RIO DE LOS ANGELOS, in *California*, flows into the Pacific Ocean from Los Angelos co.

Lo'santville, in *Indiana*, a post-village of Randolph co., about 25 m. N.W. of Richmond.

Lose (lōōz), *v. a.* [A. S. *losian, losigan*, to lose; Du. *verlies*; Dan. *forliis*, loss, losing.] To part or be separated from a thing, so as to have no knowledge of the place where it is; to mislay. — To forfeit by unsuccessful contest; not to gain or win, as a victory. — To be deprived of; to forfeit, as a penalty; as, to *lose* money by gambling. — To suffer diminution or waste of. — To ruin; to destroy, as by shipwreck. — To wander from; to miss, so as not to be able to find; to bewilder. — To possess no longer; to be deprived of; not to employ or enjoy. — To waste; to squander; to throw away. — To suffer to vanish from view or perception. — To fail to obtain.

—*v. n.* To forfeit anything in contest; not to win. — To decline; to fail.

Loser, (*looz'er,*) one who loses or is deprived of anything by defeat, forfeiture, or the like.

Los'ing, *a.* Bringing or causing loss. — Incurring loss.

—*n.* Loss; deprivation.

Los'ingly, *adv.* In a losing manner.

Losini, (*la-se'ne,*) an island of Austria, in the Gulf of Quarnero, Adriatic Sea, immediately S. of Cherso; *ext.* 20 m. long, with a breadth of 3 m. The principal town is *L.* Piccolo, or Little *L.*, having a fine harbor and an active trade, with a *pop.* of 7,800.

Los, (Isles of.) (*los,*) a group of 3 islands off the W. coast of Africa, belonging to England.

Loss, *n.* [A. S. *los.* See LOSE.] A parting or separation from something; deprivation of that which was once possessed. — Detriment; damage; destruction; ruin. — Failure to succeed; defeat. — Waste; useless application.

To be at loss, to be unable to proceed or determine; to be puzzled or perplexed.

Los Santos, a town of New Grenada. See SANTOS.

Lossnitz, (*loss-nitz',*) a town of Saxony, 17 m. S.S.W. of Chemnitz, 50 m. S.W. of Dresden. It is inclosed by walls. *Manuf.* Woollen and linen fabrics. *Pop.* 5,800.

Lost, *a.* Separated or parted from; let go; gone from one's hold, possession, view, &c.; mislaid, or left in a place unknown or forgotten; that cannot be found. — Ruined; destroyed; wasted or squandered; employed to no good purpose. — Forfeited; as, a *lost* prize, a *lost* battle. — Not able to find the right way, or the place intended; bewildered; perplexed; being in a maze; as, *lost* in the woods. — Alienated; insensible; hardened beyond sensibility or recovery. — Not perceptible to the senses; not visible; as, *lost* in the darkness.

Los'tant, in *Illinois*, a post-village of La Salle co., abt. 14 m. S. of La Salle.

Lost Creek, in *Alabama*, enters the Mulberry Fork from Walker co.

Lost Creek, in *Indiana*, a township of Vigo county.

Lost Creek, in *Ohio*, a township of Miami county.

Lost Creek, in *W. Virginia*, a P. O. of Harrison co.

Lost River, in *Indiana*, a small river rising in Washington co., and flowing W. joins an affluent of White River in Martin co. During its course it enters a subterranean channel and continues "lost" for several miles, after which it reappears upon the surface.

—A township of Martin co.

Lost River, in *W. Virginia*, a post-office of Hardy co.

Lot, *n.* [A. S. *hlot, gelot*; Du. and Fr. *lot.*] A distinct portion or parcel; proportion or share. — A piece or division of land. — That which is called chance, hazard, fortune; that by which the fate or portion of one is determined. — Something which is used to decide what is yet undecided. — The part, division, or fate which falls to one by chance, that is, by Divine determination.

—*v. a.* To assign by lot; to allot; to assign; to distribute; to portion; to sort; to catalogue.

Lot. (*Script.*) The son of Haran, and nephew of Abraham, by whom he was brought up. He afterwards settled at Sodom, where he was taken prisoner by the king of Edom, but rescued by Abraham. When Sodom was about to be destroyed, two angels came to Lot and obliged him to quit the place with his wife and daughters, when the former, for looking back, was turned into a pillar of salt. By his daughters he became the father of two sons, named Moab and Ammon, from whom sprung the Moabites and Ammonites.

Lot, (*lo,*) a river in the S. of France, one of the largest tributaries of the Garonne, rises at Mount Lozère, in the Cevennes, about Lat. 44° 30′ N., Lon. 30° 45′ E. It flows in a W. direction through the depts. of Lozère, Aveyron, Lot, and Lot-et-Garonne, joining the Garonne near Aiguillon, after a course of 270 m. It is navigable for four months of the year, for nearly 190 m.

Lot, a dep. in the S. of France, corresponding to the anc. dist. of Quercy, in Guienne; having N. Corrèze, E. Cantal and Aveyron, S Tarn-et-Garonne, W. Lot-et-Garonne and Dordogne. *Area*, 1,530 sq. m. The dept is mountainous, a range of the Cantal Mountains running from E. to W in the shape of a semi-circle, its highest elevation being in the E., 2,500 feet above the sea. *Rivers.* Lot and Dordogne. The soil is generally fertile, but agriculture is backward. *Prod.* Corn and fruit. Wine is abundant, and tobacco is grown to some extent. *Min.* Iron and coal, but both mining and manufacturing industry are little attended to. *Manuf.* Woollen, cotton, and linen cloths, paper, &c.; also, flax mills, and there are nearly 1,000 flour mills in the dept. *Cap.* Cahors. *Pop.* 288,919.

Lo'ta, *n.* (*Zoöl.*) The Burbots, a genus of fishes, family *Gadidæ*, having two dorsal fins, one anal, and barbels on the chin. The Spotted Burbot, *L. maculosa* (Fig. 1627), of our northern lakes and rivers, is 24 inches long.

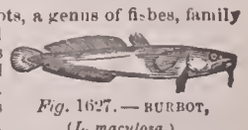


Fig. 1627. — BURBOT, (*L. maculosa.*)

Lotbiniere, (*lo-been'e-air,*) a S.E co., prov. of Quebec, *area*, abt. 735 sq. m. *Rivers.* River du Chien, St. Law-

rence, and Beaurivage rivers. *Chief town.* Lotbiniere. *Pop.* 20,606.
—A village of prov. of Quebec, in the above co., on the St. Lawrence River, abt. 45 m. W. of Quebec.

Lot-et-Garonne, (*ga-ron'*,) a dept. in the S.W. of France, formerly included in Guienne, having N. Dordogne, E. Tarn-et-Garonne and Lot, S. Gers, W. Gironde and Landes; Lat. between 44° and 44° 40′ N., Lon. 1° E. *Area,* 1,852 sq. m. The surface is mostly level. The Garonne intersects the dept. from S.E. to N.W., and receives about its centre the Lot, from the E. The banks of these rivers may be considered among the most productive portions of France; about one half consists of a chalky soil, and about ⅛ part of the W. of the dept. is composed of *Landes,* or sandy plains, sprinkled with marshes. The dep. is principally agricultural. *Rivers.* Garonne, Lot, Gers, and Baise. *Prod.* Corn, wine, hemp, fruit (the *prunes d'entes of Agen* being particularly celebrated), and tobacco, the latter considered the best in France. *Manuf.* Linens, woollens, cottons, sail-cloth, brandy, &c. *Chief towns.* Agen (the cap.), Marmande, Nerac, and Villeneuve d'Agen. *Pop.* 327,964.

Lote'-tree, Lote'-bush, *n.* (*Bot.*) See LOTUS.

Loth, *a.* See LOATH.

Lothaire I., (*lo-thair'*,) Emperor of Germany, eldest son of Louis-le-Débonnaire. In 817 he was associated with his father in the empire, and named king of the Lombards in 820. He afterwards dethroned his father, and imprisoned him in a monastery, upon which Louis and Charles, his brothers, joined their forces, and defeated *L.* at Fontenay, in 841. Two years afterwards, the three brothers entered into a treaty by which *L.* retained the title of emperor, with Italy, and some French provinces beyond the Rhine and the Rhone. Charles became king of France, and Louis had a tract of country bordering on the Rhine. Lothaire died 855.

LOTHAIRE II., Emperor of Germany, and Duke of Saxony, between 1125 and 1137. He died in Italy, on his return from an expedition against Roger, king of Sicily.

Lothaire, King of France, succeeded his father, Louis IV., 954. He made war against the emperor Otho II., and D. 988.

Loth'ian. (*Geog.*) A name common to that part of Scotland which stretches along a considerable part of the S. shores of the Frith of Forth, and comprehends 3 counties, Haddingtonshire, Edinburghshire, and Linlithgowshire; otherwise called East, Mid, and West *L.* The etymology of the word is doubtful. *L.* was taken possession of by the Saxon invaders A. D. 450, and became the scene of contest between the Saxon-Gaels and Scoto-Irish, and was at length ceded to Malcolm II., in 1020. *L.* was considered as a country wholly distinct from Scotland in the reign of David I., and the period of its incorporation with the rest of the country is assigned to the 11th or 12th century.

Loth'ly, *a.* Hateful; disgusting; detestable.

Lotion, (*lō'shun.*) *n.* [Fr., from Lat. *lotio,* from *lavo, lotum,* to wash.] A washing; particularly, a washing of the skin for the purpose of rendering it fair. — A liquid preparation for washing some parts of the body to cleause it of foulness or deformity.

(*Med.*) A medical preparation, used as an outward application to reduce the heat in an inflamed part, or to stimulate some indolent sore or unhealthy ulcer. Collyriums, or eye-waters, are also included under the name of lotion. Lotions are of various kinds, such as refrigerating, sedative, stimulating, astringent, or evaporating, according to the effect they are employed to produce. — *Refrigerating* or cooling lotions are made either with sal-ammoniac and cold water, or iced water, and may be dropped in a continuous stream on the part, or else applied on cloths wetted in the liquid used. — *Sedative lotions* are prepared by rubbing down opium in cold water, or using a strong decoction of poppyheads, either warm or cold. — *Stimulating lotions* may be made by adding to half a pint of camphor-water an ounce of spirits of wine, or 3 grains of sulphate of copper to 1 ounce of water. — *Astringent lotions* are prepared by dissolving 30 grains of white vitriol, and the same quantity of sugar of lead, in 8 ounces of water, or by dissolving 1 drachm of alum, and 1 drachm of sugar of lead, in a pint of cold water. — *Evaporating lotions* may be made by dissolving 2 drachms of sal-ammoniac in a pint of camphor-water, and adding one ounce of spirits of sulphuric-ether.

Lotoph'agi, *n. pl.* [Gr. *lotophagos,* a lotus-eater.] (*Homeric Myth.*) The name of the people inhabiting a country to which Ulysses was carried (*Odyss.* ix. 82), while trying to double Cape Malea in the Peloponnesus. According to the legend, those who ate its fruit forgot their friends and country, and wished only to remain idle in the land of the Lotus.

Lo'tos, *n.* (*Bot.*) See LOTUS.

Lot'tery, *n.* [Fr. *loterie*; Sp. *loteria,* from *lot.*] A game of hazard, in which, by payment of a small sum, one has the chance of obtaining a considerable prize. The origin of *L.* may be found in the custom inaugurated by the Roman emperor Augustus, of distributing at his feasts sealed pockets (*sortis convivialis*), similar in appearance, but containing orders for articles of very different value. In the middle ages, the same mode was adopted by the Italian merchants in the disposition of their wares. A money *L.*, called the *lotto,* was instituted in Florence in 1530, for the benefit of the state; and in Venice, a half century later, lotteries existed under public control. From that time many of the European states resorted to *L.* as a means of raising a revenue. The first *L.* was established in France in 1539; in England in 1569; in Würtemberg in 1699; and in Berlin in 1763. They were abolished in England in 1826, and in France in 1836. In the United States, the *L.* was from the earliest settling of the country a familiar means of raising funds; and it must be said that the state lotteries were generally fairly managed, and used for many important and beneficial purposes. But the multiplicity of private lotteries, and the scandalous abuses to which they gave rise, aroused public opinion against the principle itself. In 1833, a society was formed in Pennsylvania, which advocated the suppression of *L.*, and to the efforts of that society may be attributed the acts of most of the States in prohibiting the further establishment of lotteries. Actually, in most, if not all, of the United States, lotteries not especially authorized (and in some States the Constitution especially forbids the legislature to authorize them) are prohibited, and the people concerned in establishing them are subjected to a heavy penalty. Among the earliest to prohibit them were Alabama, Connecticut, Delaware, Georgia, Kentucky, Maryland, Massachusetts, Mississippi, New York, Ohio, Pennsylvania, and Virginia. In scarcely any State is it sanctioned by law.

Lott's Creek, in *Iowa,* a post-office and township of Kossuth co.

Lotts'ville, in *Pennsylvania,* a post-village of Warren co., about 20 miles W.N.W. of Warren.

Lo'tus, *n.* [Lat. *lotus*; Gr. *lotos.*] (*Bot.*) The name given by the ancients to a rich fruit, concerning which much dispute now exists, no fewer than 11 distinct species of plant being enumerated under this name by Fée, in his *Flore de Virgile,* during 1822. One of the most notable of them is the Lote-tree or Lote-bush, *Zizyphus Lotus,* a native of the N. of Africa and S. of Europe, belonging to the order *Rhamnaceæ.* It is a shrub two or three feet high, and its fruit, which is produced in great abundance, is a drupe of the size of a wild plum, with an almost globose kernel. This fruit is somewhat farinaceous, and has a pleasant, sweetish, mucilaginous taste. It is called by the Arabs *Nabk* or *Nabka;* and has, from the earliest times, served as an article of food to the inhabitants of the north of Africa, where it is still a principal part of the food of the poor. Probably it was on this fruit that Homer's *Lotophagi* (q. v.) lived. — The fruit of the *Diospyrus Lotus,* or Date Plum, was sometimes called the lotus. The name *L.* was also given to several beautiful species of water-lily, especially to the blue water-lily, *Nymphœa carulea,* to the Egyptian water-lily, *N. lotus,* and to the Nelumbo, *Nelumbium speciosum,* (Fig. 1628), which grows in stagnant and slowly running water in the south of Asia and north of Africa. The *Nymphœa lotus* was called by the Egyptians *Skuin* or *Seshin,* and is called by the Arabs *Beshnin.* It grows in the Nile and adjacent rivulets, and has a large white flower. The root is eaten by the people who live near the lake Menzaleh. The rivulets near Damietta abound with this flower, which rises two feet above the water. It was the rose of ancient Egypt, the favorite flower of the country, and is often seen made into wreaths or garlands, placed on the foreheads of females, or held in their hands, and smelled for its fragrance. It frequently appears in the hieroglyphs, where it represents the Upper Country or Southern Egypt, and entered largely into works of art — the capitals of columns, prows of boats, heads of staves, and other objects being fashioned in its shape. In the Egyptian mythology the *Nelumbium speciosum* was sacred to Osiris and Isis, and regarded in Egyptian delineations as signifying the creating of the world. In the mythology of the Hindoos and Chinese, it plays also a distinguished part. The Hindoo deities of the different sects are often represented seated on a throne of its shape, or on the expanded flower. The color in Southern India is white or red, the last color fabled to be derived from the blood of Siva, when Kamadeva, or "Cupid," wounded him with the love-arrow. Lakshmi, also, was called the "lotus-born," from having ascended from the ocean on its flower. It symbolized the world; the *Meru,* or residence of the gods; and female beauty. Among the Chinese, the *L.* had a similar reputation and poetic meaning, being especially connected with Fo, or Buddha, and symbolizing female beauty, the small feet of their women being called *kin-lèèn,* the gold lilies.

Fig. 1628. — SACRED LOTUS.
(*Nelumbium speciosum.*)
About one-tenth to one-fifteenth natural size.

Loud, *a.* [A. S. *hlud, lud*; Du. *luid*; Ger. *laut*: Gr. *klumi.*] Having a great sound; striking the ear with great force; uttering or making a great noise; noisy. — Vociferous; making a great clamor; turbulent. — Emphatical; impressive.
—*adv.* With loudness; loudly.

Loud'ly, *adv.* With great sound or noise; noisily; clamorously; with vehement complaints or importunity.

Loud'-mouthed, *a.* Having a loud voice; talking or sounding noisily or clamorously.

Loud'ness, *n.* Quality of being loud; great sound or noise.
—Clamor; clamorousness; turbulence; uproar.

Lou'don, JOHN CLAUDIUS, a Scottish horticulturist and author, B. at Cambuslang, in Lanarkshire, 1783. Between the years 1820–43 he produced a number of works of the highest importance to the scientific farmer, the gardener, and the botanist. The *Encyclopædias of Gardening, Agriculture, Plants, Cottage, Farm, and Villa Architecture,* may be quoted as examples of his great industry and usefulness. D. 1843. — His wife, JANE *L.*, wrote several valuable works, chiefly connected with botany, such as *The Ladies' Flower-garden: Botany for Ladies; The Ladies' Country Companion,* &c. D. 1848.

Lou'don, in *Illinois,* a township of Fayette county.

London, in *New Hampshire,* a post-village and township of Merrimac county, about 10 miles N.E. of Concord.

London, in *Ohio,* a twp. of Carroll co.
—A twp. of Seneca co.

London, in *Pennsylvania,* a village of Franklin co., 14 m. W. of Chambersburg. P. O. is FORT LOUDON.

London, in *Tennessee,* a post-town, cap. of London co., on the Southern R.R., 18 m. W. S. W. of Knoxville.

London Ridge, in *New Hampshire,* a post-village of Merrimac co., about 12 m. N. E. of Concord.

Lou'donville, in *Ohio,* a post-village of Ashland co., 18 m. S. E. of Mansfield. *Pop.* (1897) 1,020.

Loudoun, in *Virginia,* a N. E. co., adjoining Maryland; *area,* about 520 sq. m. *Rivers.* Potomac river and Goose creek. *Surface,* hilly, the Blue Ridge forming the N. W. border; *soil,* in some parts very fertile. *Min.* Limestone, marble, granite, and gneiss. *Products,* corn, wheat, potatoes, oats, hay, butter, wool; live stock in large quantities; there are some manufacturing industries. *Cap.* Leesburg. *Pop.* (1890) 23,274.

Louds'ville, in *Georgia,* a post-village of White co.

Loudun, (*lou'du(n'*,) a town of France, dept. of Vienne, 31 m. N.N.W. of Poitiers. This town was formerly of considerable importance, but its inhabitants being principally Protestants, it suffered much from the revocation of the edict of Nantes, from the effects of which it has never recovered. *Manuf.* Woollen cloth and lace. *Pop.* 5,000. This place is famous for being the seat of the Protestant Synod held in 1611 and 1612.

Loud'-voiced, *a.* Having a loud voice; sonorous.

Lougan, (*loo'gan.*) a river of Norway, rising by many heads in the Langefjeld Mountains, and, after a S.E. course of 200 m., falling into the Glommen, 30 m. N.E. of Christiania.

Lough, (*lōk.*) *n.* [Ir.] The same as LOCH, *q. v.*

Loughborough, (*luf'bru(r,*) A town of England, in Leicester co., 10 m. N. of Leicester. *Manuf.* Woollen and cotton hosiery, lace, and machinery. *Pop.* 11,900.

Loughbrickland, (*lōk,*) a market-town of Ireland, in the co. Down, Ulster, abt. 10 m. N.N.E. of Newry; *pop.* 647.

Loughrea, (*lok-ra',*) a town of Ireland, prov. Connaught, co. Galway, on a lake of same name, 21 m. S.E. of Galway. This town, which was formerly fortified, consists of several irregular streets and lanes. *Manuf.* Linens. *Pop.* 4,000.

Louhous, (*loo'hou.*) a town of France, dept. of Saone-et-Loire, 30 m. N.E. of Macon; *pop.* 4,200.

Louis I., (*loo'e,*) surnamed *le Débonnaire,* emp. of Germany and king of France, succeeded his father, Charlemagne, in 814. In 817 he associated his eldest son, Lothaire, with himself in the empire, and gave to his other two sons, Pepin and Louis, the kingdoms of Aquitaine and Bavaria. This division gave such offence to Bernard, king of Italy, the illegitimate son of Pepin, eldest son of Charlemagne, that he raised an army against the emperor, who put himself at the head of his troops, and marched into Italy. On his approach the soldiers of Bernard fled, and the king was taken prisoner by his uncle, who deprived him of his eyes, Bernard dying during the operation. In 829 *L.* created his younger son, Charles, whom he had by Judith of Bavaria, king of Germany; on which his other sons arose against him, depriving him of his crown, shut him up in a monastery, where he D. 840.

LOUIS II., surnamed *the Young,* B. about 822, was only son of Lothaire I., and was created king of Italy in 844, and ascended the imperial throne in 855. D. 875.

LOUIS III., called *the Blind,* was the son of Boson, king of Provence, and Ermengarde, daughter of the emperor, Louis the Young. He succeeded his father at the age of 10, and in 900 contested the imperial throne with Berenger, who, having surprised him at Verona, deprived him of his eyes. D. about 923.

LOUIS IV., the son of the emperor Arnulphus, whom he succeeded in 899. The empire was a scene of desolation during his reign, being constantly ravaged by the Hungarians. He was the last prince in Germany of the Carlovingian race. D. 911.

LOUIS V., commonly called *Louis of Bavaria,* was the son of Louis the Severe, duke of Bavaria. He was elected

emperor in 1314, and at the same time Frederick le Bel was chosen at Cologne by another party of electors, which occasioned a war between them. Frederick was taken prisoner, but gained his liberty by renouncing his claim in favor of his rival. Pope John XXII. being opposed to that arrangement, in 1322 issued his bull of deposition against *L.*, who, in return, appealed to a general council, and marched into Italy, where he procured the election of Peter de Corbiere (Nicholas V.), and by whom he was crowned at Rome. Five electors, on the other hand, chose Charles of Luxemburg to be emperor; on which the civil war was about to be renewed, when *L.* was killed by a fall from his horse, in 1347.

Louis I., king of France. — See Louis I., emperor of Germany.

Louis II., *the Stammerer*, so called from a defect in his speech, was the son of Charles the Bald, b. 846, crowned king of Aquitaine in 867, and succeeded his father as king of France in 877. He was obliged to deliver up Provence to Boson, by whom it was erected into a kingdom. His children were Louis and Carloman, who divided the kingdom between them, and a posthumous son, who was afterwards known as Charles the Simple. D. at Compiègne 879.

Louis III., the son of the preceding, and brother of Carloman, enjoyed the kingdom with his brother. He defeated Hugh the Bastard, son of Lothaire, marched against Boson, king of Provence, and opposed the progress of the Normans. D. without issue 882.

Louis IV., surnamed *d'Outremer*, was the son of Charles the Simple, b. 921, and ascended the throne in 936. He invaded Normandy, but was defeated and taken prisoner in 944. He regained his liberty the following year, after being obliged to concede Normandy to Richard, son of Duke William, and Laon to Hugh, father of Hugh Capet. He afterwards recovered the latter territory, and d. of a fall from his horse, 954.

Louis V., surnamed the *Fainéant* (*do-nothing*), succeeded his father Lothaire in 986, and soon after took the city of Rheims. He was preparing to march to the assistance of the count of Barcelona, who was pressed by the Saracens, when he is said to have been poisoned by his queen, 987. After his death, the crown devolved by right to his uncle Charles, Duke of Lower Lorraine; but that prince being disliked by the French, it was conferred on Hugh Capet.

Louis VI., called the *Big*, the son of Philip I., succeeded to the throne in 1108. His reign was disturbed by wars with the Normans, and also by feuds among his vassals. He also quarrelled with Henry I. of England, and thus was commenced the wars between the English and French, which lasted during 3 centuries. He was a good and wise monarch, and was ably supported by his minister, Abbé Suger. D. 1137.

Louis VII., was the son and successor of the preceding. B. 1120. He had a dispute with Pope Innocent II., on the right of presenting to benefices, and was excommunicated by that pontiff, who also laid his kingdom under interdict. Thibault, Count of Champagne, being devoted to the pope, *L.* declared war against him, and ravaged his country. A reconciliation afterwards took place between them, and *L.*, by the persuasions of St. Bernard, engaged in a crusade, but was defeated by Saladin, and, on his return to Europe, was taken at sea by the Greeks, and delivered by the general of Roger, King of Sicily. Having divorced his queen, Eleanor, she married Henry of Normandy, afterwards Henry II. of England, to whom she brought, as her dower, the provinces of Poiton and Guienne. This produced a new war between England and France, which lasted, with little intermission, for 21 years. D. 1180.

Fig. 1629. — LOUIS VII.

Louis VIII., named the *Lion*, was the son of Philip Augustus and his queen Isabella of Hainault. B. 1187. In 1216 he accepted the call of the barons of England, provoked to revolt by the tyranny and treachery of King John, and, though prohibited by the papal legate, sent them aid, and soon after landed in England himself. He took Rochester and Winchester, besieged Dover unsuccessfully and received the homage of the barons at London; but, after the death of John, was abandoned by most of his adherents, and was excommunicated by the legate; his troops were defeated by the Earl of Pembroke, at *The Fair* of Lincoln; and *L.* besieged in in London, made terms with Pembroke, and withdrew to France in Sept., 1217. He succeeded his father in 1223, and in the following year recovered most of the English possessions in France, in spite of papal excommunications. In 1226 he undertook a crusade against Raymond, count of Toulouse, and the Albigenses; took Avignon after a 3 months' siege; overran Languedoc; and d. in Auvergne, Nov. of the same year. He had married in 1200, Blanche of Castile, by whom he had 7 sons and one daughter.

Louis IX., or *Saint Louis*, was b. in 1214, and succeeded his father, Louis VIII., in 1226. Being then only in his 12th year, he was placed under the guardianship of his mother, Blanche of Castile, who was made regent of the kingdom. He was declared of age in 1236. A severe struggle was going on between the crown and some of the great feudal nobles, in which the latter were assisted by Henry III. of England. In 1243 *L.* defeated the English in several engagements, and a truce for five years was concluded. Having made a vow, in the event of recovering from a dangerous disease, to march against the infidels in the Holy Land, he made preparations for doing so, and, in 1248, embarked at Aigues-Mortes with an army of 50,000 men, accompanied by his queen, his brothers, and almost all the chivalry of France. The particulars of his disastrous campaign, which led to his surrender, and that of the remains of his army, cannot be recorded here: but we may remark, that a greater union of fortitude, punctilious honor, humanity, and personal bravery, has seldom been witnessed in the conduct of a prince than was displayed by *L.* throughout this expedition. The town of Damietta, which had been taken by the French, was demanded as the price of the monarch's freedom, and a vast ransom was also claimed for his followers. These terms being fulfilled, *L.* embarked with about 6,000 men, the sole remains of his fine army, for Acre, and spent 4 years more in Palestine. On his return to France, he applied to the govt. of his kingdom with exemplary diligence, and ruled with impartiality and moderation. Notwithstanding the disasters of his crusade, he undertook a new one, the object of which was the conquest both of Egypt and Palestine. Tunis, however, was the first point of attack; but while engaged at the siege of that place, a pestilence broke out among the French troops; and, after seeing one of his sons, and a great part of his army, perish, he was himself one of its victims, Aug. 24, 1270. *L.* was canonized by Boniface VIII. in 1297, and his life was written by his friend, the Sire de Joinville.

Louis X., surnamed *Hutin* (an old French term for *quarrelsome*, was b. at Paris, 1289, and succeeded Philip the Fair, his father, in 1314, being king of Navarre before, in right of his mother. He recalled the Jews to his kingdom, and made successful war against the count of Flanders. D. at Vincennes, 1316.

Louis XI., was the son of Charles VII., and born at Bourges, in 1425. Active, bold, and cunning, he was in all respects unlike his father, of whose ministers and mistress, Agnes Sorel, he soon showed himself a decided enemy. In 1440 he left the court, and put himself at the head of an insurrection. Charles defeated the rebels, and executed some, but pardoned his son, whom he even trusted with a command against the English and Swiss. *L.* conducted himself with valor and prudence, and his father became entirely reconciled to him; but having soon entered into new conspiracies, he was obliged to take refuge first in Dauphiné and afterwards in Burgundy, and lived there five years in a dependent condition. On the death of his father, in 1461, he dismissed the former ministers, and filled their places with obscure men, without character or talents to recommend them. Insurrections broke out in various parts of his dominions; but they were soon quelled, and followed by many executions. In everything he did, his crooked policy and sinister views were evident. Whilst he pretended to reconcile contending parties, he secretly instigated them against each other; and when he had a negotiation with a foreign govt., he corrupted its courtiers by bribes, and established secret correspondences with them. He became involved in a war with Charles the Bold, duke of Burgundy, which lasted from 1465 to 1472.

Fig. 1630.— LOUIS XI. AND CHARLES THE BOLD AT PERONNE.

In the course of the war *L.* having requested a passport from the duke, went to visit him at Peronne, though he had just before secretly instigated the people of Liége to rise, and promised them aid. Charles, having discovered this act of treachery, was furious with rage, and hesitated 3 days (during which he kept the king in prison) as to what course he should adopt. Nothing but the aversion of Charles to take the life of a king, and the greatest persistency in falsehood on the part of the latter, who asserted his innocence under the most solemn oaths, saved him. He was obliged to accompany Charles to Liege, and to witness the pillage and slaughter of which he had been the cause. A peace was concluded on favorable terms for Charles and his allies; but when *L.* returned to Paris he used every artifice to evade its fulfillment. The great object of *L.* was the establishment of the royal power, and the overthrow of the feudal aristocracy; but it is almost impossible to convey a just idea of his character, so contradictory were its qualities. He was at once confiding and suspicious, avaricious and lavish, audacious and timid, mild and cruel. D. 1483.

Louis XII., surnamed *the Father of his People*, was the son of Charles, duke of Orleans, and b. in 1462. On ascending the throne, in 1498, he pardoned the wrongs he had suffered before his accession. "The king of France," said he, "must not revenge the injuries done to the duke of Orleans." His reign was a continued course of warfare. He conquered the Milanese, Genoa, and Naples; but after ravaging Italy for 15 years, the French were expelled in 1513. The Emperor Maximilian, Henry VIII. of England, and the Swiss, attacking Louis in his own dominions, he was obliged to sue for peace, and d. in 1515. About three months before his death he had married the young princess Mary, sister of Henry VIII. She was his third wife, and after his death was married to her first lover, Charles Brandon, duke of Suffolk. *L.* XII. possessed many of the qualities of a good ruler; he was honest, kind-hearted, and magnanimous; he was also a friend to science, and France enjoyed under him a high degree of prosperity and security.

Louis XIII., was the son of Henry IV., and b. in 1601. Being only 9 years old at the death of his father, the care of him and the kingdom was intrusted to his mother, Mary de Medicis. During the early part of his reign France became the prey of civil dissensions, which Marshal d'Ancre, prime minister at that time, was utterly unable to suppress; and when the king, in 1615, married a Spanish princess, the disturbances grew still more alarming. At length the Huguenots rose in arms, with Rohan and Soubise at their head; and a great part of the kingdom rebelled against the king, who now delivered himself up to the guidance of Cardinal Richelieu. After victory had inclined, sometimes to one side and sometimes to the other, and both parties felt deeply the necessity of repose, peace was concluded in 1623. But it was of no long duration. La Rochelle, the headquarters of the Huguenots, revolted, and was supported by England. The king drove the English to the sea, conquered the island of Rhé, and at last took La Rochelle, which had sustained all the horrors of a siege for 12 months. After this event, fatal to the Protestant interest in France, *L.* assisted the duke of Mantua against the emperor, and entered on the campaign in person, in which he showed skill and bravery. In 1631 a treaty was concluded, by which the duke was confirmed in his estates. The year following Gaston of Orleans, only brother of the king, revolted, out of dislike to Richelieu, and was assisted by the duke of Montmorency, who being wounded and taken prisoner at the battle of Castelnaudari, in 1632, was beheaded at Toulouse. *L.* and the cardinal were attacked by a mortal disease nearly at the same time; the latter died in December, 1642, and the king in May following.

Louis XIV., called the *Grand Monarque*, son of the preceding, was born 1638, and only 5 years old on the death of his father, the regency being in the hands of the queen-mother, Anne of Austria, under whom Mazarin acted as prime minister. The nation was then involved in a war with Spain and the emperor, which was maintained with glory to the French arms by the Prince of Condé and the famous Turenne; but although *L.* was successful abroad, his kingdom was distracted by internal divisions; the Parisians, irritated against Mazarin and the queen, took up arms; and the king, his mother, and the cardinal, were obliged to fly. The Spaniards, profiting by these troubles, made several conquests in Champagne, Lorraine, and Italy. In 1651 the king assumed the government, but Mazarin returning to power the year following, the civil war was renewed. On the war breaking out between England and Holland, *L.* joined with the latter; after a few naval actions, the peace of Breda was concluded in 1667. In 1672 the French king made an attack on Holland, and reduced some of its provinces in a few weeks. This invasion produced a new confederacy against *L.*, between the emperor, Spain, and the elector of Brandenburg, in which the allies were unsuccessful, and which was terminated, in 1678, by the treaty of Nimeguen. Amidst all his glory, *L.* committed an act of impolitic cruelty, by the revocation, in 1685, of the Edict of Nantes, granted by Henry IV. in favor of the Protestants — a measure which drove from France a vast number of ingenious mechanics and others, who settled in England and Holland. About this time another league was formed against France by the prince of Orange, the duke of Savoy, and the electors of Bavaria and Brandenburg. To this league were afterwards added the German emperor and the king of Spain. The dauphin had the command of the French army, and he opened the campaign by taking Philipsburg in October, 1688,

but he was soon forced to retreat before a superior force. In 1690 Luxembourg gained the battle of Fleurus, and Catinat took Nice, and gained a victory over the troops of the duke of Savoy; this was followed by the taking of Mons in Flanders, Valencia in Spain, and Carmagnola and Montmelian in Savoy. These successes were counterbalanced by the defeat of Tourville's squadron off La Hogue, by Admiral Russell, June 2, 1692. *L.* in person took Namur, and Luxembourg gained the battles of Steenkirk and Neerwinden. In 1696, Savoy made a separate peace with France, which was followed by a general one at Ryswick, in 1697. The tranquillity of Europe, however, was again broken by the death of Charles II., king of Spain, in 1700. He left his crown to Philip of France, duke of Anjou, who assumed the title of Philip V. In opposition to him the Archduke Charles laid claim to the throne; and he was supported by the emperor, Holland, and England. Prince Eugene had the command of the imperial forces, with which he took Cremona. In 1704, Eugene and Marlborough gained the great battle of Hochstet, or Blenheim; the year following, Nice and Villa-Franca were taken by the French, who also gained a dear victory at Cassano over Eugene; on the other hand, Barcelona surrendered to the archduke, and Gironne declared in his favor; the battle of Ramilies was gained by the Duke of Marlborough, and Prince Eugene saved Turin by defeating the duke of Orleans. In 1708, Lille was retaken by the allies, who also gained the battle of Oudenarde, and the imperialists made themselves masters of Naples. The year following the French lost Tournay, and suffered a great defeat at Malplaquet. In 1713 a treaty of peace was signed at Utrecht by France, Spain, England, Savoy, Portugal, Prussia, and Holland; and the next year peace was concluded with the emperor at Rastadt. Louis, though aged and reduced to stand at bay, still retained vigor enough to save France from the dismemberment threatened by the allies, and to leave to his successor his most valuable conquests. The internal administration of his govt. during this long period had been marked by the highest magnificence, and conduced to the most splendid results. The favorite motto of *L.*, *L'état c'est Moi*, was quite as much the expression of a principle as of personal pride, and it meant the extension and consolidation of the state from its own centre, in place of the distraction of government occasioned by the feudal system. He carried this principle into effect immediately after the death of Mazarin, by dispensing with any future prime minister; and the issue of it (besides its results in his political wars) was to humble the noblesse, and raise the talent of the middle classes to places of trust — as in the person of Colbert. The domestic history of *L.*, for the greater part of his life, is far more open to censure than any part of his public conduct. His succession of mistresses, La Vallière, Montespan, Fontange, and others, exhibits him in the character of a sensualist, and we can only say that he was not an unrepentant one for at least the last twenty years of his life. To Madame de Maintenon, aided by the eloquence of Bossuet, belongs the credit of reforming him in this particular, and the most sceptical of historians have not been able to show that Madame owed her influence to any sacrifice of honor, or that she was not really married to him in 1684, about a year after the death of his queen, Maria Theresa. Apart from all this, Louis XIV. was distinguished by high qualities of heart and mind, and his self-command and moderation in all that pertains to the sovereign character cannot be doubted. He most completely realized the idea of a monarchy at a period when the habits of thought, and the manners of a people, naturally fickle, and tired of his long reign, were taking a new direction; and if he loved warlike enterprise too much, as indeed he deplored in his deathbed, he also loved France, and did all in his power to develop the resources of commerce, industry, literature, and art, and to discover the efficient instruments of a wise administration. D. 1715.

Fig. 1631. — LOUIS XIV.

Louis XV., great-grandson and successor of the preceding, was b. in 1710; and Louis XIV. dying when he was only five years of age, the kingdom was placed under the regency of Philip, duke of Orleans. *L.* was crowned in 1722, and declared of age the following year. The beginning of his reign was rendered disastrous by the Mississippi scheme of Law (*q. v.*), the famous financier, which ruined thousands of people. On the death of the duke of Orleans, in 1723, he was succeeded as prime minister by the duke of Bourbon, who was displaced in 1725, and was succeeded by Cardinal Fleury. The same year the king married the daughter of the king of Poland. On the death of the last-mentioned monarch, in 1733, *L.* supported the election of his father-in-law, Stanislaus, against the elector of Saxony, which occasioned a war between France and the emperor; Stanislaus, however, was forced to abandon the throne; but the French were successful in Italy, and a peace was concluded in 1738. The death of the emperor Charles opened a new scene. The succession of the house of Austria was disputed by four persons, and *L.* declared himself against Maria Theresa, daughter of the late emperor, contrary to his own engagements. He supported the pretensions of the elector of Bavaria, who called himself Charles VII. That prince took Prague, where he was crowned king of Bohemia; but in 1742 that city was retaken, and the allies, under the king of England, gained the battle of Dettingen. In 1744 *L.* took the field in person, and captured Courtray, Menin, and Ypres; he was also present at the battles of Fontenoy and Lawfeld. These advantages were accompanied by the taking of Ghent, Ostend, Brussels, Bergen-op-Zoom, and other places. On the other hand, the troops of the duke of Saxony, and of the queen of Hungary, ravaged Provence, and the English completely ruined the French commerce at sea, and negotiations were opened which ended in the peace of Aix-la-Chapelle, in 1748. In 1755 a new war broke out between France and England, in which the latter power had Prussia for an ally, while Austria leagued with France. At first the French were successful, taking Port Mahon, defeating the duke of Cumberland at Hastinbeck, and forcing the English general and his army to capitulate at Closter-Seven. The electorate of Hanover was conquered; but in 1757 the French and Austrians were defeated by Frederick the Great at Rossbach; this was followed by other losses, both by land and sea, particularly by the conquest of Canada by the English, and *L.*, humiliated, despised by his subjects, and given up to the grossest immoralities with his mistresses, and his *Parc aux Cerfs*, d. in 1774. He was polite, affable, and naturally humane; but want of strength of character, and sensual indulgences, degraded him equally as a monarch and a man. The storm which burst on the head of his devoted successor was fully expected by him; but he selfishly congratulated himself that, bad as things were, they would last his time.

Fig. 1632. — FRENCH COSTUMES, 1770.

Louis XVI., son of Louis the dauphin, and Maria Josephine, daughter of Frederic Augustus, king of Poland, was b. in 1754, and immediately created duke of Berri. On the death of his father, in 1765, he became the heir to the throne; and in 1770 he married Marie Antoinette, an Austrian princess of great beauty and accomplishments. In 1774 he succeeded to the crown. France was in a deplorable state; her finances were nearly exhausted, her trade diminished, her navy destroyed, and the nation groaned under a weight of debt. In this state of things the people looked to their young king to recover their lost greatness, and he seconded their hopes by calling around him those persons whom he thought most likely to redeem the errors of the late administration. He chose Turgot and Malesherbes for his first ministers. His first act was very popular; he dispensed with the customary tax paid by the people at the beginning of every new reign. In 1774 the parliament was recalled, and affairs began to assume a favorable aspect, when the war of the American Revolution broke out, and the agents of the U. States, Franklin and Deane, arrived in Paris to solicit aid for the struggling colonies. *L.*, though sympathizing with the Americans, was averse to embarking in a war on their account; but his pacific inclination was at length overcome by the urgency of his ministers and of the queen, and on Feb. 6, 1778, he concluded the treaty of alliance with the United States, which in a few months resulted in the declaration of hostilities between France and Great Britain. The war cost France 1,400,000,000 livres; and beside the irreparable deficit it produced in the already disordered finances, it tended greatly to weaken the monarchy by diffusing republican and revolutionary ideas. Necker became, by his attempts of reform, so obnoxious to the court and the aristocracy that he was obliged to resign in 1781. The sanguine Calonne took the post, and strove as vainly against the overwhelming embarrassments of the government; and the Cardinal de Brienne, who succeeded Calonne, laid such intolerable burdens upon the people that their parliament refused to register them. For this the members were exiled to Troyes, but were afterwards recalled by *L.*, who, at the suggestion of Necker, again in office, convened the states-general. This assembly met in May, 1789. The public mind was agitated. Mirabeau was the leader of the popular party. At his voice the people of Paris arose, and on the 14th of July that year stormed the Bastile. Revolution had begun; and in October the armed mob, with a prodigious number of women, marched to Versailles, forced the palace, murdered the guards, and searched in vain for the queen, who would have shared the same fate had she not escaped from her bed, which the miscreants pierced with their sabres. The result of this insurrection was, the leading of the king and his family in triumph to Paris, amid the insults of a lawless rabble. In February, 1790, *L.* was forced to accept the new constitution; but, notwithstanding all his concessions, finding himself a mere prisoner at Paris, and exposed daily to new injuries, he resolved to escape. Accordingly, on the night of June 21, 1791 he and his family quitted the Tuileries; but at Varennes he was recognized, and conducted back to Paris, where he became a prisoner in his own palace. War was declared against France by the emperor and the king of Prussia; and the duke of Brunswick marched into the country, but was forced to retreat. In the meantime, the people were wrought up to a pitch of savage ferocity, and assaulted the Tuileries, in storming which, they murdered the brave and loyal Swiss guards. The king and royal family sought refuge in the National Assembly, which ordered them to be sent to the Temple. The Legislative Assembly gave way to the National Convention, which brought *L.* to trial. His defence was conducted by Malesherbes, Trouchet, and Deseze; and his own deportment was, as it had uniformly been during his confinement, firm and modest, dignified and resigned. Jan. 17, 1793, he was adjudged to death for conspiring against the public good. His separation from his family was uncommonly affecting; yet in every scene he manifested the spirit of a Christian, and employed the short interval allowed him in preparation for death. On Jan. 21st he was led to the scaffold, where he showed the calm fortitude which had distinguished him through all the scenes of suffering and indignity to which he had been exposed. He declared his innocence to the surrounding crowd, but was interrupted while addressing the people by the noise of drums and the interference of his executioners. He was accompanied by his confessor, the Abbé Edgeworth, who, as the monarch laid his head on the fatal block, exclaimed, "Ascend, O son of St. Louis, ascend to heaven!" His body was thrown into a pit filled with lime, and no vestige left of the

Fig. 1633. — LOUIS XVI.

Fig. 1634. — THE TEMPLE.

place of his interment. *L.* XVI. was one of the most moral and best-intentioned sovereigns of France; and in spite of all the prejudices to which the misrule of his ancestors had subjected him, was allowed to possess an amiable heart, an upright mind, and a refined and enlarged understanding.

Louis XVII., second son of the preceding, was B. in 1785, and was at first styled Duc de Normandie, and after the death of his elder brother, Louis-Joseph, in 1789, became dauphin of France. Imprisoned in the Temple with his relatives, he was, after his father's death, styled monarch by the Royalists and foreign powers. A cobbler, named Simon, was appointed his gaoler, with the derisive title of tutor. He D. in 1795, it is suspected of poison; but it is more probable that his life was brought to a premature close by the harsh treatment to which he had been subjected in prison. Many impostors have sought to pass for the veritable Louis XVII., but have succeeded in obtaining but a small number of dupes.

Louis XVIII., *Stanislas Xavier*, surnamed *Le Desiré*, second son of the dauphin (the son of Louis XV.), was B. in 1755, and was originally known as the Count de Provence. At the accession of his brother, Louis XVI., in 1774, he received the title of *Monsieur*; and after the death of his nephew, in 1795, from which time he reckoned his reign, he took the name and title of *L.* XVIII., king of France and Navarre. As a boy, he is said to have manifested a disposition tinctured with much timidity and reserve, but to have exhibited a far more decided turn for literary pursuits than either his elder or his younger brother Charles X., with whom he was educated; and he early acquired the character of a good classical scholar. When Louis XVI., attempting to escape to the frontiers of the kingdom, took the road to Montmedy, and was arrested at Varennes, Monsieur took that of Mons, and reached Brussels in safety; and in 1792, he and the Count d'Artois joined the Prussian army, at the head of six thousand cavalry. The progress of the republican arms, however, compelled them to make a retreat, first to Turin, and afterwards to Verona, where he assumed the name of Count de Lille, a title which he retained till his accession to the French throne. He now led a wandering life, supported by foreign courts, especially the British, and by some friends of the house of Bourbon. In 1796 he joined the army of the prince de Condé, on the Rhine. After this he went to Blankenburg, where he lived under the protection of the duke of Brunswick, and carried on a correspondence with his friends in France, especially with Pichegru. Being invited to Russia by the Emperor Paul, he took up his residence for a while in the ducal castle of Mittau, in Courland. The versatility of his new ally, however, soon put an end to his continuance there, and he received peremptory orders to quit Russia in a week. The Russian govt. then allowed him to reside at Warsaw; and while there, in 1803, Bonaparte, at that time first consul, attempted to induce him to renounce his claims to the throne. To which he replied: "I do not confound M. Buonaparte with his predecessors; I esteem his valor, and his military talents, and thank him for all the good he has done my people. But faithful to the rank in which I was born, I shall never give up my rights. Though in chains, I shall still esteem myself the descendant of St. Louis. As successor of François I., I will at least say, like him — 'We have lost all except our honor.'" In 1805, *L.*, with the consent of the emperor Alexander, returned to Mittau; but the peace of Tilsit obliged him to leave the Continent, and, as a last resource, he took refuge in England. Here he was hospitably received; and Hartwell, in Buckinghamshire, a seat belonging to the Marquis of Buckingham, was assigned as his residence, where he remained till the fall of Napoleon, in 1814, drew him from his retreat to reascend the throne of his ancestors. On the 3d of May he made his entry into Paris; on the 30th he caused a constitution to be drawn up; on the 4th of June it was formally accepted; and the Chamber of Deputies, which was established by this instrument, requested the king to take the surname of "The Desired," *Louis le Desiré*. But the disgrace which the French arms had received was too deeply felt by the soldiers who had fought under Napoleon to make them satisfied with the Bourbons, and the prevalence of ultra-liberal opinions rendered a great portion of the people disaffected to the monarchy; and when Napoleon made his reappearance in France, March 1, 1815, his presence roused every latent feeling, and inspired his former followers with tenfold courage and enthusiasm. *L.* was compelled to flee from Paris on the 20th, and seek refuge in Belgium. The duke and duchess d'Orleans, the old prince de Condé, the count d'Artois, and the duke de Berri, also hastily left Paris; and proceeding to La Vendée and the S. of France, they endeavored to awaken popular sympathy in favor of the royal cause. The ministers, together with several officers of distinction, followed the king; and Talleyrand, in particular, was actively engaged in his cause at Vienna. Great events now followed in rapid succession. The battle of Waterloo, fought on the 18th of June, broke the power of Napoleon; Wellington and Blücher marched to Paris; and Fouché, who had already induced the emperor to leave France, put a stop to the shedding of blood by the capitulation of Paris, July 3d. Thus was *L.* once more restored to the throne of France. On the 7th of July the British and Prussians occupied Paris; on the 9th the king entered the capital, under the protection of the Duke of Wellington; and he immediately appointed his new ministry, at the head of which was Talleyrand, and in which Fouché was minister of police. Among the most decided measures by which the king sought to support his throne, was the ordinance of July 16, disbanding the army, according to the wishes of the Allies; and another, dated July 24, excluding from the general amnesty those who were there denominated "rebels," and whose punishment, for the most part, consisted in exile, or degradation from the peerage. All the relations of Napoleon were, under pain of death, banished from France; as were also those who had voted for the death of Louis XVI., and those who had, in 1815, received offices or honors from the "usurper." During the last few years of his reign, *L.* was much enfeebled by disease; a dry erysipelas in his legs had deprived him of the power of walking; while his attachment to the pleasures of the table increased his natural tendency to corpulence, and a paralysis of the lower limbs taking place, he died, Sept. 16, 1824, having survived his second restoration nine years.

Louis Philippe, King of the French, the eldest son of the duke d'Orleans, better known in the revolutionary times as *Philippe Egalité*, and of Marie, only daughter of the duke de Penthièvre, was B. in Paris, Oct. 6th, 1773. His education, which was intrusted to the celebrated Madame de Genlis, was directed equally to the development of his physical, moral, and intellectual nature. Without neglecting the ancient and modern languages, and the usual branches of learning and science, *L. P.* and his brothers were inured to bodily fatigue; and gardening, turnery, basket-making, and carpentry ranked among the number of their accomplishments. At the age of 17, his father introduced him to the Jacobin Club; in 1791, having received the command of a regiment of dragoons, he set out to join it at Valenciennes; and war being declared against Austria, he made his first campaign in 1792, fighting at Valmy at the head of the troops confided to him by Kellermann, Sept. 20th, and afterwards, Nov. 6th, gaining great distinction at Jemappes under Dumouriez. Meanwhile the revolution was hastening to its crisis. In 1793, Louis XVI. was carried to the scaffold, and a few months afterwards, when the duke of Orleans, notwithstanding his connection with the revolutionary cause, shared the same fate, *L. P.*, duke de Chartres, had all his worst apprehensions of a reign of terror realized, by a summons to himself to appear before the Committee of Public Safety. He instantly fled to the French frontier, escaped into the Austrian territories, and refusing an invitation to enter into that service, proceeded as a traveller toward Switzerland, where he met with his sister Adelaide and Mad. de Genlis, who had also fled thither for safety. The wanderings of *L. P.* in Switzerland, Hungary, Denmark, Norway, Sweden, and America have been often narrated and will be long remembered. While he remained in Europe, *L. P.* refused several invitations to take up arms against France; and on the 24th of Sept., 1796, he sailed from the Elbe for the U. States, where he arrived in safety, and was soon after joined by his brothers, Montpensier and Beaujolais. His residence and travels in America continued until 1800, in the beginning of which year he arrived in England, and took up his abode on the banks of the Thames at Twickenham. His brother, the duke de Montpensier, died in England in 1807, and on returning in the following year from the burial of his other brother, the Count de Beaujolais, in Malta, *L. P.* received an invitation from the king of Naples to visit the royal family at Palermo. During his residence at the Neapolitan court he gained the affections of the Princess Amelia, the second daughter of the king, to whom he was married in Nov., 1809, his mother, the duchess d' Orleans, who had been released from her confinement in Spain, being present at the nuptials. Palermo now became the residence of *L. P.* and the scene of a domestic tranquillity to which he had long been a stranger. The abdication of Napoleon in 1814 introduced a new change in his fortunes, and he returned to Paris after an absence of 21 years. The return of Napoleon from Elba scattered the Bourbons once more, and *L. P.* returned to England, till the expiry of the Hundred Days, when he repaired to France, and entered into all the honors due to his rank. A coldness which arose between him and the administration led to his temporary retirement to England; but in 1817 he took up his permanent abode in France, and, while abstaining from politics, devoted himself to the education of his family and the patronage of literature and the arts, until the revolution of July, 1830, and the deposition of Charles X. placed him on the throne. The events of that period and his subsequent reign would ask more space than we can give to them. Suffice it here to say, that the first few years after his accession were spent in repressing the republican spirit that still lingered among the descendants of the *first* French revolutionists, and in consolidating the throne upon a purely constitutional basis. The various conspiracies that were entered into for overthrowing his government were detected and suppressed; repeated attempts to assassinate the king himself had proved abortive; and the speculator on probabilities might have justly anticipated that *L. P.* would have spent the remainder of his days in peace, and have bequeathed his kingdom to his family. But this was not to be. The close of 1847 and the beginning of 1848 had been signalized in France by strenuous efforts, on the part of the opposition, to wrest from the government a measure of "electoral reform." But the Guizot administration turned a deaf ear to their appeals, and went so far as to interdict a banquet, which had been fixed to be held in Paris. In honor of this movement, on Feb. 21, 1848. A slight riot, which took place on that day, soon swelled into a formidable insurrection. In vain the king now offered to change his ministry, and to yield to the popular demands. Even his abdication in favor of his grandson, on Feb. 23, came too late: he found himself compelled to take flight. Hastily quitting Paris with the queen, who had shared with him so many dangers, he made his way to the sea-shore, whence he escaped, in disguise, to England, and landed at Newhaven, in Sussex, March 3, 1848. He then took up his residence at Claremont, with an occasional sojourn at Richmond or St. Leonard's, and for a time appeared to bear up manfully under the disasters which had befallen him. But in the spring of 1850 a change suddenly came over him; his naturally strong constitution gradually gave way; and, after lingering a few months in great physical debility, he expired at Claremont, Aug. 26. *L. P.* had 8 children. — 1, Ferdinand, duke d'Orléans, B. 1810, married princess Hélène de Mecklenburg, and D. 1842, leaving two sons, Louis Philippe, count de Paris, B. 1838, and Ferdinand, duke de Chartres, B. 1840: 2, Louise, B. 1812, married Léopold, king of the Belgians, and D. 1850; 3, Marie, B. 1813, married the Prince Alexandre de Würtemberg, D. 1839; 4, Louis Charles, duke de Nemours, B. 1814, and married to a princess of Saxe-Coburg-Gotha; 5, Clementine, B. 1817, married to a princess of Saxe-Coburg-Kohsry; 6, François Ferdinand, prince de Joinville, B. 1818, married to a princess of Brazil; 7, Henri Eugéne, duke d'Aumale, B. 1822, married to a princess of Naples; 8. Antoine-Philippe, duke de Montpensier, B. 1824, married to princess Louise, sister of the ex-queen of Spain Isabella, and one of the actual pretenders to the crown of Spain.

Louis I. and **II.**, kings of Bavaria. See BAVARIA.

Louisa, (*loo-ee'za,*) in *Illinois*, a village of Stephenson co., abt. 135 m. W.N.W. of Chicago.

Louisa, in *Iowa*, an E.S.E. co., adjoining Illinois; *area*, abt. 400 sq. m. *Rivers.* Mississippi and Iowa rivers, besides several smaller streams. *Surface*, generally level; *soil*, fertile. *Min.* Limestone and coal. *Cap.* Wapello.

Louisa, in *Kentucky*, a post-village, cap. of Lawrence co., abt. 135 m. E. of Frankfort.

Louisa, in *Virginia*, a N.E. central co.; *area*, abt. 500 sq. m. *Rivers.* North Anna, South Anna, and Little rivers. *Surface*, hilly; *soil*, moderately fertile. *Min.* Gold has been mined to a small extent. *Cap.* Louisa Court-House.

Louisa Court-House, in *Virginia*, a post-village, cap. of Louisa co., abt. 60 m. N.W. of Richmond.

Louisa Fork, in *Virginia.* See SANDY RIVER.

Louisburg, or LOUISBOURG, (*loo'is-burg,*) formerly an important fortified seaport-town on the S.E. coast of Cape Breton Island, Nova Scotia, abt 20 m. S.E. of Sidney. It was taken from the French June 17, 1745, by a troop of American volunteers. The fortifications, which cost the French $6,000,000, were demolished by the British at a cost of $50,000, and the town is now in ruins; occupied only by a few fishermen. A light-house has been erected on the site of the former one, exhibiting a fixed light 15 feet high.

Louis'burg, in *N. Carolina*, a post-village, cap. of Franklin co., abt. 35 m. N.E. of Raleigh.

Louisburg, in *Penna.*, a village of Schuylkill co.

Louis-d'or. [Fr., Louis of gold.] (*Numis.*) A piece of money, first coined in France in 1641, during the reign of Louis XIII., ceased to be a legal coin in 1795. Louis XVIII. re-established this gold coin on his return to Paris in 1814. It has been replaced by the Napoleon.

Louisiade Archipelago, (*loo-is'i-ad,*) an extensive group of islands in the Pacific Ocean, lying to the S.E. of New Guinea, and extending about 400 m. in length, by about 160 in breadth, where broadest; Lat. of the centre, 10° S., Lon. 152° 25′ E. The inhabitants are of the Papuan race.

Louisiana, (*loo-ee-ze-ah'na,*) one of the most southerly States of the American Union, having Arkansas and Mississippi on the N., Mississippi and the Gulf of Mexico on the E., the Gulf of Mexico on the S., and Texas on the W. It lies between Lat. 28° 50′ and 33° N., and Lon. 88° 40′ and 94° 10′ W., being 292 m. in length from E. to W., with an average breadth of 230 m., and having an area of 41,346 sq. m., or 26,461,440 acres. *Gen. Desc.* The surface of this State, never more than 200 feet above the level of the Gulf, is in many places so low that extensive districts, especially in the S., are submerged during the stages of high water in the rivers. W. of the Mississippi basin the land rises in hills towards the N.W. part of the State, broken, however, by the marshes along the several arms of the Red River. The delta of the Mississippi, including both the river Atchafalaya and the main stream, and embracing about one fourth of the area of the State, is nowhere more than 10 feet above the sea, and is subject through its entire extent to annual inundations. The coast-line of 1,256 m. is indented with numerous bays and inlets, the principal of which are Barataria, Timbalier, Caillou, Atchafalaya, Cote-Blanche, and Vermilion bays; but owing to their insufficient depth, it has few good harbors. There is, however, a good roadstead on the W. side of the Chandeleur Islands. Besides the latter, sundry other islands are scattered along the coast. These are more elevated than the mainland, being from 30 to 100 feet above the

Fig. 1635. — SEAL OF THE STATE.

sea-level, and are covered with dense forests abounding in deer and other game.—*Rivers, Lakes, &c.* Besides the Mississippi, which forms the E. boundary of the State for 150 m., and traverses it for 220 m. more, the chief rivers are the Red River, Ouachita, or Washita, and Teche, tributaries of the former; and the Pearl, Atchafalaya, and Sabine,—the Pearl River forming a part of the E., as does the Sabine a part of the W. border of the State,—all flowing into the Gulf of Mexico.—*Min.* The geological features of *L.* show the emersion of the tertiary strata over abt. two-fifths of its surface, in the N.W. part; underlying this formation is a saline bed; the residue of the State being alluvial and diluvial. In the tertiary series are found coal, lead, salt, lime, iron, soda, ochre, copperas, gypsum, and marl. Iron is especially frequent in the tertiary strata, and is of good quality. The coal is not equal to that of some other parts of the western coal-field, but the marl is rich, and the gypsum of the very best quality. The western range of the Mississippi alluvion is marked by precipitous hills of freestone, from 80 to 200 feet high. In the neighborhood of Harrisonburg, quartz, crystals, agates, jasper, sardonyx, carnelians, onyx, selenites, chalcedony, and other precious stones have been found in unusual size and abundance.—*Climate.* Situated S of Lat. 33° N., the temperature of *L.* rarely sinks below the freezing-point, and as all parts of the State are daily fanned by the refreshing breezes from the Gulf, the temperature of midsummer seldom rises as high as in places more remote from the sea in the upper valleys of the Mississippi and its tributaries. The mean temperature in all parts of the State is abt. 82° F.; that of winter 50° in the N. part, and 55° on the parallel of New Orleans. The average temperature for the year is about 70° in the southern, and 65° in the northern portions of the State. The summers are long, but seldom or never oppressive, and the nights are always cool and refreshing. In the neighborhood of swamps and marshes miasmatic influences prevail during the fall of the year, occasioned by the evaporation of the stagnant waters left by the annual overflow of the rivers, and producing the various types of fever incident to such localities. The uplands, however, are remarkably salubrious, and many invalids from the North, especially those predisposed to consumption, derive great benefit from the mild and healthy atmosphere of these regions. The yellow fever, which was so identified with New Orleans and the other towns along the river, always makes its appearance first in some of the W. India islands, or at some point along the coast of Mexico or Central America, and hence may be considered more as an imported disease than as having its origin here, though the natural lowness and moisture of certain localities undoubtedly favor its dissemination. When not visited by an epidemic, New Orleans is as healthy as any city of similar size, and there is little doubt that proper sanitary measures, and the complete draining of the marshes in the vicinity, will render this city as healthful as Philadelphia, New York, or Boston, at all seasons of the year, as it is during the winter and spring.—*Soil, Vegetation, &c.* In the N. and W. parts, the soil is frequently thin and sandy, and covered with pine forests, but even here it is easily brought to a high state of fertility by the application of marl and gypsum, which is found in great abundance and of the best quality in this portion of the State. Every part of *L.* is traversed by numerous streams, bordered by valleys of greater or less width, always exceedingly fertile. The soil of the prairies is rich and productive, covered at all seasons with indigenous grasses, supporting vast herds of cattle, sheep, horses, and mules, which are raised here with as little trouble and expense as in any other part of the United States. The delta of the Mississippi is a sedimentary accretion many hundred feet in depth. It is abt. 200 m. in length, with an average breadth of 60 or 70 m., containing an area of from 12,000 to 14,000 sq. m., being about as large as the whole valley of the Nile from the cataract of Syene to the Mediterranean. It is also equal in fertility to that far-famed valley, and will render bountiful returns to its cultivators for generations, without manure, and without dependence upon the overflowing of the river by which it was formed. The husbandmen of the Nile rejoice in the inundation of that river, because the clouds furnish no moisture to the thirsty soil; while the planters of the valley of the Mississippi resist the inundation of their lands, and confine the river to its channel, because the rains are abundant for the most successful agriculture. It may be safely stated with regard to *L.*, that all, or nearly all, its marshy and swamp lands are capable of reclamation, and that when so reclaimed, there will be few, if any, States in the Union that will contain an equally large proportion of the very richest land, or any so admirably adapted to the production of some of the most valuable staples that enter into the commerce of the country. The vegetable products of *L.* comprise the walnut, oak, ash, sassafras, hickory, poplar, locust, mulberry, magnolia, cottonwood, buckeye, papaw, cypress, pine, elm maple, willow, hackberry, pecan, dogwood, and persimmon, among its forest-trees; while the orange, peach, quince, plum, and fig, with the apple in the N., are the principal fruits. The wild cane flourishes here, attaining to a height of 30 feet.—*Agriculture.* The great staples of *L.* are cotton, sugar, and rice. Indian corn and tobacco coming next in order. At the date of the last census there were 1,107,595 acres in cotton, yielding 659,583 bales; 216,740 acres in sugar, yielding 208,259 hogsheads and 331,538 barrels of sugar, and 409,669 barrels of molasses; 973,372 acres in corn, with a yield of 13,459,734 bushels; 93,534 acres in rice, yielding 1,155,256 barrels. There were at that date 69,294 farms, with a total improved acreage of 3,774,668, and a total value for land and improvements of $85,381,270. The live stock was valued at $17,898,380, and the farm products at $54,343,953. In connection with the above agricultural statistics, it should be remembered that in *L.* most of the land improved in farms had been cultivated continuously without manure, according to the crude system of slave husbandry, for more than a century, and thus little of it, in fact, has ever yet been treated according to the advanced principles of modern agriculture. During the last two decades, however, the agricultural developments have been rapid and extensive. The district producing the most cotton is that part of the bottom-lands of the Mississippi and Red rivers north of Lat. 31°; and those producing sugar, south of said parallel in the low lands of the Mississippi, the Bayou La Fourche, the Atchafalaya and its branches, and the Vermilion river. These are the lands subject to overflow, and which have been rescued from the floods by the system of dykes called *levees*, which system, however, too often becomes powerless against the enormous pressure of the waters of the rising river, as for instance in 1897, when an unprecedented flood in the river and the breaking of the levees threatened disaster. Though the rice-culture is on the increase, there is growing opposition to it. The rice flumes too often prove the little rift which ends in the breakage of the levee. Besides the irrigation of the rice-fields is unwholesome. The malarial fever, not fatal, but painful, which afflicted *L.* during the autumn of 1880, was popularly attributed to this cause. The most important question before the people of *L.* is that which concerns the colored population. The introduction of a population which had no tradition of civilization, culture, progress, or of advancement to higher conditions than barbarism, to the possession of the powers, faculties and rights of the most advanced people on earth, must be admitted to have been a perilous experiment. The latest reports, however, show that there is improvement in the condition of the colored population.—*Counties, Towns, &c.* *L.* is divided into the 59 following districts, called parishes, viz.:

Acadia,	E. Baton Rouge,	Orleans,	Saint Martin,
Ascension,	East Feliciana,	Ouachita,	Saint Mary,
Assumption,	Franklin,	Plaquemine,	Saint Tammany,
Avoyelles,	Grant,	Point Coupee,	Taugipahoa,
Bienville,	Iberia,	Rapides,	Tensas,
Bossier,	Iberville,	Red River,	Terre Bonne,
Caddo,	Jackson,	Richland,	Union,
Calcasieu,	Jefferson,	Sabine,	Vermilion,
Caldwell,	Lafayette,	Saint Bernard,	Vernon,
Cameron,	LaFourche,	Saint Charles,	Washington,
Catahoula,	Lincoln,	Saint Helena,	W. Baton Rouge,
Claiborne,	Livingston,	Saint James,	Webster,
Concordia,	Madison,	Saint John	West Carroll,
De Soto,	Morehouse,	Baptist,	West Feliciana,
East Carroll,	Natchitoches,	Saint Landry,	Winn.

The chief cities are New Orleans, Baton Rouge (since 1879, again the capital), Shreveport, Donaldsonville, Algiers, Jefferson, Carrollton, Plaquemine, Natchitoches, Alexandria.—*Edu.* The Constitution of 1879 does not mention the board of education, which had control of the State schools. The chief responsible officer is a superintendent of public education. For the parishes, which answer here to counties elsewhere, the old parish board of directors appointed by the State board of education give way to like boards of public education, to be provided for by the general assembly. Under the new Constitution, all general exercises in the schools are to be conducted in the English language, except in the parishes or localities where the French language predominates. Then the primary instruction may be in French, if no additional expense be incurred thereby. The State schools are to be free to all children of the State between 6 and 18 years of age, instead of from 6 to 21 as formerly. They are to be supported from the proceeds of a State school fund (now recognized as being $1,030,867); from a poll-tax of $1 to $1.50 from each male inhabitant over 21, which is to be retained in the parishes where it is collected; from a State tax on property not to exceed 1 mill on the dollar, instead of the previous 2 mills; and from a permissible parish. The public schools in *L.* suffer from irregularity in the payments for their support, and from the scattered population, often divided up between far distant plantations, not gathered into towns and villages. The free schools, however, are eliciting increased attention from the State authorities. Of 400,000 children of school age, about 155,000 are enrolled in the schools, with an average attendance of about 110,000. Higher education is provided for in the State University, and the Agricultural and Mechanical College at Baton Rouge, the State Normal School at Natchitoches, and the Southern University at New Orleans, an institution endowed by the State. In New Orleans is also the Tulane University, which has departments for women and for manual training. The other institutions include asylums for the blind and the deaf and dumb at Baton Rouge, and for lunatics at Jackson, with a large hospital at New Orleans, all supported by the State.—*Industry.* The industry of *L.* has hitherto been directed to agriculture and commerce rather than to manufactures, though there is no reason why that class of enterprise should not be profitably conducted. The commerce of the State, both foreign and domestic, has been very extensive, and its admirable system of internal navigation will yet place the State in the front rank of the world's commercial communities. What is specially needed in *L.* is small industries, which will give remunerative employment all the year round. The principal existing manufacturing industries are devoted to shingles, tanks, tobacco, machinery, clothing, boots and shoes, and the cleaning and polishing of rice and refining of sugar and molasses. The mining of rock-salt, which is found in inexhaustible quantities at Petit Anse, on Avery's Island, is profitably pursued. Cotton-seed oil is manufactured to a large extent in New Orleans, and exported in considerable quantity to Europe, where it is used to adulterate olive oil. The development of many minor cultures, instead of the absorption of all industry on the great staples, would tend greatly to enhance the prosperity of *L.* For instance, in the neighborhood of Natchitoches the truffle is indigenous, and might become a source of profit. Madder grows luxuriantly. Cochineal culture might well be made profitable when the aloe flourishes as it does in lower *L.*—*Government.* Louisiana adopted, in 1879, its 7th Constitution, an instrument which, in its general features, is similar to those of the other States; though it places many limitations upon executive, legislative, and judicial powers. A general election is held every 4 years on the first Tuesday in Dec., at which all the State officers and members of the assembly are chosen. The apportionment of 1880 gave *L.* 6 members of the House of Representatives and 8 Electoral votes, which numbers still hold good. The judges of the Supreme Court are appointed by the governor for a term of 12 years, those of the Courts of Appeal are elected by the assembly for 8 years, and in New Orleans and the country districts the District Court judges are appointed by the governor, being elsewhere elected for 4 years. A code of civil law, based on the Code Napoleon, was adopted in 1825. In 1890 *L.* had a total debt of $33,335,497, including State debt, $16,008,585; county debt, $177,798; municipal debt, $17,149,114. The last almost wholly belonged to New Orleans, whose debt on Jan. 1, 1897, was $15,723,345.—*Religion.* There are nearly 700 churches in *L.* The most numerous religious denominations are the Methodist, the Baptist, the Roman Catholic, the Presbyterian, and the Episcopalian. The total value of Church property is about $5,000,000.—*History.* Although the Spaniards had navigated the Gulf of Mexico for two centuries, exploring its shores in almost

Fig. 1636.—STATUE OF HENRY CLAY, NEW ORLEANS.

every direction, they appear to have taken little interest in this territory; ignorant, doubtless, that it formed the mouth of one of the largest rivers in the world, and it was not until after the French had become established in Canada, and had explored the Mississippi to the sea, in 1682, that the real history of Louisiana commences. In 1699, Iberville founded his first colony near the mouth of the river. In 1712, Louis XIV. of France granted a charter to M. Crozart, which included the whole of the territory of *L.*; and in 1718 the city of New Orleans was founded. About this time was originated the gigantic financial scheme, known as the *Mississippi Bubble*, the collapse of which rendered the name of John Law so notorious. In 1762, the French ceded *L.* to Spain, and from that time until 1800, the territory made very little advance either in population or wealth, and Bonaparte, then First Consul, succeeded in having it retroceded to France. It remained nominally a French colony until 1803, when the United States purchased it for $15,000,000. The territory comprehended in this purchase included not only the present State of *L.*, but also all the country now occupied by the States of Arkansas, Missouri, Iowa, Kansas, Nebraska, Indian Territory, Dakota Territory, and the greater part of Minnesota. The American flag was first raised in New Orleans on Dec. 20, 1803. By the Act of Congress of March 26, 1804, the territory was divided into two govts., that of Orleans including the present State of *L.*, and that of *L.* all the country N. and W. of it. In 1810, the U. States dispossessed Spain of a large part of West Florida, extending from the Mississippi River to the Perdido River, S. of Lat. 31° N., and subsequently annexed that part of it W. of Pearl River to the new territory. On Feb. 11, 1811, an Act of Congress enabled the inhabitants to form a constitution and State govt.; and by a subsequent Act of April 8, 1812, the territory of Orleans was admitted to the Union, under the title of the State of Louisiana. On June 4 of the same year, the territory theretofore known as Louisiana had its designation altered to Missouri. The share that *L.* took in the war of 1812 is familiar to all. The great battle fought at New Orleans, Jan. 8, 1815, in which the British

LOUISIANA

0 10 20 30 40 50 60 70

State Capital ⊛ County Seats ○

Places of 100,000 and over —— NEW ORLEANS
" " 10,000 to 100,000 —— Baton Rouge
" " 3,000 to 10,000 —— New Iberia
" " 1,000 to 3,000 —— Hammond

Hammond's 8 x 11 Map of Louisiana
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Longitude West from Greenwich

LOUISIANA.

Land surface, Sq. m. 45,420
Water surface, Sq. m. 3,300
Pop. 1900..1,381,625
White.....729,612
African...650,804
Indian..... 593
Chinese 599
Japanese.....17
Native-born, 1,328,722
Foreign-born, 52,903
Males.....694,733
Females..686,892

COUNTIES.

Acadia .....C 3
Ascension.....E 3
Assumption .. D 4
Avoyelles..... D 2
Bienville..... B 1
Bossier ..... B 1
Caddo .....B 1
Calcasieu.....B 3
Caldwell..... C 1
Cameron.....B 4
Catahoula.....C 2
Claiborne..... C 1
Concordia .... D 2
De Soto.....B 1
East Baton Rouge D 3
East Carroll...D 1
East FelicianaD 3
Franklin.....D 1
Grant..... C 2
Iberia. ....D 4
Iberville .....D 3
Jackson..... C 1
Jefferson ... . E 4
Lafayette..... C 3
Lafourche.... E 4
Lincoln ..... C 1
Livingston.... E 3
Madison .....D 1
Morehouse....D 1
Natchitochcs..B 2
Orleans.....F 3
Ouachita .....C 1
Plaquemines F 4
Pointe Coupee D 3
Rapides .....C 2
Red River ....B 1
Richland .... D 1
Sabine .... B 2
St. Bernard....F 4
St. Charles....E 4
St. Helena.... E 3
St. James .... E 3
St. John The Baptist E 3
St. Landry.... C 3
St. Martin ....D 3
St. Mary .....D 4
St. Tammany..E 3
Tangipahoa...E 3
Tensas .... D 2
Terrebonne... E 4
Union .....C 1
Vermilion.....C 4
Vernon... .....B 2
Washington...E 3
Webster.....B 1
West Baton Rouge D 3
West Carroll..D 1
West FelicianaD 3
Winn..... C 2

CITIES-TOWNS

Pop.	Thousands.	
16	Shreveport	B 1
14	Donaldsonville	D 3
11	Baton Rouge	D 3
6	New Iberia	D 3
6	Lake Charles	B 3
5	Alexandria	C 2
5	Monroe	C 1
4	Crowley	C 3
3	Plaquemine	D 3
3	Lafayette	D 3
3	Thibodaux	E 4
3	Houma	E 4
2	Opelousas	C 3
2	Franklin	D 4
2	Natchitoches	B 2
2	Morgan City	D 4
2	Jackson	D 3
1	St. Martinsville	D 3
1	Jeanerette	D 4
1	Whitecastle	D 3
1	Minden	B 1
1	Amite	E 3
1	Jennings	C 3
1	Abbeville	C 4
1	Hammond	E 3
1	Ruston	C 1
1	Roseland	E 3
1	Kentwood	E 3
1	Lake Providence	D 1
1	Kenner	E 3
1	Pickering	B 2
1	Covington	E 3
1	Washington	C 3
1	Homer	B 1
1	Leesville	B 2
1	Slidell	F 3
1	Albemarle	D 4
1	St. Francisville	D 3
1	Mandeville	E 3
1	Vidalia	D 2
1	Rayne	C 3

Pop.	Hundreds.	
9	Clinton	E 3
9	Napoleonville	D 4
9	Arcadia	C 1
8	Bunkie	C 3
8	Mansfield	B 1
8	Marksville	D 3
8	Boyce	C 2
7	Bastrop	D 1
7	Madisonville	E 3
7	W. Monroe	C 1
7	New Roads	D 3
7	Bayou Sara	D 3
7	St. Joseph	D 2
7	Berwick	D 4
7	Ponchatoula	E 3
6	Logansport	A 2
6	Breaux Bridge	D 3
6	Pollock	C 2
6	Pineville	C 2
6	Coushatta	B 1
5	Gibsland	C 1
5	Grand Coteau	C 3
5	Melville	D 3
5	Cottonport	C 3
4	Benton	B 1
4	Farmerville	C 1
4	Pointe a la Hache	F 4
4	Mansura	C 2
3	Columbia	C 1
3	Many	B 2
3	Eunice	C 3
3	Greensburg	E 3
3	Harrisonburg	D 2
3	Pleasanthill	B 2
2	Waterproof	D 2
2	Churchpoint	C 3
2	Zwolle	B 2
2	Bienville	B 1
2	Franklinton	E 3
1	Colfax	C 2
1	Villaplatte	C 3
1	Cameron	B 4

sustained so signal a defeat, was the crowning event of the period, and virtually ended the war. The State seceded from the Union, Jan. 25, 1861, and became the theater of important military operations during the ensuing Civil War. On the 25th June, 1868, *L.* was re-admitted to representation in the Federal Congress. Political difficulties after the war retarded the growth of *L.* In 1876–7, rival governors and legislatures, in the interests respectively of the Republican and Democratic parties, existed, and party feeling was excited. In 1877, President Hayes withdrew the Federal troops, S. B. Packard, the Republican governor, withdrew from the contest, a single legislature was formed from the two, and F. T. Nicholls, the Democratic governor, remained the *de facto* governor. Since 1877 the political disturbances have ceased, railroads have been extended, and there has been a very large increase in the assessed valuation of property.—*Pop.* The population of *L.* is highly composite. In the country districts the negroes somewhat exceed the whites in numbers, the latter being about one-sixth each of German, Irish, and French (some being Acadian) descent. Those of French descent are called Creoles—a term which does not, in this State, imply any mixture of African or Indian blood. There are also a number of Spanish and Italian, less than half the white population being of English origin. French is the ordinary language of the people in most of the southern parishes, and in some places Spanish is also spoken. The population in 1900 was 1,381,625. See NEW ORLEANS.

Loulsia'na, in *Missouri*, a city of Pike co., on the Mississippi river, 115 m. above St. Louis. *Pop.*

Louis Napo'leon. See NAPOLEON III.

Lou'ison, *n.* See GUILLOTINE.

Louis, (St.,) (*loo'ee,*) a town of W. Africa, cap. of the French possessions of Senegambia, on an island of its own name in the river Senegal, 7 m. from its mouth; Lat. 16° 21′ N., Lon. 16° 13′ 45″ W. The town is about 1 m. long by 200 yds. wide, is regularly built, most of the houses being of brick. There is good anchorage in the river, especially in the E. channel. Boat-building and weaving are the principal items of industry. *Pop.* 12,000.

Louis, (St., a town of the island of Bourbon in the Indian Ocean, 20 m. from St. Paul; *pop.* 11,000.

Louis. (St.) (*Her.*) Louis XIV. of France instituted an order of this name in 1693, as a reward of military merit. It was enlarged in 1779 by Louis XVI., and having been suppressed at the revolution, was restored in 1815. No knights have been created since 1830.

Louisville, (*loo'is-vil,* or, more properly, *loo'e-vil,*) in *Ala.*, a p.-vill. of Barbour co., abt. 85 m. S.E. of Montgomery; in *Ga.*, a p.-vill., cap. of Jefferson co.; in *Ill.*, a p.-vill., cap. of Clay co., abt. 110 m. S.E. of Springfield; in *Ind.*, a vill. of Henry co., abt. 42 m. E. of Indianapolis; in *Kan.*, a p.-vill. of Pottawattomie co., on Rock creek, about 36 m. W. N. W. of Topeka.

Louis'ville, in *Kentucky*, an important city, port of entry of the State, and the cap. of Jefferson co., on the Ohio River, abt. 53 m. W. of Frankfort. Lat. 38° 3′ N., Lon. 85° 30′ W. The city is beautifully located at the Falls of the Ohio, upon a level plain 75 ft. above low-water mark. The streets are generally spacious, well-paved, straight, and cross each other at right angles. *L.* contains many handsome and substantial edifices, both public and private, among the former of which are the city Hall and the Court-House, erected at a cost of over $1,000,000; the Medical Institute, founded by an ordinance of the city council, and averaging 300 students; the Asylum for the Blind, established by the State; the County Prison, and the Custom-House, besides many large and elegant churches. The city is well lighted and abundantly supplied with water. Dupont's Artesian well is one of the deepest in the world, being 2,086 ft. in depth, with a diameter of 3 inches. It supplies 340,000 gallons of water in 24 hours, to an elevation of 170 ft. above the surface. An immense bridge, 1 m. in length, completed in 1870, has been constructed over the Ohio River and Portland Canal. It consists of 19 spans, averaging 249 ft. each, and two great ones of 400 ft. each. The industry of *L.* is devoted to commerce rather than manufactures, although the latter are quite extensive. By means of the Ohio River it has uninterrupted intercourse, during the greater part of the year, with all the important cities and towns of the W. and S., and is connected by railroads directly with all points North, South, East, and West. The chief exports are tobacco, pork, hemp, and flour. The imports are dry-goods, groceries, hardware, and cutlery; and the manufactures consist principally of iron, tobacco, furniture, rope, flour, leather, &c. Settled in 1778, and named in honor of Louis XVI., whose troops were then aiding the Americans in their Revolutionary struggle. *L.* is one of the largest tobacco markets in the world; no less than 100,000 hogsheads of leaf being handled annually, the streets in the vicinity of the tobacco warehouses being, in the early season, sometimes filled with stock that the storage houses cannot at once accommodate. About 29,000,000 gallons of whiskey are distilled annually; a single factory turns out nearly half a million plows; 2,000,000 barrels of hydraulic cement, 7,500,000 yards of cotton jean, 90,000 tons of water and gas pipes, 6,500 tons of leather, and 30,000 wagons are among the annual manufacturing products of *L.*, whose factories represent an investment of some $32,000,000, employ 25,000 hands, and turn out nearly $50,000,000 worth of goods each year. There are 10 national banks, with an aggregate capital of about $4,500,000, and 9 State banks, with a capital of nearly $5,000,000; these have a surplus of about $4,400,000. *Pop.* (1900) 204,731.

Louis'ville, in *Minnesota*, a village and township of Scott co., about 28 m. S. W. of Minneapolis.

Louis'ville, in *Mississippi*, a post-village, capital of Winston co., abt. 95 m. N.E. of Jackson.

Louis'ville, in *Missouri*, a post-village of Lincoln co., abt. 75 m. N.E. by E. of Jefferson City.

Louis'ville, in *Nebraska*, a village of Cass co., abt. 22 m. S.W. of Omaha City.

Louis'ville, in *New York*, a post-township of St. Lawrence co., on the St. Lawreuce River, abt. 28 m. N.E. of Ogdensburg. It is the port of entry for the district of Oswegatchie.

Louis'ville, in *Ohio*, a post-village of Stark co., about 126 m. N.E. of Columbus.

Louis'ville, in *Pennsylvania*, a village of Potter co.

Louis'ville, in *S. Carolina*, a village of Orangeburg district.

Louis'ville, in *Tennessee*, a post-village of Blount co., on the Holstein River, abt. 20 m. below Knoxville.

Louis'ville Laud'ing, in *New York*, a post-village of St. Lawrence co., abt. 28 m. N.E. of Ogdensburg.

Loulé, (*loo'lai,*) a town of Portugal, in Algarva, on a river of the same name, 9 m. N. of Faro; *pop.* 5,500.

Lounge, (*lownj,*) *v. n.* [O. Fr. *longis;* O. Eng. *lungis,* a heavy, awkward fellow; from Lat. *longus,* long.] To spend time lazily; to move idly about; to stroll.—To recline at ease; to loll.

—*n.* An idle gait or stroll.—Act of recliuing at ease.—A place for lounging.

Loun'ger, *n.* A loiterer; an idler; one who dallies away his time in indolence.

Lour, *v. n.* The same as LOWER.

Lourdes, (*loord,*) a town of France, dept. of the Hautes Pyrénees. It has extensive Roman remains, and was fortified by Cæsar. It is a place of pilgrimage for devotees, in consequence of a miracle which is said took place here. *Pop.* 4,900.

Louse, *n.; pl.* LICE. [A. S. *lus,* pl *lys;* Du. *luis;* Ger. *laus.*] (*Zoöl.*) A family of parasitic insects, order *Anoplura,* (q. v.)

—*v. a.* To clean from lice.

Lousewort, (*lows'wurt,*) *n.* (*Bot.*) See PEDICULARIS.

Lous'ily, *adv.* In a mean, paltry manner; scurvily. (Low.)

Lous'iness, *n.* The state of abounding with lice.

Lous'y, *a.* [Ger. *lausig.*] Swarming with lice; infested with lice.—Mean; low; contemptible. (Low.)

Lout, *n.* A mean, awkward fellow; a bumpkin; a clown.

Louth, (*lowth,*) a maritime co. of Ireland, on its E. coast, being the most N. of the prov. of Leinster, having E. the Irish Sea, N. Carlingford Bay, which separates it from Down and Armagh, W. and S. Monaghan and Meath. *Area,* 315 sq. m. The surface is flat, with the exception of the lofty range at the N., which stretches E. and W., and terminates at an elevation of 1,935 feet in Carlingford Mountain, overlooking the bay of that name. The soil is generally fertile and well cultivated. *Rivers.* Boyne and Dee. *Prod.* Wheat, barley, and oats. *Manuf.* Linens, to a great extent. The chief towns are Drogheda, Dundalk, and Ardee.

—A decayed town of Ireland, in the above co., about 5 m. S.W. of Dundalk; *pop.* 700.

Louth, a town of England, in Lincoln co., 22 m. E.N.E. of Lincoln. *Manuf.* Carpets, paper, and soap, which, however, are unimportant. *Pop* 11,600.

Lou'tre (or OT'TER) **Riv'er,** in *Missouri*, enters the Missouri River from Montgomery co.

Lout'ish, *a.* Clownish; rude; awkward.

Lout'ishly, *adv.* In an awkward manuer; like a clown.

Lout'ishness, *n.* Clownishness.

Louvain, (*loo va.*) [Du. *Leuven.*] A town of Belgium, prov. of Brabant, on the Dyle, 16 m. E.N E. of Brussels. Its walls, which are of brick, have a circuit of nearly 7 m., a portion of which is now converted into boulevards. A large part of the inclosed area consists also of fields and gardens. The town-hall, begun in 1440, and completed in 10 years, is one of the finest specimens of the florid Gothic in Europe. The university of Louvain was founded in 1426. It had, in its most prosperous days, more than forty colleges. This famous university, after being suppressed by the French in 1797, was reëstablished in 1817. In the 14th century, *L.* was noted for its woollen and linen manufacture, which supported, it is said, 150,000 employees. It has still some manufactures of woollens, lace, cotton yarn, &c.; but it is principally celebrated for its beer. It has also a considerable trade in corn, flax, hemp, and the produce of the surrounding country.

Louvau, (*loo'van,*) a river of Norway, rising in the district of Christiania, and after a S.S.E. course of 100 m., falling into the Skager-rack, near Laurvig.

Louvat, (*loo'va,*) a river of Russia, rising in the Witepsk marshes, and flows through the governments of Pskov and Novgorod into Lake Ilmen. Its total length is 267 miles, and it is navigable for barges of 50 tons as far as Kholm, more than 80 m. from its mouth.

Louviers. (*loo've-ai,*) a town and parish of France, dept. of Eure, on the river Eure, 16 m. S.E. of Rouen. It consists of an old and new town. The former is built chiefly of wood; the latter has a broad and elegant street, with well-built brick and stone houses. *L* was formerly a fortress of some strength. It is now, however, distinguished for its industry, and ranks as one of the chief seats of woollen manufacture in France. *Manuf.* Fine broadcloths and woollen yarns chiefly: also, cotton yarn, linen thread, and machinery. The woollen manufacture employs about 7,000 hands.

L'Ouverture, TOUSSAINT, (*loo'vair-toor,*) a negro, B. at St. Domingo, 1748. He assisted the French general Laveaux in driving the English and Spanish from the island of St. Domingo, subsequently became commander-in-chief of the army of St. Domingo, and, in 1800, caused himself to be named president. In 1812 he refused to recognize General Leclerc, who was sent to reëstablish French authority, but was compelled to capitulate, and was transported to France, where he died, 1803.

Louvre, Louver, (*loo'ver,*) *n.* [Fr. *l'ouvert,* the opening, from *ouvrir,* to open.] (*Arch.*) A turret, or small lantern (Fig. 1637), placed on the roofs of ancient halls, kitchens, &c., to allow of the escape of smoke, or to promote ventilation; originally, they were entirely open at the sides, or closed only with narrow boards, placed horizontally and sloping, and at a little distance apart, so as to exclude rain and snow without impeding the passage of the smoke. When, as was formerly by no means uncommon, fires were made on open hearths, without flues for the conveyance of the smoke, louvres were indispensable, and when not required for use they were very frequently erected for ornament, but in the latter case were usually glazed, and many which once were open have been glazed in later times. Similar in structure to *lanterns,* they were used only for allowing the smoke to escape, while the lantern was especially for admitting light.

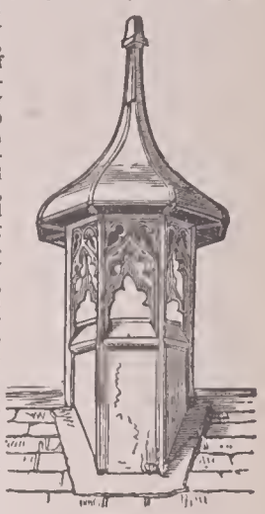


Fig. 1637.
LOUVRE AT LINCOLN COLLEGE, (Oxford.)

Louvois, (*loo'vwäh,*) FRANÇOIS MICHEL LETELLIER, MARQUIS DE, minister of war to Louis XIV., B. at Paris, 1641. After 1666, he had the whole management of the ministry of war, and soon exercised a despotic control over the king and the army. His extensive knowledge, his decision, activity, industry, and talents, rendered him an able minister; but he was regardless of the rights of human nature, lavish of the blood and treasure of France, and too much of a despot to deserve the appellation of a great statesman. He caused the Palatinate to be wasted by fire and sword in 1674. For some time he was, after the king himself, the most powerful man in France. After the death of Colbert, financial affairs came under his control; and the system of extortion and borrowing which he pursued was among the causes of the Revolution. He partially lost favor with the king by counselling him against his marriage with Madame de Maintenon, but afterwards instigated the persecution of the Protestants, and involved France in the long war with the German empire, 1688–97. In 1689, with the alleged view of securing the confines of the kingdom, he again caused the Palatinate to be desolated. Madame de Maintenon directed the attention of the king to these atrocities, who thereupon forbade the burning of Treves; but *L.* declared that, to save trouble to the king's conscience, he had already issued orders for reducing that city to ashes. The king, upon hearing this reply, seized the tongs from the fireplace, and would have struck his minister with that ready weapon, if Madame de Maintenon had not stepped between. Such scenes were repeated from time to time, and the health of the vain and ambitious minister gave way. He died suddenly, in 1691. Louis is said to have rejoiced at his death.

Louvre, (*loo'v(r.*) The name of a celebrated public building of Paris, situated in the N. part of the city, near the right bank of the Seine. In the time of Dagobert, a hunting-seat existed here, the woods extending over all the space which is now occupied by the northern part of the city down to the banks of the Seine. It was converted into a stronghold by Philip Augustus in 1214, and used as a state prison. Charles V. (1364–80) added some embellishments to it, and brought thither his library and his treasury; and Philip I., in 1528, erected that part of the palace which is now known as the gallery of Apollo. Henry IV. laid the foundation of the gallery which connects the Louvre on the south side with the Tuileries. Louis XIII. erected the centre; and Louis XIV., according to the plan of the physician Perrault, the elegant façade toward the east, together with the colonnade of the *L.* That monarch afterwards chose the palace at Versailles, and from that time to the middle of the 18th century the works were interrupted. They were again commenced, under the direction of M. de Marigny, but were again interrupted by the Revolution, when the *L.* was declared to be national property, and its contents roughly handled by the populace. When the great number of works of art seized in Italy by the armies of Napoleon made it necessary to assign a proper place for their reception, the architect Raimond was selected to conduct the work; and Percier and Fontaine, who, in 1803, were charged by Napoleon with its resumption, built the great staircase of the museum proper, the museums of ancient art, the Egyptian museum, &c. After the Restoration, the work was again brought to a stand-still; and nothing was done until after the revolution of 1848. Two million francs were devoted by the provisional government to the repairs of the old *L.*, under the direction of M. Duban, who restored the Apollo gallery. A resolution having been passed by the provisional government in favor of the completion of the whole building, the foundation-stone

of the new *L.* was laid on the 25th of July, 1852, and the work completed in 1857, at a cost of nearly six million francs. The *L.* now consists of two parts, — the *old* and *new Louvre*. The former is nearly a square, 576 feet long and 538 wide, and inclosing a quadrangle of about 400 feet square; its eastern façade, looking towards the church of St. Germain l'Auxerrois, is a colonnade of 28 Corinthian columns (Fig. 645), and one of the finest works of architecture of any age or country. The new Louvre consists of two vast lateral piles of buildings, projecting at right angles from the two parallel galleries, which formerly joined the old *L.* with the Tuileries, and formed the eastern boundary of the Place du Carrousel. Turning into the Place Napoléon III., they presented on each side a frontage of 590 feet, intersected by three sumptuous pavilions, intended to accommodate the minister of state, the minister of the interior, and the library of the *L.* Some of the galleries on the upper stories are set apart for permanent and annual exhibitions of works of art. In the central part of the building is the council-chamber, to be used as an assembly-room for the public bodies of the empire on the opening of the legislature, and on other solemn occasions. The Tuileries, before its burning by the communists and subsequent demolition, and the *L.* formed together a single palace of a magnitude and splendor which can be paralleled nowhere else. The total space covered or inclosed by the *L.* is nearly 60 acres.

Lov'able, *a.* Worthy of love; amiable.

Lovage, (*luv'ej,*) *n.* (*Bot.*) See Ligusticum.

Love, (*luv,*) *n.* [A.S *lufian, lufigran;* Ger. *liebe.*] An affection of the mind excited by beauty or worth of any kind, or by the qualities of an object which communicate pleasure, sensual or intellectual; ardent or passionate affection.—Courtship. — Strong or fond attachment; the tender passion between the sexes.—Patriotism; the attachment one has to his native land. — Benevolence; good-will.—The object beloved; — a word of endearment. — Cupid, the god of love.

(*Ethics.*) One of the primary passions of the human mind. It has been defined to be the internal feeling of good-will and kindness which one intelligent being bears to another, and the expression of that benevolence in words and acts which gratify and benefit another. In its full and proper sense, the inward emotion and the outward act are united; for neither the doing good nor wishing good to another can, of itself, in strict propriety, be termed love. Reciprocity is almost an essential element of love; all durable love is mutual. This passion forms one of the most prominent features of the Christian religion; and hence the incomparable superiority of Christianity to any other system of religion or morals. The sum of the Christian religion is love to God and love to our fellow-man. "If a man say that he love God and hate his brother, the truth is not in him."—On what is commonly termed *Platonic love*, very mistaken ideas prevail. It is generally regarded as a pure spiritual affection, abstracted from all carnal desires, and terminating in itself. The dialogue in which Plato treats of love is indeed very mystical and allegorical; but the thing principally intended to be brought out by him, and consequently that which ought to be understood by Platonic love, evidently is the ascent of the soul unto God by the steps of inferior and subordinate beauties,—from the many beauties to the chief beauty, that is, to God. The steps thereof are, according to his idea, as follows; from the beauty of bodies to the beauty of the soul: from the beauty of the soul to the beauty that is in the offices of life and laws; and from thence to the beauty that is in the sciences; and lastly, from the beauty of the sciences to the immense ocean of beauty, that is, God, of whom he gives a noble and magnificent description, and details the happiness of him that shall enjoy Him. — Love is also used to denote that affection which becomes the bond of attachment and union between individuals of the different sexes, and makes them feel, in the society of each other, a kind of happiness which they experience nowhere else.

—*v. a.* To desire; to long after; to wish for; to regard with affection, on account of some qualities which excite pleasing sensations or desire of gratification; to have a strong, a tender, or a dutiful regard for. — To regard with passionate affection; to be enamored of. — To have benevolence or good-will towards.

—*v. n.* To delight; to take pleasure in.

Love-apple, (*luv'-ap'pl,*) *n.* (*Bot.*) The Tomato. See Lycopersicum.

Love'-bird, *n.* (*Zoöl.*) The name given to a beautiful and diminutive group of birds, comprising the genus *Psittacula*, fam. *Psittacidæ*, common in all warm parts of the world. They are distinguished by the tail being slightly graduated, and by having no furcula.

Love, (Court of.) [Fr. *cour d'amour.*] In mediæval France, a tribunal composed of ladies illustrious for their birth and talents, whose jurisdiction, recognized only by courtesy and opinion, extended over all questions of gallantry. Such courts existed from the 12th to the 14th century, while the romantic notions of love which characterized the age of chivalry were predominant. Some of the troubadours were often present to celebrate the proceedings in verse, and the songs of these minstrels were not unfrequently reviewed and judged by this tribunal.

Love, (Family of.) (*Eccl.*) A sect of religious fanatics that originated in Holland about the middle of the 16th century, holding tenets resembling those of the early Anabaptists.

Love'-favor, *n.* Something given to be worn in token of love; a gage d'amour.

Love'-feast, *n.* (*Eccl.*) A kind of religious social meetings, held periodically among the Methodists, and to which only members of their Church are admitted. They are evidently in imitation of the *agapæ* or love-feasts of the early Christian Church.

Love'-feat, *n.* The gallant act of a lover.

Love'-grass, *n.* (*Bot.*) See Eragrostis.

Love-in-i'dleness, *n.* (*Bot.*) A variety of violet.—See Viola.

Love-knot, (*luv'not,*) *n.* A knot of ribbon, &c., used as a token of love, or as representing mutual affection.

Love'lace, Richard, an English poet, b. in Kent, 1618, was a zealous Royalist, and suffered much for his attachment to Charles I. His poems are elegant, and he also wrote 2 plays,—*The Scholar*, a comedy, and *The Soldier*, a tragedy. D. 1658.

Love'laceville, in *Kentucky*, a post-village of Ballard co., about 250 m. W.S.W. of Frankfort.

Love'land, in *Ohio*, a post-village of Clermont co., abt. 23 m. N.E. of Cincinnati.

Love'-lass, *n.* A sweetheart; a mistress.

Love'less, *a.* Void of love; without tenderness. —Unattractive.

Love'-letter, *n.* A letter professing love; a letter of courtship; a billet doux.

Love'-lies-bleed'ing, *n.* (*Bot.*) See Amaranthaceæ.

Lovelily, (*luv'li-ly,*) *adv.* Amiably; in such a manner as to excite love.

Love'liness, *n.* Quality of being lovely; amiableness; qualities of body or mind that may excite love.

Lov'ell, in *Maine*, a post-twp. of Oxford co.

Lovell's Station, in *Pennsylvania*, a P. O. of Erie co.

Love'-lock, *n.* A curl, or lock of hair so called, worn by men of fashion in the reigns of Elizabeth and James I. of England.

Love'-lorn, *a.* Forsaken by one's love.

Lov'elton, in *Pennsylvania*, a post-village of Wyoming co., about 15 m. W. by S. of Tunkhannock.

Lovely, (*luv'ly,*) *a.* Lovable; that may excite love; possessing qualities which may invite affection; amiable; pleasing; beautiful; charming; delectable; delightful; enchanting.

Lov'er, *n.* One who loves; a friend; one who regards with kindness.—One who has a tender affection, particularly for a female; a suitor; an admirer; a wooer.—One who likes or is pleased with anything.

Lo'ver, *n.* (*Arch.*) The same as Louver.

Lov'er, Samuel, an Irish novelist, poet, musician, and artist, b. in Dublin, 1797. Starting in life as a painter, his early success secured his election, in 1828, as an academician of the Royal Hibernian Society of Arts. While still engaged as painter, he turned his attention to literature, and produced his celebrated *Legends and Tales illustrative of Irish Character*. Removing to London, in 1827, he published his popular novels, *Rory O'More*, *Handy Andy* (his best work), and *Treasure Trove*. In addition to these labors, he devoted himself to music, composed the comic operas of *Rory O'More*, the *Happy Man*, and the *White Horse of the Peppers*, and a collection of songs and ballads, some of which, as *Molly Carew*, *Rory O'More*, *The Angel's Whisper*, *Molly Bawn*, *The Four-leaved Shamrock*, &c., have achieved a world-wide popularity. In 1847 he visited the U. States, returning to England in the following year. In 1858 appeared his *Lyrics of Ireland*. This gifted and genial man d. in 1870.

Love'-sick, *a.* Sick or languishing with love or amorous desire.—Dictated by a languishing lover, or expressive of overpowering love.

Love'sickness, *n.* The state of being love-sick.

Love'-suit, *n.* Courtship.

Love'-trick, *n.* Art of expressing love.

Lov'ettsville, in *Virginia*, a post-village of Loudon co., about 166 m. N. of Richmond.

Love'ville, in *Delaware*, a post-vill. of New Castle co.

Lovi'lia, or Lovel'ia, in *Iowa*, a post-village of Monroe co., about 90 m. W.S.W. of Iowa City.

Lov'ing, *a.* Kind; affectionate; as, a *loving* wife.

Lov'ing-kind'ness, *n.* Tender regard; mercy; favor.

Lov'ingly, *adv.* With love; affectionately.

Lov'ingness, *n.* Kindness; affection.

Lov'ingston, in *Virginia*, a post-village, cap. of Nelson co., about 118 m. W. of Richmond.

Lov'ington, in *Illinois*, a post-village of Moultrie co., about 30 m. E. of Springfield.

Low, *a.* [Du. *laag;* Dan. *lav*, low; Icel. *lag*, a place depressed, *lagdr*, placed, *lagrentr*, low.] Laid, placed, or having place beneath some other thing or things; as, a *low* fence. — Laid prostrate; dejected; as, in *low* spirits. — Sunk; depressed below any given surface or place; as, a *low* valley. — Not high or elevated; not rising to the usual height; as, *low* in stature. — Declining near the horizon; deep; descending far below the adjacent ground. — Sunk to the natural level of the ocean by the retiring of the tide. — Below the usual rate or amount, or below the ordinary value; as, a *low* price. — Not high or loud, as, a *low* tone; grave; depressed in the scale of sounds. — Depressed in vigor; wanting strength or animation. — Depressed in condition; in an humble state; interior in rank; as, *low* life.—Mean; abject; grovelling; base; dishonorable; vulgar; as, *low* tricks.—Not elevated or sublime: not exalted in thought or action; common. —Submissive; reverent.—Weak; exhausted of vital energy; feeble; without force. — Moderate; not intense; as, a *low* fever. — In reduced circumstances; plain; simple. — Not rich, high-seasoned or nourishing.

—*adv.* Not aloft; not on high. — Under the usual price; at a moderate cost. — Near the ground. — In a mean condition. — In times not remote. — With a depressed voice; not loudly. — In a state of subjection, poverty, or disgrace.

—*v. n.* [A. S. *hlowan;* Du. *loeijan;* formed from the sound.] To bellow, as an ox or cow.

—*n.* The voice of a bovine animal; moo.

Low'-bell, *n.* [Du. *laeye.*] A bell used in a kind of fowling in the night, to awaken the birds, and by a flame or light, lure them into the net. — A term of familiarity; as, "peace, gentle *low-bell*."

—*v. a* To scare as with a low-bell.

Low-Church, *a.* (*Theol.*) A term commonly applied in the Church of England to those who form the more moderate party in the Church, having less ambitious notions of its authority and power, and being more tolerant in their conduct towards dissenters, — opposed to *High-Church*, q. v.

Low Countries, *n. pl.* A term frequently applied, in Europe, to portions of the country now constituting Belgium and Holland.

Lowden, in *Iowa*, a post-village of Cedar co., about 42 m. E.S.E. of Cedar Rapids.

Low-Dutch and **High-Dutch,** are terms somewhat improperly used for Dutch and German. The confusion seems to have arisen from *Deutsch* signifying German in the language of that country.

Lowe, Sir Hudson, the English jailer of Napoleon I. at St. Helena. The inflexible and unintelligible severity with which he discharged his odious duty, has been strongly denounced by Dr Barry O'Meara, and in the *Mémorial de St. Hélène*. The impressive and irrefutable protest of the Great Captive will attach to the name of *L.* an indelible stigma. On the death of Napoleon, *L.* returned to England, where he was very coldly received. He defended himself by producing the instructions of the British govt., which were very minute, strict, and severe, and left but little to the discretion of the governor; but was unable to escape the odium which naturally attached to the execution of such instructions. He d. in London, in very poor circumstances, 1844, in the 65th year of his age.

Low'ell, (*lo'el,*) the patronymic of an eminent family of Mass., descended from an old English stock, and of which the following members are the most noticeable:

L., John, LL.D., an American statesman and jurist, b. at Newburyport, 1743, (o.s.) He graduated at Harvard College in 1760, and after being admitted to the practice of law, settled in Boston in 1777, and became a member of the convention which framed the constitution of Massachusetts, in 1780. Dr. *L.* was one of the earliest advocates of the abolition of slavery, and aided its extinction in his State, in 1783. In 1781, he entered Congress, and, in 1801, was appointed Chief Justice of Massachusetts. D. 1802.

L., Francis Cabot, son of the preceding, b. 1775, has acquired celebrity as being the first to establish the cotton manufacture in the United States, and, also, as the founder of the town which bears his name, and which has since become the chief seat of textile manufactures in this country. D. 1817.

L., John, son of the preceding, b. at Boston, 1799, founded the Lowell Institute in that city, bequeathing $250,000 for its maintenance, and d. in India, 1836.

L., James Russell, a distinguished American poet, grandson of Judge Lowell, b. at Cambridge, Mass., in 1819, graduated at Harvard College in 1838, and studied the law, which, however, he has never practised. He embarked in authorship before leaving college, by the publication of a class poem. A volume of miscellaneous poems, entitled *A Year's Life*, appeared in 1841; a new collection containing a *Legend of Brittany*, *Prometheus*, and others, in 1844: *Conversations on some of the Old Poets*, containing a series of well-studied criticisms, both in prose and verse, giving indications of *L.*'s interest in the various practical and philanthropic questions of the day, in 1845; a third collection of poems, and *The Vision of Sir Launfal*, founded on a legend of the Search for the Holy Grail, in 1848; *A Fable for Critics*, in which he satirically passes in review the literati of the United States; and his most remarkable work, the *Biglow Papers*, a collection of humorous poems on political subjects, written in the Yankee dialect, in 1848. The latter has been frequently reprinted in England. The *Fireside Journal*, including graphic papers on Cambridge in old times, and a second series of the "Biglow Papers," appeared in 1864. His later works are, *Under the Willows and other Poems* (1868); *The Cathedral*, a poem (1869); *Among my Books*, and *My Study Windows* (1870), and *Three Memorial Poems* (1877). *L.* was for several months editor of a magazine called the "Pioneer," and was afterwards connected with the "Anti-Slavery Standard," and editor of the "Atlantic Monthly" and the "North American Review," to these, as well as to other periodicals, he had long been a contributor. He succeeded Mr. Longfellow as professor of Modern Literature at Harvard, in 1854. The degree of D.C.L. was conferred upon him in 1873 by Oxford, and LL.D., by the University of Cambridge, England, in 1875. In 1877 was appointed by President Hayes as Minister to Spain, and in 1880, Minister to England. Died Aug. 12, 1891.

Lowell, in *Georgia*, a village of Carroll co.; in *Illinois*, a post-village of La Salle co., about 13 m. S.W. of Ottawa; in *Indiana*, a village of Lake co.; in *Iowa*, a post-village of Henry co., about 65 m. S. by E. of Iowa City; in *Kentucky*, a post-village of Garrard co., about 38 m. S. of Lexington; in *Maine*, a post-town of Penobscot county.

Lowell, in *Massachusetts*, a city of Middlesex co., at the confluence of the Merrimac and Concord rivers, about 25 m. N. by W. of Boston: Lat. 42° 38′ 46″ N., Lon. 71° 19′ 2″ W. *L.* is one of the most important manufacturing cities of the U. S. It is regularly laid out, considering the unevenness of its site, for the most part substantially built, and contains many fine edifices. The Merrimac river has here a fall of 33 feet, which, by means of canals or feeders, has been utilized to the

James Russell Lowell

1819–1891

extent of over 12,000 horse-power. The cotton and woollen manufactures alone represent a total capital of $34,000,000, running 600,000 spindles, employing 21,000 hands, and producing, weekly, 3,500,000 yards of cotton cloth; 30,000 yards of woollen cloth; 50,000 yards of carpet, 3,200 shawls, and 8,500 dozen hosiery. The other principal manufactures are machinery, locomotives, cutlery, dyestuffs and chemicals, furniture, firearms, &c. Previous to 1821, the locality was known as Pawtucket Falls, and the only improvement was a canal about 1½ m. in length, constructed to raft lumber around the Falls. At this period the great advantages of such an immense water power attracted the attention of certain Boston capitalists; they purchased the adjoining lands, together with the interest in the canal; laid out town lots, established factories, and the result of their enterprise is a large, populous, and wealthy manufacturing city. The population, which in 1822 did not amount to 200, reached 84,367 in 1895.

Low'ell, in *Michigan*, a post village and township of Kent county, about 18 miles E. by S. of Grand Rapids.

—A former village of Washtenaw co., about 5 m. E. by S. of Ann Arbor.

Lowell, in *Minnesota*, a township of Polk co.

Lowell, in *North Carolina*, a post-village of Gaston co., on the Southern R.R.

Lowell, in *New York*, a post-village of Oneida co.

Lowell, in *Ohio*, a post-village of Washington co., about 10 m. N. of Marietta.

Lowell, in *Vermont*, a post-town and township of Orleans co. *Pop.* (1897) 1,215

Lowell, in *Wisconsin*, a post-village and township of Dodge county, about 38 miles north-east of Madison.

Lowell Mills, in *Indiana*, a small village of Bartholomew co.

Lo'wellville, in *Ohio*, a post-village of Mahoning co., about 6 m. S.E. of Youngstown. *Pop.* (1897) 950.

Low'enberg, or **Lnmberg,** (*loom'bairg,*) a town of Austria, prov. of Silesia, on the Bober, 16 m. S.W. of Liegnitz. *Manuf.* Woollens, linens, and cottons. *Pop.* 5,500.

Lower, (*lō'er,*) *v. a.* To cause to descend; to let down; to take or bring down; to depress; to suffer to sink downward.—To bring downward as in rank or feelings; to humble; to degrade; to debase.—To bring down, as in value or amount; to lessen; to diminish, to reduce.

—*v. n.* To fall; to sink; to grow less.—To let down the brows; to look sullen; to frown.—To appear dark or gloomy; to be clouded; to threaten a storm.

Low'er, in *New Jersey*, a township of Cape May co.

Lower Al'len, in *Pennsylvania*, a township of Cumberland co.

Lower Alloway's Creek, in *New Jersey*, a township of Salem co.

Lower Augns'ta, in *Pennsylvania*, a township of Northumberland co.

Lower Bank, in *New Jersey*, a P. O. of Burlington co.

Lower Bartlett, in *New Hampshire*, a post-village of Carroll co., abt. 65 m. N.N.E. of Concord.

Lower Blue Lick, in *Kentucky*, a village of Nicholas co., abt. 58 m. E.N.E. of Frankfort. It is noted for the mineral springs in the vicinity.

Lower (or Old) **California,** a dept. of Mexico, forming a peninsula of the S.W. coast of N. America, which extends N.W. from Lat. 22° 52′ N., Lon. 109° 53′ W., to Lat. 32° 30′ N., Lon. 117° 30′ W. It is abt. 750 m. in length by an average breadth of 90 m. *Area,* abt. 70,000 sq. m. The peninsula is of volcanic origin, and is traversed throughout its entire length by a continuation of the Sierra Nevada, which averages an elevation of 3,000 feet, and culminates at Cerro de la Giganta, a peak 4,900 feet in height. *Rivers.* Few, small, and unimportant, two falling into the Gulf of California, and three into the Pacific. There are, however, numerous copious springs along the interior; but they seldom form streams, their waters being either absorbed by the arid sandy earth, or are lost in the subterranean channels among the rocks. This scarcity of water renders the soil almost uniformly sterile, and consequently the vegetation is very scanty even in the lower regions, while the more elevated are absolutely bare and desolate. There are some spots, however, which have an extraordinary fertility, and produce maize, wheat, peas, manioc, grapes, oranges, and other tropical fruits; but such tracts are very rare. The native vegetation consists merely in briers, small shrubs, or dwarf-trees, and a gigantic species of cactus. The chief towns are La Paz (the capital), Loretto, and Rosario. *L. C.* was discovered by Fortuno Ximenes, in 1534. *Pop.* abt. 20,000.

Low'er-case, *n.* (*Print.*) The case containing the small letters, usually placed at the bottom of the frame, — whence its name.

—*a.* (*Print.*) Applied to small letters, in opposition to *capitals.*

Lower Chance'ford, in *Pennsylvania*, a township of York co.

Lower Chich'ester, in *Pennsylvania*, a township of Delaware co.

Lower Dick'inson, in *Pennsylvania*, a township of Cumberland co.

Lower Em'pire. (*Hist.*) The designation applied to the Roman Empire in its decline, commencing, according to some historians, with the reign of Constantine I., and, according to others, with its separation into the Eastern and Western empires at the death of Theodosius I., in 395. The term is applied more particularly to the Eastern Empire (*q. v.*). Its history, (*L'Histoire du Bas Empire,*) by Lebeau and Ameilhou, appeared at Paris, in 29 vols., in 1757.

Lower Evesham, in *New Jersey*, a village of Burlington co.

Lower Gil'manton, in *New Hampshire*, a post-office of Belknap co.

Lower Held'elberg, in *Pennsylvania*, a post township of Berks co.

Lower Lake, in *California*, a post-village of Lake co., abt. 20 m. S.E. of Lakeport.

Lower Law'rence, in *Ohio*, a village of Washington co., abt. 100 m. E.S.E. of Columbus.

Lower Lea'cock, in *Pennsylvania*, a township of Lancaster co.

Lower Macungy, (*ma-kung'hee,*) in *Pennsylvania*, a township of Lehigh co.

Lower Mahantango, in *Pennsylvania*, a post-township of Schuylkill co.

Lower Maho'noy, in *Pennsylvania*, a township of Northumberland co.

Lower Make'field, in *Pennsylvania*, a township of Bucks co.

Lower Marl'borough, in *Maryland*, a post-village of Calvert co., abt. 26 m. S.S.W. of Annapolis.

Lower Mer'ion, in *Pennsylvania*, a post-township of Montgomery co.

Lower Mil'ford, in *Pennsylvania*, a township of Lehigh co.

Lower Mount Beth'el, in *Pennsylvania*, a township of Northampton co.

Lower Naz'areth, in *Pennsylvania*, a township of Northampton co.

Lower New'port, in *Ohio*, a P. O. of Washington co.

Lower O'kau, in *Illinois*, a township of Coles co.

Lower Ox'ford, in *Pennsylvania*, a township of Chester co.

Lower Pax'ton, in *Pennsylvania*, a township of Dauphin co.

Lower Penn's Neck, in *New Jersey*, a township of Salem co.

Lower Prov'idence, in *Pennsylvania*, a post-township of Montgomery co.

Lower Peach-tree, in *Alabama*, a post-village of Wilcox co.

Lower Sag'inaw, in *Michigan*, the former name of Bay City (*q. v.*).

Lower Sag'inaw, in *Michigan*, a village of Bay co., about 112 m. N.N.W. of Detroit.

Lower Saint Clair, in *Pennsylvania*, a township of Allegheny co.

Lower Sa'lem, in *Ohio*, a P. O. of Washington co.

Lower Sal'ford, in *Pennsylvania*, a township of Montgomery co.

Lower Sandus'ky, in *Ohio.* See Tremont.

Lower Sau'cou, in *Pennsylvania*, a post-township of Northampton co.

Lower Smith'field, in *Pennsylvania*, a township of Monroe co.

Lower Squan'kum, in *New Jersey*, a post-office of Monmouth co.

Lower Swata'ra, in *Pennsylvania*, a township of Dauphin co.

Lower Three Creek, in *S. Carolina*, enters the Savannah River from Barnwell dist.

Lower Towamen'sing, in *Pennsylvania*, a township of Carbon co.

Lower Tur'keyfoot, in *Pennsylvania*, a township of Somerset co.

Lower Uwchlan, in *Pennsylvania*, a township of Chester co.

Lower Valley, in *New Jersey*, a small village of Morris co.

Lower Wa'terford, in *Vermont*, a post-village of Caledonia co., abt. 35 m. E.N.E. of Montpelier.

Lower Wind'sor, in *Pennsylvania*, a township of York co.

Low'eringly, *adv.* With cloudiness or threatening gloom.

Low'ermost, *a.* Lowest.

Low'ery, *a.* Cloudy; gloomy.

Lowestoft, (*lōs'toft,*) a town of England, on the E. coast of Suffolk co., 20 m. S.E. of Norwich. It is a resort for visitors as a watering-place during the summer season. Being built on the most E land of England, it has two light-houses, and its harbor, which is spacious, though of somewhat difficult access, is defended by forts and batteries. *Manuf.* China-ware, and ropes. But the chief consequence of *L.* as a port is owing to its herring, cod, mackerel, and sprat fisheries. *Pop.* 11,729.

Loweville, (*lō'vil,*) in *Alabama*, a village of Madison co., abt. 180 m. N. of Montgomery.

Low-German, *n.* [Ger. *Platt-deutsch,* or *Niederdeutsch.*] (*Philol.*) That softer German dialect which was formerly spoken over a great part of Germany, and which is even now the language of the common people in most parts of North or Lower Germany. It has also maintained itself in some legal forms; thus the Hamburg oath of citizenship is in *L. G.* It is not, as is sometimes supposed, a corrupt language, but a distinct dialect as much as the High-German, though circumstances have caused the latter to become the language of literature and of the educated classes. — See German Language and Literature.

Low Hamp'ton, in *New York*, a post-village of Washington co.

Low Hill, in *Pennsylvania*, a post-township of Lehigh co.

Lowicz, (*lo'iks,*) a town of Russian Poland, 44 m. W. S.W. of Warsaw, on the Bzura, an affluent of the Vistula. *Manuf.* Linen-weaving and tanning. *Pop.* 8,200.

Lōwigite, *n.* (*Min.*) A var. of alum-stone found at Tolfa in Italy and Tabrse in Siberia, and differing from ordinary alum-stone only in containing a less amount of water.

Low'ing, *n.* The bellowing or cry of cattle.

Low'land, *n.* Land which is low with respect to the neighboring country; a low or level country.

Low'lander, *n.* An inhabitant of the Lowlands.

Low'lands, *n. pl.* A term applied to the southern parts of Scotland, in contradistinction to the *Highlands,* which comprise the northern and north-western parts.

Low'lihood, Low'lihead, *n.* A lowly state.

Low'lily, *adv.* Humbly; without pride.—Meanly; without dignity.

Low'liness, *n.* State or quality of being lowly: freedom from pride; humility; humbleness of mind.—Meanness; want of dignity; abject depression.

Low'ly, *a.* Not high; not elevated in place.—Having a low esteem of one's own worth; free from pride; modes; humble.—Wanting dignity or rank; low; mean —Not lofty or sublime; humble.

"These rural poems and their *lowly* strains."—*Dryden.*

—*adv.* Humbly; meekly; modestly.

—Meanness; in a low condition; without grandeur or dignity.

Low'moor, in *Iowa*, a post-village of Clinton co., about 9 m. E. of De Witt.

Lowndes (*lowndz*), in *Alabama*, a S. central co.; *area,* about 720 sq. m. *Rivers.* Alabama river, and Pintelala, Letohatchee, and other creeks. *Surface,* uneven; *soil,* fertile. *Cap.* Hayneville. *Pop.* (1890) 31,550.

Lowndes, in *Georgia*, a S. co., adjoining Florida; *area,* about 431 sq. m. *Rivers.* Withlacoochee and Little rivers, besides several smaller streams. *Surface,* level; *soil,* fertile. *Cap.* Valdosta. *Pop.* (1890) 15,102.

Lowndes, in *Mississippi*, an E. co., adjoining Alabama; *area,* about 536 sq. m. *Rivers.* Tombigbee and Oktibbeha rivers, and Luxapalilla and other creeks. *Surface,* gently undulating; *soil,* very fertile. *Cap.* Columbus. *Pop.* (1890) 27,047.

Lowndes, in *Missouri*, a post-village of Wayne co., about 160 m. S.E. of Jefferson City.

Lowndes'borough, in *Alabama*, a post-village of Lowndes co., abt. 25 m. W.S.W. of Montgomery.

Lowndes'ville, in *S. Carolina*, a post-village of Abbeville dist., abt. 110 m. W. of Columbia.

Low'ness, *n.* The state of being low or depressed; state of being less elevated than something else.—Meanness of condition, mind, or character.—Want of dignity.—Want of sublimity in style or sentiment.—Submissiveness.—Depression of mind; want of courage or fortitude; dejection.—Depression in fortune; a state of poverty.—Depression in strength or intensity.—Depression in price or worth.—Graveness or softness of sound.

Low'-pressure, *a.* (*Steam-engine.*) A pressure only equal, or inferior, to that of the atmosphere.

Low Pressure steam-engine, is where the steam-engine is worked at a low pressure of steam, when the steam is drawn off into a condenser apparatus

Low'rence's Mills, in *N. Carolina*, a village of Lincoln co.

Low'ry, in *Virginia*, a post-office of Bedford co.

Low'ry's Ferry, in *Georgia*, a village of Murray co.

Low'ry's Turnout, in *S. Carolina*, a village of Barnwell dist.

Low'rytown, in *Pennsylvania*, a village of Carbon co., on the Lehigh River, abt. 12 m. above Manch Chunk.

Low'-spirited, *a.* Not having animation and courage; dejected; depressed; not lively or sprightly

Low'-spiritedness, *n.* State of low spirits; dejection of mind.

Low Spirits, *n.* Depression or dejection of mind; hypochondriasis.

Low Sunday, *n.* The first Sunday after Easter;—so called because it is a lower festival than Easter-day, and that some part of the services proper to Easter-day is repeated on that day.

Lowt, *n.* The same as Lout, *q. v.*

Low'ville, in *New York*, a post-village and township of Lewis county, about 55 m. N. by W. of the city of Utica.

Low'ville, in *Pennsylvania*, a village of Erie co., abt. 15 m. S.E. of Erie.

Low'ville, in *Wisconsin*, a post-village and township of Columbia county, about twenty-two miles N. of Madison.

Lox'a. See Loja.

Loxodrom'ic, *a.* [Fr. *loxodromique.*] Pertaining or relating to loxodromics; as, *loxodromic* tables.

Loxodrom'ics, *n. sing.* [Fr. *loxodromie*; Gr. *logos,* and *dromos.*] The art of oblique sailing by the rhomb, which always makes an equal angle with every meridian; that is, when you sail neither directly under the equator, nor under one and the same meridian, but across them; hence the table of rhombs, or the transverse tables of miles, with the table of longitudes and latitudes, by which the sailor may practically find his course, distance, latitude, or longitude, is called loxodromics.

Loxod'romism, *n.* The act of moving or sailing in a loxodromic line or curve.

Loy, *n.* (*Agric.*) A long, narrow spade, used in stony lands.

Loy'al, *a.* [Fr. *loyal*; Norm. *loial*; from Lat. *legalis,* pertaining to the law, from *lex, legis,* a law. See Law.] Faithful and obedient to the laws.—Faithful to a prince or superior.—True to plighted faith, duty, or love; not treacherous.

Loyalhan'na, in *Pennsylvania*, a township of Westmoreland co.

Loyalhan'na Creek, in *Pennsylvania*, joins the Conemaugh near Salzburgh to form the Kiskiminetas River.

Loy'alist, *n.* A person who adheres to his sovereign; one who maintains his allegiance to his prince, and defends his cause in times of revolt.

Loy'ally, *adv.* With fidelity to a prince or sovereign, or to a husband or lover.

Lo'yal Le'gion, (The Military Order of the.) An association formed by officers and honorably discharged officers of the Army, Navy, and Marine Corps of the United States, April 15, 1865, to "cherish the memories and associations of the war waged in defence of the unity and indivisibility of the Republic; to strengthen the ties of fraternal fellowship and sympathy formed from companionship in arms; to advance the best interests of soldiers and sailors of the U. S.; to extend all possible relief to unfortunate officers and their families; to foster the cultivation of military and naval science; to enforce unqualified allegiance to the general Government; to protect the rights and liberties of American citizenship, and to maintain national honor and independence." The principles which form the basis of the order are "true allegiance to the U. States, based upon a paramount respect for and fidelity to the National Constitution and Laws, manifested by the discountenancing of whatever may tend to weaken loyalty, incite to insurrection, treason, or rebellion, or in any manner to impair the efficiency and permanency of our Free Institutions." The organization consists of State Commanderies and a National Commandery known as the Commandery-in-chief. The members or companions of the order are of 3 classes: "1st. Commissioned officers of the U. S. Army, Navy, and Marine Corps, — Regular and Volunteer, — who have been actually engaged in the National service during the late rebellion. 2d The eldest male lineal descendants of Companions of the First (1st) Class, or collateral relations. 3d. A limited number of honorary members under certain restrictions of gentlemen in civil life, who during the late rebellion have been specially distinguished for conspicuous and consistent loyalty to the National Government, and who have been active and eminent in maintaining the supremacy of the same." The insignia of the order (Fig. 1638) consists of a badge pendent by a link and a ring of gold, from the ribbon. — The badge of the order is: — *obverse* — a cross of 8 points gold; cantoned with rays of gold, — forming a star. The cross enamelled azure (blue); charged with a smaller cross of like proportions, enamelled white and edged with gold. In the centre thereof, within a circle, enamelled gules (red), the National eagle displayed in gold. On the circle, gold, the motto — "*Lex Regit, Arma Tuentur.*" — In relievo, *reverse* — the star as above described. In the centre thereof, within a circle enamelled gules (red), two sabres in saltire, their points in base; surmounted by a faces pale-wise, ensigned with the Phrygian cap: environed in chief with an arch of 13 stars; in base, a wreath of laurel: — all in gold. On the circle, gold, the legend — "*M. O. Loyal Legion U. S. MDCCCLXV.*" — in relievo. — It is worn in the centre of the left breast, suspended by the ribbon of the order, which is for Companions of the First (1st) Class, a red ribbon $\frac{8}{16}$ of an inch wide, bordered with white and edged with blue, each $\frac{7}{2\,0}$ of an inch wide; — for Companions of the Second (2d) and the Third (3d) Class, a blue ribbon $\frac{8}{16}$ of an inch wide, bordered with white and edged with red, each $\frac{7}{2\,0}$ inch wide. See *United Service Magazine* (Philada.), Feb. 1889, for historical sketch of the institution of this Order.

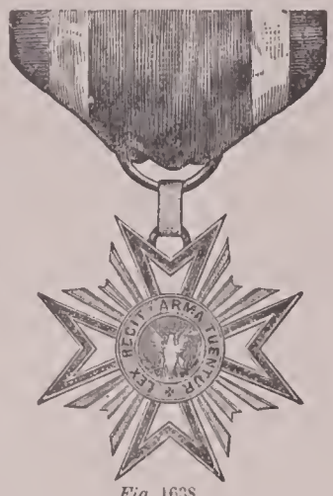


Fig. 1638.

Loy'alsock Creek, in *Pennsylvania*, enters the Susquehanna River below Williamsport.

Loy'alty, *n.* [Fr. *loyauté*, from L. Lat *legalitas.*] Faithful adherence to the laws or to allegiance; fidelity to a prince or sovereign, or to a husband or lover.

Loy'alty Islands, a group in the Pacific Ocean, E. of New Caledonia, consisting of 2 large and 3 small islands, the 3 largest being inhabited. — Lifu is the most N., and the largest: Lat., at the N. extremity, 20° 27′ S., Lon. 167° E. It is 37 m. long, from 10 to 20 broad, is of coral formation, and has no harbor. It is about 250 ft. in elevation, level on the top, and thickly wooded. *Pop.* Estimated at 3,000. — Mare, discovered in 1841, is about 20 m. long and 10 broad. It is of coral formation, level, and thickly wooded. It is densely populated by a wild race of small stature, the number of which is not ascertained.

Loyd. See Lloyd.

Loyds'ville, in *Ohio*, a post-village of Belmont co., abt. 16 m. W. of Wheeling, W. Va.

Loyo'la, (St. Ignatius de,) founder of the Society of Jesuits, was b. in 1491, of a noble family, in the Spanish province of Guipuscoa. He was at first in the army, and served with distinguished bravery; but having been severely wounded at the siege of Pampeluna, he beguiled his time with books; and on reading the Lives of the Saints, his imagination became highly excited, and he determined to devote himself from that time to works of piety. He began by making a pilgrimage to Jerusalem, not from a mere wish to see those places which had been hallowed by the presence of our Lord, but in the hope of converting the infidels, who were masters of the Holy Land, or of gaining the palm of martyrdom in the attempt. Having accomplished this painful and perilous journey, he returned to Spain, more unprovided even than he had left it. In 1526, he went to the university of Alcala, where he found some adherents; but the Inquisition imprisoned him for his conduct, which appeared strange, and rendered him suspected of witchcraft. He was not delivered from the prison of the Holy Office until 1528, when he went to Paris to continue his studies. Here he became acquainted with several Spaniards and Frenchmen, who were afterwards noted as his followers. They were Pierre Favre, Francis Xavier, Lainez, Salmeron, Robadilla, and Rodriguez. They conceived a plan of an order for the conversion of heathens and sinners, and, on Ascension Day, in 1534, they solemnly pledged themselves to this great work in the subterranean chapel of the abbey of Montmartre. They met again, in 1536, at Venice, whence they proceeded to Rome, and received the confirmation of their fraternity from Pope Paul III., as *Clerks of the Society of Jesus.*

Fig. 1639. — St. Ignatius de Loyola.

In 1541, Ignatius was chosen general of the society, invested with absolute authority, and subject only to the Pope; he continued his abstinence and penances during life; and died in 1566. *L.* was in person of a middle stature, and of olive complexion, with a bald head, eyes full of fire, and an aquiline nose, majestic air, and noble countenance. He is often described as a fiery enthusiast; but nothing could be further from the truth. Though by nature of an ardent temperament, his actions were so entirely under his control that during his life he was commonly thought cold and phlegmatic. His outward bearing gave no sign of the religious zeal which burnt in his heart. Obedience, humility, and resignation amounting to indifference, were among the virtues that he practised and loved to inculcate. To him are due, not alone in the general spirit, but even in most of their details, all the rules and constitutions of his order. From him also originated several works of great charity and benevolence, the germs of great institutions still maintained in Rome. But the great source of his influence upon the spiritual interests of the world is his well-known *Exercitia Spiritualia.* He died at Rome, it may well be believed, prematurely, being worn out by his long-continued austerities, July 31, 1556. He was solemnly canonized as a saint by Gregory XV. in 1622. His life has been written in almost every European language. The biographies of Ribadaneira, of Maffei, of Bartoli, and Bonhours are the best known and most popular among Roman Catholics.

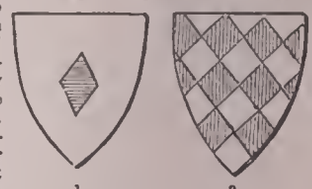
Lozère, (*lo'zair.*) a dept in the S. of France, bet. Lat 44° and 45° N., Lon. 3° and 4° E., having N. Haute-Loire and Cantal, E. Gard and Ardèche, S. Gard, W. Cantal and Aveyron; *area*, 1,973 sq. m. This dept. lies chiefly on the N.W. slope of Cevennes. The surface varies from 2,500 to 5,000 feet above the sea; but the average elevation is 3,800 feet. It derives its name from the Lozère Mountain in the S.E., one of the principal summits of the Cevennes, 4,888 ft in height. *Rivers.* Allier, Tarn, Lot, and Gard, all of which have their sources in this dept. The soil is stony in the N. and S., and calcareous in the centre. Agriculture is very backward. Sheep are reared in large numbers, and the greater portion of the inhabitants subsist on potatoes and chestnuts. *Min.* Iron, lead, copper, antimony, and silver. *Chief towns.* Mende (the cap.), Florac, and Marvejols. *Pop.* 137,263.

Lozenge, (*loz'enj,*) *n.* [Fr. *losange*; Gr. *lozos*, slanting, oblique, and *gonia*, an angle; Lat. *angulus.*] (*Geom.*) An oblique-angled parallelogram; a rhombus; a figure with four equal sides, having two acute and two obtuse angles; something in the shape of a rhomb.

— A small cake or cube of sugar, &c.

(*Pharmacy.*) A medicinal substance made up into a small cake, to be gradually dissolved in the mouth. Sugar, gum, and starch are the usual inert parts of lozenges; and minute quantities of active substances are added, according to the purposes for which they are intended: such as ipecacuanha or squills, for pectoral *L.*; extract of poppies or opium, for sedative *L.*; cayenne pepper as a stimulant; oil of peppermint as an antispasmodic, &c.

(*Her.*) A shield in the shape of a parallelogram, with two obtuse and two acute angles, in which the arms of maidens and widows are especially borne; or a charge of such shape (1, Fig. 1640) that the horizontal diameter must be at least equal to the sides; otherwise it is not a *L.*, but a *fusil.*


1 2
Fig. 1640. — Lozenge.

Lozenged, *a.* Shaped or formed like a lozenge.

Loz'engy, *a.* (*Her.*) Having the field or charge covered with lozengee of alternate tinctures. (2, Fig. 1640.)

Lu, *n.* and *v. a.* The same as Loo.

Lub'bard, *n.* A lazy, sturdy fellow.

Lubben, (*loob'ben,*) a town of Prussia, prov. of Brandenburg, 40 m. S.W. of Frankfort, on an island formed by the Spree and the Birste. *Manuf.* Linens, woollens, tobacco, beer, and brandy. *Pop.* 5,500.

Lub'ber, *n.* [W. *llabi*; Icel *lubbi.*] A heavy, clumsy fellow; a sturdy drone; a clown; a contemptuous name given by sailors to those who know not the duties of seamen.

Lub'ber's-hole, *n.* (*Naut.*) An entrance to the top, by which it is reached without passing over the futtock shrouds. It is the easier though slower way, and is regarded by sailors as only worthy of a lubber.

Lub'berly, *a.* Bulky and heavy; clumsy; lazy. —*adv.* Clumsily; awkwardly.

Lub'bub Creek, in *Alabama*, enters the Tombigbee River from Pickens co.

Lu'bec, in *Maine*, a post-town, seaport, and township of Washington co., on Ocean Inlet, 4 m. S. of Eastport, and 22 m. by stage from East Machias. *Pop.* (1897) about 2,175.

Lübeck, a free city and state of Germany, on the Trave, abt. 10 m. from Travemünde, at its mouth in the Gulf of Lübeck, in the Baltic, 36 m. N.E. of Hamburg; Lat. 53° 52′ N., Lon. 10° 45′ 5″ E. *Area* of state, 127 sq. m. The city is built on a ridge between the Trave and the Wackenitz. The environs are well wooded, and enlivened with cheerful villas. The streets are wide, the houses generally old, built of stone, and have their gable ends towards the street. They are generally very lofty, six or seven stories being quite common. *L.* has schools of surgery, navigation, &c., a public library of 60,000 vols., a society of useful sciences and arts, and several benevolent institutions. *L.*, though not so prosperous and important as formerly, is still a thriving commercial town. Its trade is principally confined to the N. and W. of Europe. Upwards of 2,000 vessels annually enter and leave its port. It has also an extensive commission and transit trade, and considerable markets for wool, cattle, and horses. *Manuf.* Woollens, silk, cotton, paper, gold-lace, tobacco, &c. The territory subject to *L.* consists of a district of 82 sq. m., immediately adjacent to the city, surrounded by the territories of Mecklenburg, Holstein, and Oldenburg, and the Baltic; of numerous small portions of surface enclosed by Holstein, and of the Vierländer, and town of Bergedorff, the sovereignty of which it shares with Hamburg. The land is very productive, yielding good crops; but rearing of cattle is the chief occupation of the inhabitants. — *Hist.* Its date of foundation is uncertain, but it existed in 1140, was ceded to the dukes of Saxony in 1158, and

Fig. 1641. — Gate-way of Lubeck.

taken by the Danes in 1201; it was made a free, imperial city in 1226, when the Danish garrison was expelled. It became the head of the Hanseatic League in 1241. The dissolution of the League marked the epoch of the decline of *L.* Blücher threw himself into the town, to avoid the French army, when it was carried by assault, and suffered a three days' pillage, in 1806. It was annexed to the empire in 1810, and regained its freedom after the battle of Leipsic in 1813. *Pop.* of the city (1897) 52,250; of the state, 64,140.

Luben, (*loo'ben.*) a town of Prussian Silesia, on the Kalterbach, 14 m. N.N.E. of Lieguitz. *Manuf.* Woollens. *Pop.* 4,700.

Lublin, (*loob'lin,*) a town of Russian Poland, in a prov. of same name, on the Bistritza, 97 m. S.E. of Warsaw. *L.* dates back as early as the 10th century, and was formerly fortified. *Manuf.* Woollen and linen goods. *Pop.* 20,000.

Lublin, a prov. of Russian Poland, having E. Volhynia, S. Galicia, W. and N. the provs. of Siedlec and Sandomir; *area,* 11,975 sq. m. *Principal rivers.* Wieprz, Bug, and Vistula. *Pop.* 1,000,000.

Lubny, or **Lubun,** (*loob-noo'.*) a town of European Russia, govt. of Pultova, or Poltowa, on the Sula, 80 m. from Pultowa; *pop.* 6,500.

Lu'bric, Lu'brical, *a.* [Lat. *lubricus.*] Slippery; smooth on the surface.

—Uncertain; unsteady; as, "the deep and *lubric* waves of state."—*Wotton.*

—Wanton; lewd; as, "this *lubric* and adulterate age." *Dryden.*

Lu'bricant, *n.* He or that which lubricates.

Lu'bricate, *v.a.* [Lat. *lubrico, lubricatus,* from *lubricus,* slippery, smooth.] To make smooth or slippery.

Lubrica'tion, *n.* Act or process of making smooth or slippery.

Lu'bricator, *n.* He or that which lubricates.

(*Mach.*) The arrangement by which the bearings of an engine are preserved from the effects of friction by means of oil or grease. It has always been found difficult to lubricate machinery exposed to a high temperature, as most of the materials used for such purposes decompose and become viscid, thus interfering considerably with the motion that they ought to assist. Hitherto, finely pulverized plumbago has been the most effective lubricator under such circumstances, as heat has no effect whatever upon the plumbago itself, though it so far changes the relations of the metals to it as to interfere with its usefulness. More recently it has been proposed to use melene, a hydro-carbon of the olefiant series.

Lubri'cious, *a.* [Lat. *lubricus.*] Slippery; smooth.

—Uncertain.

Lubric'ity, *n.* [Fr. *lubricité.*] Smoothness of surface; slipperiness; smoothness.—Aptness to glide over anything, or to facilitate the motion of bodies in contact by diminishing friction.—Figuratively, slipperiness; instability; uncertainty.—Wantonness; lewdness.

Lubrifica'tion, Lubrifac'tion, *n.* [Lat. *lubricus,* and *facio.*] The act of smoothing or lubricating.

Lucan, a village of Ireland, in Leinster, co. of Dublin, abt. 6 m. W. of the city of Dublin; *pop.* 800.

Lucan'idæ, *n. pl.* [Gr. *lucos,* a wolf,—and also the name of an insect.] (*Zoöl.*) A family of Coleoptera, beetles which have the body hard, oblong, and rounded behind, head large and broad, thorax short and as wide as the abdomen, upper jaws large, and in some cases curved, in others branched, antennæ bent in the middle, and composed of ten joints, the last three or four of which are leaf-like, and project on the inside. They fly only at night, spending the day upon the trees, and feeding upon the leaves. The grubs of the larger kinds are six years in coming to their growth, living all the time in the trunks and roots of trees. Fig. 1642 represents the *Lucanus ibex,* a very common Brazilian species; but we may rather refer to the common Stag-beetle (*Lucanus cervus*), a highly characteristic species of the group, which is seen flying about in the evening, in the middle of summer, especially around oaks, upon the wood of which the larva feeds; remaining in that state for several years, before undergoing its final transformation.

Fig. 1642.
LUCANUS IBEX.

Luca'nus, Marcus Annæus, a celebrated Roman poet, was born at Corduba, in Spain, A. D. 37. He was a nephew of Seneca; and being taken early to Rome, he studied there under the best masters. Before he was of the legal age he was made a quæstor; and he was also admitted into the college of augurs. He excited the anger of Nero for having had the effrontery to recite one of his compositions, in a public assembly, in competition with the emperor, and was ordered never more to recite in public. This induced Lucan to join Piso and others in a conspiracy against the tyrant, for which he suffered death, A. D. 65. His "Pharsalia," a poem in ten books on the civil war between Cæsar and Pompey, contains passages of great beauty, but also much that is strained and artificial. There are several English translations of the *Pharsulia.*

Fig. 1643.—LUCANUS.
(From an ancient medal.)

Lucanus, (*loo-ka'nus,*) a prov. of Peru, dept. of Ayacucho; *pop.* 20,000.

Lu'cas, in *Iowa,* a S. by E. co.; *area,* abt. 430 sq. m. *Rivers.* Whitebreast and Chariton rivers, besides many smaller streams. *Surface,* undulating; *soil,* fertile. *Cap.* Chariton. *Pop.* (1895) 13,545.

—A post-town of Lucas co. *Pop.* (1897) 700.

—A village of Muscatine co., about 25 m. S. E. of Iowa city.

Lucas, in *Missouri,* a post-village of Henry co., about 50 m. S. of Lexington.

Lucas, in *Ohio,* a N. by W. co., adjoining Michigan and partly washed by Lake Erie; *area,* about 430 sq. m. *Rivers.* Maumee river, Ottawa and Swan creeks. *Surface,* level; *soil,* fertile. *Cap.* Toledo. *Pop.* (1890) 102,296.

—A post-village of Richland co., about 7 m. S.E. of Mansfield.

Lu'casville, in *Ohio,* a post-village of Scioto co., abt. 13 m. N. of Portsmouth.

Lucay'os Islands. See Bahamas.

Lucca, (*luk'ka.*) a prov. of Italy, in Tuscany, bordering on the gulfs of Genoa and Ilassa; Lat. between 43° 45′ and 44° 47′ N., Lon. 10° 12′ and 10° 42′ E. *Area,* 512 sq. m. The surface is very diversified, and very fertile, and the superiority of its agriculture serves as a model for the other provs. of Italy. Principal river, the Serchio. *Prod.* Grain, olives, chestnuts, and vegetables. The marshy flats along the coast afford excellent pasturage for cattle. *Manuf.* Silk, glass, paper, linens, cottons, &c.; also oil, the latter esteemed the best in Italy, and the principal export. *L.* was erected into a duchy by the Lombards in 1035. In 1370 it became an independent republic, and was erected into a principality by Napoleon in 1805, for his sister's husband Bacchiochi. It was ceded to Tuscany in 1847, and, in 1860, was annexed to Sardinia. *Pop.* 280,399.

Lucca, (anc. Luca,) a city of Italy, in prov. of the same name, on the Serchio, 11 m. N.E. of Pisa. The city is surrounded with walls. The towers of the churches have a fine effect in the rich and beautiful landscape, interspersed with vine-clad hills, spotted with villas, behind which rise the Apennines. Many of the public buildings are curious specimens of architecture. Most of the churches are built of Carrara marble. The cathedral, mostly constructed in the 11th century, has much carved, inlaid, and mosaic work, a rich display of stained-glass, and several old and valuable paintings. Among the public buildings may be mentioned, the Palazzo Pubblico, the residence of the gonfalonieri in the days of the republic, is an immense and noble edifice, as is also the former ducal palace, now converted into the seat of the provincial govt. *L.* is in general well built; many of its private houses are very fine, though the pointed roofs and gabled ends give it the appearance of a Flemish, rather than an Italian city. The streets, though crooked, are broad and well paved. It contains several colleges, a ducal library of 21,000 vols., also a university library of 16,000 vols. *L.* enjoys the title of *l'Industriosa,* and is one of the principal inland commercial towns of Italy. *Manuf.* Silk and woollen fabrics. It has a considerable trade in olive-oil. In the vicinity of *L.* are hot springs, picturesquely situated, and frequented by numerous visitors. *Pop.* 68,204.

Luce, a river of Scotland, in Wigtown co., which falls into the Bay of Luce.

Luce, *n.* (*Zoöl.*) Pike.

Luce, in *Indiana,* a township of Spencer co. *Pop.* (1897) 3,220.

Luce, (Bay of,) or **Glenluce' Bay,** a broad and deep inlet of the Irish Sea, on the S.W. coast of Scotland, co. of Wigtown. *Ext.* About 19 m. broad at its entrance, and 7 at its head, where it receives the river Luce. Its length is 17 m. The quicksands of this bay have often proved destructive to shipping.

Lucena, (*loo-thai'na,*) a city of Spain, prov. of Cordova, 31 m. S.E. of Cordova, and 82 E. of Seville, stands on the slope of a hill, is well built, and has agreeable suburbs. *Manuf.* Linen and cloth; and it has salt-works in the neighborhood. *Pop.* 15,500.

Lu'cent, *a.* [Lat. *lucens,* from *luceo,* to shine.] Shining; bright; resplendent.

Lucera, (*loo-chair'a,*) (anc. *Luceria,*) a city of S. Italy, prov. of Capitanata, 12 m. W.N.W. of Foggia; *pop.* 16,000.

Lu'ceru, *n.* [Fr. *luzerne.*] (*Bot.*) See Medicago.

(*Zoöl.*) A sort of hunting-dog; probably so called as coming originally from Lucerne.

Lucer'nal, *a.* [Lat. *lucerna,* a lamp.] Relating to a lamp.

Lucerna'ria, *n.* (*Zoöl.*) A genus of Polypi, which affix themselves by a slender peduncle to sea-weeds and other substances. The upper part expands like an inverted parasol, and is surrounded by numerous tentacula; and between these are eight cæca, proceeding from the stomach, and containing a red granulated matter. *L. auricula,* here figured, has the border octagonal, with a bundle of tentacula in each division.

Fig. 1644.
LUCERNARIA AURICULA.

Lucerne, or **Luzern,** (*loo-suirn',*) a cant. of Switzerland, ranking third in the Confederation; Lat. between 46° 47′ and 47° 17′ N., Lon. 7° 50′ and 8° 29′ E. It is bounded N. by Solothurn and Aargau, E. Zug, Schwytz, and Unterwalden, S. and W. Berne. *Area,* 587 sq. m. The surface in the N. is generally plain, undulating in the centre, and rising gradually towards the S., where are several mountain ranges of considerable height. The principal of these is Mount Pilate, between *L.* and Unterwalden, its highest summit, the Tomlishorn, being estimated at 7,128 ft. above the sea. The soil is generally fertile, but the husbandry is not nearly so active as in the neighboring cants. of Berne and Zurich. *Rivers.* The principal is the Emmen. *Lakes.* The Baldegg, Sempach, Lucerne, and Zug, the two latter forming part of its E. limits. *Prod.* Fruits and wine; but cattle-rearing and dairy husbandry are the principal branches of industry. *Pop.* (1897) 137,400.—This is the chief of the Swiss Roman Catholic cantons.

Lucerne', a town of Switzerland, cap. of the above cant., on the Reuss, where it issues from the W. extremity of the lake of Lucerne, 25 m. S.S.W. of Zurich, 43 m. E.N.E. of Berne. Its situation is highly picturesque. The town is surrounded by a circle of watch-towers, and on the land side is inclosed by a continuous wall. It is well built, and has several fine public edifices. The cathedral, said to be founded in 695, has a painting of Christ on the Mount of Olives, by Lanfranc. The most remarkable objects in *L.* are the four bridges over the Reuss, connecting the great and little towns. Some of these are of considerable length, and ornamented with pictures illustrative of Swiss and Scripture history, or copied from the old painting styled the *Dance of Death. L.* contains a lyceum, public library, and communal college. The institutions for the intellectual and moral improvement of the inhabitants are on a scale of great liberality, though, in general, education is far from being widely diffused, either in the cant. or city. *Manuf.* Silks, cottons, flax, hemp, gloves, &c. *Pop.* (1897) 22,350. *L.* was sold in the 13th cent. to Austria, but the citizens rebelled in 1332, and joined the Swiss confederacy. It was taken by the French in 1798, but was retaken by the Federal force in 1813. Toleration was granted to the Protestants in 1828.

Fig. 1645.—LUCERNE.

Lucerne', a lake of Switzerland, in nearly the centre of that country, between the cantons of Lucerne on the W., Schwytz on the N., Uri E., and Unterwalden S. It is the largest and finest in Switzerland, and one of the most picturesque in Europe. It is of a singular cruciform shape, with an addition to its E. end, termed the Lake of Uri. Its greatest length is 25 m.; but the breadth of any of its arms are seldom more than 2 or 3 m. *Area,* 43 sq. m.; height of its surface above the sea 1,380 feet; depth varying from 300 feet near Lucerne, to 900 feet near the E. extremity. Its banks exhibit every gradation of scenery. On the E. and S. it is surrounded by mountains, the principal being Mounts Pilate and Righi, rising to many thousand feet above the sea. At the N. extremity of what is called the Lake of Uri, is the little town of Brunnen, where, in 1315, a treaty was entered into by Uri, Schwytz, and Unterwalden, which gave birth to the Helvetic confederation. Like mountain lakes, it is subject to violent tempests.

Lucerne', in *Iowa,* a village of Wayne co., about 60 m. S. by E. of Des Moines.

Lucerne', in *Ohio,* a post-village of Knox co., about 50 m. N.E. of Columbus.

Lucesco, in *Pennsylvania,* a post-office of Westmoreland co.

Lucia (St.), (*lu'she-a.*) one of the British West India islands, belonging to the Windward group, 20 m. N.N.E. of St. Vincent, and 25 m. S. of Martinique; Lat. 14° N., Lon. 61° W. It is of an oblong shape, being nearly 32 m. long, by 12 m. in its greatest breadth. *Area,* 300 sq. m. This island is of volcanic origin. The country exhibits a variety of hills, two of which are remarkably high, said to be volcanoes. At the foot of them are fine valleys having a good soil and well watered. The elevated parts are covered with thick forests. The climate is generally considered unhealthy, being characterized by extreme variableness. *St. L.* has several good harbors, the chief being the Carenage on the W. coast, within which, it is stated, 30 ships of the line may lie in

perfect security without being moored. The principal exports are sugar, cocoa, rum, and molasses.

Lucia'nus, a celebrated Greek author, distinguished for his ingenuity and wit, was B. at Samosata, the capital of Commagene, during the reign of Trajan. He was of humble origin, and was placed, while young, with an uncle, to study statuary; but being unsuccessful in his first attempts, he went to Antioch, and devoted himself to literature and forensic rhetoric. In the reign of Marcus Aurelius, he was made procurator of the province of Egypt, and died when 85 or 90 years old. The works of Lucian, of which many have come down to us, are mostly in the form of dialogues; but none are so popular as those in which he ridicules the pagan mythology and philosophical sects. Many of them, however, though written in an elegant style, and while abounding with witticisms, are tainted with profanity and indecency.

Lu'cid, *a.* [Lat. *lucidus*, from *lux*, *lucis*, light.] Shining; glittering; bright; resplendent.
—Clear; transparent; pellucid.
—Bright with the radiance of intellect; marked by the regular operations of reason.
—Clear and distinct; presenting a clear view; easily understood.

Lucid'ity, *n.* [Fr. *lucidité.*] Splendor; brightness; lucidness. (a,)

Lu'cidly, *adv.* In a lucid manner; clearly.

Lu'cidness, *n.* State or quality of being lucid; brightness; clearness.

Lu'cifer, *n.* [Lat., from *lux*, *lucis*, and *fero*, to bear, to carry, to bring.] The Morning-star. A name given to the planet Venus when she appears in the morning before sunrise. When Venus follows the sun, or appears in the evening, she is called *Hesperus*, the Evening-star. These names no longer occur except in the old poets.—A name commonly, though unappropriately, given to the prince of darkness; Satan. — A term originally applied to matches tipped with a mixture of chlorate of potash, and sulphuret of antimony, which were inflamed by friction upon a piece of emery paper. These have been superseded by a variety of mixtures containing phosphorus. The manufacture of lucifers now forms a vast trade, which in this country alone consumes upwards of eight tons of phosphorus and twenty-six tons of chlorate of potash in tipping them. The process of making them is almost wholly performed by machinery.

Lucife'rians, *n. pl.* (*Eccl. Hist.*) A religious sect which arose in the 4th century, being founded by Lucifer, bishop of Cagliari, who was banished by the emperor Constantius for having defended the Nicene doctrine of three persons in the Godhead. The persecutions he had undergone made him bitter and irascible, and his zeal on behalf of orthodoxy alienated even Athanasius against him. He was particularly opposed to the Arians. The Luciferians spread mightily for a time in Gaul, Spain, Egypt, &c.; but they disappear in the following century.

Lucif'erous, *a.* [Fr. *lucifere*; Lat. *lucifer.*] Giving light; affording means of discovery.

Lucif'erously, *adv.* In a luciferous manner.

Lucif'ic, *a.* [Fr. *lucifique*; Lat *lucificus*, from *lux*, and *facio.*] Making light; producing light.

Lu'ciform, *a.* Having the nature of light.

Lucil'ius, Caius, a Roman satirist, who served under Scipio in his expedition against the Numantians. He has been called the first Roman satirist, which probably means that he first gave satire the form adopted by the great writers of a later age, who were much indebted to him. Numerous fragments remain of his works. He D. at Naples, B. C. 103.

Lucim'eter, *n.* [Lat. *lux*, light, and Gr. *metron*, measure.] An instrument for measuring the intensities of light; a photometer.

Lucil'na, *n.* (*Zoöl.*) A genus of Lamellibranchiate molluscs, comprising many species, both recent and fossil, and very universally diffused. The shell is nearly round, inequilateral, and radiately striated; bosses small and pointed: the outer surface sculptured, the interior often punctured with small holes; cardinal and lateral teeth distinct, but variable in number. The foot of the animal is long and cylindrical.

Lu'cius I., Pope, succeeded Cornelius, 252, and suffered martyrdom under Gallus, 253.

Lucius II., succeeded Cœlestine II., 1144. led out his troops to suppress a disturbance, and was killed by a paving-stone, 1145.

Lucius III., Pope from 1181 to 1185, was the first pope elected solely by the cardinals, in consequence of which his reign was very turbulent. D. an exile at Verona.

Luck, *n.* [Du *luk*, fortune, happy chance, *geluk*, fortune; Ger. *glück*; Icel. *lucka.*] That which one gets or obtains; that which happens to a person; an event, good or ill, affecting a man's interest or happiness, and which is deemed casual; chance; accident; hap; fortune.
—Good fortune; a favorable issue.

Luckau, (*look'ow,*) a town of Prussia, prov. of Brandenburg, 50 m. S.W. of Frankfort. *Manuf.* Woollens, linens, and powder. *Pop.* 5,600.

Luckenwald, (*look'en-vald,*) a town of Prussia, govt. of Potsdam, on the Nathe, 30 m. S.S.W. of Berlin. One of its suburbs, called Little Gera, is inhabited by Russian colonists. *Manuf.* Woollens, linens, leather, iron goods, &c. Its cloth manufactories are among the largest in Prussia. *Pop.* 9,364.

Luckipoor, (*look-e-poor',*) a town of Hindostan, in the prov. of Bengal, near the mouth of the Brahmapootra, 156 m. E.N.E. of Calcutta: Lat. 22° 56′ N., Lon. 90° 43′ E. *Manuf.* Coarse cotton cloths; and the neighborhood is so fertile and productive, that *L.* is one of the cheapest towns of British India.

Luck'ily, *adv.* Fortunately; by good fortune; with a favorable issue.

Luck'iness, *n.* State of being lucky or fortunate; good fortune; a favorable issue or event.

Luck'less, *a.* Unfortunate; meeting with ill success; producing ill or no good.

Luck'lessly, *adv.* In a luckless manner; unfortunately.

Lucknow, (*luk'now,*) a city of Hindostan, cap. of the former kingdom of Oude, on the Goomtee, a tributary of the Ganges, 150 m. N.W. of Benares, and 265 S.E. of Delhi. The city, viewed from a distance, presents a confusion of gilded cupolas, minarets, arches, and turrets, bounded by the Goomtee, and interspersed with tropical foliage, as apparently to realize the most fantastic visions of Oriental splendor. It does not, however, appear to so much advantage at a nearer approach. The city is divided into 3 parts. The first is the city, properly so called, containing the shops and private dwellings of the inhabitants. The streets here are very narrow and sunk below the level of the houses, and are very filthy. The 2d quarter is near the Goomtee toward the S.E., and consists of handsome streets, and houses built after the English style. The market-place has a lofty gateway at each extremity, one presenting a Grecian, and the other a Moorish front. In this quarter are also the buildings of the British Residency. The 3d quarter of the city adjoins the Goomtee on the N.W., and consists chiefly of religious buildings, the styles of which are more purely Oriental. The magnificent pile of *Imaum-*

Fig. 1646. — CHUTTER-MUNGIL PALACE.

bārah, or tomb and mosque of Asoph ud Dowlah, with its noble gateway, called Roumi-Derwassch, so called from being supposed a copy of the gates at Constantinople, built in a light and elegant though fantastic style, and a mixture of Gothic and Moorish architecture; the splendid palace of Chutter-mungil (Fig. 1646), and other edifices, ornament this portion of *L.* There are also many stately khans, and handsome mosques and pagodas. *Pop.* 300,000. *L.* is remarkable for the defence made by 300 British soldiers while besieged in the Residency of that city for 4 months in 1857 during the Sepoy rebellion.

Luck'penny, *n.* In Scotland, a small sum given back by a person who receives money in consequence of a bargain.

Luck'y, *a.* Meeting with good success or luck; successful; fortunate.
—Producing good by chance; prosperous; auspicious.

Lucky Hit, in *Alabama*, a village of Limestone co.,

Luçon, (*lou'thon,*) a town and parish of France, dept. of La Vendee, 16 m. W. of Fontenoy. *Manuf.* Linen and porcelain, and has an active export trade. *Pop.* 5,500.

Lu'çon, Lu'zon, or **Luco'nia,** the principal of the Philippine Islands, in the Eastern or Malay archipelago, between the Chinese Sea on the W., and the N. Pacific Ocean on the E.; Lat. between 12° 30′ and 18° 40′ N., Lon. 119° 45′ and 124° 10′ E. Its greatest length is 550 m., and greatest breadth 130 m. *Area*, estimated at 56,000 sq. m. *Desc.* The country is for the most part mountainous, being intersected in its whole length by an elevated ridge, from which other ridges diverge, and spread over the whole island. The principal of these mountains, the Sierra Madre, attain a height of 7,000 feet, and several others, between 4,000 and 7,000 feet; and, being situated near the coast, are conspicuous objects at sea. The climate is moist but temperate, considering the situation of the island within the tropics, and the soil is fertile. *Rivers.* Aparri, or Cagayan, or Tago, Pasig, Abra, Agao, Pampanga, and Cabucao. *Prod.* Cotton, indigo, tobacco, &c., besides all sorts of tropical produce. *Min.* Iron, gold, copper, and rock salt. *Manuf.* Cotton, and silk tissues, cordage, leather, &c. The natives are also expert in building boats and even ships. There are several volcanoes in this island. The inhabitants are mostly Malays. The capital is Manila, *q.v. Pop.* 2,000,000.

Lu'crative, *a.* [Lat. *lucrativus*, from *lucror*, *lucratus*, to gain, from *lucrum.*] Gainful; profitable; making increase of money or goods.

Lu'cratively, *adv.* In a lucrative manner; profitably.

Lucre, (*lu'ker.*) *n.* [Fr. *lucre*; Sp. *lucro*; Lat. *lucrum.*] Gain in money or goods; profit; emolument; — usually in an ill sense, or with the sense of something base or unworthy.

Lucre'tia, one of the noblest names in Roman history, was the wife of Collatinus, a near relation of Tarquin the Proud, king of Rome. The story, as related by Livy, is to the effect that Sextus Tarquinius, the king's eldest son, was inspired with a passion for her, moved by her extreme beauty; and becoming a guest at her house during the absence of Collatinus, succeeded in dishonoring her person. Entering her chamber in the night with a drawn sword, and finding himself resolutely repulsed, he threatened to slay her, and place the body of a slave in her bed, to make it appear that he had killed them both in the act of adultery. The dread of being thought so infamous induced Lucretia to yield, but with a resolve that the honor of her husband and her own innocence should be avenged. She summoned her father and her husband from the camp, who came accompanied by their kinsmen, Valerius Publicola and Brutus, and having recounted the events of the night, she suddenly stabbed herself to the heart with a concealed dagger. The bloody poniard was snatched from the wound by Brutus, and the witnesses of this sad tragedy swore by the "once pure blood" of Lucretia, not to rest till they had expelled the Tarquins from Rome. This event, which occurred B. C. 509, was the signal of Roman freedom, the kingly government being abolished, and a republic established by the conspirators, of whom Junius Brutus became chief. Poets and artists have vied with each other in celebrating the heroism of Lucretia; and her name, like that of Penelope, has furnished the most significant expression for all that is noble and chaste in the female character.

Lucre'tius, Titus Carus, one of the greatest Roman poets, was born, according to Clinton, B. C. 95, and died B. C. 55. He is alleged to have committed suicido. He was author of the poem entitled *De Rerum Natura*, in which he explains the atomic theory of Leucippus, and the moral and religious doctrines of the philosophy of Epicurus; leading to the conclusion that the world exists, and things go on, without any divine guidance or interposition. This theme, so unpromising for a poet, he succeeded in making attractive, interspersing the exposition of doctrines with many digressions of the most majestic and splendidly poetic character. The poem has been translated into most European languages, and several times into English. The best recent English accounts of Lucretius are to be found in a volume of the *Oxford Essays*, and in Professor Sellar's *Roman Poets of the Republic.* The Commentary on Lucretius by Lachmann is esteemed one of the greatest monuments of modern classical scholarship. The most recent English edition of Lucretius is that of Mr. Munro, which has been highly praised for its "varied learning, philosophical power, fine scholarship, taste, and good sense."

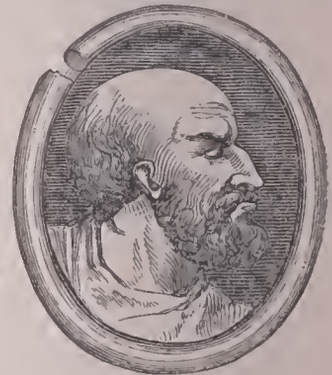


Fig. 1647. — LUCRETIUS.
(From an ancient gem.)

Luc'to, in *Kentucky*, a village of Mercer co.

Lu'cubrate, *v. n.* [Lat. *lucubro*, *lucubratus*, from *lux*, *lucis*, light.] To study by candle-light or a lamp; to study by night.
—*v. a.* To watch; to work by night; to accomplish a study or work by night.

Lucubra'tion, *n.* [Fr. *lucubration*; Lat. *lucubratio.*] Study by a lamp or by candle-light; nocturnal study.— That which is composed by night; that which is produced by meditation in retirement.

Lu'cubrator, *n.* A person who studies by night, or by candle light.

Lu'cubratory, *n.* [Lat. *lucubratorius.*] Composed by candle-light.

Lu'culent, *a.* [Lat. *luculentus*, from *lux*, *lucis*, light.] Bright; lucid. — Clear; transparent. — Evident; luminous.

Lucul'lite, *n.* [Lat. *lucullus*, and Gr. *lithos*, stone.] (*Min.*) A black limestone, used for ornamental purposes.

Lucul'lus, Lucius Licinius, a Roman consul and commander, celebrated for his military talents and luxurious style of living, was born about B. C. 115. He first distinguished himself in the social war, and afterwards defeated Hamilcar in two naval battles. He was in great favor with the dictator Sulla, who made him guardian to his son and editor of his Commentaries. In B. C. 74 he obtained the consulship and the command of the expedition against Mithridates. He was engaged in this war with varying success for 8 years. In B. C. 71 he finally broke up the hostile army, and Mithridates himself sought protection in Armenia, where, Tigranes refusing to surrender him to the Romans, *L.* attacked that monarch, and completely subdued him. On an occasion of a mutiny of his soldiers, who accused him of avarice and covetousness, he was deprived of the chief command, and recalled. From this time, *L.* remained a private individual, spending in magnificent feasts, splendid gardens, parks, and fishponds, and all kinds of luxurious indulgence, the immense riches which he had brought with him from Asia, without, however, abandoning the more noble and serious occupations of a cultivated mind. D. abt. B. C. 57.

Lud. (*Script.*) A son of Shem, and ancestor, it is thought, of the Lydians in Asia Minor.

Lu'dicrous, *a.* [Lat. *ludicrus*, from *ludo*, *ludere*, to play.] Adapted to raise laughter, without scorn or contempt; laughable; burlesque; comic; droll; ridiculous.

Lu'dicrously, *adv.* Sportively; in burlesque; in a manner to raise laughter without contempt.

Lu'dicrousness, *n.* Quality of being ludicrous; sportiveness; quality of excitiug laughter without contempt; drollery.

Ludifica'tion, *n.* [Lat. *ludificatio*, from *ludificare*.] The act of mocking, or making sport with another.

Lud'low, a town of Eugland, co. Salop, on the Teme, 24 m. S. of Shrewsbury. It is an old, but well-built town, with wide and well-paved streets, and dates from the reign of Edward III. On a rock overhanging the river at the N.W. of the town stands the castle, formerly an important stronghold, the walls and towers of which are now but a mass of magnificent ruins. *Manuf.* Gloves; but the principal business is malting and tauning. *Pop.* 6,000.

Lud'low, in *Iowa*, a post-town and township of Allamakee co.

Lud'low, in *Kentucky*, a post-town of Kenton co., on the Ohio river, 2 m. below Covington. *Pop.* 2,649.

Lud'low, in *Massachusetts*, a post-town and township of Hampden co., abont 9 m. N.E. of Springfield, he county seat.

Lud'low, in *Ohio*, a village of Hamilton co., abt. 5 m. N. of Cincinnati.

—A township of Washington co.

Lud'low, in *Vermont*, a post-village and township of Windsor conuty, about 70 miles south of Moutpelier.

Lud'lowville, in *New York*, a post-village of Tompkins co., abt. 10 m. N. by W. of Ithaca.

Lud'wick, in *Pennsylvania*, a vill. of Westmoreland co.

Ludwig'ia, *n.* [In honor of *C. D. Ludwig*, prof. of botany at Leipzig, abt. 1750.] (*Bot.*) A genus of perennial herbs, order *Onagraceæ*, growing in wet grounds, and including the American species, *L. alternifolia*, the Seed-box, or Bastard Loose-strife, and *L. palustris*, the Water Purslane.

Ludwigsburg, (*lood'wigs-boorg.*) a town of S. Germany, in Würtemberg, on the Neckar, 7 m N. of Stuttgart. *Manuf.* Woollen and cotton cloth, earthenware, and buttons. *Pop.* 12,321.

Luff, Loof, *n.* [Du. *loef;* Fr. *lof.*] The palm of the haud.

(*Naut.*) The weather-gage, or part toward the wind. The sailing of a ship close to the wind.

—*v. n.* [Du *loeven.*] (*Naut.*) To put the helm so as to turn the head of a ship toward the wind; to sail near the wind.

Luffa, *n.* [From *louff*, its Arabic name.] (*Bot.*) A genus of plants, order *Cucurbitaceæ*, or Gourd fam. *L. purgans* aud *drastica* have fruits which are violently purgative. They constitute the drug commonly called *Americun colocynth.* The fruit of *L. fœtidu*, termed the *sponge-gourd*, consists of a mass of fibres entangled together; these fibres are used for cleaning guns.

Lug, *v. a.* [A. S. *geluggian*, to pull, to lug; Sw., Goth. *lugga*, to draw.] To haul; to drag; to pull with rugged violence; to pull wlth force, as something heavy and moved with difficulty.

—To carry or convey with labor.

—*n.* The ear, and more especially tho pendent part of the ear. (Local Eng.) — A rod, twig, or pole. (Local Eng.) — A sea-worm, *Lumbricus marinus*, used for bait. — A heavy load; anything difficult to be carried. (Colloq. and Vulgar.)

(*Founding.*) A projecting slip of a mould or flask.

(*Com.*) A designatiou used in classifying the kiuds of American tobacco.

"There are factory *lugs* and planters' *lugs.*"—*Worcester.*

Lugano, (*loo-ga'no,*) **(Lake of.)** A lako of Switzerland, principally within the cant. of Tessin, but partly also in Italy, between Lago Maggiore and Lago di Como. It is of an extremely irregular figure, its greatest length beiug 16 m. and average breadth 2 m. In addition to its main body, it has two great arms, one stretching S S E. to Lago, and the other N. to Agno. It is surrounded by high mountains, overhanging woods, and bold abrupt precipices. Ono of the mountains, San Salvadoro, rising to the height of nearly 2,000 feet above its lovel, presents a fine appearance from the lake, and commands from its summit a magnificeut and varied prospect. The scenery around the lake is very fine. Its waters are quite transparent and very deep. It is 190 feet abovo the level of the lakes of Como and Maggiore, into the latter of which the Tresa conveys its surplus waters. Along its shores an active transit trade is carried on.

Lugan'o, a town of Switzerland, on Lake Lugano, cant. of Tessin, 15 m. N.N.W. of Como. It is a well-built, handsome town, surrounded by hills having their slopes studded with villas, gardens, and forests, while in the distance can be seen the snowy Alps. *L.* derives its principal support from being the entrepôt of a considerable trade between Italy, Switzerland, and Germany. *Pop.* 6,000.

Luggage, (*lug'gej,*) *n.* That which is dragged heavily along: a traveller's trunks; packages; baggage.

Lug'ger, *n.* [Du. *logger.*] (*Naut.*) A small vessel (Fig. 1648) carrying two or three masts and a running bowsprit, upon which *lug-sails*, and two or threo jibs, are set. Topsails are sometimes adapted to them.

Lug'-mark, *n.* A mark cut in the ear of a sheep or a dog to identify it.

Luguaquil'la, a mountain of Ireland, in Leinster, co. Wicklow, abt. 6 m. S.E. of Donard. *Height*, 3,039 feet.

Lu'go, a town of Spain, prov. of Galicia, on the Minho, 47 m. E.S.E. of Corunna, 142 N.N.E. of Oporto. *Manuf.* Morocco leather and thread stockings. In the time of the Romans, the mineral baths of *L.* were famous. *Pop.* 8,500.

Lugo, a town of Italy, prov. of Ferrara, on the Senio, 32 m. S.S.E. of Ferrara. It has a large annual fair, and is an important place of trade. *Pop.* 9,000.

Lug'-sail, *n.* (*Naut.*) A small sail hoisted occasionally on the mast of a boat or small vessel; (1, Fig. 1648.)

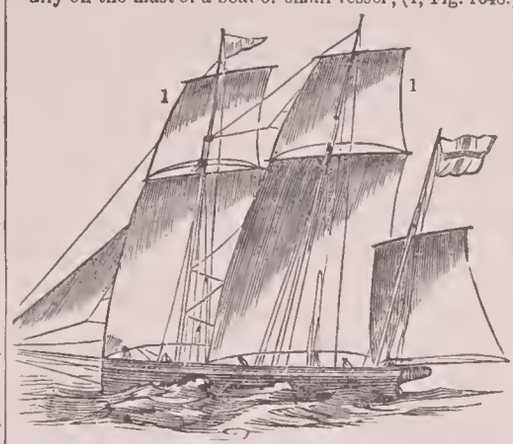


Fig. 1648. — LUGGER.

Lugu'brious, *a.* [Fr. *lugubre;* Lat. *lugubris*, from *lugeo*, to mourn or lament.] Mournful; indicating sorrow.

Lugu'briously, *adv.* In a mournful manner; dismally; dejectedly.

Lug'-worm, *n.* (*Zoöl.*) See LUG.

Luitprand, (*lwe'pran,*) a Lombard historian, B. at Pavia, early in the 10th century, was secretary of Berengarius, regent of the kingdom of Italy, who also employed him as his ambassador to Constantinople. He afterwards became bishop of Cremona. He wrote the history of the affairs of Europe in his time, and other works valuable for their historical information. D. abt. 970.

Luis de la Paz, a town of Mexico, abt. 36 m. N.N W of Queretaro. There are productive silver mines in the vicinity.

Luiz-Alves, (or MANOEL-ALVES, or MERIDIONAL,) (*looees-al'ves,*) a river of Brazil, rises in the Sierra do Duro, and joins the Tocantins, abt. Lat. 9° 20′ S.

Lujan, or LUXAN, (*loo-han',*) a river of the Argentine Republic, flowing into the Plata æstuary from the W., abt. 23 m. N.W. of Buenos Ayres.

Luke, (St.,) the evangelist, probably the same person who is called by St. Paul, "the beloved physician," (*Col.* iv. 14.) The name Luke, or Lucas (*Phile.* 24), is the same as Lucanus in Latin. Luke was the writer of the gospel which bears his name, and of the Acts of the Apostles, having been the friend and companion of St. Paul in most of the journeys recorded in the latter book. Thus, in *Acts* xvi. 11, he first uses the word "we," and shows that he was with Paul at Troas and in his first Macedonian tour. After they reached Philippi, an interval of separation occurs; but they are again together at Philippi when Paul sails thence for Jerusalem, and from that time he continues with the apostle in his labors, voyages, and sufferings, to the close of his first imprisonment at Rome, (*Acts.* xvii. 1; xx. 5, 6, 13–16; 21–28; *Phile.* 24; 2 *Tim.* iv. 11.) His personal history before and after this period of his companionship with Paul is uuknowu, or rests ou uncertain traditions.

Luke, (Gospel of St.) (*Script.*) The third of the four Gospels of the New Testament. The genuineness and authenticity of this gospel aro confirmed by the unanimous testimony of ancient writers. It is repeatedly cited by Justin Martyr; and all admit that, at the time of Irenæus and Tertullian, it was accepted throughout the whole Church in its present form. These testimonies are confirmed by a host of later writers, whose evidence has been collected by Dr. Lardner. Notwithstanding this, there have not been wanting German critics to call in question the authenticity of this gospel, or particular parts of it. Luke was probably a physician, of Gentile descent, and a frequent companion of the Apostle Paul. That this gospel was specially written for the benefit of the Gentiles is evident, both from its general tenor as well as from its being dedicated to Theophilus, one of his Gentilo converts. He thus condescends to many particulars, and notices various points, for the benefit of those who were remote from the scene of action and ignorant of Jewish affairs. Hence, also, he is particularly careful in specifying various circumstances of facts that were highly conducive to the information of strangers, but which the Jews could supply from their own knowledge; on this account, he begins his history with tho birth of John the Baptist, and traces Christ's lineage up to Adam, showing that he is the seed of the woman promised for the redemption of the world. He has likewise introduced many things not noticed by tho other evangelists, tending to encourage the Gentiles to hearken to the gospel; as the parables of the publican praying in the Temple, the lost piece of silver, and the prodigal son, Christ's visit to Zaccheus, and the pardon of the penitent thief upon the cross. This gospel is divided by Rosenmüller and others into five distinct parts, viz. — 1. Containing the narrative of the birth of Christ, together with all the circumstances that preceded, attended, and followed it (i.–ii. 40); 2. comprising the particulars relative to our Saviour's Infancy and youth (ii. 41–52); 3. including the preaching of John, and the baptism of Jesus Christ, whose genealogy is annexed (iii); 4. comprehending the discourses, miracles, and actions of Jesus Christ during the whole of his ministry (iv.–ix. 50); 5. containing an account of our Saviour's last journey to Jerusalem, with all the circumstances relative to his passion, death, resurrection, and ascension (ix. 51–62, x.–xxiv.) The style of this gospel is pure, copious, and flowing, and bears a considerable resemblance to that of his great master Paul. From his medical knowledge he has described, with singular accuracy and skill, the various diseases which he had occasion to notice. With regard to the time when this gospel was written, some difference of opinion exists, but the majority of critics are now agreed in judging it to have been about the year 63 or 64.

Lu'kens, in *Illinois*, a township of Lawrence co.; *pop.* about 1,800.

Luke'-warm, *a.* [A. S. *wlaco*, warm, tepid, slack; *wlacian*, to be or make warm or tepid.] Moderately warm; tepid.—Not ardent; not zealous; cool; indifferent.

Luke'warmly, *adv.* With moderate warmth.—With indifference.

Luke'warmness, *n.* State or quality of being lukewarm; a mild or moderate heat. — Indifference; want of zeal or ardor; coldness

Lull, *v. a.* [Dan. *lulle*; Ger. *lullen;* Lat *lallo* to sing lullaby.] To sing to, as a nurse to a child: to sing a lullaby to; to quiet; to compose; to cause to rest.

—*v. n.* To subside: to cease: to become calm.

—*n.* Power or quality of soothing. — A season of quiet or cessatiou, as of wind, &c.

Lull'aby, *n.* A song to lull or quiet babes; that which soothes or disposes to slumber.

Lull'er, *n.* A person who lulls.

Lully, or **Lulli,** JEAN BAPTISTE, (*lool'le.*) a musical composer, B. at Florence, 1634. Having discovered a passionate fondness for music when quite a child, he was sent to Paris in his 12th or 14th year, to be page to Mdlle. de Montpensier. He rose rapidly, till he obtained the appointment of musician to the court; and, in 1670, was made joint director of the French opera, which situation he filled till his decease. *L.* contributed much to the improvement of French music, composed 19 operas, and was much admired by his contemporaries. D. 1687.

Lul'ly, RAYMOND, a great theurgist and philosopher of the Middle Ages, was of Catalonian descent, and was B. at Palma, the cap. of Majorca, 1235. He commenced life as a courtier and man of pleasure, but was converted when about 30 years of age to the religious life, chiefly by the exhortations of a married lady, to whom he had professed the most ardent devotion. For about 10 years, 1265–1275, he lived more or less in a solitary place, and became the subject of remarkable ecstasies and visions — the end being, that his prayers for wisdom to convert the heathen were answered, he says, by a singular illumination of his mind, in which the principles of things became manifest to him. In this light, with the aid of his investigations in Arabian philosophy, he conceived a new system of dialectics, which may be consulted in his *Ars Generalis Ultima*, first published 1480; the *Ars Brevis*, published 1481; and the *Arbor Scientiæ*, 1482. The first of these (of which the second is an abridged method) proposes a universal art, or science of sciences, in the principles of which all others are supposed to be comprehended, and by the aid of which *L.* maintained they could all be demonstrated. The general object of all his works is to demonstrate, by an infallible method, all the primary truths of religion: and they embrace in their scope, the physical and metaphysical sciences, and, as a necessary consequence, the doctrines of the alchemists, who claim *R. L.* as one of their greatest masters. Disappointed after the most indefatigable efforts to procure the adoption of his system, *R. L* embarked for Tunis, to commence his apostleship single-handed, and there, it is believed, he found the death of a martyr, 1315.

Lum, *n.* The chimney of a cottage. (Local Eng.)

Lu'machel, Lumachel'la, *n.* [It. *lumachella*; Fr. *lumachelle.*] (*Min.*) Shell marble; the fragments having a pearly lustre, it is sometimes termed *fire marble.* The finest specimens are from the lead mines of Bleiberg, in Carinthia.

Lumbag'inous, *a.* Pertaining or relating to lumbago.

Lumba'go, *n.* [Lat. from *lumbi*, the loins.] (*Med.*) See RHEUMATISM.

Lum'bal, *a.* The same as LUMBAR.

Lum'bar, *a.* [Lat. *lumbus*, a loin.] Pertaining to or near the loin.

L. Abscess. (*Med.*) One of the largest and most serious collections of matter to which the body is liable. *L.*, sometimes called *psoas abscess*, is a collection of pus formed in the *L.* region of the abdomen, adjoining the spine, which, burrowing under the psoas muscle, after a long period of exhaustion and suffering, at length points at the groin, where, when opened, an immense amount of matter is occasionally discharged

Lum'ber, *n.* Anything useless or cumbersome, or things bulky and thrown aside as of no use.

—Logs to be sawed, or timber sawed or split for use, as beams, joists, planks, boards, shingles, laths, &c.

—*v. a.* To fill with lumber. — To heap together in disorder.

—*v. n.* To move heavily, as if burdened by one's own bulk.

—To cut or procure logs in the forest, to be made into lumber or timber.

Lum'ber, in *Pennsylvania*, a thriving township of Cameron co.

Lum'ber City, in *Georgia*, a post-village of Telfair co., about 100 m. S.S.E. of Milledgeville.

Lum'ber City, in *Pennsylvania*, a post-borough of Clearfield co.

Lum'berer, Lum'berman, *n.* One employed in procuring lumber from the forest. (U. S.)

Lum'berland, in *New York*, a post-township of Sullivan co.

Lum'berport, in *W. Virginia*, a post-village of Harrison co., abt. 210 m. N.W. of Richmond, Virginia.

Lumber River, rises near the N.E. corner of Richmond co., N. Carolina, and flowing S.E. through Robeson co., turns S.W., and entering S. Carolina, joins the Little Pedee in Marion co.

Lum'ber-room, *n.* A room or place for useless articles or lumber.

Lum'berton, in *N. Carolina*, a village of Gates co., abt. 25 m. W. by N. of Gatesville.

—A post-village, cap. of Robeson co., abt. 91 m. S S.W. of Raleigh.

Lum'berton, in *New Jersey*, a post-village and port of entry of Burlington co., abt. 2 m. S. of Mount Holly. It has an active trade and several extensive manufactories.

Lum'berton, in *Ohio*, a post-village of Clinton co., abt. 70 m. S.W. of Columbus.

Lum'berville, in *Pennsylvania*, a post-village of Bucks co.

Lum'bric, *n.* [Fr. *lombric;* Lat. *lumbricus.*] A worm.

Lum'brical, *a.* [Fr. *lombrical;* It. *lumbricale.*] Resembling an earth-worm.

L. muscles. (*Anat.*) Small muscles of the hand which assist in bending the fingers; — so called from having the form of a worm.

—*n.* A lumbrical muscle.

Lumbri'cidæ, *n. pl.* [From *Lumbricus.*] (*Zoöl.*) The Earth-worm, a family of *Annelides*, of which the common earth-worm (*Lumbricus terrestris*) (Fig. 1649) may be given for the type. Its outward appearance is a body composed of numerous narrow rings closely approximated to each other: the color of the body is reddish or purplish; of a cylindrical form, somewhat pointed at the anterior extremity, and usually a little flattened at the tail. It is without the organs of sight. The organs of motion consist of a double row of bristles running down the lower surface of the body, and which are capable of being withdrawn within small hollows when not in use. The mouth is unarmed, and the intestine runs straight through the body. The vascular system consists of two longitudinal vessels running along the ventral and dorsal regions of the body, and united by numerous branches. The blood is red. Like the leeches, this worm is furnished with ciliated canals, which have been supposed to serve as organs of respiration; but their real destination appears to be still uncertain. As far as relates to its appearance above the ground, the earth-worm may be regarded as a nocturnal animal. In the night, and at early morning, hundreds may be seen in localities where, during the daytime, not one is to be seen. They are of immense utility in improving the soil. The organs of the earth-worm's locomotion prevent its moving backwards, while the expansion of the rings, as it contracts the anterior segments and draws forward the hinder parts, widens a passage for it through the earth, whose particles were close together before. They are thus, in their multitudes, of incalculable utility in constantly loosening and stirring the soil, and accumulating on the surface those little hillocks of earth known as "worm-casts." On this subject, Mr. Charles Darwin, who seems to have given it long and careful attention, remarks: — "The burrowing of earth-worms is a process exceedingly useful to the gardener and agriculturist; and these animals are far more beneficial to man in this way than they are injurious by devouring the vegetables set in the soil. They give a kind of under-tillage to the land, performing the same below ground that the spade does above the garden, and the plough for arable land, and loosening the earth so as to render it permeable to air and water. It has been shown, too, that they will even add to the depth of the soil, covering barren tracts with a layer of productive mould. Thus, in fields which have been overspread with lime, burnt marl, or cinders, these substances are in time covered with finely divided soil, well adapted to the support of vegetation. That this result, which is commonly attributed by the farmers to the 'working down' of the materials in question, is really due to the action of the earth-worms, appears from the fact that in the soil thus formed large numbers of worm-casts may be distinguished. These are produced by the digestive process of the worms, which take into their intestinal canal a large quantity of the soil through which they burrow, extract from it the greater part of the vegetable matter it may contain, and eject the rest in a finely divided condition. In this manner a field manured with marl has been covered in the course of 80 years with a bed of earth averaging 13 inches in thickness." Besides their usefulness in the manner above described, the earth-worms are of importance as food for birds, fish, &c. Their value as bait for fishes is well known to every angler. The power of reproducing parts after mutilation is very great in this animal, as in the whole of the order. It is generally supposed that the earth-worm may be propagated by division; but this scarcely appears to be the case. It is said, however, that if it be divided across the middle, the part bearing the head will develop a new tail, although the tail will soon die; and that if the head be cut off, the body will form a new head; but it appears that both portions never survive the mutilation.

Fig. 1649.
EARTH-WORM, (*Lumbricus terrestris.*)
a, earth-worm; *b*, anterior extremity, showing the mouth, — the bristles are also shown; *c*, egg, containing two young; *d*, young escaping from the egg.

Lumbric'iform, *a.* [Lat. *lumbricus*, a worm, and *forma*, form.] Shaped like a worm.

Lum'bricus, *n.* [Lat., a worm.] (*Zoöl.*) The typical genus of the LUMBRICIDÆ, q. v.

Lu'minary, *n.* [Fr. *luminaire*, from Lat. *lumen, luminis*, light, for *lucmen*, from *lucco*, to shine.] Any body that gives light, but chiefly one of the celestial orbs. — One who illustrates any subject, or enlightens mankind.

Luminiferous, *a.* Producing light; luminous; luciferous.

Luminos'ity, *n.* State or quality of being luminous; luminousness.

Lu'minous, *a.* [Lat. *luminosus*, from *lumen, luminis.*] — Shining; emitting light; illuminated. — Bright; shining; as, *luminous* colors. — Figuratively, clear; lucid; perspicuous.

Lu'minously, *adv.* With brightness or clearness.

Lu'minousness, *n.* Quality of being luminous; brightness; clearness; perspicuity.

Lump, *n.* [Ger., Dan., and Sw. *klump;* Icel. *klumpr*, a mass, a lump.] A small mass of matter of no definite shape. — A mass of things blended or thrown together without order or distinction. — A cluster; a galaxy.

—*v. a.* To throw into a mass; to unite in a body or sum without distinction of particulars. — To take in the gross.

Lum'per, *n.* One who lumps; — a laborer employed to load or unload a ship.

Lump'fish, *n.* [Ger. and Du. *lump;* It. and Sp. *lompo.*] (*Zool.*) A malacopterygious fish, the different species of which compose the family *Cyclopteridæ*. It derives its name from the clumsiness of its form, its height being about half its length, and its thickness about half its height. The names *Lumpsucker* and *Cock-paddle* are also given to it. These fish are very remarkable for the manner in which their ventral fins are arranged.

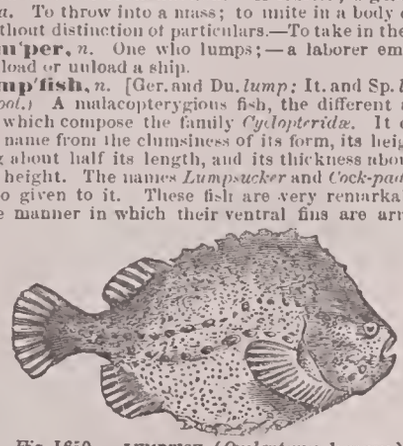


Fig. 1650. — LUMPFISH, (*Cyclopterus lumpus.*)

They are united by a membrane so as to form a kind of oval and concave disc, by means of which they are enabled to adhere with great force to any substance to which they apply themselves. This, the largest of the genus, sometimes weighs seven pounds. The back is arched and sharp, of a blackish color, variegated with brown; the body is covered over with sharp, black tubercles, and on each side there are three rows of large bony scales, and another on the back. The great resort of this species is on the northern seas, about the coast of Greenland. It is also caught in many parts of the British seas during the spring season, when it approaches the shore for the purpose of depositing its spawn. In the northern seas great numbers of them are devoured by the seals, who swallow all but the skins, quantities of which, thus emptied, are seen floating about in the spring months; and it is said that the spots where the seals carry on their depredations can be readily distinguished by the smoothness of the water. Its power of adhesion is truly wonderful. Pennant says, "That on placing a fish of this species, just caught, into a pail of water, it fixed itself so firmly to the bottom, that on taking it by the tail, the whole pail by that means was lifted, though it held some gallons, and that without removing the fish from its hold."

Lump'ing, *a.* Bulky; heavy; in a mass or lump.

Lump'ish, *a.* Like a lump; heavy; gross; hulky; — hence, dull; inactive.

Lump'ishly, *adv.* Heavily; with dulness.

Lump'ishness, *n.* State or quality of being lumpish; heaviness; dulness; stupidity.

Lump'kin, in *Georgia*, a N. co.; *area*, abt. 460 sq. m. *Rivers.* Chestatee and Etowah rivers. *Surface*, much diversified, the Blue Ridge forming the N.W. border; *soil*, in some parts very fertile. *Min.* Gold in considerable quantities, besides copper, silver magnetic iron, lead, and granite. *Cap.* Dahlonega.

—A post-village, cap. of Stewart co., abt. 160 m. S.W. of Milledgeville.

Lump'kin's Creek, in *Georgia*, enters Flint River in Dooly co.

Lump'sucker, *n.* (*Zoöl.*) The same as LUMPFISH.

Lump'y, *a.* Full of lumps or small compact masses.

Lu'na, *n.* [Lat.] The moon. (*Myth.*) See Selene.

Luna cornea. (*Chem.*) Fused chloride of silver; so called from its horn-like appearance, luna being the term by which the old chemists designated silver.

Lu'nacy, *n.* [Lat. *luna*, the moon.] (*Law.*) "A lunatic," says Blackstone, "is one that hath had understanding, but by disease, grief, or other accident, hath lost the use of his reason; he is, indeed, properly, one that hath lucid intervals, sometimes enjoying his senses, and sometimes not, and that frequently depending upon the change of the moon." The common belief in the connection between the accessions of madness and the phases of the moon, from which the name is derived, has long since been exploded; and in medical science, the terms of insanity and mental alienation have taken the place of lunacy, but in law it is still a common term, and is applied to all persons of unsound mind and incapable of managing their own affairs. Some law-writers prefer the phrase *non compos mentis* (Lat., not of sound mind) as a generic appellation to include the various conditions of mental disease, as fatuity, and the English equivalent *of unsound mind*, is also sometimes employed; but *L.* is still the ordinary term, and may be fitly taken as the title under which to treat of the legal relations of insanity (which, physiologically, has been already treated under INSANITY). In the United States it belongs to the legislature to exercise a protective authority over idiots and lunatics. The statutes of the different States provide that such persons may be put under guardianship; and if a competent judicature have found the fact of *L.* in the prescribed mode, and have appointed a guardian, the fact of *L.* is held to be conclusively proved. Until the contrary be shown, either upon an inquisition of *L.*, or upon special testimony in a given case, every man is presumed to be of sane mind. Persons of insane mind may inherit or succeed to land, or personal property, but they cannot be executors or administrators, or make a will, or bind themselves by contract. An insane person is competent to purchase, and also to retain what he purchases; but he cannot be compelled to retain it; the transaction (if found to be disadvantageous to him) being liable to subsequent voidance on account of his insanity. In criminal cases, *L.* are not chargeable for their own acts, if committed when laboring under defect of understanding, not even for treason itself. By the common law, if a man in his sound memory commits a capital offence, and before arraignment for it becomes mad, he ought not to be arraigned for it, because he is not able to plead with that caution that he ought; if after he has pleaded he should become mad, he shall not be tried; for how can he make his defence? If after he be tried and found guilty, he loses his senses before judgment, judgment shall not be pronounced; and if after judgment he becomes of non-sane memory, execution shall be stayed; for, peradventure, he might have alleged something to stay judgment or execution. It is not, however, every kind or degree of insanity that will exempt a man from responsibility for his act; and in general, a partial unsoundness will form no excuse. But the entire law on this subject is in a painful state of uncertainty, and it is impossible to lay down any general rules as to what may be regarded as partial or perfect insanity, or what degree of insanity will exculpate a man from his acts. Generally speaking, however, if it is of such a nature as to render the person incapable of exercising self-control, he will not be held responsible.

Lu'nar, *a.* [Lat. *lunaris*, from *luna*, the moon.] Pertaining to the moon. — Measured by the revolutions of the moon; resembling the moon; orbed.

L. bone. (*Anat.*) One of the bones of the wrist.

L. caustic. (*Chem.*) A term applied to nitrate of silver, cast in sticks, and used by surgeons for cauterizing purposes. A great improvement has been lately made in its manufacture by melting with it a certain proportion of chloride of silver, which has the effect of rendering the stick flexible instead of brittle.

L. cycle. (*Calendar.*) The period of time after which the new moons return on the same days of the year.

L. distance. (*Naut.*) The distance of the moon from the sun, or from a fixed star or planet, by means of which the longitude of a place is found.

L. evective. (*Astron.*) A term applied to an inequality in the longitude of the moon, caused by the disturbing force of the sun. Its occurrence depends on the variable eccentricity of the lunar orbit and the movable position of the apsides. The discovery of lunar evection is attributed to Ptolemy, the celebrated astronomer of Alexandria.

L. method. (*Astron. and Naut.*) The method of determining the longitude of a place or ship by the operation of *lunar distance.*

L. month. (*Astron.*) The time in which the moon completes a revolution about the earth, and returns to the same position relatively to some celestial body, or point in space, with which her motion is compared. But the moon's period may be determined in relation to several objects — as the sun, the equinoxial points, a fixed star, the perigee or nodes of her orbit; and accordingly there are as many different lunar months as there are assumed points of comparison, provided these points have different motions in the heavens. 1. The proper *lunar month* is the same as the *lunation* or *synodic month*, and is the time which elapses between two consecutive new or full moons, or in which the moon returns to the same position relatively to the earth and sun. — 2. The *periodic month*, or *synodic month*, is the revolution with respect to the movable equinox. — 3. The *sidereal month* is the interval between two successive conjunctions with the same fixed star. — 4. The *anomalistic month* is the time in which the moon returns to the same point (for example, the perigee or anogee) of her movable elliptic orbit. — 5. The *nodical month* is

the time in which the moon accomplishes a revolution with respect to her nodes, the line of which is also movable.—The exact *mean* lengths of these different lunar months are as follows:

	d.	h.	m.	s.
Synodic month, . .	29	12	44	2·84
Tropical month, . .	27	7	43	4·71
Sidereal month, . .	27	7	43	11·54
Anomalistic month, .	27	13	18	37·40
Nodical month, . .	27	5	5	35·60

L. year. (*Calendar.*) The period of twelve synodic lunar months, containing consequently 354 days; the lunar months in the calendar being alternately 29 and 30 days. The exact period of 12 lunar months is 354 days, 8 hours, 48 min., 34 sec.; so that the lunar year of the calendar requires to be adjusted by intercalation every third year.

Luna'ria, *n.* [Lat. *luna*, the moon; from the broad, round silicles.] (*Bot.*) A genus of European plants, order *Brassicaceæ*. *L. rediviva*, the Perennial Satin Flower, or Honesty, is a handsome perennial, with light purple flowers. *L. biennis*, Honesty, is a large hairy plant with lilac-colored flowers.

Luna'rian, *n.* An inhabitant of the moon.

Lu'nary, *n.* (*Bot.*) See LUNARIA.

—*a.* Lunar; pertaining to the moon; resembling or measured by the moon.

Lu'nate, Lu'nated, *a.* [Lat. *lunatus*, from *luna*.] (*Bot.*) Formed like a half-moon; crescent-shaped.

Lu'natic, *a.* [Fr. *lunatique*; Lat. *lunaticus*, from *luna*.] Affected by a species of madness, formerly supposed to be influenced by the moon; mad; insane; demented; crazy.

—*n.* A person affected by insanity; a madman.

L. asylum. A hospital for insane persons.

Luna'tion, *n.* [L. Lat. *lunatio*, from Lat. *luno*, *lunatus*, from *luna*.] A lunar month; the time from one new moon to the next.

Lunch, *n.* [Probably corrupted from O. Eng. *noonshun*, the refreshment taken at *noon*, when laborers desist from work to shun the heat.] A slight repast between breakfast and dinner; a luncheon.

—A place for taking a luncheon; an eating-house.

—*v. n.* To take a lunch.

Luncheon, (*lunsh'on,*) *n.* A meal taken between breakfast and dinner; a lunch.

Lund, (*lound,*) a town of Sweden, prov. of Malmæ, 20 m. N.E. of Malmæ, and 24 m. E. of Copenhagen; Lat. 55° 42′ 26″ N., Lon. 13° 12′ 42″ E. It is chiefly noted for its university, founded in 1666, and containing a library of 50,000 vols. and 1,000 MSS. *Manuf.* Woollen cloth and tobacco; and it has also tanneries, sugar refineries, and some foreign trade.

Lun'dy Island, an island lying at the mouth of the Bristol Channel, abt. 10 m. from Hartland Point. It is defended, except on its E. side, by lofty rocks, and has a light-house. Formerly it was a noted stronghold of pirates.

Lundy's Lane, a locality in prov. of Ontario, near the Falls of Niagara. Here, July 25, 1814, an obstinate and undecisive engagement was fought between an American force, numbering 3,000 men, under Gen. Brown, and a body of abt. 4,000 British troops commanded by Gen. Drummond. The loss of the Americans was 743 men; that of the British 878 men. In this battle, fought against the best disciplined English soldiers, the troops of Brown fought with a valor which did much to disabuse the country of the idea, then prevalent, that American troops could not cope with the trained veterans of Europe.

Lune, *n.* [Lat. *luna*, the moon.] (*Geom.*) That portion of the surface of a sphere which is inclosed between two great circles.

Lune, (*lune,*) a river in England, rising in Westmoreland co., and running through Lancaster co., falling into the Irish Sea at Sunderland Point. It is 50 miles long.

Luneburg, (*loo'ne-boorg,*) a dist. of Prussia, prov. of Hanover, formerly a principality of the German empire, on the Elbe, and forming part of the N.W. frontier of Hanover; *area*, 4,355 sq. m. *Rivers.* The Elbe, Aller, Ilmenau, Oker, Jetze, and the Fuhr. *Pop.* 381,712.

Luneburg, a town of Prussia, prov. of Hanover, in a dist. of same name, on the Ilmenau, 67 m. N.E. of Hanover, and 27 S.E. of Hamburg. It is inclosed by walls and entered by 6 gates. The streets are dark and narrow. *Manuf.* Woollen, cotton, and linen goods, tobacco, paper, &c. It has also a large trade in horses, and a transit trade between Hamburg and the Elbe. *Pop.* 15,691.

Lunel, (*loo-nel',*) a town of France, dept. of Hérault, 14 m. E.N.E. of Montpellier. Its territory produces the best quality of Muscadel wine. *Pop.* 7,400.

Lu'nenburg, a S.E. co. of Nova Scotia, bordering on the Atlantic Ocean; *area*, about 600 sq. m. *Rivers.* Le Have River, and numerous smaller streams. *Surface*, broken; *soil*, in some parts fertile. The coast is deeply indented with bays and inlets, of which Margaret's Bay and Mahone Bay are the largest. *Cap.* Lunenburg. *Pop.* (1897) 28,800.

—A seaport town, cap. of the above co., about 45 miles W.S.W. of Halifax. The harbor affords excellent anchorage, and at the entrance is a light-house exhibiting 2 lights, one revolving and 30 feet above the other. It is sometimes called MALAGUASH.

Lu'nenburg, in *Massachusetts*, a post-town and township of Worcester co.

Lunenburg, in *Vermont*, a post-town and township of Essex co., about 45 m. E.N.E. of Montpelier. *Pop.* (1897) 1,080).

Lunenburg, in *Virginia*, a S. co.; *area*, about 429 sq. m. *Rivers.* Nottaway and Meherrin rivers. *Surface*, uneven; *soil*, fertile. *Cap.* Lunenburg Court-House. *Pop.* (1890) 11,372.

Lu'nenburg Court-House, in *Virginia*, a post-village, cap. of Lunenburg co., about 91 m. S.W. of Richmond.

Lunette', *n.* [Fr., from Lat. *luna*.] A kind of convex-concave lens, used for spectacles.—A felt pad or blinker to cover the eyes of a vicious horse.

(*Farriery.*) A horse-shoe without a sponge.

(*Fortif.*) A detached work consisting of two faces and two flanks. It is especially applicable to the defence of a fortress when its faces can be directed so that its glacis can receive flank defence from the fortress, or other detached works within moderate range. It is in general the best form of detached work.

(*Arch.*) An aperture for the admission of light in a concave ceiling.

Luneville, (*loon'veel,*) a town of France, department of Meurthe, on the Vezouze, near its junction with the Meurthe, 16 miles S.E. of Nancy. *Manuf.* Cotton and worsted goods, embroidery, and earthenware. *L.* is noted for the treaty concluded here in 1801, between France and the German Confederation, by which the former acquired the territory on the left bank of the Rhine. *Pop.* 17,000.

Lu'ney's Creek, in *W. Virginia*, a post-village of Grant co.

Lung, *n.* [A. S. *lungen*; D. *long*; Fris., Ger., and Dan. *lunge*; Icel. *lúnga*; Sansk. *laghu*, light. See LIGHTS.] (*Anat.*) One of the 2 large conical bodies placed one in each of the 2 lateral cavities of the chest, and separated from each other by the heart and large vessels, and by two layers of the pleura, which form the mediastinum, or median partition. They occupy by far the larger portion of the cavity of the chest, and during life accurately adapt themselves to its varying dimensions. Each lung is invested by an exceedingly delicate serous membrane, termed the pleura. Each pleura forms an independent sac quite distinct from the other, inclosing the corresponding lung as far as its root, and then reflected back upon the inner surface of the thorax. The portion investing the surface of the lung is called the *pleura pulmonalis*, while that which lines the inner surface of the chest is called the *pleura costalis*. The root is that part of the lung which is connected to the heart and the trachea; being formed by the bronchial tube, the pulmonary artery and veins, the bronchial arteries and veins, &c.; all of which are inclosed by a reflection of the pleura. Each lung is of conical shape, with a broad, concave base resting upon the convex surface of the diaphragm. The apex forms a blunted point, which extends into the root of the neck about an inch above the level of the first rib. The outer, or thoracic, surface is smooth, convex, and of considerable extent, corresponding to the form of the cavity of the chest, and of greater depth behind than in front. The inner surface is flattened or concave, presenting in front a depression corresponding to the convex surface of the pericardium, and behind a deep fissure (the *hilum pulmonis*) which gives attachment to the root of the lung. The posterior border is obtuse or rounded, and is received into the deep groove formed by the ribs at the side of the vertebral column. The anterior border is thin and sharp, and overlaps the front of the pericardium. The anterior portion of the right lung corresponds to the median line of the sternum, and is in contact with its fellow, the pleuræ being interposed, as low as the fourth costal cartilage, below which they are separated by an irregularly shaped interval formed at the expense of the left lung. Each lung is divided into two lobes, a lower and an upper, by a long and deep fissure, which commences upon the upper portion of the posterior border of the lung, about 3 inches from the apex, and extends obliquely downwards, and forward to the lower part of the anterior border, penetrating nearly to the root of the organ. The upper lobe is smaller than the lower, and is conical, with an oblique base, while the lower lobe is more or less quadrilateral. In the right lung, the upper lobe is partially divided by a second and shorter fissure, extending from the middle of the principal fissure forwards and upwards to the anterior margin of the organ, and marking off a small triangular portion, called the middle lobe. The right lung has thus three lobes, and is larger and broader than the left. The weight of the lungs varies much, according to the quantity of blood, mucus, or serous fluid that they may contain; but in general they are found to be between 36 and 42 ounces,—the right lung being about two ounces heavier than the left. The lungs are heavier in the male than in the female, being in the former in proportion to the body as 1 to 37, in the latter as 1 to 43. The substance of the lung is of a light, porous, spongy texture, and when healthy, is buoyant in water; but in the fœtus, before respiration has taken place, and also in cases of congestion or consolidation from disease, the entire lungs, or portions of them, will sink in that fluid. The specific gravity of a healthy lung after death varies from 345 to 746, water being 1,000. At birth the lungs are of a pinkish-white color; but as life advances they become darker, and are mottled or variegated with patches of a dark slate-color, assuming at length a dark black color. The pulmonary tissue is endowed with great elasticity, in consequence of which the lungs collapse by atmospheric pressure, when the thorax is opened, to about ⅓ of their bulk. The lungs are composed of an external or serous coat, a subserous areolar tissue, and the pulmonary substance. The serous coat is derived from the pleura, as already mentioned, beneath which is a thin layer of subserous areolar membrane, containing a large proportion of elastic fibres. It invests the entire surface of the lung, and extends inwards between the lobules. The substance of the lung itself is composed of numerous small lobules, which, although closely connected together by an interlobular areolar tissue, are quite distinct from one another, and are easily separable in the fœtus. These lobules are of various sizes, those on the surface being large, and of a pyramidal form, with the base turned toward the surface; those in the interior being smaller, and of various forms. Each lobule may be regarded as a lung in miniature, the same elements entering into its composition as go to form the lung itself. Each is composed of one of the ramifications of the bronchial tube and its terminal air-cells, of the ramifications of the pulmonary and bronchial vessels, lymphatics and nerves; all being connected together by areolar fibrous tissue. Each bronchus, on entering the substance of the lung, divides and subdivides dichotomously throughout the entire organ. Sometimes three branches arise together; and occasionally small lateral branches are given off from the sides of a main trunk. Each of the smaller divisions of the bronchi enters a pulmonary lobule, and again subdividing, ultimately terminates in the intercellular passages and air-cells of which the lobule is composed. After entering the substance of the lobules, each lobular bronchial tube is said to divide and subdivide from four to nine times, according to the size of the lobule, diminishing in size until they attain a diameter of 1-50th to 1-30th of an inch, when they become changed in structure, lose their cylindrical form, and are continued onwards as irregular intercellular passages through the substance of the lobule. Within the lungs, the bronchial tubes are not flattened behind like the bronchi and trachea without, but form completely circular tubes. The air-cells are small polyhedral alveolar recesses, separated from each other by thin septa, and communicating freely with the intercellular passages. They vary from 1-200th to 1-70th of an inch in diameter, and are larger on the surface than in the interior. The pulmonary artery conveys the venous blood to the lungs. It divides and subdivides into branches, which accompany the bronchial tubes, and terminates in a dense capillary network upon the walls of the intercellular passages and nerves. From this network, the radicles of the pulmonary veins arise, and, coalescing into large branches, at length accompany the arteries and return the blood, purified by its passage, through the capillaries to the heart. In their course through the lung, the branches of the pulmonary artery are usually found above and in front of a bronchial tube, and the vein below. The pulmonary arteries and veins differ from the same vessels in other parts of the body, inasmuch as the former convey dark blood, the latter red blood. The pulmonary veins are also destitute of valves. The bronchial arteries and veins are much smaller than the pulmonary vessels, and are designed for the nourishment of the substance of the lungs. The lungs are supplied with nerves from the pulmonary plexuses, formed chiefly by the par vagum, together with filaments from the sympathetic. The absorbents are deep-seated and superficial. They pass to the bronchial glands at the roots of the lungs, and then proceed partly to the thoracic duct on the left side, and partly to a corresponding vessel on the right. The lungs are the great organs of respiration. The air passes through the bronchial tubes until it reaches the minute air-cells, on the walls of which the blood circulates in a network of capillaries in such a way that it is brought into immediate connection with the atmospheric air, which is drawn in by each inspiration. In the act of breathing, the capacity of the chest is increased by the action of certain muscles, when the air rushes in to fill the vacuum, and expansion of the lungs takes place; and then, the muscular movement ceasing, the ribs, by their weight and elasticity, contract and force out the air. From fifteen to twenty-two is the average number of respirations in a minute; but this number may be very greatly increased by excitement, exercise, or disease. The lobules are not all distended with air in ordinary inspiration, nor by the most powerful efforts that can be made. Those of the upper parts of the lungs seem to be most filled, and are most constantly in action. The average quantity of air contained in the lungs is estimated at about 200 cubic inches. In each ordinary act of inspiration, or expiration, a change of from 20 to 30 cubic inches is supposed to take place. The lungs, from their highly-organized structure and their incessant exercise, are, perhaps, more liable to disease than any other part of the body. The diseases to which they are mostly liable are, in their first stages at least, of an inflammatory character, and are mostly produced by exposure to damp and cold, sudden atmospheric changes and transitions of temperature, want of proper nourishment, &c. The state of the lungs can now be ascertained with tolerable certainty by means of auscultation, which see. For particular diseases of the lungs, see ASTHMA, BRONCHITIS, HÆMOPTYSIS, PLEURITIS, PNEUMONIA, PHTHISIS.

Lunge, LONGE, or ALLONGE, (*lunj.*) *n.* [Fr. *allonge*.] (*Fencing.*) The third mode of attack, which is executed by first making the movement termed the "extension," and afterwards advancing the right foot forward, as far as can be done with ease, towards the opponent. The right foot is firmly planted on the ground, the body quite erect, resting equally upon both legs, the height of the shoulders equal, the right thigh nearly horizontal with the ground, and the leg perpendicular. The thrust of the weapon proceeds from the wrist, the point of the foil being elevated, and advanced towards the breast of the adversary.

Lunged, (*lungd.*) *a.* Having lungs, or the nature or resemblance of lungs; drawing in and expelling air.

Lungeous, (*lunj'us,*) *a.* Ill-tempered; quarrelsome; irritable. (Used as an English provincialism.)

Lung'-grown, *a.* (*Med.*) Having lungs attaching to the pleura.

Lung'less, *a.* Without lungs.

Lung'wort, (*-wart,*) *n.* (*Bot.*) See PULMONARIA.

Lu'niform, *a.* [Lat. *luna,* moon, and *forma,* form.] Moon-shaped; resembling the moon.

Luniso'lar, *a.* [Fr. *lunisolaire,* from Lat. *luna,* and *solaris,* of the sun.] (*Astron.*) Having reference to the mutual action or connection of the sun and moon. — A lunisolar period is that after which the eclipses again return in the same order. (See CYCLE.) The Dionysian period of 532 years, formed by multiplying together the solar and lunar cycles of 28 and 19 years, has sometimes been called the lunisolar year.

Luniti'dal, *a.* Belonging or having reference to tidal movements dependent on the moon.

Lun'nite, *n.* (*Min.*) A variety of Phosphocalcite, or hydrated phosphate of copper, occurring in radiating fibrous matter of a beautiful emerald-green color.

Lunt, *n.* [D. *lont;* Ger. *lunte.*] The match-cord with which a cannon is fired.

Lu'nula, *n.* [Dim. of Lat. *luna.*] (*Anat.*) The white, semi-lunar mark at the base of the nails.

Lu'nular, *a.* [From Lat. *lunula.*] (*Bot.*) Possessing the form of a new moon or crescent.

Lu'nulate, Lu'nulated, *a.* (*Bot.*) Having the shape of a small crescent.

Lu'nule, *n.* [Fr., from Lat. *luna.*] (*Conch.*) A crescent-shaped spot on some bivalve shells.

(*Gem.*) See LUNE.

Lu'nulet, *n.* [Dim. of *lune,* q. v.] (*Zoöl.*) A crescent-shaped spot on insects, differing in color from the rest of the body.

Luper'cal, *a.* Belonging to the Lupercalia.

Luper'cal, *n.; pl.* LUPERCALIA. [Lat. *lupercalis.*] (*Rom. Antiq.*) A Roman festival held in honor of Pan. Augustus endeavored to restrain the license of this festival, which was altogether abolished in 496.

Lupinas'ter, *n.* [Lat. *lupinus,* lupine, and Gr. *aster,* star.] (*Bot.*) A species of bastard lupine.

Lupine, (*lu'pin,*) *n.* [Lat. *lupinus.*] (*Bot.*) See LUPINUS.

Lu'pine, *a.* [Lat. *lupinus,* from *lupus;* Gr. *lukos,* a wolf.] Like a wolf; wolfish.

Lu'pinus, *n.* [Lat. *lupus,* a wolf; because it overruns the field and devours its fertility.] (*Bot.*) A genus of plants, order *Fabiaceæ.* They are perennial herbs, with palmately 5–15-foliate leaves. The principal American species are *L. perennis,* the Common Lupine; *L. polyphyllus,* the Many-leaved Lupine; *L. Nootkatensis,* the Nootka-Sound Lupine; and *L. arboreus,* the Tree Lupine.

Lu'pous, *a.* Wolfish; having the characteristics of a wolf.

Lu'pulus, *n.* (*Bot.*) See HUMULUS.

Lu'pus, *n.* [Lat., the wolf.] (*Astron.*) A constellation of the southern hemisphere, which originally formed part of the constellation Centaurus, according to Aratus and Ptolemy. It lies to the S. of Scorpio, having Centaurus on one side of it, and Ara on the other. The largest star is one of the third magnitude.

(*Med.*) A peculiar and malignant skin-disease which attacks the wings of the nose, the lips, and other parts of the face, slowly eating away the part by a spreading ulcer called *lupus,* or the wolf, from its chief characteristic: the eating ulcer.

Luray', in *Ind.,* a p.-v. of Henry co., abt. 50 m. E.N.E. of Indianapolis.—In *Ohio,* a vill. of Licking co., abt. 24 m. E. of Columbus.—In *Va.,* a p. v., on the Norfolk & Western R. R., cap. of Page co., about 136 m. N.W. of Richmond. One mile from Luray are the celebrated caverns of *L.,* resembling the Mammoth Cave of Kentucky; but in variety, grandeur, and beauty said to surpass all other similar caves.

Lurch, (*lerch,*) *n.* [O. Fr. *lourche, ourche,* the game at tables called *lurch; il demeura lourche,* he was left in the lurch.] (*Naut.*) A sudden roll of a ship to one side. — *Lee lurch,* the sudden rolling of a ship to the lee side. — *To leave in the lurch,* to leave in a forlorn or deserted condition; to leave in a state of embarrassment, or without help or power of extrication.

"Though thou 'rt of a different church,
I will not *leave* thee *in the lurch.*" — *Hudibras.*

—*v. n.* To shift about: to dodge; to play tricks.

"I myself . . . am fain to shuffle, to hedge, and *to lurch.*" — *Shaks.*

—To lurk; to lie in wait or ambush. — To roll suddenly to one side, as a ship in a heavy sea.

—*v. a.* To filch; to pilfer; to rob; to steal. — To defeat; to disappoint; to frustrate.

"This is a sure rule, that will never *lurch* the sincere communicant." — *South.*

Lurch'er, *n.* [See LURK.] One who lies in wait or ambush; a lurker; one who watches to steal, or to betray or entrap; a poacher.

"Swift from his prey the scudding *lurcher* flies." — *Gay.*

—A sort of hunting-dog, resembling a mongrel greyhound, with pricked ears, a shaggy coat, and generally of a yellowish-white color. It runs very swiftly, so that, if it gets between the burrows and the rabbits, it seldom misses taking them; in hunting, this is its usual practice. The lurcher is much used by poachers.

—[Lat. *lurco,* a glutton.] One who is addicted to gluttony.

Lurch'-line, *n.* The line of a fowling-net used for ensnaring birds.

Lur'dy, Lur'gy, *a.* Heavy; listless; indolent. (Used as an English provincialism.)

Lure, *n.* [O. Fr. *leurre,* a falconer's lure; Fr. *leurre,* a decoy; Ger. *luder,* carrion, bait; Swed.-Goth. *lura,* to entice.] Something held out to call a hawk. — Any enticement; anything that promises gratification or advantage.

"Luxury held out her *lure* to his superior eye." — *Madden.*

Lure, *v. n.* To call a hawk or other bird or animal.

—*v. a.* [Fr. *leurrer.*] To draw to the lure. — To attract; to entice; to induce by anything which promises pleasure or profit.

Lur'gan, a town of Ireland, county of Armagh, prov. of Ulster, 3 m. from the S. border of Lough Neagh, and 18 W S.W. of Belfast. *Manuf.* Linens and muslins, particularly linen-diapers and damasks; also tobacco. *Pop.* 8,000.

Lur'gan, in *Pennsylvania,* a township of Franklin co.; *pop.* abt. 1,600

Lu'rid, *a.* [Lat. *luridus,* from *lorum,* a whip, a thong of leather.] Sallow; wan; ghastly pale; gloomy; dismal; overcast.

(*Bot.*) Dingy-brown.

Lurk, *v. n.* [W. *llercian,* to loiter about, to lurk.] To lie hid; to lie in wait or ambush; figuratively, to lie concealed or unperceived; to retire from public observation; to keep out of sight.

Lurk'er, *n.* One who hides or lurks; one who keeps out of sight.

Lurk'ing-place, *n.* A place where one lies in wait or ambush; a hiding-place.

Lur'ry, *n.* A confused heap or mass. (R.) — A jumbled utterance; as, a *lurry* of words.

Lus, a province of Beloochistan, bounded on the S. by the Indian Ocean, and on its other sides by Mukran, Jhalawan, and Scinde; Lat. between 25° and 26° N., Lon. 65° 30′ and 67° E. *Area,* 5,200 sq. m. *Desc.* Generally mountainous; but fertile along the banks of its rivers. *Pop.* 60,000.

Lusatia, (*lu-sai'she-a,*) an anc. prov. of N. Germany, with the title of a margraviate, lying between the Elbe and Oder, and surrounded by Brandenburg, Bohemia, Silesia, and a part of Saxony. It now forms a part of the provs. of Potsdam, Lieguitz, and Frankfort, in the kingdom of Prussia.

Luscious, (*lŭsh'us,*) *a.* [Ar. *laziz,* sweet, full of juice; *lazzat,* pleasures; Hind. *luzzat,* the sweets.] Sweet to excess; delicious; toothsome.

"Raisins keep their *luscious* native taste." — *Dryden.*

—Sweet or rich, so as to cloy or nauseate; hence, fulsome, as flattery. — Smutty; obscene; exotic. (R.)

Lusciously, (*lŭsh'us-li,*) *adv.* With sweetness or richness that cloys or nauseates; in a luscious manner.

Lusciousness, (*lŭsh'us-ness,*) *n.* State or quality of being luscious; immoderate sweetness or richness that cloys or offends.

Lu'sern, *n.* [Lat. *lupus cervarius,* deer-wolf.] (*Zoöl.*) The lynx.

Lush, *a.* [From *luscious.*] Full of juice and vitality; succulent.

"The year grows *lush* in juicy stalks." — *Keats.*

Lush, *n.* Drink; liquor; grog; as, "he is fond of his *lush.*" (Vulgar.)

Lu'siad, *n.* (*Lit.*) The name given to the great epic poem of Portugal, written by Camoëns, and published in 1571. As the Italians boast of Tasso, so do the Portuguese of Camoëns; and, indeed, the two poets were contemporary, but the *Lusiad* appeared before the *Jerusalem.* The subject of the *Lusiad* is the first discovery of the East Indies by Vasco de Gama, an enterprise, splendid in its nature and extremely interesting to the author's countrymen, as it laid the foundation of their future wealth and consideration in Europe. The poem opens with Vasco and his fleet appearing on the ocean between the island of Madagascar and the coast of Ethiopia. After various attempts to land on that coast, they are at length hospitably received in the kingdom of Melinda. Vasco, at the desire of the king, gives him an account of Europe, recites a poetical history of Portugal, and relates all the adventures of the voyage which had preceded the opening of the poem. This recital takes up three cantos or books. It is well imagined, and contains a great many poetical beauties, its only defect being an unreasonable display of learning to the African prince in frequent allusions to the Greek and Roman histories. Vasco and his companions afterwards set forth to pursue their voyage. The storms and distresses which they encounter; their arrival at Calicut on the Malabar coast; their reception and adventures in that country, and at last their return homeward, fills up the rest of the poem. Both the subject and the incidents of the Lusiad are magnificent, and, joined with some wildness and irregularity, there appear in the execution much poetic spirit, strong fancy, and bold description; but the machinery of the poem is perfectly extravagant. It consists of a singular mixture of Christian ideas and heathen mythology, and is so conducted that the pagan gods appear to occupy the chief place. The great protector of the Portuguese is Venus, and their great adversary Bacchus, whose displeasure is excited by Vasco's attempting to rival his fame in the Indies. It contains, however, some fine machinery of another description; as, for instance, when the genius of the river Ganges is made to appear to Emanuel, king of Portugal, in a dream, inviting him to discover its secret springs, and acquainting him that he was the monarch for whom the treasures of the East were reserved; and when the huge and monstrous phantom appeared to them, rising out of the sea, at the Cape of Good Hope, which had never been doubled by any navigator before, menacing them for daring to explore these seas, and foretelling the successive calamities that were to befall them. This poem has been frequently translated into foreign tongues. There are two English translations, one by Fanshaw, the other by Mickle.

Lu'signan, GUY DE, a celebrated French nobleman, who went to the Holy Land in the time of the Crusades, and espoused Sibylla, daughter of Amaury, king of Jerusalem, whom he succeeded; but he afterwards conceded that title to Richard I., king of England, and received the isle of Cyprus in return. D. 1194.

Lusk'ish, *a.* Somewhat inclined to laziness or indolence.

Lusk'ishly, *adv.* Lazily; indolently.

Lust, *n.* [A. S., D., Flem., Ger., and Sw. *lust;* Icel. and Dan. *lyst;* Sansk. *lash,* to desire, to seek or grasp after.] Longing desire; inordinate eagerness to possess or enjoy.

"Ring out the narrowing *lust* of gold." — *Tennyson.*

—Concupiscence; carnal appetite; unlawful desire of carnal pleasure; depraved affections or desires.

"This our court, infected with . . . epicurism and *lust.*" — *Shaks.*

—*v. n.* [A. S. *lustan.*] To desire ardently; to long for; preceding *after;* as, to *lust after* liberty. — To desire carnally; to seek the gratification of sexual appetite; — followed by *after.* — To have irregular or inordinate desires.

"The spirit that dwelleth in us *lusteth* to envy." — *James* iv. 5.

Lust'er, *n.* One who lusts.

Luster, *n.* See LUSTRE, the more correct orthography

Lust'ful, *a.* Libidinous; lewd: having eager desire of carnal gratification; sensual; licentious. — Inciting to lust; provoking to sensuality; exciting carnal desire; as, "*lustful* orgies." — *Milton.*

Lust'fully, *adv.* With concupiscence or carnal desire; in a lustful manner.

Lust'fulness, *n.* State of being lustful or of having carnal desires; libidinousness; lewdness.

Lust'head, Lust'hood, *n.* Vigor of the animal functions; corporeal ability; state or quality of being lusty or hearty.

"His May of youth, and bloom of *lustihood.*" — *Shaks.*

Lust'ily, *adv.* With vigor of body; stoutly; heartily; sturdily.

"I determine to fight *lustily* for him." — *Shaks.*

Lust'iness, *n.* State or quality of being lusty: bodily vigor; stoutness; strength; robustness; sturdiness.

"Cappadocian slaves were famous for their *lustiness.*" — *Dryden.*

Lus'tral, *a.* [Lat. *lustralis,* from *lustrum,* an expiatory or purifying sacrifice, from *luo,* to atone for; Gr *lüō,* to ransom, to redeem.] Used in purification.

"His better parts by *lustral* waves refin'd." — *Garth.*

—Pertaining to lustration; as, *lustral* days.

Lus'trate, *v. a.* To cleanse or purify by the medium of a propitiatory sacrifice. — To behold; to survey; to view; to examine.

Lustra'tion, *n.* [Lat. *lustratio,* from *lustrum.*] Act or operation of making clean or pure; a cleansing or purifying by water.

"By ardent pray'r, and clear *lustration.*" — *Prior.*

(*Antiq.*) Among the Greeks, *L.* followed the commission of some crime, which it was to expiate. With the Romans it was simply an act to win the favor of the gods; as on fields after the crops were sown, and on armies before beginning a campaign.

Lustre, (*lus'ter,*) *n.* [Fr., from Lat. *lustro,* to make light, illumine, from *lucco,* to shine. See LUCID.] Brightness; brilliancy; polished splendor of surface; gloss.

"Time adds fresh *lustre* to her beauty still." — *Davies.*

—Splendor of birth, of deeds, or of fame; renown: distinction. — A candlestick or candelabrum ornamented with pendent drops of cut-glass.

—The space of five years. See LUSTRUM.

Lus'treless, *a.* Without lustre or brilliancy; dull; dim.

Lus'trical, *a.* [Lat. *lustricus.*] Belonging to, or employed in, purification.

Lus'tring. (Often corruptly written LUTESTRING.) *n.* [Fr. *lustrine;* It. *lustrino,* from Lat. *lustro.*] A species of stout, glossy, bright silk stuff, used for ladies' dresses.

Lus'trous, *a.* Full of lustre; bright; shining; luminous; as, *lustrous* eyes.

Lus'trously, *adv.* In a lustrous or luminous manner.

Lus'trum, *n.; pl.* LUSTRA. [Lat. probably from *luere,* to wash or expiate.] (*Roman Antiq.*) A name which was given to each successive period of five solar years, at the close of which a census of the people was taken, which was followed by a solemn expiatory sacrifice of a sow, a sheep, and a bull. The sacrifice was made under the direction of the censor, and the animals were slain in the Campus Martius, or Field of Mars, near Rome, after having been led three times around the people that had assembled there to witness the ceremony. It was afterwards used to denote any period of five years; a man who had commenced his 36th year being said to have completed his seventh *L.,* and to have entered on the eighth. After the establishment of the Julian calendar, and the adoption of the solar year of 365 days, the old Roman year of 304 days was still retained for religious purposes; and Niebuhr considers the *L.* to mean the periods of time at the conclusion of which the commencement of the Roman civil and religious years again coincided; six religious years of 304 days being just equal to five civil or solar years of 365 days.

Lust'-stained, *a.* Defiled by lust; as, a *lust-stained* bed.

Lust'-wort, *n.* (*Bot.*) A species of plants, genus *Drosera.* See DROSERACEÆ.

Lust'y, *a* (*comp.* LUSTIER; *super.* LUSTIEST.) [Ger. *lustig;* O. Ger. *lustac.*] Vigorous; strong; robust; healthful; hearty; sturdy; as, a *lusty* fellow.

"Last noon beheld them full of *lusty* life." — *Byron.*

—Full-sized; bulky; burly; large; corpulent. — Pregnant; enceinte. (Used colloquially.)

Lust'yhood, *n.* Same as LUSTIHEAD, *q. v.*

Lu'sus natu'ræ. [Lat., from *lusus*, sport, and *natura*, nature.] A sport, freak, or whim of nature; hence, an abortive or unnatural production.

Lut'anist, Lut'enist, *n.* [From Lat. *lutana*, a lute. See LUTE.] A performer on the lute. (R.)

Luta'rious, *a.* [Lat. *lutarius*, from *lutum*, mud.] Mud-colored.

"A scaly tortoise-shell of the *lutarious* kind."—*Grew.*

—Living in mud; having the characteristics of mud.

Luta'tion, *n.* [Fr.] Act or process of luting vessels.

Lute, *n.* [Fr. *luth;* Ger. *laute*, from *lauten*, to sound. See SOUND.] (*Mus.*) An ancient musical instrument of the guitar kind, somewhat resembling in shape the section of a pear, and consisting of four parts: viz., the table; the body, which has nine or ten sides; the neck, containing as many stops or divisions; and the head or cross, in which the screws are inserted. It is played upon by striking the strings with the fingers of the right hand, and regulating the sounds with those of the left. Its origin is unknown, but generally believed to have been very ancient; it was, in all probability, derived from the ancient lyre. Vincentio Galilei ascribes its invention to the English, among whom, according to Burney, the first author who mentions it is Chaucer. Until the end of the 17th century, a knowledge of this instrument was considered an almost indispensable part of a good education; after that time, however, it became gradually superseded by the guitar. It is said to have gone out of fashion from Ita being considered to occasion deformity in ladies.

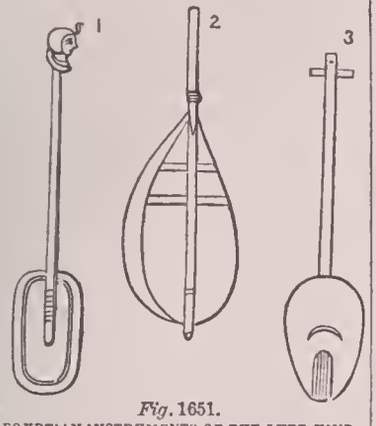


Fig. 1651.
EGYPTIAN INSTRUMENTS OF THE LUTE KIND.

—*v. a.* To play on a lute.

Lute, Lut'ing, *n.* [Lat. *lutum*, mud.] (*Chem.*) The general name for a variety of compounds used for securing the junctures of vessels, or protecting them from the action of heat. Slips of wetted bladder; linseed meal made into a paste with gum-water; white of egg and quicklime; glazier's putty, which consists of chalk and linseed-oil; and *fat lute*, composed of pipe-clay and drying-oil, are useful for retaining vapors; but to withstand the action of a high temperature, earthy compounds are required. Loam, or a mixture of clay and sand well beaten into a paste and then thinned with water, and applied by a brush in successive layers to retorts, tubes, &c., enables them to bear a high temperature; if a thick coating is required, care should be taken that the cracks are filled up as the lute dries; a little tow mixed with it renders it more permanent. If the lute is intended to vitrify, as, for instance, to prevent the porosity of earthenware at high temperatures, a portion of borax, or red lead, may be mixed with it.

—*v. a.* To close, coat, or smear with lute.

Lute'-backed, (*-bākt,*) *a.* Possessing a curved spine.

Lu'ton, a town of England, Bedford co., on the Lea, 16 m. W.N.W. of Hertford, and 28 N.W. of London. *Manuf.* Straw hats and laces.

Luteocobal'tia, *n.* (*Chem.*) See COBALT.

Lute'tia. [The Lat. name of Paris.] (*Astron.*) An asteroid discovered in 1852, by Goldschmidt.

Lu'teous, *a.* [Lat. *luteus.*] Of a deep golden or orange-yellow color.

Lut'er, *n.* One who performs on a lute; a lutanist.

Luteole'ine, Lu'teoline, *n.* [Fr. *luteoline*, from Lat. *luteolus*, yellowish.] (*Chem.*) A yellowish coloring-matter obtained from the wood of *Reseda luteola*, or Weld.

Lutescent, (*-tĕs'sent,*) *a.* [From Lat. *luteus*, yellow.] Of a yellowish color; resembling yellow.

Lute'string, *n.* The string of a lute.
(*Manuf.*) See LUSTRING.

Lu'ther, MARTIN, the leader of the German Reformation, b. in 1483, at Eisleben, in Lower Saxony. His father, Hans Luther, was a poor miner, and soon after his son Martin's birth, settled with his pious and industrious wife, Margaret, at Mansfeld. At the age of 14 he was sent to the school of Magdeburg, from which he removed to Eisenach, and thence to the university of Erfurt, (Fig. 958,) where, in 1503, he received his first degree, and, two years later, having obtained the degree of doctor of philosophy, he delivered lectures on the physics and ethics of Aristotle. He was destined by his father for the legal profession; but the impression produced on him by the fate of his friend Alexis, who was struck dead by lightning while walking by his side on their road from Mansfeld to Erfurt, uniting with the effect of his early religious education, induced him to devote himself to the monastic life, and he entered the monastery of the Augustines in 1505, submitting patiently to all the penances which the superior of the order imposed upon novices. During his residence in the monastery he studied with great enthusiasm the writings of St. Augustine, and passed through severe mental conflicts, seeking vainly guidance or consolation. In 1507 he was ordained priest, and in 1508 he was made professor of philosophy in the new university of Wittenberg. In this sphere of action his powerful mind soon showed itself; he threw off the fetters of the scholastic philosophy, asserted the rights of reason, and attracted a large number of disciples. He was called by the Senate to preach, and it was with very great reluctance and timidity that he made his first attempts in the pulpit. In 1510 he visited the court of Pope Leo X., at Rome. After his return, in 1512, he was made doctor in theology. His profound learning, his intimate acquaintance with the Bible, together with the fame of his eloquence, soon made *L.* known to the principal scholars, and esteemed as a powerful agent for the reformation of the Church. Great, therefore, was the attention excited by his 95 Propositions, affixed to the Castle church, Wittenberg, Oct. 31, 1517, and intended to put an end to the sale of indulgences by the Dominican Tetzel. They were condemned as heretical and burnt; but neither menaces nor persuasions could induce him to recant, and he maintained the invalidity of indulgences, and denied the papal supremacy. In 1518 *L.* had a controversy with Doctor Eck, and the same year met the cardinal-legate Cajetan at Augsburg. In 1520 the Pope issued a bull of excommunication, which Luther publicly burnt before an immense assembly at Wittenberg. Luther's separation from Rome was now complete. Leo X. urged the new emperor, Charles V., to apprehend and punish the turbulent and daring heretic, but by the influence of the elector of Saxony, the reformer's cause was tried at Worms. On his way to Worms, Spalatin, apprehensive for his safety, dispatched a messenger to forewarn and dissuade him from continuing his journey; but the daring champion replied, "Go tell your master, that, though there were as many devils in Worms as tiles upon the house-tops, I will enter it." On the 16th of April he reached this city, attired in his friar's cowl; multitudes met him, and he entered it attended by two thousand persons. Before his 204 august judges, the emperor and his nobility, his courage did not fail, and he steadily appealed to the authority of Scripture. The result was, that Charles issued a rescript "against the evil fiend in human form," "the fool," and "the blasphemer," and put him under the

Fig. 1652. — MARTIN LUTHER.

ban of the empire. On his return from Worms, he was seized, at the instigation of his friend, the Elector of Saxony, and safely lodged in the old castle of the Wartburg. The affair was made to assume an aspect of violence, but in reality it was designed to secure him against the destruction which his conduct at Worms would perhaps have provoked. For a whole year he remained in this shelter, while his friends and relatives mourned over his absence or death. But his powerful patrons had in this way provided for his safety. This period of forced retirement was not misspent, and though he had to wrestle with morbid and nervous sen-

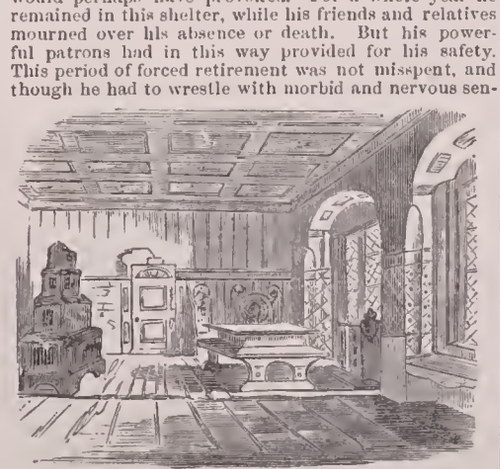


Fig. 1653. — LUTHER'S CHAMBER AT WITTENBERG.

sations, produced by his confinement and sedentary life, he translated the New Testament into German, which was published in 1522. Leaving his Patmos, and returning to Wittenberg, his undaunted energy carried all before it, the Reformation was ushered in, and in 1524 Luther abandoned the monastic dress — the last symbol of his connection with Rome. He crushed his fanatical opponents in the party of the Reformists, gallantly entered the lists with Henry VIII. of England, and fought stoutly with Erasmus on the Freedom of the Will. In 1525, Luther married Catharine von Bora, a nun, who had escaped from a convent; on which his enemies accused him of immorality and impiety; but Luther defended his act on Scriptural ground. In 1529 the emperor convened a diet at Spires, to procure aid from the German princes against the Turks, and to devise means for allaying religious disputes. In this assembly it was ordered that the mass should be universally observed throughout the empire. Against this decree the electors of Saxony and Brandenburg, and other princes, entered their protest; on which account the reformed party acquired the name of *Protestants.* These princes then entered into a league for their mutual defence against the emperor. In 1530 was drawn up by Melanchthon, the Confession of Augsburg, which was received as the standard of the Protestant faith in Germany. In 1535 Luther's translation of the Bible into German was published. In 1537, Luther was attacked with a dangerous illness, but recovered, and went on writing books, and laboring to promote the great work of reformation. The mind of Luther was ardent and impetuous, but honest. His manners were becoming his profession, and his whole life evinced a zeal for the discovery of truth, and the welfare of man. He was a multifarious and voluminous writer; a complete edition of his works, in 26 vols., was published at Erlangen, in 1833. A translation of Luther's *Table-Talk* was published in London, 1849. D. 1546.

Lu'theran, *a.* (*Eccl. Hist.*) Springing from, or having reference to the Protestant reformer Luther; as, the *Lutheran* religion.

—*n.* (*Eccl. Hist.*) A disciple of Luther; a member of the Lutheran doctrine of religion.

Lu'theranism, Lu'therism, *n.* The religious doctrines promulgated by Martin Luther. The Lutheran Church professes no other rule of faith than the Holy Scriptures. The Confession of Augsburg (see AUGSBURG CONFESSION), with Melanchthon's defence of it, the Articles of Smalcald, the larger and smaller Catechisms of Luther, and the Formula Concordiæ, are generally received as containing the principal points of doctrine; but these books have no authority but what they derive from Scripture. Luther reduced the number of sacraments to two, — Baptism, and the Lord's Supper; but he maintained the doctrine of the real presence. He maintained the mass to be no sacrifice; opposed the adoration of the host, auricular confession, monastic vows, indulgences, purgatory, meritorious works, the worship of images, celibacy of the clergy, &c. There are, however, certain religious rites and institutions of the Roman Catholic Church which are regarded by Lutherans as tolerable, and some of them as useful; as the distinguishing vestments of the clergy, the use of wafers in the administration of the eucharist, the forms of exorcism in the celebration of baptism (now in disuse), the private confession of sins, the use of images of incense, and of lighted tapers in their churches, with a crucifix upon the altar. Some of these, however, are not general, but confined to particular parts. Hence, Lutheranism is regarded as more nearly allied to the Roman Church than any other reformed system of worship. Some of the doctrines which were warmly maintained by Luther are now generally abandoned by his followers; as, for instance, the doctrines of absolute predestination, human impotence, and irresistible grace, which are so distinct from Lutheranism now, that they are generally known as Calvinistic doctrines. The Lutherans now maintain, with regard to the Divine decrees, that they respect the salvation or misery of men in consequence of a previous knowledge of their sentiments and characters, and not as free and unconditional, and as founded on the mere will of God. Towards the close of the 17th century, the Lutherans began to entertain a greater liberality of sentiment than they had before adopted; and their teachers now enjoy an unbounded liberty of dissenting from the decisions of those symbols or creeds which were once deemed almost infallible rules of faith and practice, and of declaring their dissent in the manner they deem most expedient. The constitution of the Church is simple, and in every country where it is established, the head of the state is acknowledged as the supreme visible ruler of the Church. It is governed by a consistory composed of divines and civilians, frequently appointed by the sovereign himself. The German Lutherans reject episcopacy; but as the Reformation extended, and Sweden and Denmark embraced the Lutheran faith, these countries retained the episcopal form of government, and are governed by bishops and superintendents under the authority of the sovereign. The forms of worship vary in different countries. Every country where Lutheranism prevails has its own liturgy, which is the rule of proceeding in all that relates to external worship and the public exercise of religion. The liturgies used in the different countries agree in all the essential branches of religion, but differ widely on matters of an indifferent nature regarding which Scripture is silent. Festivals in commemoration of the great events of gospel history were once observed, as well as a few saints' days; but these are now suffered to pass almost unnoticed. At present Lutheranism is most powerful in Denmark and Sweden. In the Protestant states of Germany and in Holland the Lutheran is, upon the whole, the prevailing faith, though the proportion

of Roman Catholics is often great. In France, Russia, Poland, Hungary, there are also a number of Lutheran churches. The number of members of the Lutheran Church throughout the world is est. at 30,000,000 (1897). Various attempts have been made to unite the Lutherans and Calvinists, but with little success. A sort of mechanical union of the two churches was effected in Prussia in 1817, on the basis of a declaration promulgated by a synod convened by royal authority at Berlin. The united Church forms what is known as the *Evangelical Church of Prussia*, a Church in which the Lutheran is not compelled to embrace Calvinism, nor the Calvinist Lutheranism. The two confessions are thus held within the pale of the same Church, and not unfrequently preached by collegiate ministers within the same walls. The difference between the two systems are of such a nature as to have hitherto presented insuperable obstacles to an efficient union. The Lutheran Church was introduced in the United States in 1637, by the settlement of Swedish emigrants on the Delaware river. The colony was part of a plan for a religious settlement, for the purpose of planting Protestant colonies in the new country, in which Gustavus Adolphus had taken much interest. The missionaries who came with the colony gave immediate attention to efforts to evangelize the Indians. They translated Luther's Smaller Catechism into the native language, and were translating the Bible at the same time that Eliot was performing a similar work in New England. Previous to this settlement, a few Lutherans had settled with the Dutch in New Amsterdam, but met little favor till 1664, when, the colony having fallen into the hands of the English, the Duke of York gave them their first permission to worship publicly. But the great foundation of the Lutheran Church was laid by the German emigrants to Pennsylvania and adjacent States, who began to come over in large numbers about 1710. Mühlenberg arrived in 1742, and visiting the churches, gathering scattered members, and using other means, brought the Church under organization. The first synod was formed in 1748. There were then eleven Lutheran ministers in the country, of whom six attended this meeting. These early Lutherans, says Professor Brown, of Gettysburg, in the *Bibliotheca Sacra*, while adhering to the faith and usages of their Church, "encouraged and practised the most enlarged catholicity of spirit and action among Evangelical churches. There were frequent interchanges of visits among them with ministers of other churches, and the meetings of their ecclesiastical bodies witnessed the mutual esteem in which each other was held. We find the most friendly relations existing between Lutherans, Presbyterians, Episcopalians, and others, and such names as Mühlenberg and Tennant and Whitefield associated in the work of the Lord." During the latter part of the last and the early part of this century, from various causes, the Lutheran Church grew but slowly, till the General Synod was organized in 1820. At that time there were 5 synods, with about 140 ministers, and 30,000 members. Four of these joined the General Synod. In 1823, the Synod of Pennsylvania, with over half the membership of the Church, withdrew, leaving 3 synods, 61 ministers, and 10,000 members in the General Synod. At the beginning of the war there were nearly thirty synods connected with this body. By the loss of the Southern synods, and other causes, the number was reduced to twenty-three in the General Synod of 1867. At that time the entire strength of the Lutheran churches in the U. States was estimated at 44 synods, 1,725 ministers, 3,000 congregations, and 350,000 members. One of the first acts of the General Synod was the establishment of the Theological Seminary at Gettysburg, in 1825. This gave the Church ministers educated within its own body, and was the beginning of a system of education which is now carried on by means of numerous flourishing schools and colleges in different sections. The five or six Southern synods which were separated from the General Synod by means of the civil war, united and organized the "Evangelical Lutheran General Synod of North America." Since then, several synods and parts of synods have withdrawn from the General Synod, insisting on a stricter adherence to the Confession of Augsburg than the General Synod would enforce, and uniting with other synods that were not in the General Synod; — in all, eleven synods have organized the "General Council of the Evangelical Lutheran Church in America." The Parent Education Society of the General Synod was organized in 1835; the Foreign Missionary Society in 1837, and sustains missions in India and Africa; the Home Missionary Society in 1845; the Church Extension Society in 1853; the Historical Society in 1845, and the Publication Society in 1851. Since the census of 1890 the Church has gained very largely in numerical strength in this country. At that time it numbered 4,591 ministers, 8,595 congregations, 1,231,075 communicant members. Since that date there has been an increase of nearly 1,400 ministers, 1,200 congregations, and over 200,000 communicants. The Church has gained also through having its history, principles of faith, and worship brought to the attention of the American people through numerous publications in English, the literature of the Church having previously been almost entirely confined to languages other than English. The statistics of the Lutheran churches in the United States in 1897 were as follows: General Synod, numbering 1,465 churches and 169,871 communicants; the United Synod in the South, 382 churches and 35,110 communicants; the General Council, 1,720 churches and 302,355 communicants; the Synodical Conference, 2,234 churches and 456,833 communicants, the United Norwegian, 1,028 churches and 107,830 communicants; and thirteen independent synods, not affiliated with any general body, numbering altogether 2,444 churches and 251,135 communicants; making a grand total of 9,283 churches and 1,327,134 communicants.

Lu'thersburg, in *Penna.*, a post-vil. of Clearfield co.

Lu'ther's Mills, in *Pennsylvania*, a post-village of Bradford co.

Lu'therville, in *Maryland*, a post-village of Baltimore co. *Pop.* (1897) 760.

Lutose', *a.* [Lat. *lutosus.*] Miry; muddy; besprent with clay.

Lu'tulence, *n.* Muddiness; state or condition of being lutulent or miry.

Lützen, (*loot'sen,*) a town of Prussia, prov. of Saxony, 12 m. S.W. of Leipsic. The Swedes, commanded by Gustavus II. (Adolphus), who lost his life in the battle, gained an important victory over the Austrians, under Wallenstein, near *L.*, in 1632. In 1813, Napoleon I. defeated the Russians and Prussians in an engagement at the neighboring village of Gross Görschen. *Pop.* 2,900.

Lux'an, in the Argentine Republic. See LUJAN.

Luxapatil'la Creek, rises in Marion co., Alabama, and flowing S.W. into Mississippi, enters the Tombigbee River in Lowndes co.

Luxate, Lux, (*luks'āt,*) *v. a.* [Lat. *luxo, luxatum*; Fr. *luxer*, from Gr. *loxo-ō*, to make slanting, to cast sideways, from *loxos*, slanting.] To put out of joint; to dislocate; to remove from its proper place, as a joint.

Luxa'tion, *n.* [Fr., from L. Lat. *luxatio.*] Act of moving or forcing a joint from its proper place or articulation. — State of being thus put out of joint; a dislocation; that which is disjointed.

(*Surg.*) *L.*, or dislocation, is divided into complete and incomplete: *complete*, when the displacement is perfect, or when the head of one bone is *completely* drawn out of the socket in the other, or when the articulation has been thoroughly disunited; *incomplete*, when the joint has only been started, and the bones are merely sundered, but not absolutely separated. *L.* are characterized according to their situation — as a *L. upwards, backwards, forwards*, and *downwards*; and are yet further distinguished into simple and compound. A *simple L.* is when no injury is inflicted on the skin or muscles; a *compound L.*, when the integuments and flesh are ruptured. *L.* are accidents of very frequent occurrence, and may happen to almost every bone in the body, and are usually effected by sudden falls or severe blows. It sometimes happens that *L.* are accompanied with a fracture of the same bone, when, if the fracture is near the head of the bone, it is generally impossible to reduce the *L.* till the fracture has been first reunited. — *Symptoms.* All *L.* are characterized by the same symptoms; these are: pain and immobility of the member, with shortening of the limb, accompanied with great pain if moved; a depression in one place, and an enlargement or swelling in another; a turning in or out of the foot or hand, according as to whether it is the leg or arm that is displaced. When the injury occurs to the hip-joint, the knee is drawn up and pressed on the thigh of the sound leg, while if it is the shoulder-joint, the patient invariably grasps the injured member by the elbow with the opposite hand. It should be always remembered, that when elderly people meet with heavy falls or blows, the chances are, from the greater brittleness of their bones, that they have sustained a fracture, and not a dislocation. It is in what are called the ball and-socket joints, and next in the hinge, or *ginglymus* articulation, that *L.* occur most frequently. — The *general treatment* of *L.* consists in their *reduction*, or pulling the displaced bone back into its place. Its return is opposed by the muscles attached to it, which are stimulated to contraction by the pain of the operation, which requires, of course, a good deal of force to be employed. It is desirable to remove this spasm of the muscles, which is the great obstacle to the reduction of a *L.*; and in former days bleeding from the arm, emetics, the warm bath, &c., were generally made use of; at present, chloroform or ether attains the same ends, and renders the

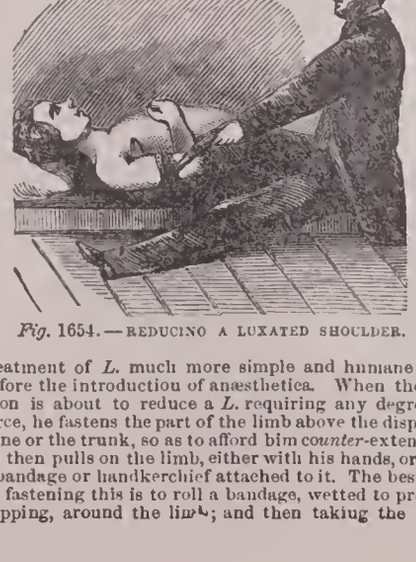


Fig. 1654. — REDUCING A LUXATED SHOULDER.

treatment of *L.* much more simple and humane than before the introduction of anæsthetics. When the surgeon is about to reduce a *L.* requiring any degree of force, he fastens the part of the limb above the displaced bone or the trunk, so as to afford him *counter*-extension: he then pulls on the limb, either with his hands, or with a bandage or handkerchief attached to it. The best way of fastening this is to roll a bandage, wetted to prevent slipping, around the limb; and then taking the thing with which he wishes to extend in both hands, he casts it into two loops, forming what is called a *clove-hitch*, and then slips the double noose up the limb till it rests on the wet bandage previously applied. In old-standing cases, the hands grow weary before the extension has been kept up sufficiently long, so it is well to adapt pulleys to draw upon the clove-hitch, as with them the traction can be regulated as the surgeon desires. Sudden, forcible pulling is useless and hurtful, the object being merely to tire out the muscles which resist the attempts at reduction; when they are exhausted, the bone will generally slip back into its place with an audible snap.

Luxe, (*lŭks,*) *n.* [Fr., from Lat. *luxus*, pomp.] Luxury; sumptuousness.

"The various *luxe* of costly pride." — *Prior.*

Luxembourg, FRANÇOIS HENRI DE MONTMORENCI, DUKE of, (*loox'em-boorg,*) a famous general and marshal of France, b. in 1628, was the posthumous son of the Count de Bouteville, who was beheaded in the reign of Louis XIII. for fighting a duel. He served when young under the prince of Condé; was made a duke and peer of France in 1662; was a lieutenant-general at the taking of Franche Comté in 1668; commanded during the invasion of Holland, in 1672; and having gained the battle of Senef in 1674, was created a marshal. He subsequently distinguished himself at the battles of Fleurus, Lenze, Steenkirk, &c., and d. in 1695.

Lux'emburg, (GRAND-DUCHY AND PROVINCE,) a territory of W. Europe, between Lat. 49° 25′ and 50° 28′ N., and Lon. 5° and 6° 30′ E.; having N. the Belgian prov. of Liége, W. that of Nassau, E. Rhenish Prussia, and S. France. Greatest length and breadth about 65 m. E.; *area*, 2,700 sq. m. A chain of hills, branching from the Ardennes, traverses the country from S.W. to N.E., forming the dividing line between the basins of the Meuse and the Moselle. The valleys are fertile, but the rest of the country has mostly a stony and barren soil; and in some parts a good deal of the surface is occupied with marshes, heaths, and poor waste land. The chief branch of rural industry is the rearing of cattle for exportation. Horses are good. There are few countries where iron is more abundant, and abt. 9,200,000 kilog. of metal are produced annually. The inhabitants, generally of Saxon origin, are all Roman Catholics. *L.* was ceded to Siegfried by the monastery of Trèves, and created a county in 965. In the 12th century it came into the possession of the Counts of Limburg, who took the title of Counts of Luxemburg. The Emperor Charles IV. erected it into a duchy in 1354. It came to Philip of Burgundy by his marriage with Isabella, daughter of the king of Portugal, in 1443, and through him passed to the house of Spain, with whom it remained till the peace of the Pyrenees, when part of it was ceded to France, Nov. 7, 1659. It was ceded to France by the treaty of Campo-Formio, Oct. 17, 1797, and it passed to Holland in exchange for certain German principalities in 1814, and became a grand-duchy. In consequence of the Belgian revolution, *L.* was dismembered, and a portion was assigned to Belgium by the conference of London, Oct., 1831, and a fresh division was made in 1839, the king of Holland retaining the title of Grand-Duke of *L.* The whole territory is divided into the district of *L.* (identical with the Dutch prov.) and the districts of Diekirch and Grevensnacher, belonging to Belgium. The Dutch prov. has an independent constitution and administration; the governor is appointed by the king of Holland. The Belgian districts are governed like other provinces. *Pop.* (1897) 215,200.

Lux'or (*luks'or*), a village of upper Egypt, on the Nile, 2 m. S. of Karnak. It stands on a portion of the site of

Fig. 1655. — LUXOR. (From the river Nile.)

anc. Thebes, and has one of the most magnificent anc. temples extant. The celebrated obelisk, known as that of Luxor, was transported to Paris, and placed in the Place de la Concorde.

LUXEMBURG, [Ger. *Lutzelburg,*] a town belonging to the kingdom of Holland, the cap. of the above grand-duchy, and formerly one of the strongest fortresses of Europe, on the Alzette, a tributary of the Sur, 22 m. S.W. of Trèves. Since 1815 the fortress was garrisoned by about 3,000 Prussian troops, but on the protestation of France, and by a clause of the treaty of London, May 11, 1867, the grand-duchy was rendered neutral, and it was agreed

that the town of *L.* shall cease to be a fortified place. The fortress was evacuated the following month by the Prussians, and the works razed in the course of the year.

Luxeuil, (*loox'e(r)e,*) a town of France, dept. of the Haute-Saone, 15 m. N.E of Vesoul. It is chiefly remarkable for its hot springs, annually frequented by large numbers of visitors. *Pop.* 4,200.

Luxuriance, Luxuriancy, (*lugz-yū'ri-ans,*) *n.* [Formed from Lat. *luxurians.*] State or quality of being luxuriant; excessive or superfluous growth; rank abundance; strong, vigorous growth; exuberance; wanton diffusion or plenty.

Luxu'riant, *a.* [Lat. *luxurians — luxurio, luxuriatum,* from *luxuria.* See LUXURY.] Excessive or exuberant in growth or development; abundant; as, *luxuriant* herbage. — Superfluous; in abundance; in excessive plenty.

"If the fancy of Ovid be *luxuriant,* it is his character to be so." *Pope.*

Luxu'riantly, *adv.* In a luxuriant manner; with exuberant growth.

Luxuriate, (*lugz-ū'ri-āt,*) *v. n.* [Lat. *luxurio, luxuriatum.*] To exceed ordinary limits in growth; to grow to rank or superfluous abundance; to shoot with vigorous life and exuberant plenty. — To live or feed luxuriously: as, to *luxuriate* in pleasure. — To expatiate or enlarge on with unction or delight; as, to *luxuriate* in poetical fancy.

Luxuria'tion, *n.* Act or process of growing exuberantly, or beyond ordinary limits; superfluous growth.

Luxu'rious, (*lugz-yū'ri-us,*) *a.* [Fr. *luxurieux*; Lat. *luxuriosus.*] Indulging freely or excessively the gratification of the appetite, or in expensive dress, equipage, and surroundings; addicted to luxury; voluptuous; sensual; as, a *luxurious* sybarite. — Supplied with luxurious dainties, and sumptuous appointments; as, a *luxurious* table. — Administering to free or extravagant indulgence in diet, dress, and equipage; contributing to luxury and sumptuousness; as, *luxurious* wealth, *luxurious* tastes. — Softening by pleasure, or free indulgence in luxury.

"Protect the Latins in *luxurious* ease." — *Dryden.*

—Lustful; libidinous; lewd: salacious; concupiscent.

"She knows the heat of a *luxurious* bed." — *Shaks.*

Luxu'riously, *adv.* In a luxurious manner; voluptuously: sumptuously.

Luxu'riousness, *n.* State or quality of being luxurious; a condition of luxury or of great abundance.

Luxury, (*lŭk'shu-re,*) *n.* [Fr. *luxe, luxure*; It. *lussuria*; Lat. *luxuria,* from *luxus,* excess, debauchery. See LUXATE.] A free or immoderate indulgence in the pleasures of the table, or in the gratification of appetite; voluptuousness; sensuality; addictedness to pleasure; also, the free indulgence in costly dress and equipage.

"O *Luxury!* thou curst by Heaven's decree." — *Goldsmith.*

—Delicious fare; dainty living; that which gratifies a nice and fastidious palate; anything which affords pleasure to the senses.

"Weep on; . . . I 'll taste the *luxury* of woe." — *Moore.*

Luynes, CHARLES D'ALBERT, (DUKE DE,) constable of France and first minister of Louis XIII., was B. in 1578. Introduced at the court of Henry IV., he was attached to the person of the dauphin Louis; became his favorite, and on the accession of Louis to the throne, was named first gentleman of his chamber. He procured the exile of the queen, Mary of Medicis, and roused a revolt by his counsel to besiege her in the château to which she had retired. In 1621 he was named Constable, but his arrogance and avarice made his administration at length intolerable even to the king. D. 1621.

Luzern, a canton of Switzerland. See LUCERNE.

Luzerne, *n.* (*Bot.*) Same as Lucern. See MEDICAGO.

Luzerne, in *Iowa,* a post-village of Benton co.

Luzerne, in *New York,* a post-village and township of Warren co.

Luzerne (*lu-zĕrn'*), in *Pennsylvania,* a N.E. co.; *area,* about 920 sq. m. *Rivers.* N. Branch of the Susquehanna and Lehigh rivers, and Lackawanna, Nescopek, Huntingdon, Wapwallopen, and other creeks. *Surface,* pleasantly diversified, several ridges of the Allegheny range traversing the co., and receiving various local names, as Wyoming Mountain, Moosic Mountain, Nanticoke Mountain, and Lackawanna Mountain; *soil,* very fertile, especially in the beautiful Wyoming Valley, through which flows the Susquehanna river. *Min.* Coal, in immense quantities. In 1878, this co. was divided; about 440 sq. m., with a pop. of about 100,000, being made into the co. of Lackawanna (*q. v.*). *Cap.* Wilkesbarre. *Pop.* (1897) about 210,100.

—A township of Fayette co.

Luzon. See LUCON.

Lu'zula, *n.* [It. *lucciola,* a glow-worm; from the dew glistening upon its flowers.] (*Bot.*) A genus of plants, order *Juncaceæ.* They are herbs, with jointed, leafy stems. *L. campestris,* the Field-rush, and *L. pilosa,* the Hairy Wood-rush, are the common American species.

Ly. [O. Eng. *lich.*] A termination of adjectives and adverbs.

Lycæ'nidæ, *n. pl.* (*Zoöl.*) The Azure-Butterfly fam., embracing very small and very beautiful butterflies, which in the caterpillar state much resemble wood-lice, and whose legs are so short that they seem to glide over surfaces, and whose chrysalides are short, thick, with the under side flat and the upper very convex. The genus *Chrysophanus* contains the Copper Butterflies. The American Copper Butterfly, *C. Americanus* (Fig. 1656), (D'Urban,) expands over 1 inch; the fore wings are coppery-red above, with about 8 square black spots, and the hind margins bordered with dusky brown; hind wings with a few small black spots on the middle, and a coppery-red band on the hind margin. It flies all summer.

Fig. 1656. — AMERICAN COPPER BUTTERFLY, (*Chrysophanus Americanus.*)

The caterpillar is green, and lives upon sorrel. The genus *Lycæna* contains the Azure Butterflies, small and delicate species, which expand about an inch, and which are generally of some shade of blue or brown above, and grayish dotted with black below. The genus *Tæcla* has generally two thread-like tails on each hind wing. In some cases the hind wings are merely notched. The species expand over an inch.

Lycan'thrope, *n.* One who labors under the delusion that he is a wolf; also, one who has a morbid propensity to exhume dead bodies and rend them to pieces.

Lycan'thropy, *n.* [From Gr. *lykos,* a wolf, and *anthrōpos,* man.] A kind of morbid humor, in which a person imagines himself a wolf, and imitates its actions. Herodotus says that, according to the Scythians, every Neurian once a year changes himself for some days into a wolf, and afterwards resumes his own shape; but adds, "they cannot make me believe such stories, though they not only tell them, but swear to them." A similar superstition is noticed by Virgil in his *Eclogues,* Pliny, Pausanias, and other writers. A belief in *L.* appears to have been extremely prevalent in the 16th century, and numerous authentic narratives remain to us of victims committed to the flames for this practice, for the most part in consequence of their own confessions. They were called *loups-garous* by the French, *were-wolves* by the Anglo-Saxons, *währ-wölfe* by the Germans, and were believed to be extremely ferocious, devouring not only beasts, but human beings. From the prevalence of this superstition, many persons were led to believe themselves wolves, and to imitate the howl and actions of these animals,—a species of insanity to which the term lycanthropy was also applied. It was said to manifest itself "by the patient's going out of doors at night and imitating the actions of wolves, and in the daytime wandering in burial-grounds."

Ly'canon. (*Greek Myth.*) A son of Pelasgus, who is said to have first civilized Arcadia, and to have built the town of Lycosura. The number of his sons is given as 22 or 50; their impiety led Zeus to visit them in the guise of an old man, and when they placed before him a meal of human flesh, they were by him, according to Pausaniaa, changed into wolves; but Apollodorus (iii. 8. 1) merely says that they, with their father, were killed by a thunderbolt.

Lycaon'ia. (*Anc. Geog.*) A country in Asia Minor, bounded on the E. by Cappadocia, on the N. by Galatia, on the W. by Pisidia, and on the S. by Isauria and Cilicia. Its cap. was Iconium.

Lyceum, (*lī-se'um,*) *n.* [Lat.; Gr. *lykeion*; Fr. *lycée.*] It was the name of an academy at Athens, so called from its position near the temple of Apollo Lyceus. Here Aristotle and his disciples taught, and were called Peripatetics, from their habit of walking up and down its porches while delivering their lectures. In the present day, in France, the name is given to preparatory schools for the universities, as in them the Aristotelian philosophy was formerly taught. Of these there are now many. The payment to be made by the children is fixed by laws made in 1853 and 1857, and varies according to the classes or *divisions,* of which there are three: elementary, of grammar, superior. A *pensionnaire* in a lyceum at Paris pays 950, 1,050, 1,150 francs per annum in these three classes respectively. There are also *demi-pensionnaires,* and *externes* or day-boarders. — In the U. States the name is applied to an academy or literary seminary between the common school and a college; — also to a literary association designed for the object of mutual improvement.

Lych'-gate, *n.* [A. S. *lic,* or *lice,* a body, corpse.] (*Arch.*) A church-yard gate covered with a roof, under which the bodies of persons brought for burial are set down under the shelter of the roof while the service is read. They are common in England, and are also called *corpse-gate.* — See LICH-GATE.

Lych'nis, *n.* (*Bot.*) A genus of European plants, ord. *Caryophyllaceæ.* The Red Campion, *L. diurna,* and the Scarlet Lychnis, *L. chalcedonia,* are cultivated in gardens.

Lych'nobite, *n.* [Gr. *lychnos,* lamp, and *bios,* life.] A worker by night and worker by day.

Lych'noscope, *n.* [Gr. *lychnos,* and *skopos,* viewing.] (*Arch.*) A narrow window, just above the ground.

Lycium, *n.* [From *Lycia,* q. v.] (*Bot.*) A genus of plants, order *Solanaceæ. L. barbarum,* the Matrimony vine, is a long, slender, trailing shrub with greenish-purple flowers, native of Barbary, but cultivated and almost naturalized in this country.

Ly'cia. (*Anc. Geog.*) A country on the S. coast of Asia Minor, extending toward Mount Taurus, and bounded on the W. by Caria, on the N. by Phrygia and Pisidia, and on the E. by Pamphylia. The most ancient inhabitants are said to have been two Semitic races called the *Solymi* and *Termilæ,* the former of whom were driven from the coast to the mountains in the north by adventurers from Crete, under the command of Sarpedon, a brother of Minos, who first gave the country the name of Lycia. *L.* shared the vicissitudes of the other states of Asia Minor, becoming subject to the Persian and Syrian monarchies, and then to Rome. During the time of its independence it consisted of 23 confederate cities, of which the principal were Xanthus, Patara, Pinara, Olympus, Myra, and Tios. Many monuments and ruined buildings (temples, tombs, theatres, &c.), exquisite

Fig. 1657. — REMAINS OF AN IONIC TEMPLE IN LYCIA.

sculptures, coins, and other antiquities, testify to the attainments of the Lycians in civilization and the arts, in which they rivalled the Greeks themselves.

Lycoming (*lī-kŏ'ming*), in *Pennsylvania,* a N.E. central co.; *area,* about 1,195 sq. m. *Rivers.* W. branch of the Susquehanna river, and Muncy, Loyalsock, Lycoming, and Pine creeks. *Surface,* mountainous, the main range of the Alleghenies traversing this co. under the name of the North Mountain; *soil,* very fertile. *Cap.* Williamsport. *Pop.* (1890) 70,579.

—A post-township of Lycoming co.

Lycoming Creek, in *Pennsylvania,* enters the W. branch of the Susquehanna River above Williamsport.

Lycoperda'ceæ, *n. pl.* (*Bot.*) An order of plants, alliance *Fungales,* distinguished by having spores generally quaternate on distinct sporophores; hymenium inclosed in a peridium.

Lycoper'don, *n.* [Gr. *lykos,* wolf; *perdomai,* I break wind, because supposed to spring from wolf's dung.] (*Bot.*) The Puff-ball, a gen. of Fungi, order *Lycoperdaceæ.* When the species *L. giganteum* is submitted to combustion, fumes arise which are powerfully narcotic. In this way the fungus has been employed to stupefy bees when removing honey from the hive. Lately, the vapor has been proposed as an anæsthetic agent instead of chloroform.

Lycoper'sicum, *n.* [Gr.] (*Bot.*) A genus of plants, order *Polemoniaceæ.* distinguished by the anthers being connected with a thin membrane prolonged upwards, and by their cells opening by a long slit instead of by two pores at the top. The Tomato or Love-Apple, *L. esculentum,* is an annual plant, native of S. America, and long introduced into most warm or temperate countries, where it is cultivated for the sake of its wholesome fruit, which, either green or ripe, is eaten in various ways.

Lyc'opiron, a Greek poet, was B. at Chalcis, in Eubœa. He flourished in the age of Ptolemy Philadelphus, and was one of the seven poets included in the so-called Pleiad. He wrote tragedies, a satirical drama, and other works; but his only extant production is a poem relating to the predictions of Cassandra, daughter of Priam, king of Troy.

Lycop'odales, *n. pl.* (*Bot.*) An alliance of plants, class *Acrogens.* DIAG. Axillary or radical, one- or many-celled spore-cases, and spores of two sorts. The alliance is divided into 2 orders, viz., *Lycopodiaceæ* and *Marsileaceæ,* q. v.

Lycopodia'ceæ, *n. pl.* [Gr. *lykos,* wolf; *pous,* foot.] (*Bot.*) The Club-moss fam., an ord. of plants, alliance *Lycopodales.* They are herbaceous plants, usually resembling mosses, with creeping stems and forked ramification; or aquatic plants, with corn-like stems. The order includes six genera and about 200 species, which occur in cold, temperate, and warm climates.

Lycopodiaceous, (*-ā'shus,*) *a.* [Lat. *lycopodiaceus.*] (*Bot.*) Pertaining to, or having the characteristics of the *Lycopodiaceæ.*

Lycop'odite, *n.* (*Pal.*) A fossil plant, found in the coal deposits and oölitic formations, and allied to the *Lycopodiaceæ.*

Lycopo'dium, *n.* [Lat.; Gr. *lykos,* and *podos,* foot.] (*Bot.*) The Club-mosses, a genus of plants, order *Lycopodiaceæ.* The seeds of one species, *L. clavatum,* which are very minute, and resemble an impalpable yellow powder, are used in theatres to imitate lightning; when thrown across a flame, they produce a sudden flare. They contain a peculiar oil. *L. complanatum,* the Ground Pine, is a trailing evergreen, common in woods and shady grounds throughout the U. States.

Lycop'sis, *n.* [Gr. *lykos,* a wolf, and *ops,* the eye; a name suggested by the small blue flowers.] (*Bot.*) A genus of plants, order *Boraginaceæ.* They are annual plants distinguished from Anchusa only by the curved corolla tube. *L. arvensis,* the Wild Bugloss, grows in fields and roadsides in the Northern States; corolla sky-blue, with white scales within.

Lyco'pus, *n.* [Gr. *lycos,* a wolf, *pous,* a food: a fanciful name.] (*Bot.*) A genus of plants, order *Lamiaceæ.* The principal American species are *L. sinuatus,* the Water Hoarhound, and *L. Virginicus,* the Virginian Water Hoarhound or Bugle-weed, both perennial plants growing in damp grounds. The former yields a permanent black dye, and the latter is a reputed remedy for blood-spitting.

Lyco'sa, *n.* [Gr. *lycos.*] A genus of spiders, of which the famous Tarantula spider may be taken as the type. See TARANTULA.

Lycur'gus, the celebrated Spartan legislator, whose existence, however, like that of Homer, is doubted by some modern critics, and whose story must be read as mythical or semi-mythical, is usually said to be the son of Ennomus, king of Sparta, and to have lived in the 9th cent. B. C. His elder brother, Polydectes, who succeeded to the throne on the death of his father, soon after D. and left the kingdom to him; but *L.* forbore to assume the sceptre, and fulfilled the office of guardian to the posthumous child of his brother. He travelled for the purpose of investigating the institutions of other lands, returned to his own country, and established those laws by which Sparta was so long governed. Having bound the king, senate, and people, by a solemn oath, not to alter any of the laws he had made until his return, he left Sparta with the avowed intention of visiting the oracle of Delphi, but he secretly determined never to see it again. Plutarch affirms that he put himself voluntarily to death by starvation, while Lucian asserts that he died naturally, at the age of 85. The legislation of *L.* was intended to make public principle predominate over private interest and affections. Children were not to be the property of their parents, but of the state; which directed their education, and even determined on their life or death. The severest penalties were imposed on debauchery and intemperance; and it was enjoined that the people should take their meals in public. Iron was used for money; nothing but the most indispensable knowledge was allowed to be acquired; everything that could promote a hardy life and personal bravery was encouraged. The Spartans, under the laws of *L.*, consequently became a nation of warriors.

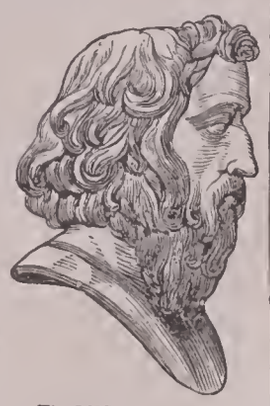


Fig. 1658. — LYCURGUS. (From an ancient statue.)

Lycur'gus, in *Iowa,* a post-office of Alamakee co.

Lyddite, *n.* An explosive belonging to the numerous gun-cotton series of unstable nitro compounds, which differ from the dynamite series in containing no nitroglycerine. *L.* is of special interest as being the explosive used in the British shells during the South African war. It has great bursting power, and emits fumes of suffocating effect.

Lyd'ia. (*Anc. Geog.*) A country of Asia Minor, bounded on the W. by Ionia, on the S. by Caria, on the E. by Phrygia, and on the N. by Mysia. It is said to have been originally inhabited by a people called Mæonians, of Semitic or Indo-Pelasgic origin, who were subdued or expelled by the Lydians (about 720 B. C.), a Carian race. The country was celebrated for its fruitful soil, and for its mineral wealth, particularly for the gold of the river Pactolus and of the neighboring mines, but was infamous for the corruption of morals which prevailed among its inhabitants, and especially in Sardis, its capital. *L.* attained its highest prosperity under the dynasty of the Mermnadæ (*circa* 700–546 B. C.). The first of this dynasty was the half mythical Gyges; the last was the famous Crœsus, celebrated for his prodigious wealth. The subsequent history of *L.* is unimportant.

Lydian, (*lid'i-an,*) *a.* [Lat. *Lydius,* from anc. *Lydia.*] Relating or belonging to Lydia, a former country of Asia Minor, or to its people; — hence, soft; languid; effeminate; delicate; as, "*Lydian* airs."

"Softly sweet in *Lydian* measures." — *Dryden.*

L. Mode. (*Mus.*) One of the ancient Greek authentic modes in music, which was retained as one of the old church modes, the notes being F, G, A, B, C, D, E, F, the same as in our modern diatonic scale. Since the 16th century, the melodies in the *L. M.* have entirely disappeared, and the *L. M.* is used only occasionally in modulation from other modes.

L. Stone. (*Min.*) A silicious slate or flinty jasper, of a velvet-black color, used as a touch-stone for testing the quality of gold and silver.

Lye, *n.* [A. S. *leah;* Ger. *lauge;* Fr. *lie;* Sp. *lia,* from Lat. *lix, licis,* ashes.] Water impregnated with alkaline salt imbibed from wood-ashes.

—*n.* (*Railway Engineering.*) One of the aidings or short offsets from the main line into which trucks may be run for the purpose of loading or unloading; — also, one of the sets of rails at a terminus on which trucks stand while being loaded or unloaded.

Ly'ell, SIR CHARLES, an English geologist, B. at Kinnordy, co. Forfar, 1797, was educated at Exeter College, Oxford. He was president of the Geological Society in 1836–7, and again in 1850–1; was knighted in 1848, received the honorary degree of D.C.L. from the University of Oxford in 1855, and was created a baronet, 1864. *L.,* who is the author of several important geological works, and of many papers in scientific journals, has written *The Principles of Geology,* published in 1833; and *Elements of Geology,* in 1838, reprinted under the title of *A Manual of Elementary Geology.* The principal object of these treatises is to show that the early progress of geology was retarded by a prevalent belief that the former changes of the earth and its inhabitants were the effects of causes differing in intensity, and some of them in kind, from those now in operation; whereas the true key to the interpretation of geological monuments is to be found, according to the author, in a knowledge of the changes now going on in the organic and inorganic worlds. *Travels in North America,* a narrative of a visit which he paid to North America for the purpose of examining the geological structure of that continent, appeared in 1841; *A Second Visit to the United States,* in which he treats of the social as well as of the geological characteristics of America, in 1845; and a treatise on *The Geological Evidences of the Antiquity of Man, with Remarks on Theories of the Origin of Species by Variation,* in 1863. D. Feb., 1875.

Lygor'dinm, *n.* [Gr. *lygodes,* flexible, slender; from the slender, climbing habit.] (*Bot.*) A genus of plants, order *Polypodiaceæ. L. palmatum,* the Climbing Fern, is found from Massachusetts to Pennsylvania. It is one of the few ferns with climbing stems, and the only one found in the U. States.

Ly'ing, *ppr.* of LIE. Recumbent. See LIE.

Lying along. Lying prostrate, or on all fours; recumbency.

Lying-in, (*a.*) Being in parturition. — (*n.*) Act of child-bearing.

Lying panel. (*Arch.*) A panel with the wood horizontally grained.

Lying to. (*Naut.*) Position of a ship when the topsails are laid flat aback to counteract the ship's headway motion.

Ly'ingly, *adv.* Falsely; in a manner conveying untruth.

Ly'kena, in *Ohio,* a prosperous post-township of Crawford county.

Ly'kens, in *Pennsylvania,* a post-borough and township of Dauphin co., at the base of Bear Mountain, about 38 m. N.E. of Harrisburg, on the Northern Central Railroad. Here are mines of excellent anthracite coal, of which vast quantities are shipped. *Pop.* (1897) 2,850.

Lyle, in *Minnesota,* a post-village and township of Mower co., about 10 m. S. of Austin.

Lym, Lym'-hound, *n.* A blood-hound. See BRACH.

Ly'man, in *Maine,* a post-township of York co.

Lyman, in *New Hampshire,* a thriving post-town and township of Grafton co., located about 17 m. N.N.E. of Haverhill.

Ly'man Cen'ter, in *Maine,* a village of York co., about 25 m. S.W. of Portland.

Ly'mansville, in *Pennsylvania,* a village of Potter co., about 183 m. N.W. of Harrisburg.

Lyme, in *Connecticut,* an important post-town and township of New London co., about 34 m. E. of New Haven, on the N. Y., N. H. & H. R. R. *Pop.* (1897) 1,010.

Lyme, in *New Hampshire,* a prosperous post-town and township of Grafton co., located about 55 m. N.W. by N. of Concord.

Lyme, in *New York,* a township of Jefferson county.

Lyme, in *Ohio,* a township of Huron co.

Lyme-Regis, (*lime-re'gis,*) a sea-port town of England, co. Dorset, 20 m. S.S.E. of Taunton, and 132 W.S.W. of London; *pop.* 4,000.

Lymington, (*lim'ing-ton,*) a sea-port town of England, in Hampshire, at the mouth of the Lymington River, where it flows into the English Channel, 18 m. S.W. of Southampton.

Lym'iter, *n.* Same as LIMITER, *q. v.*

Lymnæ'a, *n.*; **Lymne'idæ,** *n. pl.* (*Zoöl.*) The Pond-snails, a genus and family of gasteropod mollusca, inhabiting a thin, oval, or oblong shell; and having two triangular tentacula, with eyes at the base; foot oval and thin. Like the Physæ, which they much resemble in appearance, they are abundantly found in our rivers and ponds, particularly the latter. They feed on aquatic plants, to the under side of the leaves of which they adhere, and come to the surface of the water for air; the number of their eggs is very great, and they are deposited on stones, stems of vegetables, &c., in long masses enveloped in a glairy substance.

Fig. 1659. — LYMNÆA STAGNALIS.

Lymph, (*limf,*) *n.* [Fr. *lymphe;* Lat. *lympha;* allied to *limpidus,* clear, limpid. See LIMPID.] A fountain or spring of pellucid water.

(*Anat.*) A thin, transparent, colorless fluid, which is found in the lymphatic or absorbent vessels abundantly distributed over the body. (See LYMPHATIC.) Its taste is saline, and it has a faint, scarcely perceptible smell. When examined with the microscope, it is seen to consist of a clear liquid, with corpuscles floating in it, which agree entirely with the pale corpuscles of the blood. The liquid part bears a strong resemblance in its physical and chemical constitution to the plasma of the blood. The constituent parts of lymph are as follows:

Water	96·926
Fibrin	·520
Albumen	·434
Omazome	·312
Fatty matters	·264
Salts	1·544
	100·

Lymph is a nutritious fluid, and not excrementitious, as was maintained by Hewson and Hunter.

Lymphatic, (*lim-fat'ik,*) *a.* [Fr. *lymphatique.*] Pertaining to, or having the nature of lymph; as, the *lymphatic* glands.

—Frantic; morbidly zealous; insanely enthusiastic.

Lymphat'ic, *n.* (*Anat.*) One of a class of vessels in the human body, so termed from their containing lymph. They are also called *absorbents,* from their property of absorbing certain materials for the replenishing of the blood, and conveying them into the circulation. The lymphatics are found in all animals which have a lacteal system, the two forming one set of vessels; and, indeed, under the head of lymphatics, in works on anatomy, are generally included the lacteals. The lacteals differ from the lymphatics proper only in containing a milk-like fluid — the chyle, which they take up in the intestines during the process of digestion, and convey into the blood through the thoracic duct. The lymphatics are exceedingly delicate vessels, their coats being so transparent that their fluid contents are readily seen through them. They are found in nearly all the textures and organs of the body which receive blood, with the exception of the substance of the brain and spinal cord. In the different regions of the body, and in the several internal viscera, they are arranged into a superficial and a deep set, — the former running immediately beneath the skin, or under the membranous coats enveloping organs internal; the latter usually accompanying the deep-seated blood-vessels. The origin of the lymphatics may be either superficial or deep, and most commonly is in the form of networks or plexuses, out of which single vessels emerge at various points, and proceed directly to lymphatic glands, or to join larger lymphatic trunks. The fluids imbibed by these plexuses must pass into them by transudation. The lymphatics of any part or organ exceed in number the veins, but in size they are much smaller. They are interrupted at intervals by constrictions, which give to them a knotted or beaded appearance; and these constrictions correspond to the presence of valves in their interior. Like the veins and arteries, the lymphatics are composed of three coats, — an internal, middle, and external. The lymphatic, or absorbent glands, named also conglobate glands, are small solid bodies, situated in the course of the lymphatic and lacteal vessels, and through which their contents pass in their course towards their union with the blood. A lymphatic vessel may pass through two, three, or more of these bodies in its course, while, on the other hand, there are some which reach the thoracic duct without encountering any. Their size is very various, some being not much bigger than a hemp-seed, others as large or larger than a kidney-bean. They are collected in numbers along the course of the great vessels of the neck, also in the thorax and abdomen, especially in the mesentery and alongside the aorta, vena cava inferior, and iliac vessels; also in the axilla and groin, and on the popliteal vessels. A lymphatic or lacteal, previous to entering a gland, divides into several small branches, which are named afferent vessels. As they enter, their external coat becomes continuous with the capsule of the gland, and the vessels, much thinned, divide and subdivide while pursuing a tortuous course, and, finally anastomosing, form a plexus. The vessels composing this plexus unite to form two or more afferent vessels, which, on emerging from the gland, are again invested with their external coat. Capillary vessels are abundantly distributed on the walls of the lymphatics in the glands. The absorbent system discharges its contents into the veins at two points, — namely, at the junction of the subclavian and internal jugular veins of the left side by the thoracic duct, and in the corresponding part of the veins of the right side by the right lymphatic trunk. The openings are guarded by valves.

Lym'phednct, *n.* [Lat. *lympha,* and *ductus,* duct.] (*Anat.*) A lymphatic. (R.)

Lymphog'raphy, *n.* [Lat. *lympha,* and Gr. *graphein,* to depict.] A treatise on, or description of, the lymphatic vessels and their uses.

Lymph'y, *a.* Containing lymph; resembling lymph.

Lyn'cean, *a.* [From Lat. *lynx, lyncis.* See LYNX.] Belonging to the lynx.

Lynch, *v. a.* [*imp.* and *pp.* LYNCHED, (*lincht.*)] To administer capital punishment, or inflict severe bodily maltreatment, upon an individual by non-judicial process, as by a mob, or body of regulators, or other unauthorized persons. (Americau.)

Lynch'burg, in *California,* a village of Butte co., abt. 27 m. N. of Marysville.

Lynch'burg, in *Illinois,* a post-village of Jefferson co., abt. 28 m. S.E. of Centralia.

Lynch'burg, in *Kentucky,* a village of Marion co.

Lynch'burg, in *N. Carolina,* a village of Stokes co.

Lynch'burg, in *Ohio,* a village of Columbiana co., abt. 15 m. W. by S. of New Lisbon.

—A post-village of Highland co., abt. 50 m. E. by N. of Cincinnati.

Lynch'burg, in *S. Carolina,* a post-village of Sumter dist., abt. 18 m. N.E of Sumterville.

Lynch'burg, in *Tennessee,* a post-town, cap. of Moore co., about 78 m. S.S.E. of Nashville. *Pop.* (1897) 650.

Lynch'burg, in *Texas,* a post-village of Harris co., on Buffalo bayou, opposite San Jacinto, and about 18 m. E. of Houston.

Lynch'burg, in *Virginia,* a fine city of Campbell co., on the James river, about 120 m. W.S.W. of Richmond; Lat. 37° 36′ N., Lon. 79° 22′ W. It is connected by canal and railroad with the State capital, has an active trade, and contains some extensive manufactories, particularly of tobacco. *Pop.* (1897) about 22,500.

Lynch'-law, *n.* [Said to be derived from one *Lynch,* who took the law into his own hands.] A term used in the United States to denote the practice of administering capital (or minor) punishment, by unauthorized persons, without the sanction of a judicial process. — Primitive law attending a mock trial. — In England, *L.* is called *Lidford Law.*

Lynch's Creek, in *S. Carolina,* rises near the N. border of Lancaster co., and flowing S.E. enters the Great Pedee River, between Marion and Williamsburg co.

—A village of Florence co.

Lynch'wood, in *South Carolina,* a post-office of Kershaw district.

Lyndeborough (*lind'bur-ruh*), in *New Hampshire,* a post-town of Hillsborough co.

Lyn'den, or LYNDON, in *Wisconsin,* a village and township of Juneau county, about 112 m. W.N.W. of Milwaukee.

—A township of Sheboygan co.

Lynden-tree, *n.* (*Bot.*) See LINNEN.

Lyn'don, in *Illinois,* a post-village of Whiteside co., about 150 m. N. of Springfield.

Lyn'don, in *Kansas,* a post-village, cap. of Osage, co., 8 m. E. of Osage City. *Pop.* (1895) 841.

Lyn'don, in *New York,* a township of Cattaraugus county.

Lyn'don, in *Ohio,* a post-village of Ross co.

Lyn'don, in *Vermont,* a post-township of Caledonia county, about 7 miles N. of St. Johnsburg. *Pop.* (1897) about 2,700.

Lyn'don Center, in *Vermont,* a post-village in Caledonia co., about 42 m. N.E. of Montpelier.

Lyn'don Corner, in *Vermont,* a village of Caledonia co., about 40 m. N.E. of Montpelier.

Lyn'donville, in *New York,* a post-village of Orleans co., about 250 m. W. by N. of Albany. *Pop.* 700.

Lyn'donville, in *Vermont,* a post-vill. of Caledonia co.

Lyne (*line*), a river of Scotland, co. of Peebles, rising on the borders of Edinburgh co., and after a S. course of 20 miles, falling into the Tweed, above Peebles.— Another, of England, in Stafford co., which falls into the Trent.—Another, of Northumberland co., which falls into the sea.

Lynes'ville, in *North Carolina,* a village of Granville co., about 54 m. N. of Raleigh.

Lynn, in *Indiana,* a village of Adams co., about 33 m. S. by E. of Fort Wayne.

—A village of Martin co., about 45 m. E. of Vincennes.

—A township of Posey co.

—A post-town of Randolph co., about 8 m. S.S.E. of Winchester. *Pop.* (1897) 590.

Lynn, in *Iowa,* a township of Sioux co.

—A village of Plymouth co.

—A village of Warren co.

Lynn, in *Michigan,* a post-township of St. Clair co.; *pop.* about 400.

Lynn, in *Massachusetts,* a city and seaport of Essex co., on the N.E. shore of Massachusetts Bay, about 9 m. N.N.E of Boston; Lat. 42° 27′ 51″ N., Lon. 70° 57′ 27″ W. *L.* is finely situated, regularly laid out, and generally well built. It contains many handsome edifices, and has long been noted for its extensive shoe manufactories. There are at present nearly 200 establishments engaged in this branch of industry, employing about 17,200 persons, of whom over 11,000 are females, and manufacturing, on an average, 10,000,000 pair of ladies' and children's shoes annually, valued at $14,000,000. The other principal manufactures are leather, calico, glue, machinery, &c. Nov. 26, 1889, a disastrous fire occurred at *L.*, destroying $5,000,000 worth of property. the fire extended over 80 acres, consuming 142 dwellings and 154 business houses. *Pop.* (1895) 62,355.

Lynn, in *Pennsylvania,* a township of Lehigh co.

—A post-village of Susquehanna co.

Lynn'field, in *Massachusetts,* a prosperous post-town of Essex co.

Lynn'field Center, in *Mass.,* a p.-v. of Essex co.

Lynn Grove, in *Iowa,* a township of Jasper co.

Lynn Regis, or **King's Lynn** (*lin*), a seaport town of England, co. of Norfolk, near the mouth of the Ouse, 38 m. N.W. of Norwich, and 90 m. N.E. of London. *Pop.* 17,700.

Lynn'ville, in *Illinois,* a post-village of Morgan co., about 40 m. W. by S. of Springfield.

—A township of Ogle co.

Lynn'ville, in *Indiana,* a post-village of Warwick co., about 145 m. S.W. by S. of Indianapolis.

Lynn'ville, in *Iowa,* a post-town of Jasper co.

Lynn'ville, in *Pennsylvania,* a post-village of Lehigh co., about 83 m. E.N.E. of Harrisburg.

Lynn'ville, in *Tennessee,* a post-town of Giles co., about 60 m. S. by W. of Nashville.

Lynx, (*lingks,*) *n.* [Fr., Lat., and Gr.; Ger. *luchs.*] The name given to certain species of the family *Felidæ,* which differ slightly from others of the cat tribe, in having the ears tufted with hair, in the greater elevation of the body at the haunches, and in having a shorter tail. They are less courageous than the other felines, and show a sullen and suspicious disposition; they live upon small quadrupeds and birds, pursuing the latter to the tops of trees; and some of them also resort to the water, to feed on fishes. *Felis cervaria,* the largest and most beautiful, is found in Asia and Europe. *Lynx virgatus,* the European lynx (Fig. 1660), has become rare, and is only found in the Pyrenees and part of the Apennines. In length this animal is about three feet, and is very destructive to the smaller quadrupeds. Among the ancients it was celebrated as having been harnessed to the car of Bacchus when he made his Indian conquest. Great quickness of sight was also attributed to it, and it was supposed that its urine was converted into a precious stone. The skin of the male is spotted, and is more valuable in winter than in summer. Another species of lynx is the *caracal,* which is slightly larger than a fox. It derives its name from the black color of its ears, *caracal* being a Turkish word signifying black. In North America there are several species of

Fig. 1660. — LYNX VIRGATUS.

these animals, the best known of which is the northern or Canada lynx, distinguished by the name of *loup-cervier,* and *le chat* among the French Canadians. In the region round Hudson's Bay it is found in great abundance, about seven to nine thousand skins being annually exported. Although a timid creature, and incapable of attacking the larger quadrupeds, it is very destructive to rabbits and hares, on which it chiefly preys. When brought to bay by a hunter, it makes but a slight resistance; for, though it spits and erects the hair on its back like a cat, it is easily killed by a blow with a slight stick. In appearance it is clumsy and awkward, on account of its large paws, slender loins, and long but thick hind legs, with large buttocks, scarcely relieved by a short, thick tail. It moves in straightforward bounds, with the back a little arched, and lighting on all four feet at once. It is not swift on land, but swims well. Its flesh is eaten, and somewhat resembles the rabbit in flavor. It breeds once a year, and has two young ones at a time. There are three other American species, named, respectively, *L. rufus,* the American Wild-cat; *L. rufus maculatus,* the Texas Wild-cat; and *L. fasciatus,* the Reed-cat.

(*Astron.*) A constellation of the northern hemisphere, formed and named by Helvetius. It is surrounded by the Cameleopard, the Great Bear, Leo Minor, and the modern constellation called Herschel's Telescope. Its largest stars are of the fourth magnitude only.

Lynx Sap'phire, *n.* A name given by jewellers to dark grayish or greenish-blue varieties of Sapphire and Iolite.

Lynx'ville, in *Wisconsin,* a village and township of Crawford county, about 12 miles south of Laneing, Iowa.

Lyons, (Eng. *li'on;* Fr. *le'awng,*) a large city of France, cap. of the department Rhône, and the second of the kingdom in population and commercial importance, situate chiefly on a peninsula between the rivers Rhône and Saône, 275 m. E.N.E. of Bordeaux, 172 m. N.N.W. of Marseillee, and 245 m. S.E. of Paris; Lat. 45° 45′ 44″ N., Lon. 4° 49′ 34″ E. It is the seat of an archbishop, and is the *chef-lieu* of the seventh military division. Many of the public buildings are interesting at once for their architecture, extent, and antiquity. Of these, the cathedral and church of St. Nizier, the Hotel-de-Ville (town-hall), the finest edifice of the kind in the country, the hospital, the public library with 130,000 volumes, and the Palais des Beaux Arts, are perhaps the most notable among numerous and important institutions. There are also a university-academy, an imperial veterinary school — the first founded in the country, and still the best, — schools for agriculture, medicine, and the fine arts, &c. The two rivers are crossed by 19 bridges; 12 over the Saône, and 7 over the Rhône. The quays, 28 in number, are said to be the most remarkable in Europe. The principal are St. Clair, St. Antoine, and Orleans. There are several large and important suburbs — La Guillotière, Les Brotteaux, La Croix-Rousse, &c.; several fine squares, of which the *Place Bellecour* is one of the largest in Europe. The fortifications extend in a circle of 13 miles around the city. From its situation on two great rivers, and on the Paris and Marseille and other railways, *L.* has become the great warehouse of the south of France and of Switzerland. The principal manufactures of *L.* are silk stuffs of all kinds, which have long been held in the highest esteem. An immense number of establishments, giving employment directly or indirectly to 100,000 hands, are engaged in the manufacture of silk fabrics. — *L.,* the anc. *Lugdunum,* was founded about 42 years before the Christian æra, and suffered greatly during the revolution from the conflicts of hostile parties. It is the birthplace of Germanicus, the emperors Claudius, M. Aurelius, and Caracalla; of Jussieu, Jacquard, and Camille Jourdan; and is connected by railway with Marseille, Paris, and the Loire at Roanne. *Pop.* (1897) 401,500.

Lyon, in *Iowa,* a township of Hamilton co.

Lyon, in *Kansas,* an E. central co.; *area,* about 858 sq. m. *Rivers.* Neosho and Cottonwood rivers. *Surface,* diversified, *soil,* fertile. *Cap.* Emporia. *Pop.* (1895) 23,795.

Lyon, in *Kentucky,* a W. co.; *area,* about 275 sq. miles. *Rivers.* Tennessee and Cumberland rivers, besides many smaller streams. *Surface,* slightly diversified; *soil,* fertile. *Cap.* Eddyville. *Pop.* (1890) 7,628.

Lyon, in *Michigan,* a prosperous township of Oakland county.

Lyon, in *Nevada,* a W. county; about 264 sq. miles. *Rivers.* Carson River, and some smaller streams. *Surface,* mountainous; *soil,* fertile. *Min.* Silver in great abundance. *Cap.* Dayton.

Lyon, (Gulf of,) the N.W. part of the Mediterranean Sea, extending along the S. coast of France, from the coast of Catalonia to the Gulf of Genoa.

Lyon King-at-Arms. See HERALD'S COLLEGE.

Lyon'nais, a former province of France, was bounded on the W. by Auvergne, and on the S. by Languedoc. Its territory coincides nearly with the present departments of Rhone, Loire, Haute-Loire, and Puy-de-Dôme.

Ly'ons, in *Illinois,* a post-village of Cook co., about 13 m. W.S.W. of Chicago.

Ly'ons, in *Iowa,* a city and township of Clinton co., on the Mississippi river, about 40 m. N.E. of Davenport. *Pop.* (1895) 6,002.

—A township of Mille co.

Ly'ons, in *Michigan,* a post-village and township of Ionia county, about 31 miles north-west of Lansing.

Ly'ons, in *New York,* a post-village and township, cap. of Wayne county, about 36 miles E. by S. of Rochester.

Ly'ons, in *Ohio,* a post-office of Fulton co.

Ly'ons, in *Wisconsin,* a township of Sauk county.

—A post-village of Walworth co., about 9 miles E.S.E. of Elkhorn.

Ly'onsdale, in *New York,* a post-village of Lewis co., abt. 120 m. N.W. of Albany.

Lyon's Station, in *Pennsylvania,* a post-village of Berke co., abt. 15 m. N.E. of Reading.

Ly'onsville, in *Illinois,* a post-village of Cook co., abt. 16 m. S.W. of Chicago.

Ly'onsville, in *Wisconsin,* a village of Manitowoc co., abt. 40 m. N.E. of Fond du Lac.

Lyon Valley, in *Pennsylvania,* a P. O. of Lehigh co.

Lyon-verses, *n. pl.* (*Pros.*) Verses differing from *Palindromes* (q. v.) in that each word, and not each letter, is reversed in order to ascertain the double reading, which frequently assumes the nature of question and answer. They were invented by Caius Sollius Sidonius Apollinaris, who was B. at Lyons about 431, and D. Aug. 21, 482 or 484. The following epitaph in Cumwallow churchyard, Cornwall, is an English Lyon-verse:

"Shall we all die?
We shall die all;
All die shall we —
Die all we shall."

Ly'ra, *n.* [Lat. *lyre.*] (*Anat.*) A portion of the brain, between the posterior crura of the fornix of the cerebrum, and marked with prominent medullary fibres, so as to give it the appearance of a lyre.

(*Astron.*) One of the 48 constellations of Ptolemy, supposed to represent the lyre that was carried by Mercury. It is situated in the N. hemisphere to the S. of the constellation Draco, having Cygnus on one side and Hercules on the other. The name Vega is given to its largest star, which is one of the first magnitude.

Ly'rate, Ly'rated, *a.* [From Lat. *lyra.*] (*Bot.*) Lyre-shaped; as, a *lyrate* leaf.

Lyre, (*līr,*) *n.* [Fr.; Lat. and Gr. *lyra.* Etymol. uncertain.] (*Mus.*) The most primitive of all stringed instruments, invented, according to the traditions of the Egyptians, by Mercury, in the year of the world 2,000.

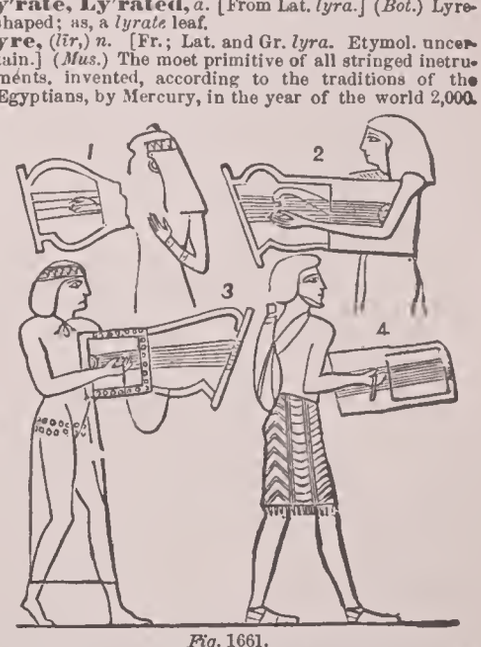


Fig. 1661.

Egyptian figures of lyres. 1, 2, played without, and 3, 4, with the plectrum; 4 is the supposed Hebrew lyre.

We find it first spoken of under this name by Aristophanes; it is also mentioned by Aymerie in the Life of Charlemagne. The Greeks, in all probability, derived their lyre from the Egyptians, (Fig. 1661; see also Fig. 290.) It was at a very early period of its existence undoubtedly capable, even with a very few strings, of producing a great variety of sounds differing in pitch. At first it possessed only three strings; to these, however, one was afterwards added by the Muses, and one each by Orpheus, Linus, and Thamyris; thus forming it into a heptachord: this number was at last increased to 11. The *L.* was of a very graceful form, possessing a hollow body to swell the sound, and was played upon with a *plectrum,* or *L.*-stick, of ivory or polished wood. Some *L.* are said to have been constructed of tortoise-shell

One was invented by Leonardo da Vinci, in the shape of a horse's skull. The ancient names for this instrument were, *lyra phorminx*, *chelys*, *barbitos*, *barbiton*, *cithara*.

Lyre'-bird, *n.* (*Zoöl.*) The common name of an Australian bird, the different species of which compose the family *Menuridæ*, order *Insessores*. They are nearly as large as a pheasant, and are distinguished by the remarkable tail of the male, which is composed of three sorts of feathers; — 12 very long, and with very fine and widely separated barbs; two more in the middle, only one side of which is furnished with barbs; and two more external, curved into the form of the arms of a *L.*, and whose internal barbs, large and thickly set, form a sort of broad ribbon, while the external barbs are very short.

Fig. 1662.
LYRE-BIRD, (*Manura superba.*)

Lyric, Lyrical, (*lĭr'ĭk, lĭr'ĭk-al,*) *a.* [Lat. *lyricus*; Fr. *lyrique.*] Pertaining to, or having the qualities of a lyre, lute, or harp.

Lyric Poetry. (*Lit.*) Under this term is commonly understood the poetry intended to be sung or accompanied with music. This distinction was not at first peculiar to any particular species of poetry, for, originally, music and poetry were always joined together. After a time the bards began to compose pieces which were to be recited or read, not to be sung; such poems as were still designed to be joined with music were, by way of distinction, called odes. The ode was that form of poetry under which the original bards poured forth their enthusiastic strains, praised their gods and their heroes, celebrated their victories, and lamented their misfortunes. It was chiefly in the spirit and manner of its execution that it was distinguished from other kinds of poetry. The subject being of a lofty and transporting nature, justified a bolder and more passionate strain than belonged to the simple narrative. Hence the enthusiasm that belongs to it, and the liberties it is allowed to take beyond any other species of poetry. Hence, too, that neglect of regularity, those digressions, and that disorder which it is supposed to admit of. The term *L. P.* is commonly applied to all kinds of verse that partake in any degree of the characteristics of that to which it was first applied. Thus we have lyrical ballads, which might with equal propriety be termed epical; and hear of the lyrical measures of Horace, where we have no ground to suppose that they were sung, and which have no fitness for musical rehearsal. The ancient Greeks speak of nine as the principal of their lyric poets; viz., Alcmæon, Alcæus, Sappho, Stesichorus, Ibycus, Anacreon, Simonides, Pindar, and Bacchylides; but, with the exception of Anacreon and Pindar, nothing remains to us of the works of these authors but a few fragments. To these two, however, the judgment of all has ascribed the palm of pre-eminence in *L. P.* Each of these excels in his particular line. Anacreon sings of women and roses and wine; Pindar, of heroes, of public contests, of victories, and laurels. The one melts away in amatory softness; the other is ever like a foaming steed of the race, vaulting in the pride of conscious strength, or the furious war-horse, dashing fearlessly on over every obstacle. Under these masters, Grecian lyrica were advanced to their greatest perfection. Among the Romans, who principally followed the Greek models, Horace stands almost alone as the representative of Greek poetry. To him even the Greeks themselves can present a superior only in the bold and lofty Pindar. That Horace borrowed freely from the Greeks has been clearly shown, yet the universal admiration that his odes have awakened is manifest proof of the power of his genius. The most important branch of the Roman lyric is satire. English *L. P.*, strictly so called, is late in its full development. Scarcely any poems occur before the time of Milton that are worthy of the name of lyrical. In "Lycidas," "Il Penseroso," and "L'Allegro," we have, perhaps, the most beautiful examples of which our language can boast. In Dryden, Pope, Gray, and Cowley, we meet with some good specimens of lyrics. The works of Wordsworth and Coleridge are eminently lyrical in their character, and, in our time, Tennyson and other poets have produced excellent examples. *L. P.* is said, from its nature, to have "flourished better at court than the dramatic and epic, both of which, like history, require liberty, because they must represent truly the character of man, in his manifold strivings, which cannot be done but by viewing life impartially, and depicting it freely; while the lyric poet, in most of his highest efforts, aims to express his adoration—be it of a hero, or his mistress, or nature, or God; and this tone coincides well with the adulation of courts. Hence, when the drama and epic have gone down with the decay of national independence and spirit, and genius, debarred from action, lives only in contemplation, *L. P.* continues, and not unfrequently even flourishes; because man always *feels*—adoration, love and hatred cannot die."

Lyr'ic, *n.* A lyrical poem;—opposed to *epic.*—A composer of lyric poems.

"After the manner of the old Grecian *lyrics.*"—*Addison.*

—A verse of the kind commonly used in lyric poetry;—generally in the plural.

"Those *lyrics* sweeter than Ausonian airs." — *Davies.*

Lyricism, (*lĭr'ĭ-sĭzm,*) *n.* A lyric composition.

Lyrist, (*lĭ'rĭst,*) *n.* [Gr. *lyristēs*; Fr. *lyriste.*] A musical performer on the harp, lute, or lyre.

"His tender theme the charming *lyrists* chose." — *Pope.*

Lys, or **Leye,** [Du. *Lice.*] A tributary of the river Scheldt, rising in France near the little town of Lyshourg, dept. of Pas-de-Calais, and flowing in a N. direction, joins the Schelde at Ghent in Belgium, after a course of 100 m. The *L.* once formed the boundary between France and Germany.

Lysan'der, a celebrated Spartan naval and military commander, lived in the 4th century B. C. He had the command, B. C. 407, of the Spartan fleet off the coast of Asia Minor, where he defeated the Athenians under Antiochus, and gained great influence, both among the Greeks and the Persians. His great exploits were the victory of Ægos-Potami, in 405, which virtually closed the Peloponnesian War; the capture of Athens in the following year, and the establishment there of the government of the Thirty Tyrants; and securing the succession of Agesilaus to the Spartan kingdom, in 397. The new king, however, slighted him, and crossed his plans. *L.* fell at the battle of Haliartus, 395.

Lysan'der, in *Ohio,* a post-office of Athens co., located 5 m. S. E. of Athens.

Lysander, in *New York,* a post-town of Onondaga co. *Pop.* (1897) 5,250.

Lysias, (*lĭ'sē-ăs,*) a celebrated Greek orator, the son of a Syracusan, was B. at Athens, B. C. 458. He wrote, it is said, 230 orations, but of these we possess only 35. The style of *L.* is admired for its clearness and elegance, and his language for its purity.

Ly'sias, general of Antiochus Epiphanes, king of Syria, who sent him against Judas Maccabæus, by whom he was surprised and defeated, with the loss of 5,000 men. *L.* saved himself by flight, and, after the death of Epiphanes, returned to power, as regent, under Antiochus Eupator. He laid siege to Jerusalem; but learning that Philip, who disputed the regency with him, had taken possession of the capital of Syria, he raised the siege, marched against Philip, and defeated him. Both Eupator and himself were subsequently abandoned by their partisans, and slain by their guards, B. C. 162.

Lysimachia, (*-mā'kē-a,*) *n.* (*Bot.*) A genus of plants, order *Primulaceæ.* They are mostly perennial herbs, with opposite or verticillate, entire leaves. The principal American species are *L. ciliata*, the Fringe-stalk, Loosestrife, or Heart-leaved Loosestrife; *L. hybrida*, the Hybrid Loosestrife; *L. quadrifolia*, the Four-leaved Loosestrife; *L. heterophylla*, the Various-leaved Loosestrife; and *L. longifolia*, the Prairie Money-wort.

Lysimachus, (*lĭ-sĭm'a-kŭs,*) one of the generals and successors of Alexander the Great, was a Macedonian of low origin, early remarkable for physical strength and courage. On the death of Alexander, B. C. 323, Thrace and the neighboring countries were the share of *L.*, who became also king of Macedonia in 286. The murder of his son Agathocles, a great favorite of the people, at the instigation of his wife Arsinoe, provoked a revolt in Asia; Seleucus took up the cause of the widow Lysandra, and *L.* was killed in the battle which ensued, B. C. 281. *L.* had assumed the title of king in 306. He was founder of a city on the Hellespont, named after him Lysimachi.

Lysip'pus, a celebrated Grecian sculptor, who worked with such extraordinary diligence, that he is said to have left behind him 1,300 pieces, every one of which evinced marks of superior genius. He received from Alexander the Great the singular privilege of exclusively making his effigy in cast metal; and he accordingly executed a series of figures of that prince, from childhood to maturity. He greatly improved the art of statuary, and gave to the human figure a degree of symmetry and beauty unattained by his predecessors.

Lys'sa, *n.* [Gr., rage, fury.] (*Med.*) Hydrophobia.

Lyte'rian, *a.* [Gr. *lyterios.*] (*Med.*) Denoting the termination of a disease.

Lythe, *n.* (*Zoöl.*) In Scotland, a denomination for the whiting.

Lytho'nia, in *Georgia,* a post-village of DeKalb co., abt. 24 m. E.S.E. of Atlanta.

Lythra'ceæ, *n. pl.* [From Gr. *luthron*, blood mingled with dust, because of its color.] (*Bot.*) The Loosestrife family, an order of plants, alliance *Saxifragales.* DIAG. Consolidated atyles, a tubular permanent calyx with the petals in the margin, opposite leaves, and no albumen.—They are herbs or shrubs, with entire, exstipulate, and usually opposite leaves. Calyx tubular, ribbed, persistent, bearing deciduous petals and stamens, the latter being inserted below the petals; anthers 2-celled, adnate, bursting longitudinally; ovary superior, with axile placentation; style 1. Fruit membraneous, dehiscent, surrounded by the non-adherent calyx.

Lyth'rum, *n.* [Gr. *lythron*, black blood; referring to the color of the flower.] (*Bot.*) The typical genus of the order *Lythraceæ*, q. v.

Ly'tle Cit'y, in *Iowa,* a post-office of Iowa co.

Lyt'tlesville, in *Illinois,* a village of McLean co., abt. 70 m. N.E. of Springfield.

Lyt'ton, (EDWARD GEORGE EARLE LYTTON BULWER-LYTTON,) LORD, D.C.L., a distinguished English man of letters, B. 1805. He graduated at Trinity Hall, Cambridge, in 1825, and at once appeared as an author, having from his earliest childhood evinced a decided taste for literature. In 1827 he published anonymously *Falkland,* a love-story in one vol. At the close of the same year, his first great novel, *Pelham, or the Adventures of a Gentleman,* stamped its author as a consummate master of his art. This brilliant success was well sustained by the following novels:—*The Disowned* (1828); *Devereux* (1829); and *Paul Clifford,* in 1830. A satirical poem, entitled the *Siamese Twins,* was the fruit of his literary activity in 1831, associated with which in the same vol.

Fig. 1663.—LORD LYTTON.

was the charming poem of *Milton.* In 1832 *L.* gave to the world his celebrated novel of *Eugene Aram*; and in 1833, *Godolphin.* About this time he assumed the editorship of the "New Monthly Magazine," succeeding the poet Campbell. A series of papers, contributed to this serial, were collected and republished, in 1835, under the title of *The Student.* In 1833, also, appeared his *England and the English,* a series of witty and caustic kaleidoscopic sketches of national character, &c. This was followed by *The Pilgrims of the Rhine,* and by the brilliant classic fiction called *The Last Days of Pompeii.* In 1835, *L.*'s splendidly picturesque historical novel, *Rienzi, the Last of the Roman Tribunes,* achieved universal popularity. Entering parliament in 1831, *L.* joined the Whig party, publishing, in 1835, his celebrated political pamphlet, *The Crisis.* In the same year, he gave to the world *Leila, or the Siege of Granada*; and, in 1836, *Athens, its Rise and Fall,* a work abounding in historical research, acumen, and elegant scholarship. In 1837–8, his novels of *Ernest Maltravers,* and its sequel, *Alice,* or *the Mysteries,* were published. In 1838 *L.* was created a baronet "in recognition of his eminent literary merits." Turning his attention to dramatic literature, he successively produced the popular plays of *The Lady of Lyons; Richelieu;* and *Money;* all of which successfully keep the stage. In 1851 he wrote a fine comedy entitled *Not so Bad as we Seem,* "for the benefit of the Guild of Literature and Art." In 1841, Sir Edward brought out another novel—*Night and Morning,* followed, the year after, by his "well-loved" work, *Zanoni.* In 1843 the grand historical romance, bearing the name of *The Last of the Barons,* appeared from the pen of this indefatigable author, and, in 1844, a spirited translation of the *Poems and Ballads of Schiller.* About 1845 Sir Edward joined the Conservative party in Parliament, and in the same year published his remarkable satire of Modern London, the poem, *The New Timon, Lucretia,* and his celebrated novel, *The Caxtons,* were his next efforts, and, again next, his historical romance of *Harold, the Last of the Saxon Kings.* In 1849, *King Arthur,* an epic, in Twelve Books, appeared; in 1853, *My Novel, or Varieties in English Life;* in 1857–8, *What will He Do with It;* and in 1862, *A Strange Story,*—all highly successful novels. He has since produced *Caxtoniana,* and *The Lost Tales of Miletus.* Besides the foregoing, *L.* is the author of voluminous critical articles and essays in the "Quarterly," "Edinburgh," "Westminster," and "Foreign Quarterly Review." While ranking among the most popular authors in Britain since Scott, *L.* is, perhaps of recent English writers, the one whose works are best known on the Continent of Europe. His novels are read, or translated, not only in France, Germany, &c., but in the remote parts of Hungary; while in the U. States they are highly and popularly esteemed. On Lord Derby's accession to power in 1838, Sir E. Bulwer-Lytton was appointed Secretary of State for the Colonies, and, in 1866, was raised to the peerage as *Lord Lytton.* As a parliamentary speaker, Lord *L.* may be classed as one of the most finished orators of his time. D. Jan. 18, 1873.

L., EDWARD ROBERT BULWER, a popular English poet, known under the *nom de plume* of "Owen Meredith," is the only son of Lord Lytton, and was born in 1831. He entered the diplomatic service, and successively belonged to the British Legations at Washington, Florence, Paris, Copenhagen, Vienna, Athens, and Lisbon, to which last-named cap. he was sent as ambassador, 1874. His first work, *Clytemnestra, and other Minor Poems,* bespoke high literary genius, and was warmly received by the critics, appeared in 1855; *The Wanderer, a Collection of Poems in Many Lands,* followed in 1859; and a novel in verse, entitled *Lucile,* in 1866. In 1861, *L.* published *Serbski Pesme. King of Amasis* appeared in 1863. In 1876, appointed Gov.-General of India, which he resigned in 1880.

Lyt'ton, a mining village of British Columbia, on Fraser river about 90 m. N. E. of New Westminster.

L.—SECTION II.

L, *n.* A wide *x* extension of a house so placed as to give the building the form of the letter L.—Anything, as a piece of pipe, bent in the shape of L.—A brief expression for *elevated railway*, especially in New York; also used attributively, as, *L roads*.

La Belle, in *Missouri*, a post-village of Lewis co., 32 m. N. W. of Quincy, Ill., on the Q., O. & K. C. R. R. Seat of Western College. *Pop.* (1897) 850.

La Crosse, *n.* (*Games.*) A game origiuating among the Canadian Indians, played upon a level field about 125 feet long; there are two goal posts, 6 feet high and 6 feet apart, at each end of the field; an umpire stands behind each goal, and there is a referee, who has general control of the game. The players, usually twelve in number, are armed with long, light sticks, the "crosse" from which the game is named; the sticks are bent at the top, aud have thongs of rawhide interlaced diagonally across the hooked portion, somewhat as in a tennis racket, except that the strips are drawn more loosely, so that they sag a little, making it easy to carry a ball upon them. Only one ball is used, and the object of the game is to pitch or carry the hall, by aid of the crosse, toward the enemy's goal, and then drive it through. The goal-keepers, who stand between the posts, are the only players who are allowed to come within a certain distance of the goals, and they also are the only players who may touch the ball with their hands; everyone else must pick the ball up from the ground, carry, and pitch it with his uetted crosse. The game is very popular in Canada, and is also played in the Northern United States, England, and Scotland.

La Crosse, in *Kansas*, a post-village, cap. of Rush co., 25 m. S. of Hays City, on Mo. Pac. R.R. *Pop.* (1895) 428.

La Cygne, in *Kansas*, a city of Linn co., 37 m. N. of Fort Scott, on K. C., Ft. S. & M. R. R.; has mines of excellent coal. *Pop.* (1895) 943.

La Farge, JOHN, artist, was born in New York, March 31, 1835; elected a member of the National Academy (1869). The frescoes in Trinity Church, Boston, are his work, and critics have awarded him high praise for imagination, suggestiveness, and charm of color. His works include: *View over Newport; New England Pasture Land; St. Paul at Athens*, &c. Of late years he has devoted himself chiefly to church decorative painting and stained glass.

La Moure, in *North Dakota*, a post-village, cap. of La Moure co., 88 m. S.W. of Fargo, on Northern Pacific R.R. *Pop.* (1897) 340.

La Plata, in *Colorado*, S.W. co., *area*, 1,860 sq. m.; drained by the Rio Dolores, the Rio La Plata, and other rivers. *Surface*, mountainous, with beautiful well-watered valleys; *soil*, very fertile when irrigated. Much gold and silver in the north; coal in the south. Lumbering, mining, and stock raising are the chief occupations. *Cap.* Durango. *Pop.* (1897) 6,950.

La Porte City, in *Iowa*, a post-town of Blackhawk co., 40 m. N.W. of Cedar Rapids, on B., C. R. & N. R. R.; has flour and feed mills, lumber mills, a creamery, and other manufactures. *Pop.* (1895) 1,296.

La Salle, ROBERT, CAVALIER DE, a French traveller, was born at Rouen, 1643. Having emigrated to Canada at an early age, he explored the western parts of that country, voyaged over the great lakes, and was the first European to explore the region of the Mississippi Valley. In the course of the western exploration undertaken in 1669, he discovered the Ohio river. He spent the two following years in exploring northern Illinois, and was granted a patent of nobility in 1673. Fort Crèvecœur, which he established in 1679 on the Illinois river, as the starting point of an expedition down the Mississippi, was destroyed by the Iroquois during his absence in Canada for supplies. Organizing a new expedition in 1680 he descended to the mouth of the Mississippi, reaching there early in April, 1685. He then went to France, returning with a band of colonists to found a settlement near the mouth of the river. Mistaking Matagorda Bay, Texas, for a western outlet of the river, he left his colony there, and had started to Canada to procure more supplies when he was assassinated by some of his followers, near a branch of the Trinity river, on March 20, 1687.

La Salle, in *Texas*, a S. co.; *area*, 1,460 sq. m.; intersected by Rio Prio and Rio Nueces. *Surface*, hilly; *soil*, productive. *Products*, cattle, sheep, and wool. *Cap.* Cotulla. *Pop.* (1897) 2,330.

Laa'ger, *n.* [Du.] In South Africa, a defensive enclosure made around a camp by means of wagons, thorn-brush, or other materials; it is substantially the same as the *zereba* of Northern Africa, or the *boma* of the lake region.

Lab'arum, *n.* [Lat.] A form of ancient Roman military standard, consisting of a staff or spear, crossed near the top by a bar, from which hung a small, richly ornamented banner. Upon the head of the staff was fixed a golden wreath, surrounding a chrismon. It was perfected by, and became characteristic of, the Emperor Constantine, and the term is preserved in the name of an ecclesiastical banner now displayed in certain ceremonies of the Roman Catholic Church.

Labette', in *Kansas*, a S. E. co.; *area* 649 sq. m.; drained by the Neosho and Labette rivers. *Surface*, undulating, nearly all prairie; *soil*, fertile; *products*, corn, wheat and oats, tobacco, sorghum, castor beans, potatoes, butter, wool, hay; live stock. *Cap.* Oswego. *Pop.* (1895) 27,023.

Labiche (*lä-beesh'*), EUGENE MARIN, dramatist; born in Paris, May 15, 1815; studied at the College Bourbon. He wrote a series of comedies, farces and vaudevilles, which were marked by mastery of stage technique, &c. Died in 1888.

La'bor, La'bour, *n.* [Fr. *labeur;* It. *lavóro*; Lat. *labor*, akin to *labo*, to be ready to fall; Heb. *labat*, to fall, to be thrown down.] Fatiguing toil or exertion of body; physical work or effort; exertion of muscular strength; employment of bodily activity; used in distinction from effort or exercise of a sportive or non-compulsory character.

(*Pol. Econ.*) The utilities produced by labor are, according to J. S. Mill, of three kinds: "First, utilities fixed and embodied in outward objects by labor employed in investing external material things with properties which render them serviceable to human beings; this is the common case, and requires no illustration. Secondly, utilities fixed and embodied in human beings, the labor being, in this case, employed in conferring on human beings qualities which render them serviceable to themselves and others; to this class belongs the labor of all concerned in education, not only schoolmasters, tutors, and professors, but governments, so far as they aim successfully at the improvement of the people; moralists and clergymen, as far as productive of benefit; the labor of physicians, as far as instrumental in preserving life and physical or mental efficiency," &c. "Thirdly, and lastly, utilities not fixed or embodied in any object, but consisting in a mere service rendered, a pleasure given, an inconvenience or a pain averted, during a longer or a shorter time, but without leaving a permanent acquisition in the improved qualities of any person or thing, the labor being employed in producing a utility directly, not (as in the two former cases) in fitting some other thing to afford a utility; such, for example, is the labor of the musical performer, the actor, the public declaimer or reciter, and the showman." Some good, or it may be evil, may be produced beyond the moment; but immediate pleasure is the effect intended.

That labor which produces the common things required by humanity—which is employed in manufacturing and merchandising, and in engineering works—is the kind of labor usually referred to in considering labor in the abstract. The labor of early civilizations was performed by captives and slaves, and, by government authority over them, great works like the Roman highways were made possible. In later civilization, the serf was the laborer, and in modern times the wage-worker, his condition being one of steady improvement, until, by organization and education, he has become recognized as the great ally, and, quite illogically, the great opponent of capital. The adjustment of labor to the changing conditions of this age of wonderful growth in machinery and methods of production has called into existence numerous labor bureaus, whose duties are mostly in the way of gathering statistics and making recommendations to legislatures as to laws required by the laboring interests. There are 28 such bureaus in the different States of the Union, the first being organized in Boston in 1869. The United States Department of Labor was organized in 1885, and Carroll D. Wright is the commissioner in charge at this date.

Labor in the United States commands a higher price than in most countries of the Old World, and the laborers of civilized nations, as a rule, receive much larger wages than those of half civilized countries. This appears to be largely owing to the fact that the well-fed and well-taught laborer of a prosperous nation is capable of performing so much more useful labor in a given time than his poorly-fed and little educated brother in half-barbarous surroundings. Even in the most civilized communities, however, the occasions are numerous when labor lacks employment, and poverty and misery result. This seems to be largely due to the transitional condition in which we live, the hand-labor of the past giving way before the machine-labor of the present, and the remedy would seem to be either increased manufacturing and building or decreased hours of labor. The commercial tendency toward suppressing competition in staple lines of trade shuts off much hope that increased manufacturing will come to the rescue of the laboring classes. Therefore many labor agitators have turned their attention toward the reduction of hours of labor, and there has been obtained considerable legislation on the subject. Through labor organizations various trades have secured a shortening of hours and the stoppage of child labor. While the condition of the workers is not what all could wish, it is generally admitted that it is better than at any previous period of the world's history, and that there is every prospect of still further improvement.

Labor Legisla'tion in the United States. (*Law.*) An immense number of laws have been enacted within twenty years in the interests of the laboring classes, most of which were brought into being through the efforts of labor organizations and labor bureaus. The United States and the following named States have passed eight-hour laws, constituting this a legal day's work for all government employees, and usually for all public works, and generally in all cases where there is no real or implied contract to the contrary between employer or employee, viz.: California, Colorado, District of Columbia, Idaho, Illinois, Indiana, Kansas, Nebraska, Missouri, Montana, New Jersey, New York, Ohio, Pennsylvania, Utah, Wisconsin, and Wyoming. In the following States it is unlawful for an employer to exact an agreement from an employee not to become a member of a labor organization: California, Idaho, Indiana, Massachusetts, Minnesota, Missouri, New Jersey, New York, and Ohio. Numerous States have also passed laws obliging the payment of wages at short intervals, and without the retaining of any considerable portion. Practically all the States make the payment of wages a preferred claim or lien in cases of insolvency or the like, and provide for their payment in advance of all other claims except taxes. Nearly all States make it criminal to endeavor to influence votes by threats of discharge, and New York and Montana forbid the insertion of political printed matter in pay envelopes. The employment of women and children for more than sixty hours' work per week is generally prohibited in California, Connecticut, Dakota, Indiana, Louisiana, Maryland, Maine, Michigan, Minnesota, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Rhode Island, Virginia, and Wisconsin, while Massachusetts prohibits more than fifty-eight hours. In South Carolina and Georgia, where sixty-six hours usually contitute a week's work, contracts for overtime are void. In Massachusetts, Rhode Island, New Jersey, and Pennsylvania there are laws of contract providing that if an employee contracts to leave a portion of his wages subject to forfeiture for quitting work without notice, the employer shall also be liable for a like amount if he discharge without notice, except for incapacity, misconduct or general suspension of business. Many States regulate the hours that shall be given factory operatives for meals; others provide for arbitration in case of strikes, and others for damages in case of accidents to workmen. The employment of women and children in mines is prohibited in most of the mining States, though some of them only apply to women under 18 or 21 years.

The following legislation passed by different States in 1896, illustrates the popular interest in bettering the condition of the working classes: In Ohio and Utah the arbitration of labor was recognized, Ohio extending its statute so as to cover large strikes, and directing the Board of Arbitration to investigate such, and publish the reports. Utah created a Board of Arbitration, and makes its findings, under certain conditions, binding on the parties who call upon it for interposition. Utah also makes the blacklisting of employees a felony. Mississippi has legislated to give employees the same rights in cases of damages for injury by accidents as

persons not employees, the knowledge of the unsafe character of any machinery, structure, &c., not affecting his rights. In the case of an employee killed through an accident for which the employer is responsible, any damages recovered are to go wholly to those dependent on him for support, and none to any creditors. New Jersey passed a law compelling the payment of employees every two weeks for wages due within twelve days. Maryland passed a similar law for the coal-miners in Allegany County. Massachusetts compels a weekly payment in concerns where 25 or more persons are employed. Utah has legislated in favor of eight hours for coal miners, also for inspection of mines as to safety, and against the labor of women and children in mines. The wages of employees are also protected for one year in case of employer's insolvency.

La'bor Organiza'tions. No other country in the world has such thoroughly organized bodies of workmen as has the United States, and nowhere else on the globe has so much legislation been passed in the interests of, or ostensibly in the interests of, the wage-workers. The total membership of the organized bodies of workingmen in this country in 1896 was estimated by the U. S. Commissioner of Labor to be 1,400,000. There are five great labor organizations, besides almost innumerable trades unions.

The oldest of the national organizations now in existence is the *Knights of Labor*, whose general assembly organized at Reading, Pa., in 1878. It organized in December, 1869, in the *Garment Cutters' Union*, of Philadelphia, and was secret in its workings. Uriah S. Stevens, a garment cutter, was its leader during the early years of its history. In July, 1870, its scope was broadened to take in all trades, and in 1872 a second branch was formed, and by 1876 there were at least 100 societies of various trades banded together under this name. The organization marked a distinct step in advance of the ordinary trades union in that it advocated the advancement of the interests of all men who earned their bread "by the sweat of their brows." Lawyers, physicians, and "rumsellers" were excluded, but in 1881 the prohibition was removed as far as the physicians were concerned. The order came into national prominence in 1877 by backing the great strike of the railroad men who opposed the ten per cent. cut in wages by the Pennsylvania and the Baltimore and Ohio railways, and in June, 1878, a national body of the Knights was formed. It waxed very strong under the leadership of T. V. Powderly as master workman, and in 1881 abandoned its secret work. The membership at one time was currently reported at several millions, but Mr. Powderly, in April, 1886, stated before a Congressional committee that it was about 500,000, and a year later Carroll D. Wright estimated it at almost a million. During recent years these figures have been greatly reduced through the greater activity of other organizations, and although the organization has spread into Great Britain, France, Belgium, British America, and Canada, the total is now given at less than 200,000.

The *American Federation of Labor* originated in November, 1881, but was nationally organized at Columbus, O., in December, 1886, and is doubtless the largest body of the sort in the United States. It comprises about 7,000 local unions, and its aggregate membership is given at 650,000. It has largely assumed the work originated by the Knights of Labor, of exercising a parental control over all trades unions, and there has been considerable antagonism between the two bodies in consequence. While the objects of the two are very similar, the Knights advocate a more centralized system of organization, while the Federation favors more independence in the subordinate bodies. In 1882 the Federation issued a manifesto against political action. Its headquarters are at Indianapolis, Ind.

Next in order of organization was the *American Railway Union*. The various local unions of the western and northwestern railway systems came together under this name in 1893. It now has 120,000 members and 391 local unions. The Union became nationally conspicuous in June, 1894, by taking up the fight of the striking employees of the Pullman Palace Car Co., and boycotting the Pullmans on leading railways. Many riots followed, and U. S. troops were obliged to intervene at Chicago to compel obedience to the mandates of the U. S. courts. The *Independent Knights of Labor* was organized in Columbus, O., in February, 1895, with objects very similar to the older body whose name they imitate, but giving less power to the general officers. Its headquarters are at Tiffin, O. The *Trades Union Alliance*, organized June 29, 1896, in New York city, is an offshoot of the Federation of Labor, consisting of labor unions seceding from that body. The larger trades unions of the U. S., some of which are affiliated with the national bodies above named, are the *Brotherhood of Carpenters and Joiners*, with 60,000 members; *Association of Iron and Steel Workers*, 40,000; *International Typographical Union* (the oldest Union in America), 40,000; *Bricklayers' and Stonemasons' Union*, 35,000; *Brotherhood of Locomotive Engineers*, 32,000; *Cigarmakers' International Union*, 30,000; *Iron Moulders' Union of North America*, 30,000; *Brotherhood of Locomotive Trainmen*, 25,000; *Brotherhood of Locomotive Firemen* 32,000; *Journeymen Tailors' Union of America*, 20,000; *United Mineworkers of America*, 20,000; *International Association of Machinists*, 20,000 members.

Labor organizations in England may be said to have come into prominence with the victory for the ten-hour movement in 1847. Labor unions and labor parties have grown there since that time, and in 1847 the first labor-member of Parliament, Thomas Burt, was elected. The membership of labor organizations in Great Britain and dependencies is about 2,000,000, and is spoken of as the "new unionism," being both progressive and aggressive. The laws in Germany against combinations of workingmen were repealed in 1866, and unions began to develop, originating, strange to say, with the professional classes. They have socialistic and political tendencies, and the total membership is believed to be less than 100,000. France, Switzerland, Belgium, and Italy are the only other countries where labor organizations have any foothold, and even these are comparatively weak.

Labouchere (*lä-boo-shãr'*), Henry, editor and politician, was born in London in 1831; educated at Eton; was in the British diplomatic service (1854 to 1864); entered Parliament in 1865 as Liberal member for Windsor, and has been in Parliament more or less constantly since 1880 as member for Northampton; is an extreme Radical. His series of letters to the London *News*, written from Paris during the siege, attracted much attention, and were afterward published in book form under the title, *Diary of a Besieged Resident in Paris* (1871.) He is proprietor and editor of the London *Truth*, and is part owner of the *Daily News*.

Lab'rador, *n.* (*Geog.*) The northeastern peninsula of the continent of North America, lying between Hudson Bay and the Gulf of St. Lawrence, and opposite the island of Newfoundland, from which it is separated by the Strait of Belleisle. It extends from 49° to 63° N. Lat. and from 55° to about 79° W. Lon., its greatest length, from the Strait of Belleisle to Cape Wolstenholme, being about 1,100 miles. Labrador has generally been described as one of the most dreary and barren of lands. This is due to the forbidding aspect of its Atlantic coast, which is precipitous, destitute of vegetation, deeply indented with narrow fjords, and fringed with rocky islands. But interiorily the surface is widely covered with forests, consisting of pines, birches, poplars, &c., and bears a profusion of herriés. It consists, in great part, of a plateau about 2,000 feet above sea-level, in which are numerous lakes, the largest being Lake Mistassini, and many rivers, some of them from 200 to 300 miles long, and 2 or 3 miles wide at their mouths. These flow toward the Atlantic and Hudson Bay and, in connection with the lakes, afford interior water-ways for great distances. These streams abound with fish, especially salmon and white-fish, while fur-bearing animals are plentiful, including bears, wolves, foxes, martens, otters, beavers, lynxes and others, which are trapped by the inhabitants in winter. The only inhabitants of this vast plateau are the nomadic Cree Indians. Grand river, one of the largest streams, presents a natural phenomenon of great grandeur and beauty in the form of Grand Falls, one of the greatest cataracts of the world, the river plunging down into a ravine of immense depth, whence it flows through a deep canyon of 50 miles in length. Little is known of the mineral resources, but iron and Labradorite, an important feldspar, are abundant. The prevailing rock is gneiss, overlaid by a bed of sandstone, alternately red and white, and strongly marked with iron near the surface; above this, again, are varieties of secondary limestone, arranged in parallel strata, and full of shells. A few miles from the shore, the secondary formations disappear, leaving gneiss and mica-slate on the surface. The climate is extremely severe. The summers are of short duration, with an average day-temperature of 50°. The prevailing winds on the E. coast are from W. S. W. to N. W.; there is less fog than on the neighboring island of Newfoundland, and the Straits of Belleisle are never frozen over. Corn will not ripen; but potatoes, cabbages, spinach, and turnips thrive fairly well. The wealth of the country, however, consists chiefly in the abundance of fish on its coasts. Whales, cod, salmon, and herring are extremely plentiful. The Labrador fishery is nearly confined to the S. E. tract, opposite Newfoundland; within a few years it has increased sixfold, and now rivals that of Newfoundland. During the fishing season, about 300 schooners come down from the latter to the fishing stations of Labrador, and about half the product is sent to St. John's, the remainder being exported to England, Lisbon, and the Mediterranean. The American fishing vessels average about 400, principally sloops and schooners, manned by crews varying from 9 to 13 hands, making a total of about 6,000 men. Each man catches, at an average, about 100 quintals of fish during the season; and the oil is in proportion of 1 ton to 200 quintals. They frequent chiefly the N. part of the coast, clean their fish on board, and leave Labrador early in September. From 16,000 to 18,000 seals are taken in the spring and autumn, producing about 350 tons of oil; and the export of furs of wolves, bears, foxes, and beavers, caught in the interior, averages $20,000 per annum. The European residents of the fishing locality are English, Irish, or Jersey servants, left in charge of the property in the fishing rooms, and who also employ themselves in catching seals. Their principal settlements are at Bradore Bay, L'Anse-le-blanc, and Fortean Bay, the last being by far the most considerable. Labrador was probably visited by the Norseman, about 1000 A. D., and again by Cabot in 1498, and by Cortereal in 1500, the latter giving it its name, which means "laborers' land." Hudson visited it in 1610. The Moravians made their first settlement in 1752, and have continued their missionary work since. They live a quiet, unobtrusive life, trading with the native Eskimos, with whom they barter coarse cloths, powder, shot, guns, and edge-tool for furs and oils. They are said to have exerted a very beneficial influence upon the natives, whom they have improved alike in their moral and physicial conditions. They have stations at Nain (founded 1770), Okkak, Hebron, Hopedale, and other localities. Since 1809 the coast region of Labrador has been annexed to Newfoundland for administrative purposes. The remaining parts of the peninsula are designated the Northeast Territory. The population of the coast region is about 6,000, Eskimos and French Acadians, collected chiefly at the Moravian missionary stations.

Lab'rador Duck, *n.* (*Ornith.*) A handsome sea-duck (*Camptolæmus labradorius*) formerly numerous along the North Atlantic coast, but now extinct.

La'bret, *n.* An ornament worn in a hole in the lip by various savages. Among the Botocudos of South America, one or more small plugs were worn in holes bored in the lower lip of boys, upon their arrival at manhood; and successively enlarged with advancing years. In Central America both men and women wore similar lip-ornaments in great variety. The ancient Mexicans (men) wore spool-shaped ornaments of turquois, obsidian, &c., in holes in their cheeks, noses and lips, the lower lip often being so weighted as to hide the chin. This practice has long been extinct among all these people, however, except the remote Botocudos of Brazil. It prevailed until recently, however, among the Indians of the Northwest coast of America, from Puget Sound to the Yukon river, where traces are still seen among aged people in remote tribes. Here, except among the Aleuts, it was confined to the women, who, having their under lips perforated upon arriving at a marriageable age, gradually enlarged the opening until sometimes it would hold an oval, pulley-shaped piece of ivory, bone or wood two inches in breadth. Their labrets took various other forms, however. The Eskimos of Alaska (but not east of the Mackenzie river) wear labrets (sometimes several) of various stud-shaped forms, usually smaller than is the fashion southward, which have been elaborately described by Murdoch and other students of that region. These are worn by both sexes, those of the men being larger than those of the women, as a rule. The custom never spread to the natives of the adjacent Asiatic coasts. In the lake region of Central Africa labretifery is practiced by the women alone among various tribes, and gives them a hideous appearance, the lower lips being often so distended as to hide the whole face when lifted. There seems to have been an underlying religious significance in this practice at first, but it is to be regarded as dictated of late by crude ideas as to embellishment of the person. See an article by Dr. W. H. Dall, in the *Annual Report of the* (*U. S.*) *Bureau of Ethnology for 1881–82*, where the American examples of labretifery are fully discussed.

Lachapelle', Marie Louise, accoucheuse, was born in Paris, Jan. 1, 1769. She was the daughter of a physician named Dugès. Her mother was at the head of the obstetrical service of the Hôtel Dieu, Paris, to which post the daughter succeeded in 1795, having meanwhile married Dr. *L.*, surgeon of the St. Louis hospital. Her experience of the wretched conditions then existing led to suggest the establishment of a special hospital, *La Maternité*, of which she was the chief organizer and practical instructor. To Mme. *L.* belongs the credit of originating this very important phase of hospital service and public charity. Died Oct. 24, 1821.

Lach'esis, *n.* (*Myth.*) Name of one of the Fates (*Parcæ*), represented as presiding over the future and spinning the thread of life.

Lachrymo'sa, *n.* (*Eccl.*) The last stanza but one of the *Dies Iræ*, as used in the Roman Catholic requiem mass; named from its first word.—Also, the music to which that stanza is sung.

Lac'moid, *n.* [*Lacmus* and *oid.*] A dark violet-blue dye from coal-tar.

Lac'mus, *n.* [*D. lakmoes.*] The same as litmus (*q.v.*).

Lacordaire', Jean Théonore, naturalist, was born Feb. 1, 1801; was noted as an entomologist. His great literary work is the *Genera des Coléoptères*, in ten volumes, in which over 8,000 genera are described. He made four journeys to South America to collect and study insects; was professor of Zoölogy and Comparative Anatomy at the University of Liege, Belgium, from 1835 until his death, July 18, 1870.

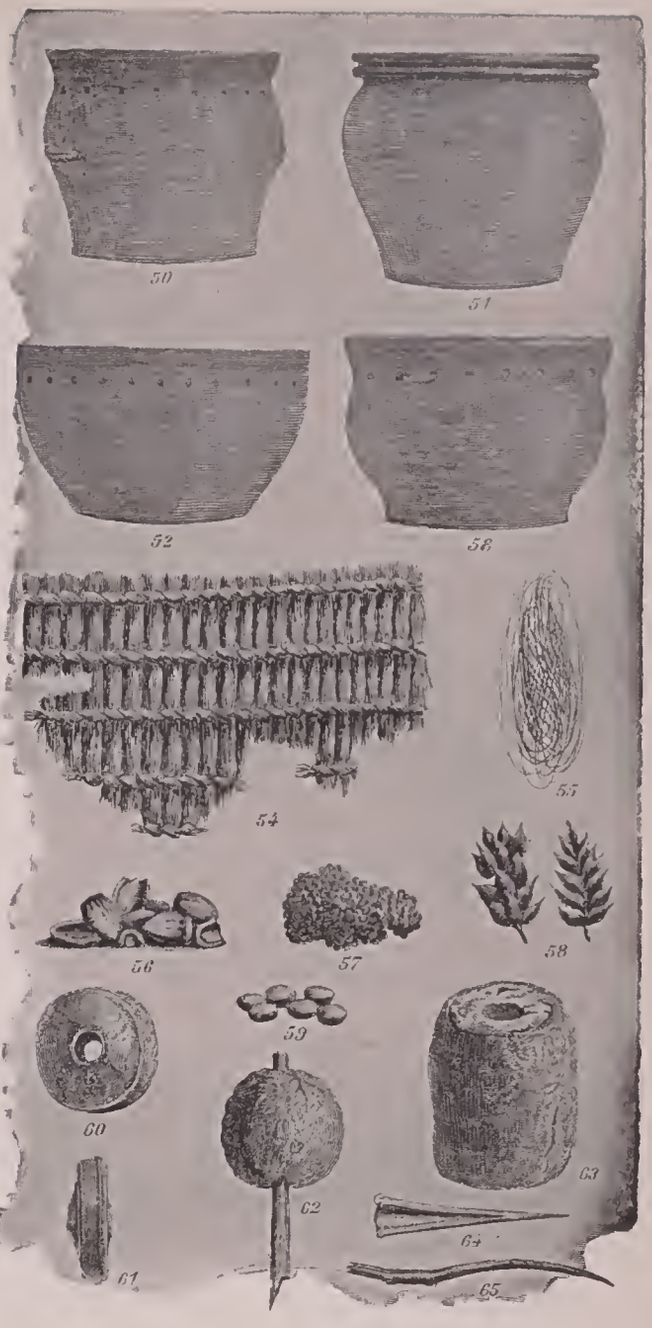
Lac'quer, *n.* An opaque varnish, made by dissolving shellac in alcohol and adding coloring matters.

—Any resinous Oriental varnish. It may contain no lac, properly so called, and is most often made from the juice of the *Rhus vernicifera*, or lacquer tree.

—Decorative work either on metal or wood, finished with the lacquer varnish. Many articles of brass, iron, tin, and other metals are lacquered to protect their surfaces, and for this purpose the true lacquer or shellac varnish is used, usually with the addition in its composition of some other gum-resin, sandarach, amber, or anime, besides the coloring matter. What is known as "lacquer ware" is usually made of seasoned wood which takes a highly lustrous polish when varnished with several coats of lacquer. Some beautiful varieties of lacquer-ware are made in India, where designs are painted upon tin-foil or other leaf metal and laid upon the wood before applying the varnish, which may or may not contain the true lac. Lacquer-ware is also made in Persia, where *papier mâché* is often used instead of wood, but the most important production of it is in China and Japan, where the varnish is made almost exclusively from the sap of the *Rhus vernicifera*. This lacquer is unlike other varnishes in its ability to bear heat, so that in Japan hot soups and drinks are often served in ware finished with it. The best ware receives several coatings of crude lacquer, each of which is laboriously polished before the final finish of the best varnish is applied; and the different colors and schemes of decoration and devices of many

REMAINS OF THE LAKE-DWELLERS.

1. Supposed appearance of an ancient pile village (France). 5-32. Stone implements. 33, 36. Dr
Earthen vessels, from Lake Constance. 54. Plaited stuff made from flax. 55. Flax. 56. Hazelnuts. 57. Bread
Constance). 63. Stone sinker for the nets. 65. Bow, from pile dwelling of Wangen. 69, 71-73. Stone wedges
80. Flint knife with wooden handle. 81. Arrow-point. 83, 88. Pendants. 85. Hoe. 86. Twirling-stick. 89. H
Vicenza (Italy).



2. Present condition of a pile structure. 3. Ground plan of a pile structure. 4. Pile structure at Hauteville
d implements. 34, 66=68, 70. Stone wedges inserted in deer's horn. 35, 37=49, 64. Awls and gouges. 50=53.
;8. Two= and six=rowed barley. 59. Cherry=stones. 60, 61, 84, 87. Clay beads. 62. Club, from Wangen (Lake
erted into wooden shanks. 74, 75. Saw=like implements. 76, 82. Needles. 77, 78. Shuttles. 79. Bone hook.
)on=point. 90. Plaited stuff of flax. 91=95. Earthen vessels, from pile dwellings. 96. Lake Fimona, near

factnre give rise to many different varieties of the ware. During the 18th and early 19th centuries, a Chinese ware with a black ground ornamented with figures in gold was the best known in Europe, and though comparatively few fine pieces are now imported, there are still many beautiful specimens to be found in old houses and in collections. Coral lacquer, and a black variety called Tsui-shu, or Soo-chow, are other well-known wares, and are characterized by the depth of the varnish, which is pressed or carved into figures in relief, sometimes forming complex designs executed in several colors. Gold or silver lacquer is made by mixing gold or silver powder with varnish, and in the richest ware the polish is almost like that of solid metal. Aventurin, or sprinkled, lacquer is similarly made, using either gold, silver, or bronze powder in smaller quantities, giving a cloudy or uniformly sprinkled background, upon which a design is applied in gold leaf, or in relief, exactly as upon the black ground. Red, brown, and blue lacquers are equally well known, and also the transparent lacquer, through which the natural grain and coloring of the wood is seen. Besides the inlaid ornaments of gold and silver leaf, those of mother-of-pearl, bronze, horn, coral, and porcelain are used. Old workers in lacquer often spent years in the making of a single piece, and in consequence the old lacquer work is more solid and durable than the modern, and the best specimens of it are valued highly. Old lacquer work was one of the principal means of introducing Oriental art into the West.

Lacretelle', Jean Charles Dominique de, a French historian and journalist, was born at Metz, in 1766; became a member of the Academy in 1811, and professor of History in the Faculty of Letters (1809–1848). Among his most notable works are a *History of the French Revolution; A History of France during the Eighteenth Century;* and *The National Convention.* Died March 26, 1885.

Lac'rimatory, *n.* A type of small, thin-necked, often tubular, glass bottles found in ancient tombs in Italy and Greece. They served to contain unguents and perfumes, and not to hold tears, as has been fabled; also called tear-bottles.

Lac'tarin, *n.* (*Chem.*) A substance which is essentially a form of casein, rendered impure by a little fat and the salts of milk. It has been introduced as a substitute for albumen for manufacturing purposes, and is said to have great advantage on the score of cheapness and convenience of preparation. For use, it is diluted with water, dissolved in ammonia, and then added to the coloring matter.

Laddo'nia, in *Missouri,* a post-village of Adrian co., 14 m N.E. of Mexico, on the C. & A. R. R.; shipping point for wheat, corn, oats, flaxseed, and live stock. *Pop.* (1897) 650.

Lado'nia, in *Texas,* a post-town of Fannin co., 12 m. S.W. of Honey Grove, on G., C. & S. Fé R. R. Situated in cotton and grain raising district. *Pop.* (1890) 765.

Lafayette', *n.* (*Ichth.*) A small, silvery, edible, sea-fish (*Stromateus triacanthus*), common off the coast of the Eastern United States. Also called harvest-fish, dollar-fish, and butter-fish.—A valuable food-fish (*Liostomus xanthurus*) of the coast of the southeastern United States, allied to the roncador; also called spot and oldwife.

Lafayette, in *Louisiana,* a post-town, cap. of Lafayette co., 60 m. W. by S. of Baton Rouge, on So. Pac. R. R. *Pop.* (1897) 2,670.

Lafayette Col'lege. (*Educ.*) A Presbyterian Institution at Easton, Pa. This college has attained a respectable age, for it was chartered in 1826, and organized in 1832. It has found benefactors who have endowed it with productive funds valued at $1,600,000. Its total income from funds and tuition was declared by the officers of the college at the beginning of 1907 to be about $58,000. At the same time it had 35 instructors and 400 students, with 30,000 volumes in its library.

Lagnappe (*lăn-yăp'*), or **Lagniappe,** *n.* A trifling present "for good measure" given by small merchants to purchasers, particularly to children, according to a custom among the Creoles in Louisiana and along the Gulf coast.

Laissez Faire. This phrase may be defined as the "let alone" principle, and is used to express the attitude toward the state of the school of political economy founded by Adam Smith. The origin of the phrase is attributed to a remonstrance of the French merchants against the system of the French statesman Colbert, who established a minute regulation of industry by the state. They believed that the best thing that the state could do for industry was to "let it alone." In England, more than in any other country, *laissez faire* has been accepted as a watchword of free trade and free industry, as opposed to the protective system and state regulation generally.

Lake, in *Michigan,* a W. co.; *area,* 580 sq. m.; intersected by the Marquette, Memoosic, and Pine rivers. *Surface,* undulating, the greater part forest; *soil,* fertile in the east, sandy plains in the west; *products,* wheat, corn and oats. *Cap.* Baldwin. *Pop.* (1895) 5,895.

Lake, in *Oregon,* a S. co., adjoining California; *area,* 8,040 sq. m.; contains numerous lakes, the most important being Albert, Goose, Summer, and Christmas or Warner. *Surface,* partly mountainous. Stock raising is the chief industry. *Cap.* Lakeview. *Pop.* (1897) 3,000.

Lake, in *South Dakota,* an E. co.; *area* 580 sq. m.; partly drained by the Vermilion river, and contains Herman and Madison Lakes. *Surface,* undulating; *soil,* fertile. *Cap.* Madison. *Pop.* (1895) 7,680.

Lake, in *Tennessee,* an ex. N. W. co.; *area* 210 sq. m.; bounded on the W. by the Mississippi river, on the E. by Reelfoot lake. *Surface,* level; *soil,* fertile; *products,* corn, wheat, cotton, pork, live-stock; lumber and shingles exported in large quantities. *Cap.* Tiptonville. *Pop.* (1890) 5,304.

Lake Ben'ton, in *Minnesota,* a post-village, cap. of Lincoln co., 35 m. W. of Tracy, on C. & N. W. R. R. *Pop.* (1895) 607.

Lake City, in *Colorado,* a post-town and cap. of Hinsdale co., 63 m. S. by W. of Gunnison, on D. & R. G. R. R.; has planing mills, sampling-works and ore-concentrating mills for the rich silver ore in its vicinity. *Pop.* (1897) 900.

Lake Coun'try, *n.* In Northern England, the regions embraced in the counties of Cumberland, Lancashire, and Westmoreland, abounding in beautiful lakes.

Lake Dwell'ings. (*Anthrop.*) A class of habitations dating from pre-historic times, and found in various parts of the world. The most noted examples are in Switzerland, where they were first discovered, in 1853, by workmen excavating a bed of mud on the shores of Lake Zurich. They came upon more or less perfectly preserved piles which had evidently been driven there for the support of buildings. Archæologists examined the discovery, and, from the many relics which they found in the surrounding mud, they established the fact that the piles had been the foundation of villages in which a race of people had lived from century to century above the lake. Other similar villages were soon discovered in Lakes Mooseedorf, Neufchatel, Morat, Constance, Geneva, and Bienno. In some places, where the lake-bottom was soft, the piles were supported and held together by a framework of tree-trunks, into which they were mortised at the bottom of the lake, and by cross-beams near the top and beneath the platform of logs on which the village stood. Where, on the contrary, the piles could not be driven down, on account of a rock bottom, they were held up and steadied by having loose stones filled in between them, as shown in Fig. 4. In still other instances, but rarely in Switzerland, no piles at all were used, the platform and superstructure being supported upon fascine work—a mass of tree-boughs, osiers, &c., plaited together in horizontal layers, intersticed with layers of clay or gravel, and secured under the water by upright stakes. But, whether supported on piles or fascine work, the nature of all the Swiss villages seems to have been much the same. They consisted of a number of small square or oblong huts of wattle-work (see Fig. 1), built quite close together, supported by posts, and coated inside and out with clay. They were usually about 20 feet long by 12 feet wide, though at Mooseedorf were found the remains of a single dwelling measuring 70 by 50 feet. In some of the villages, stalls for cattle appear to have been built between the huts, and bridges, sometimes as much as a hundred yards in length, afforded a passage for the stock to pastures on the mainland. In other settlements there is no trace of bridges; in these cases the inhabitants probably kept their cattle on the mainland all the time, and depended on their dug-outs or log canoes (see Fig. 1) for going back and forth across the water to their farming lands. That they did regular and careful farming, is shown by the different varieties of wheat and barley which they grew, besides millet and flax, and other economic products. They raised horses, sheep, goats, and swine; cultivated fruit trees, made nets and fish-hooks, wove woollen and linen cloths, prepared skins, and made coarse but serviceable pottery, besides a great variety of rudely but intelligently formed implements of stone, horn, bone, and wood. In some of the settlements there are also tools and ornaments of bronze, iron, and even gold. The stone implements (see Figs. 5 to 32) are such as belong to the neolithic or polished stone age, but the presence of the metals proves that the life of these pre-historic people was continued up into the beginning of historic times. A few of the settlements even show traces of Roman dominion, but they must have been abandoned so soon after the influence of Rome had reached them that they were forgotten until rediscovered with the rest. These later settlements show no difference in their structure from the earlier, and the improvements of advancing civilization appear to have been too rarely obtained to have been put into common use. A rudimentary commerce existed, however, as is shown by the presence among the relics of amber ornaments, which must have come from the Baltic, and of one glass bead, which, occurring as it does in a settlement believed to be neolithic, could only have come from Egypt. From the thatched roofs on the huts down to the water-line, a lake dwellers' village was so inflammable that whole settlements were often destroyed by fire, and modern science owes much to this fact, for many things which had been charred before falling into the water were rendered impervious to it by their coating of charcoal, so that even the bread, made of grain crushed but not pulverized (see Fig. 57), has been preserved. In 1858, at Robenhausen, near Lake Pfäffikon, in the canton of Zurich, an unusually large village was discovered, which was peculiar in being supported upon three tiers of piles, one range driven in above another, denoting the reconstruction of the village at different times as its foundation sank into the lake. At this place were found several long bows of a kind still used by the savages of Polynesia, beside the usual implements found under neolithic lake dwellings, such as are shown in the accompanying illustrations, and give evidence, on the whole, of a quiet, industrious life. The Swiss lake dwellers have now been proved to be of the same race as the people of the mainland, and it is difficult to find a sufficient reason for their having gone to the great labor of making the lake settlements, which in all cases suggest an effort at protection against enemies; for the Swiss appear to have been at all times a contented people, quite different from the warlike inhabitants of the Scotch and Irish crannoges, or stockaded islands. Since the discovery of these Swiss lake dwellings, kindred remains have been brought to light in the Jura and other parts of France, and in Italy, Bavaria, Denmark, and some parts of Germany. Since 1839 more than 100 lake dwellings have been found in Ireland and Scotland (see Crannoges), and more recently also near Lake Neufchâtel, in Switzerland.

Lake For'est Univer'sity. (*Educ.*) An institution of learning located at Lake Forest, Ill., a suburb of Chicago. It comprises six distinct institutions, viz.: Lake Forest Academy, Ferry Hall Seminary, Lake Forest College, Rush Medical College, Chicago College of Dental Surgery, and Chicago College of Law. The first three are governed by the board of trustees of the University, while each of the three professional schools has its own board of trustees, but of all the four boards the president of the University is an *ex officio* member. It was planned and its location selected by Presbyterians of Chicago and Waukegan, in 1855. In February, 1856, "The Lake Forest Association" was formed, and purchased 2,500 acres of land where Lake Forest now stands. Half of this was permanently set apart as association property, and the plot of the town was recorded July 23, 1857. Each alternate lot was assigned as an endowment for a university, and 62 acres were set apart as inalienable campus. The institution was chartered by the legislature, Feb. 13, 1857, as Lind University, subject to the control of the synod of Peoria and its ecclesiastical successors. The first building was erected and the Academy opened in the fall of 1858. In 1865 the legislature changed the name to Lake Forest University. In 1869 Ferry Hall was built, and the seminary course began. The collegiate department was opened Sept. 7, 1876, with a freshman class of eight young men and four young women, under the presidency of Rev. Robt. W. Patterson, D.D., who, however, resigned within two years. Rev. Daniel S. Gregory, D.D., was president from 1878 to 1886, when he resigned. Several others have since held the office. In 1887 Rush Medical College and the Chicago College of Dental Surgery became departments of the University, and in 1889 the Chicago College of Law was added. The University owns and has in use 16 buildings, valued at $400,000, on 65 acres of inalienable lands worth $150,000, and has in addition $50,000 worth of salable town lots in Lake Forest.

Lake Gene'va, in *Wisconsin,* a city of Walworth co., 53 m. S.W. of Milwaukee, on C. & N. W. R. R., has flour and feed mills and furniture factory; a favorite summer resort: many Chicago merchants own villas on the lake shores. *Pop.* (1895) 2,452.

Lake Her'ring, *n.* (*Ichth.*) A small, dark-colored, salmonoid, or "whitefish" (*Coregonus artedi*) of the Great Lakes, and many other inland waters of North America; the cisco.

Lake Trout, *n.* (*Ichth.*) Any of several North American salmonoid fishes inhabiting lakes; especially the namaycush (*q. v.*).

Lake'land, in *Florida,* a post-town of Polk co., 32 m. E. of Tampa, on S., F. & W. R. R.; health resort, in an orange grove district; has lumber mills. *Pop.* (1890) 552.

Lakeland, in *Minnesota,* a post-village of Washington co., 16 m. E. of St. Paul, on C., M. & St. P. R. R.; has steam saw-mills. *Pop.* (1897) 720.

Laker, *n.* A person or thing in some way connected with a lake; as, a dweller near it, a fish living in it, or a vessel plying it.

Lake'side, in *Minnesota,* a village of St. Louis co. Its P. O. is Lakeview. *Pop.* (1890) 897.

Lak'ist, *n.* One who lives near a lake; a laker.—A lake poet.

Laksh'mi, *n.* [Sansk.] (*Hind. Myth.*) The goddess of abundance, prosperity, and beauty; the wife of Vishnu, the preserver, and mother of Kama, the god of love, thus corresponding to the Venus of the Romans.

Lamar', Lucius Quintius Cincinnatus, jurist and statesman, was born in Putnam co., Georgia, Sept. 17, 1825; educated at Emory College, Oxford, Ga., graduating in 1845; admitted to the bar in 1847; adjunct professor of Mathematics in the University of Mississippi; practiced law in Covington, Ga. (1850); elected to the Georgia legislature (1853); removed to Lafayette co., Miss. (1854); elected to Congress (1857); resigned in 1860, and entered the Confederate army, reaching the rank of colonel; was sent as a diplomatic agent to Russia, in 1863. After the Civil War, he was appointed professor of Political Economy and Social Science in the University of Mississippi; professor of Law (1867); member of Congress (1873); was elected U. S. Senator in 1877, and re-elected in 1882; appointed Secretary of Interior in 1885, but resigned in 1888, and was appointed (by President Cleveland) an associate justice of the U. S. Supreme Court. Died Jan. 23, 1893.

Lamar, in *Alabama,* a N. W. co.; *area,* 612 sq. m.; intersected by the Buttahatchee river and many creeks. *Surface,* rolling; *soil,* fertile; coal and iron abound. *Cap.* Vernon. *Pop.* (1890) 14,187.

Lamar, in *Colorado,* a post-village, cap. of Prowers co., 116 m. E. of Pueblo on A., T. & S. Fé R.R. *Pop.* (1897) 950.

Lamb, in *Texas,* a N.W. co.; *area,* 1,010 sq. m.; intersected by Brazos river; unorganized.

Lamb'da, *n.* The eleventh letter of the Greek alphabet, corresponding to the English *L, l.*

Lam'boys, *n. pl.* [Fr. *lambeau.*] (*Old armor.*) Skirts of flexible kilted steel plates attached to the culrass, front and back, and hanging over the thighs; cut away before and behind to allow the rider to sit on his horse; worn in the early part of the 16th century.

Lamb'skin, *n.* The sklu of a lamb dressed, with the wool on or without.—A kind of woollen cloth resembling the dressed skin of a lamb.

Lamont', DANIEL SCOTT, was born at Cortlandville, N. Y., Feb. 9, 1851; educated at McGranvillo Academy and Union College; was private secretary to Mr. Cleveland when the latter was governor of New York (1883–85), and also during Mr. Cleveland's first term as President (1885–89); was Secretary of War during Mr. Cleveland's second term (1893–97).

Lamoriciere (*lä-mō-rē-sē-air'*), CHRISTOPHE LEON LOUIS JUCHAULT DE, a French general, born at Nantes, 1806. After a period of brilliant services rendered in Algeria, he became a member of the Chamber of Deputies in 1847, and in the revolutionary year which followed made a bold but ineffectual attempt to preserve the Orleans dynasty. During the latter half of the year 1848 he acted as minister of war. In 1860 he accepted the chief command of the Papal army, and was defeated and taken prisoner at Castelfidardo in 1860. Died in 1865

Land League. (*Hist.*) An organization formed in Dublin, Oct. 21, 1879, by a number of well-known Irish agitators, with the object, first, to effect a reduction of rack-rents—or rents which are equal or nearly equal to the annual value of the property rented—and, second, to promote ownership of the land by the cultivators. Mr. Charles Stewart Parnell was made president, while the executive committee, comprising some sixty members, included representatives from all parts of Ireland. This league was to have branches in every parish or group of parishes in Ireland. Affiliated branches were also to be established in Great Britain and the U. S.; the money raised by the organization to be devoted to relieving distress among farmers and to furnishing legal counsel in resisting oppression by landlords. Mr. Parnell visited America, awakening enthusiasm by his addresses, and winning the sympathy and coöperation of prominent men. It was part of the constitution that the league excluded from membership whosoever rented or leased a farm from which another had been evicted for non-payment of unjust rent, or which had been abandoned on account of extortionate rent, or who bought stock or produce seized for non-payment of such rent. With these principles, the Land League soon became a formidable organization, the arbiter of many disputes between landlord and tenant, and revealed so much distress, that Mr. Gladstone was moved to take up a bill, once proposed by an Irish member of the House of Common, providing that there should be a temporary suspension of evictions for non-payment of rent. This measure passed the House of Commons, but it was rejected by the Lords by a large majority. This so incensed the Irish Nationalists that a general uprising followed, and disturbance became anarchy. Of the hideous crimes in Ireland at this time the Land League was exculpated, but their own denunciations were not powerful enough to control the insurrectionists. The hope which was felt in England—that the Land Bill of Aug., 1881, would terminate the agitation—was abandoned when the more extreme element in the Land League refused to accept the concessions made them in the terms of the law, and declared resistance until the policy adopted by Parnell to get reduced rents should reach a favorable result. Mr. Gladstone denounced the measures of the League, and it was proclaimed "an illegal and criminal association" by the Liberal government (Oct., 1881). On Oct. 13 Parnell was arrested, and within a few days the greater number of the Irish Nationalist party were imprisoned in Kilmainham, from which they issued the manifesto calling upon their followers to refuse payment of rent altogether. The government's proclamation followed immediately, and the Land League was suppressed, after a turbulent existence of exactly two years. A year later the motives which originated with this body were incorporated in the constitution of the Irish National League, together with the Home Rule Bill, which has continued to be the principal political struggle of Ireland.

Land'grabber, *n.* One who takes possession of land by some sharp practice, though it may be under protection of the forms of law.

Landou'zy, LOUIS, neurologist, was born at Rheims, France, in 1850; graduated M. D. from the Paris School of Medicine (1876), where, in 1880, he was appointed associate professor, and, in 1893, full professor in the faculty, a distinction won by merit. He is a recognized expert in nervous diseases.

Land'scape Gar'dening, *n.* The art of beautifying or idealizing a stretch of ground by grading lawns, planting or trimming trees, arranging walks and terraces, flooding low places to make miniature lakes or fountains, or in any way adapting the natural features of an estate or park to artistic purpose. The Italian gardens, with their wealth of architecture and sculpture, are laid out in somewhat conventional lines, more to furnish setting for the marble decoration than as landscapes to which the statuary contributes charm. Architecture is so dependent upon landscape that the two arts are rarely separate, and Grecian and Roman architects understood this, although the art was not distinguished by name nor placed in the hands of a director of the royal gardens, as during the time of Louis XIV. in France. The gardens of Versailles form a good example of French landscape gardening, representing the crowning achievement of Andre Le Notre, who was knighted for his genius in converting flat stretches into bosky dells, stones into ferny grottoes, and and sand strips into sparkling fountains.

There is very little of the Italian stiffness and geometric regularity in modern English and American landscape gardening. The rolling lawns, the scattered trees, the groups of low-growing shrubs, and the borders, under the directing influence of Bridgman and Kent, were all arranged as much as possible after the example set by Nature. It was indeed Kent's creed that "Nature, not art, must be the model of the landscape gardener." Holland, with its quaint gardens reclaimed from the marshes of the sea, furnishes a very different example of conventional cultivation, while the stiff severity of the German parks, the scarcity of gravel for walks, and the unpropitious winters combine against the appearance of Germau landscape, offering little to emulate.

In America, Central Park in New York, South Park, Golden Gate Park, and Audubon Park are the best examples of landscape gardening, and the tendencies are every year more pronounced in favor of the system originated by Kent in England.

Lane, in *Kansas*, a W. central co.; *area*, 730 sq. m.; drained by Walnut creek and its South Fork. *Surface*, level; *soil*, very fertile; *products*, corn, wheat, oats, potatoes, hay, and sorghum; live stock. *Cap.* Dighton. *Pop.* (1895) 1,490.

Lang, ANDREW, born at Selkirk, March 31, 1844; educated at Edinburgh Academy, St. Andrew's University, and Baliol College, Oxford; was elected fellow of Merton College in 1868. His contributions to literature are many. In 1885 he was made LL.D. of St. Andrew's, and elected the first Gifford lecturer at that University in 1888. He has published: *Ballads and Lyrics of Old France; Helen of Troy; Grass of Parnassus; Custom and Myth; The Library; In the Wrong Paradise; Letters to Dead Authors*, &c. He is also the author of fairy tales and translations from early French literature. His translations of the *Odyssey*, in collaboration with Prof. Butcher, and of *Theocritus*, *Bion*, and *Moschus*, are masterpieces.

Lang'enbeck, KONRAD JOHANN MARTIN, a celebrated surgeon and anatomist, was born in the kingdom of Hanover in 1776; died in 1851; author of a *Manual of Anatomy* (1806), and *Icones Anatomicæ* (8 vols., 1839).—His nephew, Benjamin von Langenbeck, is professor of Surgery in the University of Berlin, director of the Royal Clinical Hospital, and general staff physician of the army. Having been appointed (1847) successor to the great operator, Dieffenbach, in Berlin, he attained great skill and success in the operation for harelip, as well as in the replacement of noses, eyelids, and lips.

Langevin, SIR HECTOR LOUIS, born in Quebec, Aug. 26, 1826; admitted to the bar (1850); appointed Queen's counsel (1864); elected to the Canada Assembly; member of the executive council; appointed Secretary of State for Canada (1867); Minister of Public Works (1869–73); Postmaster-General (1878), and again Minister of Public Works (1879). Retired from public life in 1891.

Lang'horne, in *Pennsylvania*, a post-borough of Bucks co., 18 m. S.E. of Doylestown, on Penua. and P. & R. R. Rs. *Pop.* (1897) 1,010.

Lang'lade, in *Wisconsin*, a N. E. co.; *area*, 876 sq. m.; drained by the Wolf, Eau Claire, and Prairie rivers. *Surface*, generally level; well watered; *products*, hay, potatoes, corn, and small grains. Extensive lumbering. *Cap.* Antigo. *Pop.* (1895) 11,092.

Lang'ley, JAMES WILBERFORCE, journalist and statesman, was born in Nova Scotia, Jan. 4, 1849; was educated in law and has been prominent in official life. He was attorney-general of Nova Scotia (1886), and active in creating the policy of unrestricted reciprocity between Canada and the U. S.; a frequent contributor to current magazines.

Langley, SAMUEL PIERPONT, astronomer, was born at Roxbury, Mass., Aug. 22, 1834; an active figure in scientific circles. In 1887 he succeeded Prof. Baird as secretary of the Smithsonian Institution. He studied solar physics and atmospheric energies, invented the bolometer, and experimented largely with flying machines. His writings include *The New Astronomy*, *Researches on Solar Heat*, &c. He was awarded the Draper medal and both the Rumford medals. Died Feb. 27, 1906.

Langoor', *n.* (*Zoöl.*) Any East Indian monkey of the genus *Semnopithecus*. The best known one is the common sacred monkey (*S. entellus*) of India; also called hanuman.

Lang'shan, *n.* A breed of large barnyard fowls introduced from China. They are taller than the cochin, and have less heavily feathered shanks; there are two varieties—one glossy black, the other white. See FOWLS, DOMESTIC.

Langs'ton, JOHN MERCER, educator, was born at Louisa Court-House, Va., Dec. 14, 1829. His parents were slaves, but he received his freedom in childhood; graduated at Oberlin College (1849), where he studied theology; afterward studied law and was admitted to the Ohio bar (1854); appointed professor in Howard University, Washington (1867); became vice-president and acting-president of that University (1873). He held other positions in the ministry of public affairs, including that of U. S. minister to Hayti (1881–85). He has written upon political and literary subjects, and is noted as an orator.

Langs'ton, in *Oklahoma*, a post-village of Logan co., 14 m. N.E. of Guthrie and 10 m. E. of Lawrie, the nearest station on A., T. & S. Fé R.R. *Pop.* (1897) 625.

Lan'guage, *n.* The origin of language is a problem that has perplexed philologists and philosophers for ages, and remains still only in part elucidated, though no scientist would to-day admit the old theory of divine origin. Language can, in fact, be traced back far toward an origin the reverse of divine; being analyzed into its roots or primitive forms of speech, the steps of development from these root forms followed, and the mode of origin of these underlying forms surmised. The study of linguistic roots and of the existing languages of savage peoples leads us back to a stage in human evolution in which general ideas did not exist, and in which each word had the force of a sentence, expressing in a single utterance a complete concrete proposition. The subsequent development of language has consisted in the analyzation of the complex conceptions conveyed in primitive words, these being divided up into their elements—the so-called "parts of speech," abstract ideas growing out of the original concrete expressions of thought. From words which referred solely and immediately to things, words have emerged which have no close connection with things, and which indicate the relations of thought and the steps of logical analyses of propositions, or constitute abstract ideas that belong to the world of thought alone, and have only an ideal connection with the realm of sensible things. The methods of this linguistic analysis are of interest, since they have given rise to several distinct families of human speech, under one or the other of which practically all existing languages can be grouped. The tracing back of language to original root forms, in which a single word or sound expressed a whole proposition, assimilates human language more nearly to that of the lower animals that was formerly thought possible. For many mammals and birds possess a language of a few distinct sounds, each of which has a fixed meaning to them, each constituting a concrete proposition by which they express to their fellows some fact in surrounding nature or some condition of internal feeling or consciousness. There is reason to believe that the language of primeval man resembled this in character, and may at some remote time have been as narrow in scope, though the developing human intellect, as its perceptions of nature extended, devised a greater variety of sounds to express them, so that in time a root language of considerable diversity may have arisen. It is a fact of the greatest interest in the history of language that the form of speech possessed by what is perhaps the earliest of civilized peoples, the Chinese, is still in the root stage. The indications are that the ancestors of this people were either deficient in power of thought analysis or developed a method of expressing abstractions by aid of root words, modifying their significance directly or by means of combination, a process which checked the tendency shown elsewhere to express abstract conceptions by the modification of verbal forms. Civilization, and the employment of this form of language as a medium of literature, held it in the stage described, and caused all later development to take place in the original mode, the widening of significance in roots, their modification by combining, and their diversification in grammatical significance in accordance with their position in the sentence. This most primitive of tho families of language, the *monosyllabic*, differs essentially from another seemingly primitive form, tho *polysynthetic*, that spoken by the American Indians, and of which a branch has been retained from some very ancient era by the Basque people of Spain. In this method of speech analysis seems to have taken place to some extent, but the analyzed elements remain attached to the root, so that remarkably complex single words are built up, each of which expresses a complete, and, in some cases, an intricate, sentence. The process employed is a successive modification of the root, which remains as the central fact in the word, by the addition of particle after particle, until in the end a highly complex and cumbrous word may be built up. A third family of speech is that in use by the Mongolian race—with the exception of their Chinese branch. This is the *agglutinative* family of speech, in which, while the roots retain their forms, some of them lose their separate significance, and sink to the condition of modifying particles. It is a distinct stage in advance of the Chinese, since the modifying roots lose their force as words, and exist simply as suffixes and affixes. The highest types of language are those known as the *inflectional*, spoken by the Aryan and Semitic peoples. There are two distinct types of these. The Aryan method of inflection seems to have developed from the Mongolian system, by a loss of the inflexibility of form in the suffixes and affixes. In the Aryan tongues these readily vary, to adopt them to certain requirements of thought, each change of form signifying a corresponding change of meaning. The difference from the Mongolian system, while not great in character, is radical in effect, the inflectional variations giving to Aryan tongues a remarkable flexibility, and adapting it readily and easily to express the finest modifications of thought. It compares with the less developed modes of speech much as alphabetic writing compares with hieroglyphic, or modern notation with the Greek and Roman. While each served its purpose of expressing thought, the older forms did so in a much more awkward and round-about way than the later. The Semitic inflectional speech differs radically from the Aryan, and represents a far more primitive stage of linguistic evolution. Instead of employing suffixes and affixes for this purpose, it is almost destitute of these expedients, and performs its inflectional work

within the root itself. It is in this sense a root language, but the roots have been made widely capable of change by a vowel inflection. Their consonants remain unchanged, but the vowels vary, and thus cause variations in meaning, each root form being in this simple method capable of expressing a considerable variety of meanings. The linguistic families here mentioned do not fairly include all human languages. There are several modes of speech, in Africa and elsewhere, which do not closely conform to any of the types named, though with no characteristics distinct enough to warrant the separating them as distinct families. As regards the later evolution of language, the Aryan is the only type that displays any distinct steps of progression from its primitive condition. The ancient forms of Aryan speech, such as the Greek and the Sanskrit, were strikingly synthetic in form, the modifying forms becoming welded to the root and forming words occasionally of great and monstrous length. This method is preserved in modern Russian, and to a considerable extent in German. On the other hand, the modern Romance languages display a strong analytical tendency, and this is still more strongly displayed in the English and the Persian, words in these tongues being strikingly broken up into their elements, till, in the Saxon contingent of the English, scarcely a long word remains, and the language has become monosyllabic to a degree that recalls the Chinese. Thus the latest stage of linguistic evolution approaches the earliest, though with a striking difference in degree of flexibility, the English retaining all the advantages of the inflectional form of speech.

Language-stocks of North America. (*Anthrop.*) The aboriginal languages of North America have been studied by Gallatin, Hale, Latham, Dall, Gibbs, Powers, Brinton, and many *attachés* of the Bureau of Ethnology, especially Powell, Gatschet, and Pilling. The results were summarized in a classification of language-stocks, published with a map in the *Annual Report of the Bureau of Ethnology for 1885–'86*, by the director, Maj. J. W. Powell. The languages spoken by the pre-Columbian tribes of North America were many and diverse, embracing, according to Powell 58 *language-stocks*. "A single language," he explains, "is called a family or stock when it is not found to be cognate with any other language. Languages are said to be cognate when such relations between them are found that they are supposed to have descended from a common ancestral speech. The evidence of cognation is derived exclusively from the vocabulary. Grammatic similarities are not supposed to furnish evidence of cognation. . . . The families are by no means alike as regards either the extent of territory occupied, the number of tribes grouped under them respectively, or the number of languages and dialects of which they are composed. Some of them cover wide areas . . . others occupy so little space that the colors representing them are hardly discernible on the map. Some of them contain but a single tribe; others are represented by scores of tribes. In the case of a few, the term 'family' is commensurate with language, since there is but one language and no dialects. In the case of others, their tribes spoke several languages, so distinct from one another as to be for the most part mutually unintelligible."

Fifty-eight distinct linguistic stocks are enumerated as living north of Mexico, as follows, alphabetically presented:

Adaizan.—The language of an extinct tribe formerly dwelling near Natchez, Miss.

Algonquian.—The most widely-spoken language-stock of North America, spread from Labrador to the Rocky Mountains, and from Churchill river, Hudson Bay, south to Pamlico Sound, North Carolina. In some places it enclosed islands of other language-stocks, and elsewhere representatives, as the Cheyennes, had become isolated. The principal tribes were: Micmac, of the Maritime Provinces; Abnaki, Mahican, Mohegan, Massachusetts, Narragansetts, and Pequots, of New England; Montagnais, Algonquin, Ottawa, of eastern Canada; Ojibway (or Chippeway), of the Lake Superior region; Cree, of the Canadian plains region; Delaware, Nanticoke, Pamlico, and Powhatan, of the middle eastern coast; Illinois, Kickapoo, Shawnee, Pottawatomi, Sac and Fox, and Menominee, of the middle West; and the Arapaho and Cheyenne, isolated in the far West. Nearly 100,000 Indians speaking Algonquian tongues still survive.

Athapascan.—Covers a great northwestern territory—all of the interior of Alaska, thence across to Hudson Bay, north of the Saskatchewan divide, and thence down through British Columbia into Oregon; furthermore, the Navajo, Apache, and Lipan tribes of Arizona and New Mexico belong to this language-group.

Attacapan.—A single extinct tribe in Louisiana.

Beothukan.—Indians of Newfoundland.

Caddoan.—Pawnees, Caddos, Arikaras, Maudans, &c., along and west of the upper Missouri river.

Chimakuan.—One tribe on Puget Sound.

Chimarikan.—Two small tribes in northern California.

Chimmesyan.—Coast of British Columbia.

Chinookan.—Coast about the month of the Columbia.

Chitimachan.—An extinct tribe in southern Louisiana.

Chumashan.—The mission coast and islands of southern California.

Coahuiltecan.—In Coahuila, Mexico.

Copehan.—About Mt. Shasta, California.

Costanoan.—California coast, south of San Francisco.

Eskimauan.—Comprises all the Eskimo languages, from western Alaska to Greenland and Labrador.

Esselenian.—An extinct race formerly dwelling on the California coast, south of Monterey.

Iroquoian.—The stock of the speech of the Iroquois confederacy, and of the Hurons, Cherokees, Tuscaroras, Wyandots, and other scattered relatives living in the Eastern States and Canada. See IROQUOIS.

Kalapooian.—Two small tribes in the Willamette Valley, Oregon.

Karankawan.—Matagorda Bay, Texas.

Keresan.—Includes 17 pueblos along the upper Rio Grande, of which the principal are Acoma, Cochiti, Laguna, Paguate, San Felipe, Santo Domingo, and Sia.

Kiowan.—Kiowas of the upper Arkansas valley.

Kitunahan.—The Kooteuai. See KOOTENAI.

Koluschan.—Coast and islands of Alaska, northward to the Atna river. The Chilcats and Tongas are best known.

Kulanapan.—Northern central California.

Kusan.—Coos river, Oregon.

Lutuamian.—Modocs and Klamaths of N.E. California.

Mariposan.—Southern central California.

Moquelumnan.—Calaveras county, California.

Muskhogean.—The language-stock of the Chicasa, Choctaw, Creek, Seminole, and allied well-known tribes of Georgia, Alabama, Mississippi, Florida, and Tennessee, the descendants of which are now semi-civilized in Indian Territory. These languages have dictionaries, grammars, and many printed books.

Palaihnihan.—Pit river, California.

Piman.—Pimas and Papagos, of the Gila Valley.

Pujunan.—Small tribes of the Sacramento valley.

Quoratean.—Small tribes in northern California.

Salinan.—Mission Indians near Monterey, California.

Salishan.—Spread among many tribes, over nearly the whole basins of the Columbia and Fraser rivers, and intervening country.

Sastean.—Shasta Indians, of the upper Klamath valley, California.

Shahaptian.—Northern Idaho, and represented chiefly by the Nez Percè, Kliketat, and Okinagan tribes.

Shoshonean.—Spoken by the Ute, Comanche, Bannock, and many other tribes of the Rocky Mountain region, including the people of Tusayan or the Moqui pueblos.

Siouan.—This widespread language-stock, spoken by the many tribes of Sioux (or Dakotas), the Assiniboins, Omahas, Poncas, Winnebagoes, Crows, Osages, &c., was spread from the northern shores of the Great Lakes across the plains to the headwaters of the Columbia and southward to the valley of the Arkansas, and it had offshoots (Catawba, &c.) in the Southern States.

Skittegatean.—Haida and allied tribes of the Queen Charlotte Islands, B. C.

Takilman.—Rogue river, Oregon.

Tañoan.—Certain pueblos of the upper Rio Grande valley, New Mexico; Isleta, Pojoaque, San Juan, Santa Clara, Picuris, and Taos are the principal ones.

Timuquanan.—Northern Florida; perhaps an offshoot of the Carib group of the Antilles.

Tonikan.—Yazoo valley, Mississippi, and northern Louisiana.

Tonkawan.—Southwestern Texas.

Uchean.—Southern Georgia; spoken by the Yuchis.

Waiilatpuan.—Sources of the Walla Walla river, Oregon; the Cayuse and Molale were leading tribes.

Wakashan.—Shores of the Strait of Fuca.

Washoan.—Washoes of northern Nevada.

Weitspekan.—Lower Klamath river, Oregon.

Wishoskan.—Northern California coast.

Yakonan.—Oregon coast.

Yanan.—One small tribe, near Redding, California.

Yukian.—Northern California.

Yuman.—Lower Colorado valley, thence to the Pacific coast, and southward through lower California and along the Mexican coast to Quaymas; Yumas, Mohaves, Cocopas, Seri, &c.

Zuñian.—People of the Zuñi pueblos, Arizona. The language spoken by the people of the Moqui pueblos belongs to the Shoshonean stock.

Lan'ier, SIDNEY, poet, was born at Macon, Ga., Feb. 3, 1842; graduated at Oglethorpe College (1860); entered the Confederate service in the Civil War; admitted to the bar (1866); subsequently conducted a school at Prattville, Ala. His first contribution to literature in book form was a novel entitled *Tiger Lilies*. His poems were most favorably received. The *Ode* for the opening of the Centennial Exhibition at Philadelphia (1876) was written by him; delivered lectures on literary subjects, and was appointed professor at Johns Hopkins University. He prepared modernized editions of *Froissart*, *King Arthur*, and the *Mabinogion*. He was the greatest poet produced by the Southern section of the U. S. After his death, which occurred Sept. 8, 1881, his lectures on *The English Novel and Its Development* and his *Complete Poems* were published.

Lank'ester, EDWIN RAY, zoölogist, son of Dr. EDWIN LANKESTER; was born in London, May 15, 1847; educated at St. Paul's School and at Christ Church, Oxford; became fellow and tutor of Exeter College; appointed professor of Zoölogy and Comparative Anatomy in University College, London. His scientific publications number over a hundred, and include: *Fossil Fishes of the Old Red Sandstone*, in the *Philosophical Transactions*, and works on *Comparative Longevity*, on *Degeneration*, and *Advancement of Science*. He has received the degrees of F.R.S. and LL.D.

Lan'olin, *n.* [*lana*, wool, and *oleum*, oil.] (*Chem.*) A fatty body made up of cholesterin and certain acids found in wool, hair, feathers, &c., valuable in pharmacy as a basis for ointments, being quickly absorbed by the skin.

Lans'downe, HENRY CHARLES KEITH PETTY-MAURICE, Marquis of, was born in England, January 14, 1845; educated at Oxford; succeeded to the title in 1866. He was lord of the treasury (1868–72), under-secretary of war (1872–74), and under-secretary for India for two months in 1880; was appointed Governor-general of Canada in 1883, and scored a brilliant social success, ably sustained by Lady Lansdowne, who is the youngest daughter of the Duke of Abercorn. In 1888 he became Viceroy of India for five years.

Lans'downe, HENRY PETTY-FITZMAURICE, 3d Marquis of, was born in London, England, July 2, 1780. He was one of the most honored leaders of the Liberal party in the House of Lords. His career was marked by devotion to all causes that represent moral reform and intelligent progress. Died January 31, 1863.

Lansdowne, in *Pennsylvania*, a post-village of Delaware co., a suburb of Philadelphia, on the P., W. & B. R. R. *Pop.* (1897) 1,510.

Lans'ford, in *Pennsylvania*, a post-borough of Carbon co., 6 m. N.E. of Tamaqua, on C. & B. F. R. R.; principal industry coal mining; has foundries, machine shops and coal breakers. *Pop.* (1897) 4,650.

Lans'ing, in *Kansas*, a city of Leavenworth co., 4 m. S. of Leavenworth, on A., T. & S. Fé, Un. Pac., and 2 other railroads; has manufactures of wagons, boots and shoes. The State Prison is here located. *Pop.* (1895) 629.

Lanta'na, *n.* (*Bot.*) A genus of shrubs or herbs of the vervain family, or Verbenaceæ (*q. v.*). More than 50 species are known. Several are in ornamental cultivation. *Lantana pseudo-thea* is used in Brazil as a substitute for tea. The aromatic leaves and flowers are employed in coughs, and in medicated baths for rheumatism and diseases of the skin.

Lan'za, GIOVANNI, an Italian statesman, was born 1810; after taking an active part in promoting constitutional reforms in Piedmont, and the establishment of parliamentary government in that country, became president of the Italian parliament, and in 1869 finance minister in Count Cavour's Cabinet. In September, 1867, he was elected president of the chamber of deputies; took office in the Sella Cabinet as minister of the Interior in 1860; and became chief of the Cabinet in 1871. Died in 1882.

Lan'zi, LUIGI, an Italian art-critic, was born at Montolmo, near Macerata in 1732. The work on which his reputation mainly rests is the well-known *Storia pittorica della Italia*. Died in 1810.

Lap'-board, *n.* A wide board hollowed out to fit the waist, used as a table for the lap by seamstresses and tailors.

Lap'o, ARNOLFO, architect and sculptor, was born at Florence, Italy, in 1232. Among the great works designed by his genius are the church of Santa Croce at Florence and the Duomo of the same city. Died in 1300.

Lap'sus, *n.* [Lat.] A slip, mistake. *Lapsus calami*, or *pennæ*, a slip of the pen, a mistake in writing. *L. linguæ*, a slip of the tongue, a mistake in language. *L. memoriæ*, a slip of memory.

Lar'amie, in *Wyoming*, a S.E. co.; *area*, 7025 sq. m.; intersected by the North Fork of the Platte, river, and also drained by the Laramie and Niobrara rivers, and other streams. *Surface*, diversified with mountains, table-lands, and plains; *soil*, of plains and valleys, fertile; extensive forests. Stock raising and mining are the chief industries. *Cap.* Cheyenne. *Pop.* 16,777.

—A city, cap. of Albany co., 58 m. W.N.W. of Cheyenne, on Un. Pac. R. R.; has large machine shops, rolling mills, soda refining works, glass and soap works, flour and planing mills, and other manufactures. Seat of the Wyoming University. *Pop.* (1897) 8,500.

Lar'com, LUCY, poet, was born at Beverly, Mass., in 1826. She was a constant contributor to the leading magazines. From 1866 to 1874 she edited *Our Young Folks*, published in Boston. Died April 15, 1893.

Lar'imore, in *North Dakota*, a post-village of Grand Forks co., 28 m. W. of Grand Forks, on the Gt. Nor. R. R. *Pop.* (1897) 700.

Lark-bunt'ing, *n.* (*Ornith.*) A common fringilline bird (*Calamospiza bicolor*) of the Great Plains of the United States, remarkable for its seasonal changes of plumage, which resemble those of the bobolink. The male in summer is a uniform black, with a conspicuous white patch on the wings, but in winter assumes the dull colors of the female, which is brownish-gray above and whitish below at all seasons. It is a strong, lively bird, frequents the open plains, and makes its nest upon the ground. It has an entertaining song, which resembles that of the yellow-breasted chat, which it further resembles in the habit of singing upon the wing, hovering in the air.

Lark-finch, or **Lark-sparrow,** *n.* (*Ornith.*) A familiar brownish-gray sparrow (*Chondestes grammaca*) of the prairie and plains regions of the United States, breeding on the ground and having a pleasing song.

Lark'-mir'ror, *n.* A contrivance with a revolving top, to which are fastened pieces of glass or bright metal as reflectors; used in snaring larks and in producing a hypnotic condition.

Lar'ned, in *Kansas*, a city, cap. of Pawnee co., on Arkansas river, and N. T. & S. Fé and Mo. Pac. R. Rs.; has foundry and machine shops, mills, &c., and is the shipping center of a fertile farming and stock raising region. *Pop.* (1895) 1,566.

Laryn'gograph, *n.* [Gr. *larynx*, and *graphō*.] An instrument for showing the motions of the larynx in ordinary vocal music.

Laryngoph'ony, *n.* [Gr. *larynx*, and *phonē*.] The sound of the voice as heard through the stethoscope, when placed on the larynx of the person speaking.—A peculiar sound, as heard in auscultation over the throat, indicating a cavity in the lungs.

Laryng'oscope and Laryn'geal In'struments. The laryngoscope is a surgeon's illuminating device for inspecting the larynx, consisting of a concave mirror and supporting headband, which is placed on the head of the surgeon, while a plane mirror on a long stem is introduced into the throat of the patient. Various illuminating apparatuses are used in connection with this, and sometimes the concave mirror is mounted on the illuminator. Some form of student's lamp or Argand burner, with a projector, is commonly used, though an electric illuminator has been introduced, which has the advantage of bringing the light right into the throat of the patient, being mounted on the same handle as the plane mirror. For treating the larynx a hundred forms of instruments are in common use, most of them mounted on long, slender handles. Among these are cotton-holders, sponge-holders, caustic probes, applicators, a platinum crucible, forceps, camel's-hair brushes, and many forms of powder-blowers.

Las An'imas, in *Colorado*, a S. E. co.; *area*, 4,700 sq. m.; intersected by the Purgatory river, and also drained by Apishapa river. *Surface*, partly mountainous and partly plains, the latter adapted to grazing. *Products*, wheat, corn, and wool. Coal is extensively mined, and a great quantity of coke made for smelting purposes. *Cap.* Trinidad. *Pop.* (1890) 17,208.

—A post-town, cap. of Bent co., 80 m. E. of Pueblo, on A., T. & S. Fé R. R.; has flour mills. *Pop.* (1897) 880.

Lassalle', Ferdinand, born at Breslau, Germany, April 11, 1825, of Jewish extraction; educated at the universities of Breslau and Berlin, making a specialty of philology and philosophy; in the latter he was a disciple of Hegel. Being of strongly democratic views, he took part in the revolution of 1848, and was subsequently imprisoned for six months. In 1858 he made his home in Berlin, and published a work on Heraclitus, which gave him high standing as an author. It was not until 1862 that he began his labors in the cause of workingmen, advocating advanced views through several channels, and (1863) founding the Universal German Workingmen's Association. His chief literary product was *Capital and Labor*, in which he strongly assailed the prevailing German Liberalism and maintained advanced socialistic views. In the summer of 1864 he became betrothed to a lady whose parents not only strongly opposed the marriage, but induced her to break the engagement in favor of another suitor. Mad with rage, *L.* challenged both father and lover, fought with the latter and was mortally wounded, dying Aug. 31, 1864. The agitation started by *L.* has gone far to revolutionize the political economy of Germany, and he is looked upon as the founder of the present socialistic economic system.

Lassell', William, astronomer, was born in Lancashire, Eng., June 18, 1799. About 1820 he built himself a private observatory at Starfield, near Liverpool, and made observations there down to 1861. While there he constructed and mounted equatorially reflecting telescopes of 9 inches and 2 feet aperture respectively. He discovered the satellite of Neptune (1847), and the eighth satellite of Saturn (1848) simultaneously with Professor Bond, of Harvard; and (1851) two new satellites of Uranus. He went to Malta (1861), and set up a reflecting telescope of 4 feet aperture and 37 feet focal length, mounted equatorially; remained there making observations until 1865. Returned to England and transferred his observatory to near Maidenhead. Died Oct. 5, 1880.

Las'sen, Christian, Orientalist, was born at Bergen, Norway, in 1800; became in 1840 professor of Indian Languages at Bonn University. Among his numerous and valuable works may be mentioned *The Ancient Persian Cruciform Writings* (1836); *Introduction to the History of the Greek and Indo-Scythian Kings of Bactria, Cabul, and India* (1838); and *Indian Archæology* (1844–58). Died in 1876.

Last'ing-machine', *n.* (*Mech.*) Lasting is the process of bringing together the parts of a shoe on a last, so as to give them form and fit the foot. Lasting-jacks and pincers for holding the uppers of shoes on the last in shoemaking have been largely superseded by lasting-machines. The McKay & Copeland lasting-machine is adapted to working all sizes, rights or lefts, and also for light or heavy leather. It operates by power, and has a girth, apron or straps, any of which may be used for folding the upper around the last, and laying it over the insole, ready for attachment. These girths, straps or aprons, as the case may be, are fastened at one end to fingers (which draw down the uppers with a wiping motion), and at the other end to springs, which make them yielding. The machine has also an oscillating head, carrying toe and heel lasting-mechanisms; the latest form has as attachments a pinking-device, pegger, and hand-tacker. The Chase lasting-machine is a hand-machine, has a foot-lever for taking the stretch out of the vamp, and several independent wipers grasping the vamp at different points. The toe of the last being pressed into the stretched vamp, a wiper brings the vamp into place. This machine has also a hand-tacker, and is adapted to different sizes and forms of lasts.

Lat, *n.* [Sansk.] An isolated pillar, commonly having on it an inscription or supporting a figure; constituting a marked feature of Buddhist architecture.

La'tah, in *Idaho*, a N.W. co.; *area*, 1,080 sq. m.; watered by small streams. *Surface*, undulating; *soil*, very rich loam; timber on the hills. *Min.*, gold, silver, lead, and coal. *Products*, wheat, barley, oats, vegetables and fruits; lumber and flour. Stock raising is a leading industry. *Cap.* Moscow. *Pop.* (1897) 10,500.

Latch'-string, *n.* A string fastened to the latch and passing through a hole above it in the door, so that it may be opened on the outside.—*Latch-string out:* An indication that an outsider is invited to enter; hence, hospitality; welcome.

La'tham, Robert Gordon, philologist and ethnologist, was born in Lincolnshire, England, in 1812, graduated at Cambridge University in 1832. His leading works embrace: *The Varieties of Man; The Ethnology of Europe* (1852); *Descriptive Ethnology* (1859); *Nationalities of Europe* (1863); *Comparative Philology* (1866); a new and revised edition of *Johnson's English Dictionary* (1870); and *Outlines of General Philology* (1878). Died in 1888.

La'throp, George Parsons, author, was born at Oahu, Sandwich Islands, Aug. 25, 1851. He is a journalist and magazine editor and writer, and has published both prose and verse. He married, in 1871, Rose, daughter of Nathaniel Hawthorne, who is also known as a contributor to current periodicals.

La'throp, in *Missouri*, a post-village of Clinton co., 38 m. N.N.E. of Kansas City, on A., T. & S. Fé and H. & St. J. R. R. *Pop.* (1897) 1,090.

Lat'in Amer'ica. That part of America south of the U. S. whose inhabitants are descendants of the Latin races of the Old World mixed with the native races of the New.

Latin Church. The Western portion of the Roman Catholic Church, using the Latin language in its service; so-called in distinction from the Greek Church, and from that portion of the R. C. Church that uses the Greek language, called "United Greeks."

Latin King'dom. The Christian kingdom which the French (or Latin) kings established in Jerusalem. It lasted from A.D. 1099 to 1187, but the French maintained the title of "King of Jerusalem" long after they had been expelled from the city.

Latin League. A union which existed in Italy between the cities of Latium from the earliest historic times until 338 B.C., when the Latin towns finally became a part of the dominion of Rome. Alba Longa was the most important of the thirty cities which tradition credits to the league.—A proposed alliance of the Latin nations of Europe for resisting Teutonic influences. It was suggested by Señor Castelar in the Spanish assembly in 1884, but never became more than an expression.

Latin Races. The Italians, French, Spanish, Portuguese, Grisons, and Roumanians; in a general sense, all the races whose language is founded upon Latin.

Latin Union. An alliance formed between France, Belgium, Italy, and Switzerland in 1865, and afterward joined by Greece. Its purpose was to establish and regulate a uniform gold and silver coinage on the basis of the French franc.

Latrine (*la-treen'*), *n.* A water-closet, or privy, especially one intended for a number of people, as in a camp, hospital, &c.

Latrobe', Benjamin Henry, a noted architect, was born in Yorkshire, England, May 1, 1767; educated at the University of Leipsic; served in the Prussian army. After his return to England he studied architecture; appointed surveyor of the public offices of London (1788); visited the U. S. (1796); built the Bank of Pennsylvania and the Schuylkill water-works at Philadelphia; architect for the Capitol at Washington after its destruction by the British in 1814; built the Cathedral and Exchange at Baltimore (1817–18). He was noted for his scholarship and attainments in natural science, as well as for his ability as an architect. Died Sept. 3, 1820.

Latrobe, Benjamin Henry, engineer, son of the preceding; was born at Philadelphia, Dec. 19, 1806; educated at St. Mary's College, Baltimore; was admitted to the bar, but abandoned the practice of law in 1830, and became an engineer on the Baltimore & Ohio Railroad, chief engineer of the Baltimore & Port Deposit R. R., and (1842) chief engineer of the B. & O. R. R., which he completed to Wheeling; subsequently held the positions of chief engineer and president of various railroads, and consulting engineer on numerous works. Died Oct. 19, 1878.

Latrobe', *n.* [I. *Latrobe*, of Baltimore, the inventor.] A fire-place heater, intended to heat the room in which it is placed and other rooms above by means of hot-air flues; otherwise called Baltimore heater.

Latrocin'ium, *n.* [Lat. robbery.] (*Ch. Hist.*) A term applied by Pope Leo the Great to the Council of Ephesus (449), which supported Eutyches, who held that there was in Christ but one nature—that of the Word, which became incarnate. This term "the robber-synod" was given on account of the violence and intimidation that characterized it, especially on the part of Dioscorus, patriarch of Alexandria.

Lat'timer, in *Pennsylvania*, a village of Luzerne co., P. O. Milnesville. *Pop.* (1897) 1,051.

Lat'ty, in *Ohio*, a post-village of Paulding co., on C., J. & M. and N. Y., C. & St. L. R. Rs.; has some local industries. *Pop.* (1897) 620.

Laun'dry Machin'ery. (*Mech.*) The modern laundry is a distinctly American institution, and its mechanism has advanced in proportion with the demands made upon it. There are now manufactured and in use in all large laundries a line of machinery as complete in its way as that used in any other staple business. The only wonder is that the world ever waited until the latter part of the nineteenth century for the development of such useful and necessary machines, but depended so long upon the faithful washerwoman, the tub, and the rubbing-board.

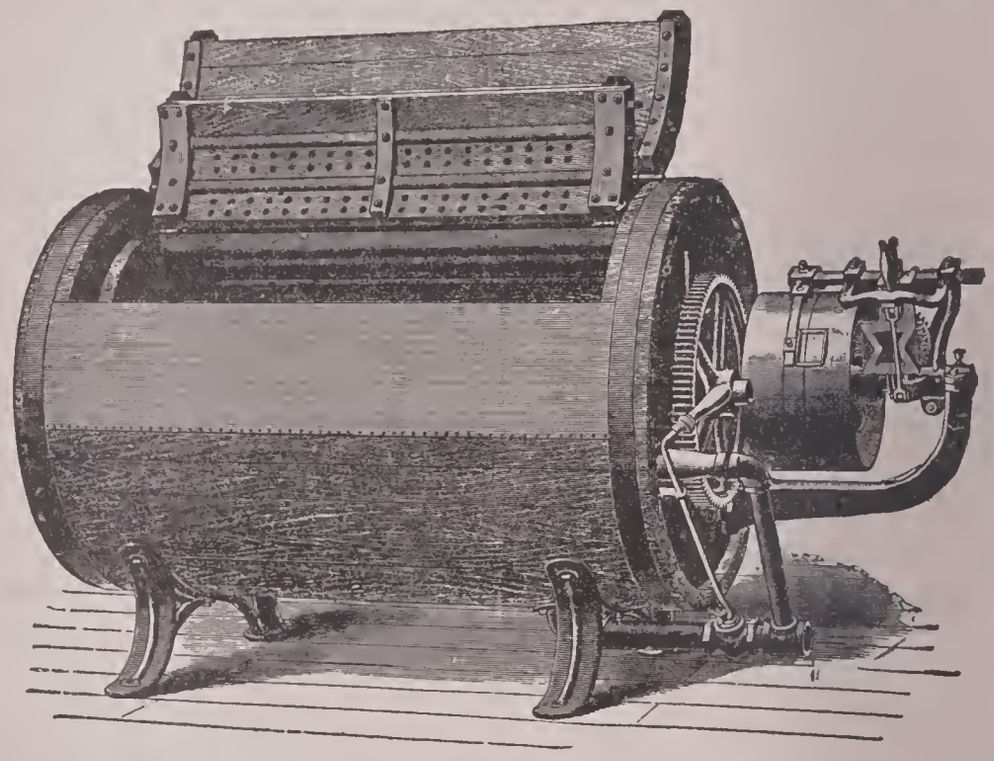


Fig. 2960.—A HYDRAULIC WASHER.

A great variety of so-called washing-machines have been patented, and more or less used, but most of them have been dropped, and one standard style of machine generally adopted as the best for the purpose. This is commonly called the hydraulic washer, and consists of a great cylindrical box, laid on its side on four feet, and having a lid through which the clothes are introduced. Within this box is a perforated metal drum, usually of brass, which is connected with outside gearing, so that it may be rotated by means of an automatic belt-shifter. The drum is turned first one way, then the other, tumbling the clothes and the water in a most thorough manner. Three waters are generally used, the first being hot water, with a bucket or two of soap solution; the second, clear tepid water; the third, clear hot water. The largest size of these washers is three by five and a quarter feet inside of drum, and weighs 2,600 pounds. The dash-wheel is a machine similar in principle to the hydraulic washer, but is different in form, resembling a broad wheel rather than a cylinder. Having a greater circumference, more centrifugal force can be obtained, so that it is often preferred for very dirty clothes. The tumbler is a cheaper form of washer, having no inside drum, but simply interior lengthwise

slats, which assist slightly in tumbling up the clothes in the water.

The centrifugal extractors or driers are very similar to those used in other trades. A tinned copper basket, about two feet in diameter, and having a double perforated bottom, is provided for the clothes that come from the washer. This basket is revolved at a great speed, and the water is thrown out by centrifugal force in a surprisingly short time. When the basket is removed the clothes are found packed close against the edges, there remaining a large vacant space in the center. For smaller laundries steam-wringers are made to dry the clothes. These resemble the ordinary hand wringers, having two rubber-covered rollers, between which the clothes are passed. They are made in large sizes, and run by pulleys and belts. For complete drying, closets are built, filled with racks to separate the clothes, and having steam-pipes running all through them. A separate door is often made for each perpendicular row of racks, so that the row can be run out without disturbing anything else in the closet.

Dip-wheels are used for starching collars and cuffs, and for shirts a special machine having a board on which the bosom is held smooth while a corrugated drum applies the starch. Several forms of simple dampening machines are also made for shirts, collars, and cuffs.

The steam mangles now employed are very different from the small affairs at first known by that name. The largest size occupies a floor space 12 x 14 feet, and weighs 9,000 lbs. The mechanism consists of a series of rolls or cylinders, one or two of which are heated internally by steam. Four or five others are covered with wool to absorb the moisture, these being called auxiliary rolls. After passing through the machine, the goods are delivered on a receiving-table by a doffer roll. Ironers have been made in numerous forms. In

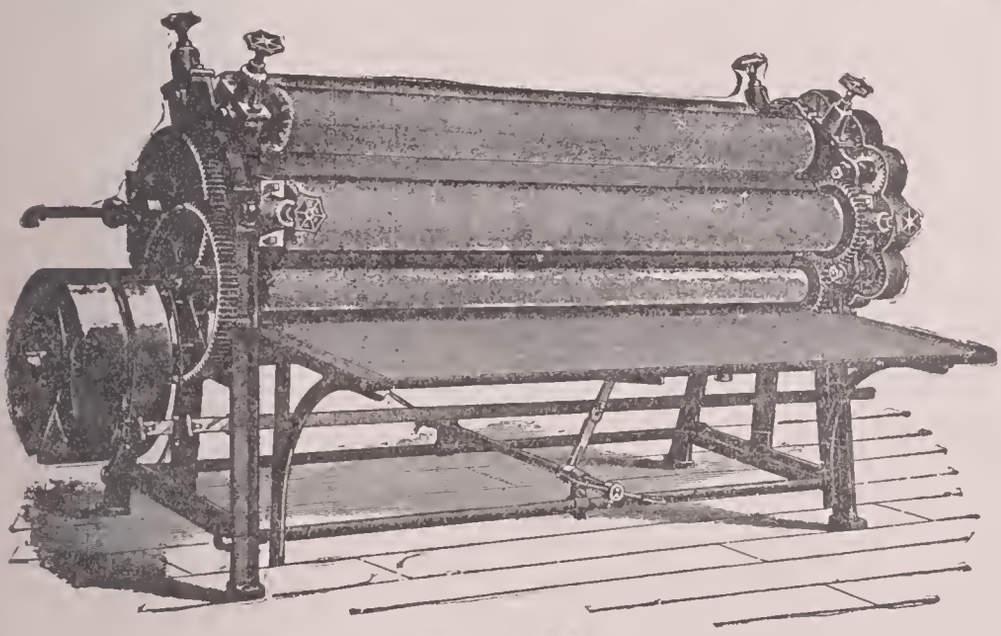


Fig. 2961.—A STEAM MANGLE.

general, they consist of one or more felt-covered cylinders under or between which the goods are run. The machines are mostly limited to one class of work; that is, one style of machine is made for bands, another for collars, another for bosoms, another for shirt-bodies, another for sleeves, &c. Among minor convenient machines used are collar-folders and collar and cuff shapers, fluters, gas-machines for heating the irons, and heating drums arranged to be placed around a cylinder stove to heat a large number of flat-irons at once. For hand-laundries, tubs, trucks, baskets, starch-kettles, old-fashioned hand-mangles, and a cheap form of washer are manufactured.

Lauren'tian, *a.* [Lat. *Laurentius.*] Relating to Lorenzo di Medici, of Florence, or to the *L.* library, founded in the 16th century by Pope Clement VII., made up largely of collections of the Medici family and noted for manuscripts.

Laurier (*lō-ri-ā'*), WILFRID, the first French-Canadian Premier of the Dominion of Canada, was born at St. Lin, L'Assomption, prov. of Quebec, on Nov. 20, 1841; was educated at L'Assomption College, and admitted to the bar in 1865. He edited *Le Defricheur* for a short time; was a member of the Quebec Assembly in 1871–74; in 1874 became a member of the Dominion Parliament; in 1877–78 was minister of internal revenue. From the first he advocated a policy of free trade, so far as revenue requirements would allow. He is an eloquent speaker, and on the retirement of Mr. Blake, he became the leader of the Canadian Liberals. Although a Catholic, his spirited resistance to the attempted dictation of the Roman Catholic hierarchy in regard to the Manitoba schools question showed that he was independent of such influence in political affairs. At the general election of 1896 he led his party to a signal victory. From the date of the confederation, in 1867, the Liberals have been in power only once—for a term of five years—until this notable election. The Manitoba schools question and other political dissensions shook the government's position in 1895–96. In the general election of 1896 there were four parties in the field, but the McCarthyites and the Patrons of Industry played no significant part in the contest, which largely turned on the schools question and certain tariff-reform measures. The Conservative party declared in favor of a "redress of the grievances of the Catholics with regard to the Manitoba schools;" the Liberals sustained the policy of non-interference with provincial politics. In the electoral fight the Catholic influence was thrown on the side of the Conservatives, but this intervention was of no avail, even in Quebec, which went almost solidly Liberal. There were finally elected 118 Liberals, 86 Conservatives, and 8 Independents, the last named being on the whole supporters of the Liberals. Sir Charles Tupper, the Conservative Premier, and his colleagues resigned July 8, 1896, and *L.* took office July 13, with a very strong Cabinet, including no less than five provincial ex-Premiers.

Lauterbrunnen (*lou'ter-broon-en*), a village and valley of Switzerland, situated amid the grandest scenery of the Bernese Alps. Near here is the celebrated waterfall of the *Staubbach*, the highest in Europe. *Pop.* (1897) about 1,900.

Laveran', ALPHONSE, discoverer of the organism causing malaria, was born at Metz, France, in 1843. He made his discovery while in Algiers with the medical corps of the French army. His theory of the existence of the malarial micro-organisms was announced in 1881, and has been sustained by medical investigation. He was appointed professor at the School of Val de Grace, and is the author of some important communications to scientific societies.

Law and Or'der Soci'eties. Organizations formed in many places to assist the authorities in, or incite them to, the enforcement of the laws. **The Law** and Order Society of Philadelphia, one of the oldest, was organized in 1881. Its object, as stated in the constitution, is: "To secure, by all proper means, the enforcement of the laws against Sunday traffic of whatever nature and character the same may be, and of all such laws and ordinances as may from time to time exist in this commonwealth relating to the liquor traffic, and to encourage and assist the authorities in the maintenance and enforcement of the same." The New York "Society for the Prevention of Crime," initiated by Dr. Howard Crosby, and since directed by the redoubtable Dr. Parkhurst, is of similar import, but has given wider scope in the interest of general political reform.

Lawn Ten'nis, *n.* (*Games.*) A modern adaptation of the old game of tennis, played out of doors by two, three, or four people. The only requisites for the game are the balls, rackets, net, posts, and a hard, smooth surface of grass, asphalt, cement, gravel, or other substance, which is marked off into a court of 78 by 27 ft. if two play, or 78 by 36 ft. for three or four persons. This court is divided lengthwise into two equal parts by a line, and crosswise by a net; and cross-lines, called service lines, are also drawn on each side 21 ft. from the net. A player standing on the base-line of the court must "serve"—that is, strike—the ball with the racket into that part of the court diagonally opposite to him, and his opponent must return the ball on the first bound, when the original player must return it again, striking it on the fly, or on the first bound, and so the ball is driven back and forth over the net until one side fails to return it, or to drop it inside their opponents' court. A failure to serve or return the ball counts 15 for the opposing side; the second failure raises their score to 30, a third to 40, and a fourth makes the game.

Law'rence, in *South Dakota*, a W. co.; *area*, 795 sq. m.; watered by branches of the Cheyenne river. *Surface*, mountainous; mining is the chief occupation. *Min.* Gold, silver, tin, copper, mica, asbestos, coal; coal oil and salt works. *Cap.* Deadwood. *Pop.* (1895) 14,345.

Lawton, HENRY W., an American general, born in Ohio, March 17, 1843. He served in the Civil War from sergeant to lieutenant-colonel of volunteers, joined the U. S. army in 1866 as second lieutenant, and rose to the rank of lieutenant-colonel in 1889. As brigadier-general of volunteers he served in the Santiago campaign of 1898, and as major-general in the Philippine war of 1899. Here, after performing brilliant services, he was shot dead in a fight at San Mateo, Luzon, December 19, 1899.

Law'-wri'ter, *n.* One who writes law-hooks or treatises on law, or one who copies and engrosses legal papers.

Lay'cock, THOMAS, an English writer on medical science, born in co. York, 1812; became in 1855 professor of Medicine at Edinburgh University. In 1840 he first developed the scientific data of unconscious and involuntary brain-function, and explained thereby the phenomena of mesmerism, dreaming, and insanity, in his *Treatise on the Nervous Diseases of Women.* These views he elaborated and extended into a system of practical philosophy in *Mind and Brain; or the Correlations of Consciousness and Organization.* Died 1876.

Lazu'li Finch. (*Ornith.*) A small, richly colored finch (*Passerina amœna*) of Mexico and adjoining parts of the U. S., nearly related to the indigo-bird, painted bunting, and several other gaudy American finches of this genus, and valued as a cage-bird. The adult male has the head, neck, and upper parts rich torquoise blue, the wings marked with white bars, the breast and sides tawny yellow, and the ventral region white; the female and young are inconspicuous in browns and grays. They haunt shrubbery, and build a soft nest in a bush, above which the male trills a sparkling but not loud song, closely similar to that of the Eastern indigo-bird.

La'zy-bed, *n.* (*Agric.*) A bed of fine earth on which potatoes are laid and covered with a mulching of manure or rich earth; the potatoes mature early without cultivation. This way of planting potatoes is practicable only on a small scale. It is followed to some extent in the southern States and in Ireland, but was once very common in Scotland.

La'zy-cord, *n.* (*College.*) A cord attached to the door-fastening and passing over pulleys to the seat of the student, by pulling which he may open the door without rising.

La'zy-tongs, *n. pl.* (*Mech.*) Tongs or pincers made up of several pairs of levers which are pivoted together at the center and hinged together at the ends, so that on bringing together the scissors-like handles, they are extended far enough to pick up objects at a distance. The principle is the same as that of the folding gates on ferry-boats, &c.

Le Conte, JOHN, born in Liberty co., Ga., Dec. 4, 1818, son of Dr. Lewis Le Conte, a noted botanist; graduated at Franklin College, Athens, Ga. (1838); received the degree of M. D. from the New York College of Physicians and Surgeons (1841); settled as a physician in Savannah; appointed professor of Natural Philosophy in Franklin College (1846); professor in South Carolina College (1856), and of Physics and Industrial Mechanics in the University of California (1869); became president of that university (1875.) He is the author of important papers on physical science, which have been published in scientific journals and in the proceedings of learned societies. His treatise on *General Physics*, which was nearly completed, was destroyed in the fire at Columbia, S. C., 1865. Died April 29, 1891, at Berkeley, California.

Le Conte, JOHN LAWRENCE; born at New York, May 13, 1825; graduated at New York College of Physicians and Surgeons (1845.) He made many scientific journeys; gave special attention to the North American *Coleoptera*, and published many memoirs upon them; entered the army as surgeon of volunteers (1862); subsequently made medical inspector in the regular army; president of the American Association for the Advancement of Science (1873.) His *Classification of the Coleoptera of North America* and *List of the Coleoptera of North America* were published by the Smithsonian Institution. Died Nov. 15, 1883.

Le Flore, in *Mississippi*, a N.W. central co.; *area*, 660 sq. m. The Tallahatchee and Yallabusha rivers unite in this county and form the Yazoo river, traversing the S. part. *Surface*, level; *soil*, fertile. *Products*, cotton, corn, sweet potatoes, pork; live stock, lumber. *Cap.* Greenwood. *Pop.* (1890) 16,869.

Lea, HENRY CHARLES, author, was born in 1825; head of the old publishing firm established under the name of Matthew Carey & Sons, in Philadelphia; author of *Superstition and Force* (1866); *Studies in Church History* (1869); and *Historical Sketch of Sacerdotal Celibacy in the Christian Church* (1867).

Lea, ISAAC, an eminent American naturalist, born at Wilmington, Del., 1792; became, in 1858, president of the Academy of Natural Sciences, Philadelphia. Among his many writings in scientific literature are: *Contributions to Geology; Synopsis of the Family of Naiades*, which made him the foremost authority on the fresh-water mussels so numerous in American rivers and lakes; *Fossil Footmarks in the Red Sandstone of Pottsville*, illustrating his discovery of saurian footprints in the red sandstone 1,700 feet below the conglomerate of the coal formation at Pottsville, and named by him *Sauropus primævus.* This discovery was of great interest, as it had been believed up to that time that no "air-

breathing animal" had existed even so low as the coal measures. He was a member of every leading scientific society of Europe and the United States. Died 1886.

Lead, in *South Dakota*, a city of Lawrence co., 3½ m. S.W. of Deadwood, on B. H. & P. and B. & M. R. R.Rs. Here is what is claimed to be the largest gold mine in the world, there being in operation over 600 stamps. The yield of the district in 1896 was over $2,250,000 in gold. Gold jewelry is manufactured. *Pop.* (1895) 4,124.

Lead'-line, *n.* The weighted line used in sounding at sea.—The line of sinkers attached to the bottom of a net or seine.

Lead'-pois'oning, *n.* (*Pathol.*) A diseased condition of the human system induced by the absorption of lead, characterized by a blue line along the gums, with dropped wrist (indicative of palsy), swelling of the tongue, occasionally pains in the stomach, bowels and bones, with debility and emaciation; also called *painter's colic.*

Lead'ville, in *Colorado*, an important mining town, and the county-seat of Lake co. It is situated on the main crest of the Rocky Mountains, 10,200 feet above the sea-level, 114 m. S.W. of Denver; is reached by the Denver & Rio Grande, the Colorado Midland, and the Union Pacific R.Rs. *L.* stands upon the side of California Gulch, one of the headwaters of the Arkansas river, where, in 1860, rich gold placers attracted 10,000 persons, and yielded $2,500,000 the first year. These were exhausted after a few years, and the population totally disappeared. In 1877, prospectors discovered that a black sand, prevalent there and embarrassing to the gold-washers, was a carbonate of lead heavily charged with silver. It occurred abundantly, and in many places could be shovelled out without serious exertion. The news spread, and in 1878 a rush of miners and speculators went into the locality, so that within a year a "camp" of 15,000 people arose, and railroads hastened to connect it with the outer world. The name Leadville was given in recognition of the new ore. A large number of rich carbonate veins were found, often by inexperienced strangers; but in a short time the easy surface-diggings had been exhausted, properties were selected and consolidated, mining began to be conducted systematically, smelters were erected, and Leadville grew into an orderly city. Its present population is about 10,000.

Lear, EDWARD; born in London, England, May 12, 1812. Studied painting in 1835; was sent by the Earl of Derby to Italy and Greece, where he painted many landscapes in Albania, Athos, the Morea, and the Ægean islands. He is distinguished for his ornithological and other zoölogical drawings. From 1850 to 1873 he exhibited at the Royal Academy, though he was more widely known through his book illustrations. Among the more important of these are: *Sketches of Rome and its Environs; Illustrated Excursions in Italy; Journal in Greece and Albania; In Corsica;* and the *Book of Nonsense*, a work still popular with children; *More Nonsense Rhymes*, &c. Died Jan. 30, 1888.

Leath'er, Vari'eties and Imita'tions of. In addition to the varieties of leather mentioned in SECTION I. of this work, may be named *Avignon L.*, an embossed leather, colored and gilded; *chrome L.*, a leather that has been steeped in a solution of potassium dichromate and of ferrous sulphate; *Danish L.*, willow-tanned skin suitable for glove-making; *Hungarian L.*, a light, tanned leather, softened by oil; *russet L.*, originally an unfinished and unpolished leather, but now (generally) finished in some shade of yellow or brown. A variety of imitations of leather are made under such names as *leather-cloth, leatherette, leatheroid*, &c. These are made of paper, vegetable fiber, or of several thicknesses of cloth, or of some combination of these glued together and colored, and stamped under pressure to resemble leather.

Leath'erback, *n.* (*Zoöl.*) The largest of marine turtles (*Dermochelys coriacea*), common in all warm seas, and sometimes exceeding 1,000 pounds in weight; characterized by having a leathery carapace, without external shelly scales, but raised in longitudinal ridges and stiffened by bony deposits. The flesh is edible, but the animals are rarely caught for market.

Leather-beetle, *n.* (*Entom.*) A small beetle, the toothed dermestid (*Dermestes vulpinus*), similar to the common museum-pest, which injures leather, bookbindings, &c.

Leather-flower, *n.* (*Bot.*) A common Eastern American clematis (*Clematis viorna*), so called in reference to the large leathery sepals of its big, solitary, long-stalked, purple flowers.

Leather-leaf, *n.* (*Bot.*) A low evergreen heath (*Cassandra calyculata*) common throughout the Eastern U. S.; it has leathery, shining leaves, and bears white flowers in racemes.

Leath'erside, *n.* (*Ichth.*) A small cyprinoid fish (*Tigoma tæmia*) of North American fresh waters.

Le'bo, in *Kansas*, a post village of Coffey co., 18 m. E. of Emporia, on A., T. & S. Fe' R. R.; has coal mines. *Pop.* (1895) 532.

Lebœuf (*la-bŭf*), EDMOND, a marshal of France, was born in 1809; educated at the École Polytechnique, Paris, and the Artillery School, Metz. He served with distinction in the Crimean War, and the Italian campaign of 1859, in command of the artillery, and in August, 1869, succeeded Marshal Niel as minister of war, and continued to hold that position in the parliamentary cabinet formed by M. Emile Ollivier in Jan., 1870. Just before the war between France and Germany, which broke out in August of that year, *L.* assured the emperor that the army was in a complete state of organization, and thoroughly prepared for war. The disasters which so soon followed showed how much the minister's opinion was to be relied on, and he became the most unpopular man in France. He accompanied Napoleon III. to the seat of war, and after the capitulation of Sedan was shut up in Metz with Bazaine. On the surrender of that city he was sent prisoner into Germany. Died in 1888.

Leche (*lē-shē'*), *n.* (*Zoöl.*) A large, reddish, South African antelope (*Cobus leche*) of the waterbuck group. See WATERBUCK.

Leck'y, WILLIAM EDWARD HARTPOLE, philosophical writer and noted historian, was born at Dublin, Ireland, in 1838. He became an opponent to Home Rule in 1886, before which time he had been one of its supporters. His writings, which have been widely read, include: *History of the Rise and Influence of the Spirit of Rationalism in Europe, History of European Morals from Augustus to Charlemagne*, and *History of England in the Eighteenth Century.* Died Oct. 22, 1903.

Lecocq', ALEXANDER CHARLES, born at Paris, June 3, 1832; studied at the Conservatoire; became a composer of comic operas. His first successful opera was *Le Docteur Miracle.* Other works are; *La Fille de Madame Angot; Giroflé-Giroflà*, and *Le Petit Duc.*

Lecouvreur', ADRIENNE, actress, was born April 5, 1692, and died March 30, 1730. She made her Paris *début* in 1717, and attained first place in both tragedy and comedy. She excelled in mimicry, and in the strongly emotional quality of her acting. Her romantic life is the basis of the melodramatic play, *Adrienne*, that has been presented by leading actresses in France and America of late years.

Lecy'thus, or **Leky'thos,** *n.* [Gr.] A small, slender, narrow-necked, ancient Greek vase used for oil or perfumes in the toilet. See LACRIMATORY.

Ledg'er-fish'ing, *n.* A British angling term, applied to bottom fishing, for which various forms of *ledger*-tackle are provided; ledgering.

Lee, in *Alabama*, an E. co.; *area*, 610 sq. m. Watered by numerous creeks. *Surface*, diversified; *soil*, productive. *Products*, cotton, corn, wheat, oats, sweet potatoes, butter, and pork; live stock. *Cap.* Ophelika. *Pop.* (1890) 28,694.

Lee, in *Arkansas*, an E. co.; *area*, 606 sq. m.; bounded on the E. by the Mississippi river, is intersected by the St. Francis, and is also drained by the L'Anguille river. *Surface*, nearly level; *soil*, very fertile. *Products*, corn, cotton, and pork; live stock. *Cap.* Marianna. *Pop.* (1890) 18,886.

Lee, in *Kentucky*, an E. central co.; *area*, 228 sq. m.; intersected by the Kentucky river, and also drained by the S. fork of the same. *Surface*, hilly and mountainous; generally timbered; *soil*, fertile; coal abundant; *products*, corn, oats, and wheat, in small quantities; live stock. *Cap.* Beattyville. *Pop.* (1890) 6,205.

Lee, in *Mississippi*, a N. E. co.; *area*, 470 sq. m.; drained by the Tombigbee river and several creeks which enter that river. *Surface*, nearly level; *soil*, fertile. *Products*, cotton, corn, sweet potatoes, and pork; live stock. *Cap.* Tupelo. *Pop.* (1890) 20,040.

Lee, in *Texas*, a S.E. central co.; *area*, 640 sq. m.; partly drained by the Yegana creek. *Surface*, undulating; *soil*, fertile. *Products*, cotton, corn, oats, wool; live stock. *Cap.* Giddings. *Pop.* (1890) 11,952.

Lee's Sum'mit, in *Missouri*, a post-town of Jackson co., 24 m. S.E. of Kansas City, on Mo. Pac. R.R.; has extensive nurseries and orchards. Wheat, corn, fruit, butter, and live stock are shipped. *Pop.* (1897) 1,464.

Lees'burg, in *Florida*, a post-village of Lake co., about 65 m. S. by W. of Palatka, on F. C. & P.; F. S. and St. J. & L. E. R.Rs.; in the Florida lake region, and a flourishing orange-grove district. *Pop.* (1895) 805.

Leeto'nia, in *Ohio*, a post-town of Columbiana co., 20 m. E. of Alliance, on the Erie and the P., Ft. W. & C. R.Rs.; has large saw and planing-mills; also blast-furnaces, foundries, boiler-works, and potteries. *Pop.* (1897) 3,220.

Leg'itime, *n.* [Fr. *légitime.*] (*Civil law.*) The portion of personal property a man cannot prevent his children from inheriting. By the Roman law, it was one-fourth of the estate; in the Scots law it is one-third where there is a widow, or half where there is not.

Leguan (*lĕg-wän'*), *n.* (*Zoöl.*) Any large iguana; especially the great semi-marine, seaweed-browsing iguana of the Galapagos Islands (*Amblyrhynchus cristatus*), described at length in Darwin's *Voyage Around the World in the Beagle.*

Le'high Univer'sity. (*Educ.*) This institution, at South Bethlehem, Pa., was founded in 1866 by Asa Packer. He was born at Groton, Conn., Dec. 20, 1806, and died at Philadelphia, May 17, 1879. Prominent both as capitalist and politician, he was member of Congress from Pennsylvania (1853–57), and projector of the Lehigh Valley Railroad. Both the railroad and the University were institutions in which he took a deep interest, and he endowed the latter with $2,000,000, all invested in the securities of the railroad, which, at the time of the investment, were worth that sum. By his will he forbade any change in the investment. The railroad, however, suffered financial depression, and the University found it necessary in 1897 to call on the State of Pennsylvania for aid to prevent closing its doors. The required assistance was granted. At the beginning of 1897 it had 37 instructors and 350 students, while the volumes in its library numbered about 100,000.

Leif Erick'son (son of ERICK THE RED), the discoverer and colonizer of Greenland, was born in Iceland about 970. In the year A. D. 1000, he discovered North America ("Vinland"). The story of the Norse discovery of North America is told, with slight discrepancies, in two sagas, one being found in the *Flateyarbok*, and the other in the *Hausbok.* A full statement of the facts and theories relating to the discovery may be found in R. B. Anderson's *America Not Discovered by Columbus;* A. M. Reeves' *The Finding of Wineland the Good;* John Fiske's *The Discovery of America*; and C. C. Rafn's *Antiquitates Americanæ.*

Leighton (*lī'tn*), FREDERICK, an eminent historical and *genre* painter of the modern English school, was born at Scarborough, England, in 1830. His first appearance at the Royal Academy was made in 1855 with his famous picture, *Cimabue's Madonna Carried in Procession Through the Streets of Florence.* In 1864 he was elected associate of the Royal Academy; in 1878 he was elected president, and was knighted; in 1886 he was created a baronet; raised to the peerage in Jan., 1896. Among his best examples are: *Cimabue* (painted for Queen Victoria); *Dante in Exile; A Syracusan Bride leading Wild Beasts in Procession to the Temple of Diana;* and *Winding the Skein.* Died Jan. 25, 1896, only a few days after his accession to the peerage.

Leiot'richi, *n., pl.* [Gr. *leios*, smooth, and *thrix* (gen. *trichos*) hair.] (*Ethnol.*) One of the two groups into which Bory de Vincent divided the human race—those with straight and wavy hair, in distinction from the Ulotrichi, those with crisp, woolly or tufted hair.

Leis'ering, in *Pennsylvania*, a post-village of Fayette co., about 40 m. S.E. of Pittsburg, on B. & O. and P. R. Rs. *Pop.* (1897) 1,010.

Le'land Stan'ford Ju'nior Univer'sity. (*Educ.*) In 1891, Leland Stanford resolved to perpetuate the memory of his only son, who had recently died, by founding a university bearing the name of the young man. The father, born at Watervliet, March 9, 1824, and starting in the world in poverty, had acquired a very large fortune. He had been Republican governor of California (1861–63), and was U. S. Senator from that State (1885–93). He had also been the first president of the Central Pacific Railroad. He gave to California the Leland Stanford Junior University, a co-educational, non-sectarian Institution, at Palo Alto. This institution has an enormous endowment, amounting to $20,000,000, and had in 1903 an available income of about $500,000. It had at that time 130 instructors, 1400 students, and 80,000 volumes in its library. Tuition is free to residents of California and nominal to others. The buildings reproduce on a large scale the architecture of the old Spanish missions in California. The main departments of the university are included in two large quadrangles, one entirely surrounding the other. The twelve one-story buildings of the inner quadrangle are connected by a continuous open arcade, and enclose an area 586 feet long by 246 feet wide, containing 3¼ acres. The buildings of the outer quadrangle are similar in construction, but are two stories high and have the open arcade on the outside.

Lem'hi, in *Idaho*, an E. co.; *area*, 5,400 sq. m.; intersected by the Salmon river. *Surface*, mountainous. *Cap.* Salmon City. *Pop.* (1897) 2,500.

Lemnis'cus, *n.* [Lat. a ribbon.] A fillet or ribbon of various-colored wools, hanging back of the headdress, or crown, diadem, &c., attached as a mark of greater distinction. It was originally made of the rind of trees, but in process of time came to be made of more costly materials, and at last even of silver or gold.

(*Anat.*) A fillet; a bundle of fibers on each side of the cerebrum.

(*Zoöl.*) One of the minute ribbon-shaped appendages in the generative pores in *entozoa.*

Lem'on, MARK, born in London, Nov. 30, 1809; educated at Cheam, near Epsom. The first of a long series of melodramas, operettas, &c., was produced in 1825. He also wrote several novels, children's stories, and essays; lectured and gave public readings, and was one of the founders of *Punch*, of which he was joint-editor with Henry Mayhew for two years; afterward became sole editor, holding the position until his death. Died May 23, 1870.

Lemu'ria, *n.* [Lemur.] A hypothetical prehistoric continent, now sunk in the Indian Ocean, inhabited by lemuroids in great number and variety.

Lenæ'a, (*lē-nē'ä*), *n.* [Gr.] One of the four ancient Athenian festivals in honor of Dionysos (or Dionysus) the Grecian Bacchus. It was celebrated in the Lenæon, the temple of Dionysos, which stood to the south of the Acropolis. Its time was in the month of Gamelion (Jan.-Feb.), and its choruses and dramatic contests were the beginnings of the Greek drama.

Len'ni-Len'ape. The Delaware Indian tribe. See LENAPES.

Leno'ra, in *Oklahoma*, a post-village of "D" co. *Pop.* (1897) 100.

Lenormant, FRANÇOIS, archæologist, born in Paris, Jan. 17, 1837, son of Charles Lenormant, who was profoundly learned in archæology. At the age of 20 François received the prize for numismatics of the Académie des Inscriptions. He was a man of exhaustive learning and unwearying enthusiasm for his work in the fields of Assyriology, comparative philology, ancient history, and Biblical antiquities, he has written works of the greatest interest and value. His discovery of the existence of a non-Semitic element in the language of the cuneiform inscriptions—the Accadian—was one of his greatest contributions to science. He was the author of a valuable essay on the propagation of the Phœnician alphabet, and *Les Origines de l'Histoire d'après la Bible; Lettres Assyriologiques; Les Sciences Occultes en Asie; La Monnaie dans l'Antiquité, Monnaines et Medailles*, &c. Died in Paris, Dec. 10, 1883.

Len'ox, in *Iowa*, a post-town of Taylor co., 87 m. S.W. of Des Moines, on C., B. & Q. R.R. Has large shipping trade in grain, live stock, butter, and produce. *Pop.* (1895) 967.

Le'on, in *Kansas*, a post-village of Butler co., 12 m. S.E. of El Dorado, on St. L. & S. F. R.R. *Pop.* (1895) 487.

Leop'ard Frog. (*Zoöl.*) The common spriug frog (*Rana virescens*) of North America; is green, blotched with black.

Leop'ard-wood, *n.* A striped and mottled cabinet wood, valuable especially for inlaying-work, the product of one of the tropical American bread-fruit trees (*Brosimum Aubletiii*); also snake-wood and letter-wood.

Leopar'di, GIACOMO, COUNT, a modern Italian poet and philologist, born at Rocauati, 1798. His collective poems, under the title of *Canti*, were published in 1831, and received with favor. They were preceded in 1827 by the not less clever prose essays called *Operette Morali*. In poetry he is the recognized exponent of pessimisu, and it is equally the burden of his prose. His first and last word is the "void and nothingness" of all human life and effort. Died 1837.

Leo'ti, In *Kansas*, a post-village, cap. of Wichita co., 24 m. W. of Scott City, on Mo. Pac. R.R. *Pop.* (1897) 325.

Lep'rechawn, *n.* One of the Irish fairies. A tiuy sprite, who, accordiag to the superstitious, makes himself very useful to those who treat him kindly, performing all sorts of laborious tasks for them; the shoemaker of the Irish fairies. Also written Leprecawn, Leprecanne and Clusicanne.

Lepsi'us, KARL RICHARD, a celebrated Orientalist, was born at Nauuiburg, Germany, in 1813, studied philology at Leipsig, Göttingen, and Berlin under Bopp, and after a lengthened scientific sojourn he became professor of Eastern Languages at Berlin. Died in 1884.

Le'roy, in *Illinois*, a city of McLean co., 15 m. S. E. of Bloomington, on C., C., C. & St. L. and Ill. Cen. R. Rs.; has some manufactures. *Pop.* (1897) 1,345.

Les'ley, JOHN PETER, JR., a noted geologist, born at Philadelphia, Sept. 17, 1819; graduated at the University of Pennsylvania (1838); studied theology at Princeton, N. J., and at Halle, Germany. After serving as missionary to the Germaus in Philadelphia for a period of two years, he accepted the pastorate of a Congregationalist church at Milton, Mass. His theological views undergoing a change, he resigned his position as minister, and gave his attention to geology, which he had previously studied. For some years he was secretary of the American Iron Association; secretary and librarian of the American Philosophical Society; appointed professor of Geology in the University of Penusylvania (1872); chief geologist of Pennsylvania, with charge of a complete survey of the State (1874.) He published maps and reports, a *Manual of Coal and its Topography*; *The Iron Manufacturers' Guide*, and *Man's Origin and Destiny*. His usual signature was J. P. LESLEY. In 1886 he was made emeritus professor at the University of Pennsylvania.

Les'lie, ALEXANDER, EARL OF LEVEN, a Scottish general; after brilliant services rendered to Gustavus Adolphus in the Thirty Years' War, received a marshal's *bâton*. In 1639 he was appointed commander-in-chief of the army of the Scots Covenanters. Received Charles I. as prisoner of the Scottish nation. Died 1661.

Leslie, FRANK, pen-name of HENRY CARTER; born at Ipswich, Eng., 1821; entered a mercantile London house; contributed sketches to the *Illustrated London News*, which were so successful that he joined the staff of that paper. He went to the U. S. (1848), and assumed the name of Frank Leslie by a legal process; founded the *Gazette of Fashion* and the *New York Journal* (1854), and *Frank Leslie's Illustrated Newspaper* (1855), which was subsequently printed in German and Spanish editions. In 1865 he published the *Chimney Corner*, and later *Boys' and Girls' Weekly*, the *Lady's Journal*, and other periodicals. Died Jan. 10, 1880, and was succeeded in the publishing business by his wife, who also assumed the name of Frank Leslie.

Leslie, in *Kentucky*, a S.E. co.; *area*, 420 sq. m.; intersected by the Kentucky river. *Surface*, undulating; *soil*, very fertile, well watered; has building stone, sandstone, and coal. *Products*, corn, wheat, oats, potatoes, tobacco, hay. *Cap.* Hyden. *Pop.* (1890) 3,964.

Leth'ai, *n.* An alcohol ($C_{12}H_{26}O$) found in spermaceti; little known except in its compouuds.

Lethar'gia, *n.* [Gr. drowsiness.] (*Bot.*) A sluggish condition of the buds, seeds, &c., of a plant, requiriug stimulative treatment to induce their growth.

Lethar'gus, *n.* [Lat.] (*Path.*) A disease that affects the negroes on the west coast of Africa, characterized by fits of somnolence, and generally fatal.

Le'to, *n.* [Gr.] (*Myth.*) The mother of Apollo and Artemis by Zeus; the Latona of the Romans.

(*Astron.*) Name of the 68th asteroid.

Let'-off, *n.* (*Mach.*) A device for releasing or giving forth; especially, in weaving, for releasing the warp from the beam.

Let'tuce-bird, *n.* (*Ornith.*) The American goldfinch or black-winged yellow-bird (*Spinus tristus*). This is one of the most widely distributed, familiar, and pleasing of the smaller seed-eating North American birds, not migrating from any but the most northerly parts of its range in winter, when the male exchanges his handsome black wings and sulphur-yellow coat for a plain winter suit of drab, regaining his gay summer plumage when spring returns. This is a bird of the gardens and orchards, making a nest of soft materials in the village shrubbery, and laying bluish-white, unspotted eggs. It song is short, but very sweet, and is often uttered during the characteristic undulating flight.

Leutze, EMANUEL, artist, born at Gmünd, Würtemberg, May 24, 1816; brought to the U. S. in childhood; subsequently returned to Europe, studying there from 1841 to 1859, residing at Düsseldorf fourteen years. Returned to America, settling in New York. He painted there scenes from the life of Columbus, several from English history, and others representing incidents in the Revolutionary War. *Westward Ho*, on the staircase of the Capitol at Washington, was executed by him; also, *Washington Crossing the Delaware*. Died July 18, 1868.

Lev'ant and Couch'ant. (*Law.*) Rising up and lying down. An epithet applied to animals which have been on land where they are trespassing long enough to lie down and rise up—at least a day and a night.

Lewes (*loo'iz*), GEORGE HENRY, critic and philosophical writer, was born in London in 1817. His works include a *Biographical History of Philosophy*; *The Physiology of Common Life* (1859-60); *Studies in Animal Life*; *Aristobel*; *a Chapter from the History of Science* (1861); and a *History of Philosophy, from Thales to Comte*. Mr. L. also ably edited English versions of the works of Göthe and Auguste Comte. Died in November, 1878. See ELIOT, GEORGE.

Lew'is, DIO, American physician; born at Auburn, N. Y., March 3, 1823; studied at Harvard Medical School; commenced practice at Port Byron, N. Y.; subsequently removed to Buffalo, and published a health magazine, in which he advocated light gymnastics. By his papers on this subject, published in the *Atlantic Monthly* and other periodicals, he became widely known, and established an institution at Boston for training teachers in his system. He established a school for young ladies, at Lexingtou, Mass., which was destroyed by firo in 1868. He is the author of *New Gymnastics*; *Weak Lungs*; *Our Girls*; *Chats with Young Women*. Died May 21, 1896.

Lew'is and Clarke, in *Montana*, a W. central co., *area*, 2,600 sq. m.; bounded on the E. by the Missouri river, and on the N. by the Sun river. *Surface*, mountainous; *soil*, fertile in the valleys. *Products*, wheat, oats, barley, potatoes, butter, hay; live stock; gold and silver. *County-seat* and State capital, Helena. *Pop.* (1897) about 30,000.

Lewis and Clarke's Expedi'tion. (*Explor.*) In a history of exploration, considerable space should be allotted to this expedition, which does honor to the President who planned it, to the explorers who conducted it, and to the Congress which made an appropriation to carry it out. Early in 1803, at a time when negotiations were pending in Paris for the cession of Louisiana to the United States, President Jefferson sent a confidential message to Congress recommending an appropriation for an expedition to explore the country west of the Mississippi. Of this country next to nothing was known. The President advised that the expedition be entrusted to Meriwether Lewis, who was Mr. Jefferson's private secretary, and Capt. William Clarke. Both men were admirably equipped for the service expected of them, and the selection was most fortunate. On April 30 was signed in Paris the treaty which ceded to the U. S. the magnificent domain then known as Louisiana. Setting out late in 1803, Lewis and Clarke, with 28 men, spent the winter at the mouth of the Missouri. Early in the spring the party embarked in boats, and during the summer made the difficult ascent of the Missouri as far as 47° 21′ N. Lat., where the second winter was passed among the Mandan Indians. In 1805 the ascent of the Missouri was continued as far as the tributary they named the Jefferson river, which was followed to its source in the S.W. part of what is now the State of Montana. Procuring a guide and horses from the Shoshone Indians, the explorers pushed westward through the mountains, and embarking in canoes on a tributary of the Columbia river, reached its mouth on Nov. 15. They had travelled more than 4,000 miles, and were the first explorers to reach the Pacific by crossing the continent N. of Mexico. They spent the winter near the mouth of the Columbia, and in the spring turned their faces eastward. They made the return journey across the mountains and down the Missouri in much quicker time than their journey westward, and reached the Mississippi in Sept., 1806. Their scientific collections and observations, their account of Indian tribes never before seen by whites, their hazardous and romantic adventures, caused their reports to be read with avidity on both sides of the ocean. Not only the leaders but the men of the expedition were rewarded with liberal grants of land, and Lewis was made governor of the Territory of Louisiana. He was subject to fits of melancholy, and during one of these committed suicide near Nashville, Tenn., Oct. 8, 1809. It is surprising he should have met with such an end, considering his active career. Born near Charlottesville, Va., Aug. 18, 1774, he was the son of a wealthy man. He volunteered in the Whiskey Insurrection of 1794, became an ensign in the regular army in 1795, and captain in 1800. He was but little past 35 when he died.

Liao-Yang, a walled town of Manchuria, on the railway to Port Arthur, about 40 miles south of Mukden. Population about 50,000. It was in 1904 the seat of one of the greatest battles of modern times, between a large Japanese army under Field Marshal Oyama and a Russian army under General Kuropatkin, the forces engaged approximating 400,000. It began in an attack on the Russian entrenchments, August 26, and continued with little intermission until September 3, when a flanking movement under General Kuroki forced the Russians to retreat and leave the field of battle in the hands of the Japanese. The conflict was unsurpassed for length and fierceness in the annals of war, and was attended with great loss of life.

Li Hung Chang (*lē'hoong chăng'*), a Chinese statesman and diplomat, was born in 1823, in the province of Anhui, and took the Hanliu degree in 1849. When the Taiping rebels invaded Anhui, in 1850, he joined Tseng Kuo Fan's army as secretary. He was appointed provincial judge (Mieh Tai) of Chêkiang; and in 1861 became governor (Futai) of Kiang-su. In conjunction with General Gordon, he recovered Suchow in 1863, and drove the rebels entirely out of Kiang-su. For his services he received the Yellow Jacket and Peacock Feather, and was created an hereditary noble of the third class. Two years later he was appointed governor-general of the Liang Kiang provinces, and subsequently commander against the Nien-fei and Mohammedan rebels. In 1872 he was appointed governor-general of Chih-li, the metropolitan province, and this post he still holds. He is also senior grand secretary (Chung Tang)—the highest distinction to which a Chinese official can aspire. He is a friend to foreigners, and to European culture and industry. As member of the Board of Admiralty, he originated the Chinese navy, and was the chief promoter of the China Merchants' Steam Navigation Company—the only native steamship line. He is imperial commissioner of trade for the northern ports. The emperor entrusted to him the supreme charge of the forces, both naval and military, sent to Corea during the war with Japan in 1894; and though he was superseded, and for a time discredited, he was restored to favor, and negotiated the treaty of peace with Japan in 1895. He was sent as the special envoy of the emperor to the Czar's coronation, in May, 1896, and afterward visited Germany, the Netherlands, France, England, the United States, and Canada, attended by a numerous train, and being received with great distinction in every country, especially in Germany, where almost royal honors were paid him, and where the splendid discipline of the army, and especially of the military training school, won his amazed admiration, as did also, a few days later, the iron-clad fleet of the English navy. While in England he endeavored in vain to secure Lord Salisbury's assent to an increase of the import duties on British goods entering China. His visit to the United States was without ostensible political significance; but it was attended with the gala-day celebration that characterizes American hospitality to distinguished foreigners. In Washington, Earl Li and his suite were received by the President, with semi-official formality. Leaving the United States, he proceeded to Canada, where another cordial reception was given him. He sailed for Hong-Kong on September 14, 1896. Though more than 73 years of age, this extended tour was his first excursion beyond the bounds of his native land. His purpose was to secure concessions to China in the matter of the tariff, and the Siberian railway project; and, in a general way, to study the western civilization with a view to promoting progress in China. On his return to Pekin, he was appointed to the high office of foreign secretary of the empire; but was ordered to be punished by loss of salary "for presuming to enter the precincts of the ruined summer palace while visiting the Empress Dowager." After the Boxer outbreak of 1900 he was made the chief commissioner for arranging terms of accommodation with the offended Powers. His wealth was said to be very great. Died November 7, 1901.

Lib'eral, in *Missouri*, a post-town of Barton co., 15 m. N.W. of Lamar, on K. C., Ft. S. & M. and Mo. Pac. R.Rs., has a corn mill; coal and live stock shipped. *Pop.* (1890) 546.

Liberal Christian'ity. (*Comp. Relig.*) A term applied to that phase of Christian belief that is not restricted within the limits of so-called orthodoxy; especially denoting Unitarianism.

Liberal-Conserv'ative, *n.* (*Eng. Pol.*) A member of that section of the Conservative party in England that has a leaning toward the Liberal party. Otherwise called Tory-Democrat.

Liberal-Un'ion, *n.* (*Ger. Pol.*) A small body of German National Liberals opposed to Bismarck in the Parliament of 1880, and who in 1884 joined the Progressionists to form the Liberal party of Germany.

Liberal-Un'ionists, *n.pl.* (*Eng. Pol.*) Members of a political party in England formed in 1886 by an alliance of a portion of the Liberal party with the Conservatives on the Irish question. This alliance secured the defeat of Mr. Gladstone, and enabled the Conservatives to hold sway until 1892, when the Liberals, by the aid of the Irish members who favored Home Rule, carried the election by a small majority.

Lib'erty, in *Nebraska*, a post-village of Gage co., 20 m. S. E of Beatrice, on the B. & M. R. R.R. *Pop.* 469.

Liberty Bell. The old bell of Independence Hall, Philadelphia, which was rung on the occasion of the passage of the Declaration of Independence, July 4, 1776.

Liberty Cap. A cap worn as a symbol of liberty. The head of the Goddess of Liberty is commonly represented as decked with a close-fitting cap inscribed "Liberty."—The Roman *pileus*, a skull-cap, was worn by a manumitted slave and called a *liberty cap*.—The French Revolutionists of 1789 wore a red *liberty cap*.

Liberty Center, in *Ohio*, a post-village of Henry co., 8 m. E. of Napoleon, on Wabash R.R. *Pop.* (1897) 550.

Liberty Par'ty. (*U. S. Pol.*) An Abolition party arising in 1840, that coalesced with the Free Soil party in 1848, and became merged in the Republican party in 1854.—An offshoot of the Prohibition party, at first

called "National." At the national convention of the Prohibition party in Pittsburg, May, 1896, the so-called "broad-gauge" delegates withdrew—because the majority voted to confine the party issues to prohibition—and organized as the "National" party, with a platform embracing free silver coinage, woman suffrage, &c. The name was then changed to "Liberty" party.

Li'braries of the Uni'ted States. During the last ten years increased attention has been given in the United States to the collecting of books, to the housing of them in a dignified manner, with ample space for large growth, and to library administration. Library statistics compiled by the United States Commissioner of Education show that in six years there was an increase of 66 per cent. in the number of volumes contained in the public libraries of the United States, including in that designation every collection down to college, society, religious, and other libraries numbering 1,000 volumes and upward. Still, out of 28 libraries in Great Britain, Europe, and this country, numbering 350,000 volumes or more, 5 only are in the United States. It has been well remarked by a librarian of long experience that every national library should have for its object the collection and preservation, on the exhaustive system, of all that the country within which it is located produces. If the Congressional Library at Washington had aimed at such an object, it would have had no place to put the books, the rooms allotted to the library in the Capitol being wholly inadequate. That defect of space, however, has been remedied by the erection of a library building of immense size, fire-proof, magnificently decorated, and perhaps the finest library building in the world. The bookstacks are calculated to accommodate 2,000,000 volumes. In the various rooms which fill the main building there is space for 2,000,000 more, besides ample room for the exhibition of prints and similar objects. At present the library numbers 680,000 volumes.

Next to the Congressional Library in size is the Public Library of Boston, now numbering over 600,000 volumes, which are housed in a superb building but recently finished. These volumes are lent free of charge to all citizens in Boston and its suburbs, which include a wide extent of territory. In Chicago, a public-spirited citizen, Walter L. Newberry, bequeathed for a library property from which has been realized more than $2,500,000. This library is for reference only, and 118,000 volumes, many of them rare and costly, have been collected. Another public-spirited citizen, John Crerar, bequeathed $2,000,000 for a library to be called the John Crerar Library, the organization of which has been delayed by litigation, now at an end. New York has been left far behind by Boston and Chicago in the matter of libraries, but has lately taken a step which bids fair to place her in the first rank among her sister cities. By the will of John Jacob Astor, who died in 1848, was left a sum to establish the Astor Library, a library of reference only. The library has done a useful work, but the funds left, though increased by the testator's son and grandson, were quite insufficient for the purpose of getting together a complete reference library and maintaining it adequately. James Lenox, another wealthy man, founded in his lifetime the Lenox Library, to which benefactions were made by his sister and others. Here, again, the funds were inadequate, and by 1894 the library had but 86,000 volumes, while its annual receipts were a little over $20,000. By his will, Samuel J. Tilden, who died in 1886, left property estimated as likely to realize $4,000,000 to certain trustees for the purpose of establishing a free library and reading-room in the city of New York. The Court of Appeals declared the will void, and the trustees would have been stripped of all the property left them, had they not, previous to the decision of the court, made a compromise with one of the heirs of Tilden. As a result of this compromise, the Tilden trustees came into possession of property estimated as worth $2,500,000. It was apparent that this sum would not admit of the establishment of a library equal to either the Astor or the Lenox. Under these circumstances, the advantages of a consolidation were abundantly manifest. Negotiations were entered into, and, with the assent of the heirs of Astor and Lenox, a consolidated corporation was formed under the name of the New York Public Library, Astor, Lenox and Tilden Foundations. For this library the city of New York, having been granted authority therefor by the State, began the erection of a library building to cost $1,750,000 on a large city site, formerly occupied by a distributing reservoir on Fifth Avenue, between Fortieth and Forty-second streets. This is a large and very suitable site, and the building is admirably adapted to house the extensive free library which New York now possesses. In addition to this central building 50 branch libraries are being erected, by aid of Andrew Carnegie's large gift of $5,200,000, for this purpose. Carnegie has made a gift of $1,500,000 to Philadelphia for the erection of 30 branch libraries, also a gift of $1,000,000 to St. Louis, and many smaller gifts for libraries to other U. S. cities. Pittsburgh has been especially well provided for. In 1900 the U. S. had 5,385 libraries, with 44,591,851 volumes.

More marked than either the increase in the collections of books or in costly library buildings during the last decade, have been the improvements in library administration. The principal objects of a visitor to a reference library are to see if the books he wants are in the library, and to get them in his hands as quickly as possible. Formerly the only means of achieving the former purpose was by consulting the library catalogue, arranged alphabetically, primarily by authors, and titles, secondarily by subjects. Until recently every library undertook to issue its printed catalogue periodically, and there was rivalry among the libraries as to the elegance and thoroughness of its issue. The rapid growth of libraries made this process very expensive. Moreover, the result was unsatisfactory, since further search had to be made among the accessions to the library after the date of the last catalogue. For these reasons and others permanent catalogues in manuscript are now almost universally made on the card system. Each title is written (or type-written or even printed) on a separate Bristol-board card, generally of the ordinary postal-card size, and these cards are set on edge in drawers in alphabetical order. In this way insertions can be made at any point and to any extent without deranging the titles already in place. Entries are usually made for each book not only under the name of the author, but also under title and under subject. Most books thus require three separate cards, placed in different portions of the catalogue. In many cases even this is not sufficient. Additional entries are required, which are called analyticals. Where thoroughness of cataloguing is made an object they are very numerous, as some books are worthy of having cards made for them under a hundred or more different heads. To reduce to a minimum the labor and expense of this elaborate cataloguing, all title and subject entries and all analyticals are usually written very briefly, just enough being given to refer the reader to the book intended. The author-card, on the contrary, generally receives more careful and fuller treatment, giving such particulars as the number of the edition, whether illustrated or not, the imprint, number of pages, and so on. The author-card thus becomes the primary or complete entry, the others being regarded as references. The general principles of cataloguing as given above may seem quite simple, and conform to "*Rules for Making a Dictionary Catalogue*," compiled by Charles A. Cutter, and issued by the U. S. Bureau of Education. Simple as they seem, it requires 120 closely printed octavo pages to contain *Cutter's Rules*, with the necessary specifications, examples, exceptions, and discussions of mooted points. The fact is that most books seem to require special treatment, and often tax the ingenuity of the expert cataloguer to make the book findable by means of the catalogue as likely to be understood and used.

Besides the regular catalogue of a library as described above, other records of its books are essential. There must be an accession book, or register of all books as received. There must also be a shelf-list. This is usually a series of lists rather than one, a separate list being made for each sub-division of the library, the titles being arranged in the due order of the books on the shelves. No library, however small, can afford to dispense with any of these records. The smaller the library the more easily can they be made and maintained. Another object of the visitor to a reference library is to ascertain what books it contains relating to a subject he has on hand. To attain this it is important to have books classified, and those relating to the same subject placed on the shelves together. Various elaborate schemes of classification have been worked out, and some of them put in practice at great expense. But all these schemes have failed to guide the reader to the material he needs, and his main dependence must be, after all, on the catalogue.

Much thought has been expended on the best plan for a library building, especially on the arrangement of the book-room. The stack system is a favorite with some, and the best example of it is in the new Congressional Library. By this system the book-room is a clear space from floor to roof, from 50 to 80 feet in height, and in it is built up an iron or steel framework, consisting of book cases running across the room at intervals of about two feet and reaching from the bottom to the top, light open-work floors being introduced at every 7 feet in height, so that all books can be easily reached from the floors. The stack system has the great advantage of compact storage of books, but has serious drawbacks. The plan of building mostly in favor as opposed to the stack system is one advocated for many years by W. F. Poole, of Chicago, and used by him in the Newberry Library, of which he is director. By this plan the building is divided into separate stories, each from 15 to 18 feet high, and the lower part only of each story is occupied with book cases, the upper part being devoted to the proper distribution of light and air. Fewer books can be accommodated on this plan in a building of a given height, but they can be so much better accommodated that the difference is fully compensated.

One of the most striking innovations of recent years in the management of a library is the admission of readers in a public library to the shelves. Formerly it was thought that books in a library should be as carefully locked up and guarded as beauties in a harem. Within a brief period there has been a reaction against this rigid exclusion of readers, and arrangements are now made in many institutions for their free access to such classes of books as they may wish to consult. This freedom of access seems so far to have worked well, and to be consistent with the safety and good order of the library. It is of great value in bringing the readers in contact with books in masses, thus enabling them to acquire much of the bookishness which makes people intelligent readers, and stimulates a fondness for books and their uses. The conviction is increasing that the usefulness of a public library as a means of culture is much diminished when readers are kept away from the books, and served only through an apparatus of catalogues, cards, tickets, and red tape, managed by ill-instructed and unsympathetic attendants.

With the marked advance in library management, the qualifications required in a librarian have become of such a kind that a special training is now necessary for such a position. A school of library economy has, since 1886 been conducted by Melvil Dewey, first at Columbia College, New York, and now at the State Library at Albany. The school provides a regular two years' course of instruction, theoretical and practical, and has graduated a large number of people, who are acceptably filling important positions. Shorter courses in library economy are also offered at the Pratt Institute, in Brooklyn; the Drexel Institute, in Philadelphia; the Public Library, at Los Angeles, California, and Summer School of Languages, at Amherst, Mass. The American Library Association has held a meeting nearly every year since 1876, at which meetings important papers are read. The meeting held in 1893, at Chicago, was so arranged that its papers covered the whole field of library work, each topic being assigned to a writer specially competent to treat it. The report of this meeting was issued by the U. S. Bureau of Education, and constitutes almost an encyclopædia of everything relating to libraries and their management. Very useful is *The Library Journal*, established in 1876, always teeming with information on all library topics.

Lib'yo-Teuton'ic, *a.* (*Anthrop.*) Relating to a mixture of the Libyan and Teutonic races—the blond type of the white race, including all peoples with fair complexions, blue eyes, and reddish hair—the *Xanthrochroi*, or "fair whites," of Huxley.

Lich'tenberg's Fig'ures. [So called from the name of the observer, *Georg Christoph L.*, a German savant, born near Darmstadt, 1742; died 1799.] (*Physics.*) An experiment which well illustrates the opposite electrical condition of the two coatings of a Leyden jar. Let a glass plate be well dried, and let lines be traced on it with the knob of a jar positively charged, and then with a jar charged negatively; let a mixture of red lead and sulphur be rubbed together in a warm mortar, and then lightly sifted over the plate. The sulphur becomes negatively charged, and the red lead positively, when they are rubbed together; and the sulphur therefore adheres to the positive lines of the plate, and the red lead to the negative lines. On examining the lines it will be found that a peculiar difference exists between the forms in which the powders are distributed: the sulphur is spread around the line in branching tuft-like shapes; while the red lies in circular and oval-shaped spots.

Lick, James, philanthropist, was born at Fredericksburg, Pa., August 25, 1796. In 1820, he was employed in a piano factory in Philadelphia; the following year he attempted to establish himself in this business in New York; lacking capital, he went to South America, and engaged in the manufacture of musical instruments in Buenos Ayres, Valparaiso, and other places, for nearly a quarter of a century; in 1847 he went to San Francisco, where successful investments made him a multi-millionaire. In 1874 he placed his entire property in the hands of trustees to be devoted to public, educational, and charitable purposes, among the bequests being the following: For the construction of a suitable observatory, and the erection therein of a telescope superior to and more powerful than any before made, $700,000, the same to be connected with the University of California. The site was selected during Mr. Lick's lifetime, on the summit of Mount Hamilton, 4,302 feet above sea-level, and 26 m. E. (by road) from San José. Mr. *L.* died Oct. 1, 1876; and in 1887, when the observatory was nearly completed, his remains were placed in a vault under the pier sustaining the great equatorial telescope.

Lick Observ'atory. (*Astron.*) To the munificence of James Lick (*q. v.*) is due the observatory on Mount Hamilton, now under the charge of the Lick Astronomical Department of the University of California. Congress was induced to grant a tract of 1,350 acres of land at the desired spot, and other land was purchased, while the county supervisors contributed $75,000 for the building of a road 26 miles long leading to the observatory site. The spot chosen was a favorable one, having an elevation of 4,302 feet, and affording a view of the Sierra Nevada, 130 miles distant, on a clear day. The high locality was desired in order to avoid, as far as possible, the vibrations of the atmosphere, which interfere seriously with the use of large magnifying powers in telescopes near the earth's surface. The levelling of the mountain top was begun in 1880, and the buildings were constructed with considerable difficulty, owing to their isolated position. The main observatory building is 30 x 200 feet in ground dimensions, and contains the large hall, library, offices, &c. This hall is 12 feet wide, and runs through the entire building, connecting the two domes at either end. The large dome contains the great 36-inch telescope, and the smaller one the 12-inch. To the east of the main building is the transit house, meridian-circle house, photograph house, heliostat, and dwellings for the astronomers and assistants. All the buildings which contain astronomical instruments are built with double brick walls, it being most important that an even temperature should be maintained within, as changes in temperature tend to expansion or contraction of the metal parts of instruments and interfere with their accuracy. The corner-stone of the observatory was laid June 30, 1883, and the telescope finished and put

in place in June, 1888. The lens was made by Alvan Clark & Sons, of Cambridge, the glass being cast in Paris from special materials selected with great care to insure perfect purity. When mixed, the glass was kept molten for some weeks, being constantly stirred and frequently skimmed to rid it of the last vestige of impurity. Several casts were made from glass prepared in this manner, until the three required casts were found to be wholly satisfactory. These were then shipped to the Clarks and subjected to the polishing process, which is so delicate that the final work is done with powder and the fingers. The surface of the glass is not made of a true curve, but of a curve made with reference to the varying density of the glass, so as to carry all the light to the proper focus. This variation in density is at times so great that the surface of the lens has to be elevated or depressed as much as one-eighth of an inch. Three large lenses in all were required—a 36-inch crown glass, a 36-inch flint glass, and a 33-inch visual objective. The total value of the lenses was $63,000, and the telescope and mountings about $15,000 more. The complete cost of the dome was $85,000. Its diameter is 75 feet, and with its movable parts it weighs about 200,000 pounds. Instead of the usual elevated observing-chair, the floor of the dome-chamber is mounted like an elevator, and raised or lowered by hydraulic power. This arrangement was chosen because the size of the telescope would require an observing-chair to be hoisted at times 25 feet from the floor, a distance dangerous to an astronomer engrossed in his work. The great telescope is a refractor, and has a focal length of 58 feet. It is used mostly for visual observations and micrometer measurements, and occasionally for photography. It is also fitted with a powerful spectroscope. With this telescope objects 300 feet square can be discerned on the moon's surface. It has been found very useful in the discovery of comets and double stars. It was also the means of discovering Jupiter's fifth satellite, the transparency of Saturn's crape ring, the parallel markings on Mars, &c. The spectroscopic outfit has been very useful in the study of the nebulæ. The other instruments at the observatory are a 12-inch equatorial telescope, 6-inch refractor, 4-inch transit, 4-inch comet-seeker, 5-inch photoheliograph (with a focal length of 40 feet), 6-inch meridian-circle, Repsold universal instrument, Bermerside reflector, heliostat, chronographs, seismometers, meteorological instruments, astronomical clocks, &c. About 6,000 persons visit the observatory yearly, and several hundred more belong to the Astronomical Society of the Pacific, which is connected with the observatory, and for a small yearly payment receive all the printed publications issued from the observatory.

Lid'dell, HENRY GEORGE, born in England, 1811; educated at Charterhouse and Christ Church, Oxford, taking a double first, 1833; tutor of his college, and (1845) professor of Moral Philosophy in his university. From 1846–55 he was head-master of Westminster School, when he returned to Christ Church as dean; vice-chancellor of the university (1870–74). He published, in collaboration with Robert Scott, *Liddell and Scott's Greek Lexicon;* also wrote *History of Rome,* of which an abridged edition, *The Students' Rome,* has been published. In 1854–70 he was master of Baliol College, afterward dean of Rochester.

Lid'don, HENRY PARRY; born at North Stoneham, Hampshire, Eng., Aug. 20, 1829; educated at Christ Church, Oxford, graduated B. H. with a second class in classics; gained the Johnson theological scholarship (1851). In 1852 he was ordained as senior student or fellow of Christ Church; vice-principal of Cuddeston Theological College (1854–59); appointed prebendary of Salisbury Cathedral (1864); select preacher at Oxford at four different periods. In 1866–75 he was a member of the Hebdomadal Council at Oxford; canon residentiary of St. Paul's Cathedral, and the same year (1870) Ireland professor of the Exegesis of the Holy Scripture in Oxford University; received the degrees of D.D. and honorary D. C. L. He delivered his famous Bampton Lectures on the *Divinity of Our Lord* in 1866. In 1874 he edited *Bishop Andrewes' Manual for the Sick;* also edited *Dr. Pusey's Prayers for a School Boy;* issued a selection of *Private Prayers,* and jointly with Dr. William Bright wrote the *English Church Defense Tracts.* Died Sept. 9, 1890.

Lie, JONAS; born at Eker, Norway, Nov. 6, 1833; studied law, and practiced for several years; in 1868 removed to Christiana to take up the profession of literature. His works are very popular in Norway, being realistic pictures of life in that country. Has published two collections of *Short Stories;* a volume of *Poems;* and *Grimbow's Cat,* a comedy. Also the popular novels, *The Man with the Second Sight; The Pilot and His Wife; Go Ahead; A Prisoner for Life,* &c. His name is notable in current literature.

Lie'ber, FRANCIS, jurisconsult and publicist, was born in Berlin, Prussia, in 1800. After taking part as a student in the democratic movements of 1816, and suffering four years' imprisonment and perpetual exclusion from Prussian schools therefor, he took part in the Greek war of Independence (1821); returned to Germany, where he was again subjected to persecution. Escaping to England, he emigrated to the U. S., in 1827, and settling in Boston, began his *Encyclopedia Americana,* completed in 1833. Died 1872.

Life'-saving Appara'tus. Life-belts, life-jackets, life-preservers, and life-buoys have been invented and manufactured in a profusion of forms. The belts or jackets are usually of canvas, containing large pieces of cork for flotation, and arranged to strap around the body and over the shoulders. Life-buoys are also filled with cork, and fitted with life-lines and loops, so as to sustain a number of persons in the water. A light is generally added and arranged to burn for several hours. Life-rafts are commonly made with two long metal cylinders filled with air, and having a wooden frame-work between them large enough to accommodate a number of people. A new form of life-boat has been introduced by the Royal Lifeboat Institution of Great Britain, being propelled by a system of jet-propulsion, and the National Lifeboat Institution of Holland has built another on similar lines. The English boat is

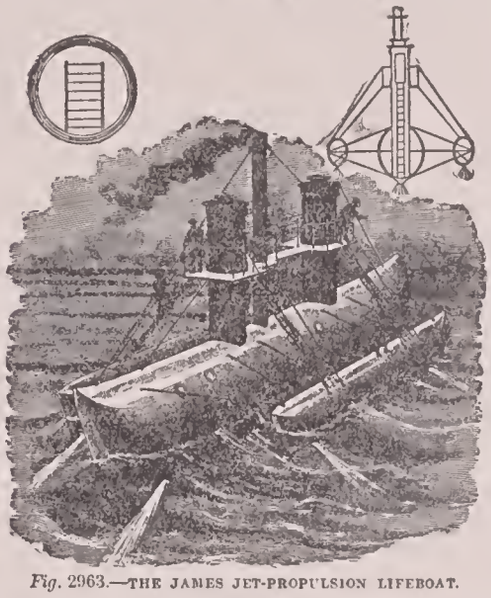


Fig. 2963.—THE JAMES JET-PROPULSION LIFEBOAT.

named *City of Glasgow,* and has engines of 200 horse-power, which drive a centrifugal pump that furnishes the jets of water used to propel the vessel, there being no paddles, screws, or similar devices. The jets are discharged from near the center of the vessel, and have flexibly adjusted nozzles over which the steerman has control, so that he may alter the angle as he desires to drive the boat. By reversing the jets the boat can be stopped very quickly, or by pointing one forward and the other aft she may be turned around; in fact, all sorts of manœuvres may be executed with a speed and facility unapproached by any other system of propulsion. It is the ease of handling which caused the adoption of the jet-propelled boat for life-saving, as it is wasteful of coal, and has been generally condemned by marine engineers. The boat built for use in the Holland service is of 250 horse-power, is 55 feet long, 13½ beam, and draws 40 inches of water. She can be stopped in 22 seconds when going at full speed.

For carrying lines to wrecked vessels the Lyle gun is used by the United States Life-saving Service. It is a small bronze cannon, weighing with projectile about 200 pounds. The projectile will carry a line 700 yards. The breeches-buoy, which is made to run on a life-line, is a simple, stout pair of canvas breeches, made to come under the armpits of the wearer, and having a ring of cork about the top. Being suspended from the life-line by a pulley, it may be run back and forth to convey persons from a wreck. If the sea is very boisterous, the life-car is usually used in place of the breeches-buoy. The car used in the U. S. service is a short, double-ended boat, decked over, so that the occupants may be completely enclosed. A pulley is provided for hanging this on the life-line. Other devices used in life-saving are the shear-legs, need to support the shore end of a life-line and give it some elevation; the life-rocket, and life-kite, devices little used for carrying a life-line; and various more or less experimental life-preservers and life-saving suits.

Life'-saving Ser'vice. There are 256 stations comprised in Life-saving Service of the U. S., 186 being on the Atlantic coast, 55 on the Great Lakes, 14 on the Pacific coast, and 1 at the Ohio Falls, Louisville, Ky. The service was established in 1871, and up to the period included in the last report (up to June 30, 1896) had assisted in saving life and property in 8,982 disasters, involving the lives of more than 32,000,000 people, of whom only 1 in 450 perished. The amount of property involved in the shipwrecks was over $146,000,000, of which but $32,000,000 was lost. For the fiscal year, prior to June 30, 1896, the cost of maintaining the service was $1,401,805.97, while the amount of property saved was $11,293,770, out of $12,726,520 involved in the shipwreck of 67 vessels. Only 13 lives were lost in these 67 disasters, out of nearly 5,000 imperilled. Succor was also extended to 613 of the castaways. The United States Life-saving Service is the most complete and efficient in the world, and the only one that is wholly maintained by a government. It was established because of the numerous frightful disasters to emigrant and other vessels along the Atlantic coast, especially on the shores of New Jersey and Long Island, which for a half of a century were the dread of all mariners on the Atlantic. Over 10,000 miles of coast are now guarded by the service, which is divided into the following districts: (1) Coasts of Maine and New Hampshire, (2) coast of Massachusetts, (3) coasts of Rhode Island and Long Island, (4) coast of New Jersey, (5) coasts of Delaware, Maryland, and Virginia, from Cape Henlopen to Cape Charles, (6) coasts of Virginia and North Carolina, from Cape Henry to Cape Fear, (7) coasts of South Carolina, Georgia, and eastern Florida, (8) coast of the Gulf of Mexico, (9) shores of Lakes Erie and Ontario, (10) shores of Lakes Huron and Superior, (11) shores of Lake Michigan, (12) coast of the Pacific. The service is made a branch of the United States Treasury Department, and is under a general superintendent at Washington, Sumner I. Kimball being the present incumbent. Officers of the Revenue Marine Service are detailed as inspectors of the districts. One inspector is regularly stationed at New York, and two superintendents are placed in charge of the construction on the Atlantic and lake coasts, and two on the Pacific coast, to look after building and repairs, and the renewal of equipments. The superintendents of each of the 12 districts has general oversight of the stations therein, but are subordinate to the general superintendent. Each station is in charge of a keeper, who has 7 surfmen under him. The keepers are all made Inspectors of customs, and so exercise a legal control over all stranded property. The stations are commonly two-story wooden buildings of 6 or 7 rooms. They are distributed as to frequency according to the number

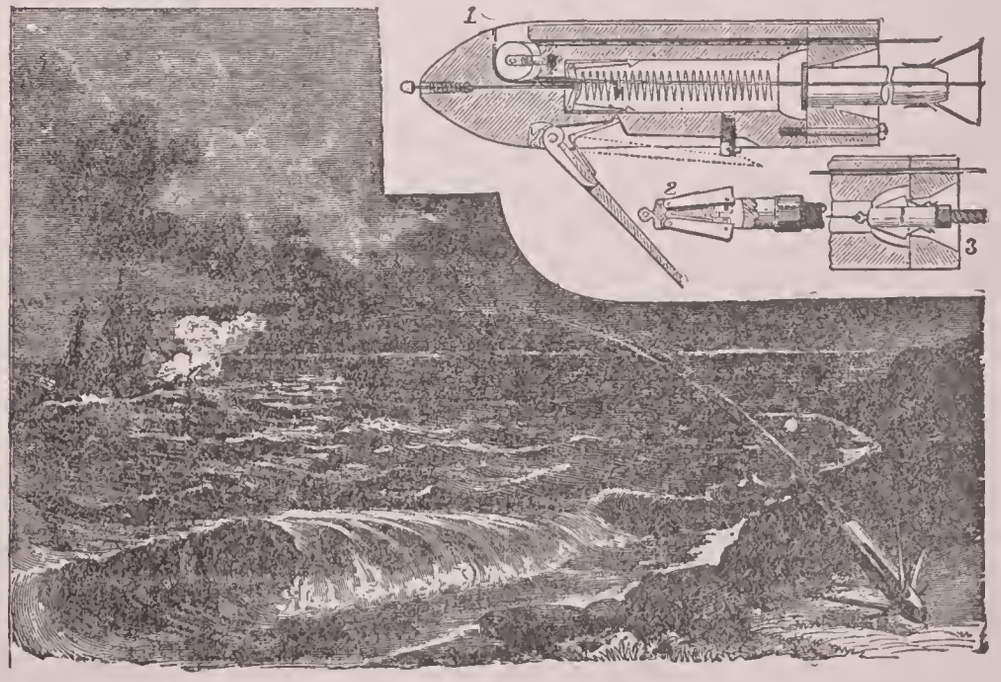


Fig. 2964.—SCHMIDT'S LIFE-LINE APPARATUS.

of vessels customarily sailing near the shores, being only 3 miles apart on the most dangerous sections, and as much as 30 miles apart at some points. Wherever practical the stations are connected by telephone, and constant communication is kept up between them. Every night and every foggy day it is the duty of the station-keepers to keep patrols marching along the shore to points midway between the stations. The duty of the patrols is to keep a strict and careful look-out for vessels in distress. They are divided into 3 watches, and as they leave their stations receive metal checks, which are exchanged with the patrols of the adjacent stations when they meet midway, so that the keepers, by having a record of the numbers on the checks, know that the patrolmen have performed their duties. Two surfmen go together on each patrol, and carry with them a beach lantern and a pouch of Coston signals. These signals are put up in the form of cartridges, and may be ignited by percussion, sending up a bright red blaze that lasts about 2 minutes. When a vessel is seen aground or in danger the patrol sets off a Coston signal to inform the crew of their proximity, and they then hasten to the station to summon the the rest of the life-saving crew. The life-boat is brought out on a pair of wheels, or with the aid of horses if the distance is considerable, and the boat puts out and brings in the wrecked crew. If, however, a storm is raging too severe to allow of the use of the life-boat, the Lyte gun and life-line are resorted to. The line is coiled in fakes, ready to follow the projectile to which it is tied. A shot being fired across the vessel, the sailors haul it in until they receive a portion of an endless rope, called the whip-line, to which is attached a tail-block, so that the whip-line may be suspended from a mast, and run freely through the

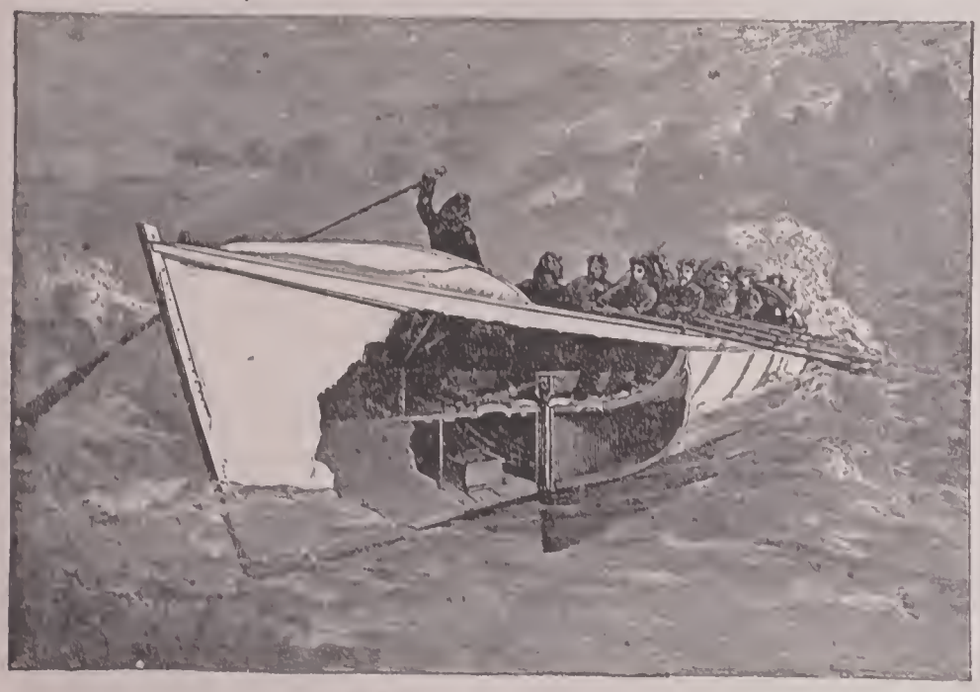


Fig. 2965.—THE TAYLOR LIFEBOAT.

pulley in the block. The whip-line is then used to draw in a stout hawser, which is tied to the mast at a higher point than the whip-line. The shore end of the hawser being supported on a pair of shears, and made taut by a large anchor, a rope bridge is thus made between the vessel and the shore, and the crew and passengers can be transferred by means of the breeches-buoy or life-car. No baggage is allowed to be removed from vessels until all living persons are taken off. Where the life-boat is used to take people from a wreck, it is the duty of the keeper in charge to allow no scrambling and filling of his boat with strong men when there are women, children or helpless persons to be rescued. These must be taken first, then passengers, then crew and officers. If the saved require further assistance, they are taken to the station and fed or clothed, and started toward their home or friends. When there are no more lives to be saved the surfmen turn their attention to the saving of property from the wreck. Through long experience they know the best ways of floating stranded crafts, stopping leaks, and generally rescuing the cargo, and if possible saving the ship.

The life-saving crews have regular drills, so that they are never out of practice, no matter how long a time elapses between wrecks. Much competition is developed in the matter of making record-time in the hoisting of the shear-legs, firing out a line, and bringing a comrade down from a distant pole in a breeches-buoy. The whole performance is frequently accomplished in less than five minutes. Boat-drill is also undertaken at least once a week, and there are drills in signalling, and frequent oral examinations. Reports are made of the proficiency of each man in every crew, and kept on record, so that natural pride serves to keep the work of the men up to a high standard. Along uninhabited portions of the Florida coast are placed refuge-stations, these being fitted up with special reference to feeding or harboring a considerable number of castaways upon short notice. Between the refuge-stations are mile-posts, on which are plainly painted the distances to the nearest station. As the stations here are 26 miles apart, and the shores so constituted that wrecked crews can usually get ashore without help, these directions as to where food, water, and shelter can be found are of great value. The stations on the Great Lakes are, of course, closed when the ice shuts off navigation in the winter until it is resumed in the spring. The Atlantic coast stations, on the contrary, are manned only during the colder half of the year, from Sept. 1 to May 6. The Pacific stations are manned the entire year. The Florida refuge-stations maintain a keeper the year round, but, as a rule, no regular crews.

In Great Britain the work of rescuing the crews of wrecked vessels is performed by the coast guard, under the direction of the Board of Trade. The Danish government also supports about 50 stations on the coast of Jutland. In France, Germany, and other countries the task is left entirely to private enterprise and charity.

Light, Artificial, or Illumination. The nineteenth century has been as prolific in light-giving devices as in many other directions of human inventions, and we are to-day, in this respect, remarkably far away from the conditions existing a century ago, when hardly a step in advance had been made from the artificial lights in use ten centuries before. Man's earliest illuminating agent was the torch, a blazing brand drawn from the primitive fire of sticks. This primeval candle has continued in use from that time to this, the torch being still in use by hunters, and in frontier cabins to aid the firelight illumination. It is, however, advanced beyond the stage of a stick seized at random to a selected piece of fat pine or rosin-infiltrated wood, which burns long and brightly.

A discovery of prime importance in human history was made when it was learned that liquid oils would burn, and that solid fats, melted by heat, could be drawn up through porous wicks and consumed at the apex of the wick, yielding sufficient light for ordinary purposes of illumination. How far back in the history of the world this prime discovery was made it is impossible to say, but the principle involved is still in common use, and new methods of light-giving are but about a century old. The story of the development of artificial light is therefore largely that of progress in the invention of the candle and the lamp (*q. v.*) Probably skulls of animals or certain sea-shells of suitable shape were first employed as oil-containers. Of lamps still in use the most primitive form is a simple vessel of oil in which a wick is laid and lighted at its extremity. Such is the method in use by the Eskimos of today, this simple device serving them not only to illuminate, but also to warm, their huts. It is not used for cooking as well, since they have not yet learned the art of cookery. During the whole period of ancient history but little progress seems to have been made beyond this simple device. The common hand-lamp of the Greek and Roman civilizations is a crude and simple affair, usually an ebonized receptacle for oil, with a hole at the extremity from which the wick emerged. Though more elaborate lamps were doubtless in use, they were as simple in principle, no method of increasing the light by the aid of an artificial draught having been devised. The lamp was adapted by nature to the consumption of fluid fats. When it occurred to man that he might also burn solid fats, by causing them to conceal around a central wick, it would be impossible to state. In this way arose the candle, which long shared with the lamp the duty of giving light to man. The steps of progress thus made were few and simple, yet invention in this direction ceased with them until near the beginning of the 19th century. The only improvements were in the elaborateness of lamps and candelabras and in the variety of fats employed. Various animal and vegetable oils served for the lamp, whale oil being one of the later discoveries. The oils of various fishes also came into use. Vegetable oils, such as coiza and grape and other seeds, and nut oils of various kinds, were also employed. For candle purposes, tallow has for ages served as the main substance employed, replaced by wax in religious ceremonials and on occasions of state display. Vegetable fats have also been used for this purpose, among others the wax of the candle-berry, a not very brilliant illuminant used to some extent in the southern States. Candle-making continued a crude process until within the memory of people now living, candle-dipping being an annual household duty, in which thick wicks were dipped again and again into the melted tallow, until they had grown of sufficient thickness. These, with their smoky flame and the constant need of snuffers to remove the burnt wick, formed the principal reading lights of our forefathers. They have happily been replaced by the modern machine-made candle, with its thin wick so twisted as to obviate the need of snuffers, that invariable implement of an old household, known only as a curious antique to the present generation.

As regards lamps, the old round, thick and smoky wicks were used until the introduction of the more limpid vegetable oils admitted of improved methods of burning. Leger, of France, in 1783, adopted flat ribbon wicks, and in 1784 Argand invented the cylindrical burner, which still bears his name whether used for oil or gas. It is not necessary here to describe the various stages of development of the lamp, such as the production of an artificial draught by use of the glass chimney, &c. These are treated under the subject LAMP. As for the illuminants employed, there has been a great and highly important development in the discovery and use of mineral oils. The use of these was preceded by a volatile hydro-carbon distilled from turpentine, and named camphene, first burned in Young's "Vesta" lamp in 1834. Since 1860, however, the mineral oils, products of refined petroleum, and known as kerosene, paraffin, and by other names, have quite superseded the vegetable and animal oils. These, being much more limpid and volatile than the fatty oils, rise freely in lamps by the ordinary suction of the wicks, and, being rich in carbon, need a plentiful supply of oxygen to their complete combustion. Various methods of producing this supply have been invented, and the kerosene lamp of to-day is vastly superior as a light-giver to the lamps and candles of the long centuries of the past. Some of the light hydrocarbons yield an inflammable gas, which is used as an illuminant in certain recent lamps. One highly volatile form of this, known as gasoline, has come into common use, both for purposes of light-giving and cooking, though so dangerous from its explosive qualities, that the receptacle containing it needs usually to be kept at a safe distance from the house.

GAS.—Coal gas is inflammable has been known for more than 200 years. In 1659 the burning well of Wigan, in Lancashire, was attributed to gases arising from the underlying coal beds, and gas was distilled from coal in 1691. Its inflammable character was observed at various times during the 18th century, but it was not until 1792 that any one seems to have thought of employing it as an illuminant. In that year, Mr. Murdoch, an engineer of Cornwall, erected a little gasometer, and produced gas enough to light his house and offices. In 1798 gas was first employed in a large way, and during the century that has since elapsed it has come so commonly into use as in great measure to replace oil as an illuminant in cities and towns. The only important new process in its production has been in the introduction of "water gas," a product of the distillation of petroleum. For fuller particulars see GAS. At this place, however, it is in order to speak of a new device in the burning of gas of great light-giving powers. This is what is known as the "Welsbach burner," a hood or mantle of highly refractory metals which surrounds the gas flame, and by incandescence yields an intense white light. Among recently discovered illuminants, however, much the most powerful is acetylene, a gas formed through a chemical reaction between water and carbide of calcium—a product of the electric furnace. This gas burns with a light of extraordinary intensity, much surpassing any illuminant known, with the exception of the electric arc-light. It can be condensed by compression into a liquid, and the gas arising thence be burned in ordinary gas burners, but the danger of explosion and other impediments have as yet stood in the way of its being brought into common use.

For the most notable discovery of recent years in illuminating agents our readers may be referred to the article ELECTRIC LIGHT, in which the most remarkable advance in the art of artificial illumination is fully described. Reference, however, needs to be made to certain new developments in this direction, of very recent origin, which may in the time to come prove of high utility. The electricians Tesla and Mercer have been experimenting in one direction, and Edison in another, each with promising results. The first two

named have dealt with the conditions of the electric glow in a vacuum tube, as effected by an extraordinary making and breaking of the current. Edison, on the contrary, has experimented with phosphorescent agents, which are caused to glow under the influence of the the Roentgen rays. In both directions results of some promise have been reached, though as yet no results of practical importance have been obtained. Puluj, of Vienna, has long been experimenting in the same direction with Edison, and is said to have attained important results in the direction of converting the current completely into light. Ordinary electric bulbs yield only a small percentage of the energy as light, and Puluj is said to have made such progress in this direction that, according to Prof. Ebert, 1 horse-power of electric energy would suffice to operate 46,000 Puluj lamps. In this device the negative pole of the battery ends in a small reflector-shaped disk, while from the apex of the globe hangs a small square sheet of mica, facing the disk, and painted with the highly phosphorescent sulphide of calcium. The negative pole being connected with the incandescent coil, a stream of electric radiance flows to the mica, which glows with an intensely brilliant phosphorescent light. It is admitted, however, that this device is not yet in condition for general use, and it is quite possible that the several lines of experiment named may end in failure. Yet, on the other hand, these or some similar lines may lead to success, and the world may be on the verge of obtaining an illuminant strikingly superior in cheapness, simplicity, and availability to any hitherto employed. See ACETYLENE; ELECTRIC LIGHT; FLUORESCENCE; GAS.

Light'house, *n.* The United States has maintained a Lighthouse Establishment since 1791, and now appropriates $3,000,000 or $4,000,000 annually to maintain the department. All the other leading governments of the world also have departments devoted to this service. The lighthouse at Minot's Ledge, near Boston Bay, is regarded as one of the most important engineering works of the U. S. system. An iron skeleton lighthouse, built on the ledge in 1848, succumbed during a terrific storm in April, 1851, the keepers losing their lives. The structure which succeeded it was erected under peculiar difficulties, the ledge being below low-water mark. The foundation-rock was cut away into good shape to receive the foundation-stones. A cylindrical tower of carefully bonded stone was then built up, the iron stumps of the original piles being utilized as anchorages. A somewhat similar lighthouse is at Spectacle Reef, in Lake Huron, and other lighthouses are built of stone, where a rock foundation can be secured. Where the ground is not solid, however, iron or steel structures are generally preferred, and on sandy or soft sea bottoms the screw-pile construction is generally adopted for the foundation. The screw-pile was invented by Alexander Mitchell, and consists of a pile, either of metal or wood, having a large, spiral, screw-like flange at the lower end, which admits of its being worked down by turning like a screw, and affords a larger base of support after it is down than does a pointed pile. The Brandywine Shoal lighthouse, in Delaware Bay, was the first of this character to be erected. This was finished in 1850, and rests on 30 screw-piles, which are protected from injury from floating ice by a framework of iron posts, constituting a breaker.

The iron-pile lighthouse at Carysfort Reef, Fla., is 112 feet high, and rests on a coral reef, below which is a softer mass of calcareous sand. This formed an unsatisfactory bearing for the piles, and they were therefore supported by iron base-plates, each having 130 square feet of surface. This structure was finished in 1852, at a cost of $105,000, and has proven satisfactory. Of somewhat similar construction is the Fowey Rocks lighthouse, on the extreme northerly point of the Florida Reefs; Ship Shoal lighthouse, Gulf of Mexico, and Southwest Pass, Miss., lighthouse. Other noteworthy iron lighthouses are at Cape Canaveral, Fla., finished in 1868, 150 feet high; Bolivar Point, Texas, finished in 1872, 120 feet; Hunting Island, S. C., finished in 1875, 130 feet; Cape Henry, Va., 165 feet.

A number of brick lighthouses have been built, the structures being strengthened with iron, notably that at St. Augustine, Fla., 150 feet high; and at Cape Hatteras, Currituck Beach, and Body's Island, N. C.; Morris Island, S. C.; Sand Island, Ala.; and Cape Fonlweather, Point Arena, and Pigeon Point, on the Pacific coast. A number of lighthouses have been built on tubular foundations, of which that at Southwest Ledge, at the mouth of New Haven harbor, affords a good example. The ledge here was levelled by a layer of concrete, on which were laid two courses of masonry, which brought the foundations to within 4 feet below mean low water. On this was placed a cylinder of cast-iron plates, 24 feet in diameter and 30 feet high. The individual plates of the cylinder are 6 by 4 feet, and 2 inches thick. This cylinder is filled in with concrete to the top, and surrounded with large granite blocks about the base.

Caisson foundations have been used to some extent within recent years. The Rothersand lighthouse, at the mouth of the Weser river, Germany, was the first of these. Another is at Fourteen-foot Bank, 20 miles off Lewes, Del. This latter is built on sand lying 38 feet below low-water mark, and the foundations were sunk to 70 feet below low-water mark. A timber caisson, resembling an inverted tin pan, 40 feet across, with sides 7 feet high, was lined with mineral pitch and launched like a ship. Being towed to the shoal, it was sunk by building up an iron cylinder on top, with rings of 1½ inch iron plates. The caisson did not strike the sand on a level, and for a time there was danger of an upset. But by judicious loading with stone on one side it was finally settled to a level position. The cylinder was later filled in with concrete, and 6,000 tons of rip-rap were dumped around it to give further stability. A novelty in lighthouses is that at Armish Rock, Sternaway Bay, in the Hebrides, Scotland. It has no lantern, depending upon a large reflector and Fresnel lenses for the distribution of the light from the Isle of Lewes, more than 500 feet away. The electric light has not been much favored for lighthouses, petroleum being generally depended upon; but Fire Island, on the south shore of Long Island, N. Y., has a powerful electric light, and another large one is located at Penmarch Point, Brittany, the latter being visible 63 miles in clear weather. The most common form of lantern is the tubular, so-called because a number of bent tubes are used to carry air to the flame, the bends preventing the extinguishment of the light in high winds. Fresnel lenses are also commonly used in lighthouses. These consist of a plano-convex central portion, surrounded by ring-shaped prisms that project the light in parallel planes from the focus. By this arrangement nearly all the light is sent out on a level, preventing the natural waste by overhead illumination. According to the 1896 report of the U. S. Lighthouse Establishment, 1,475 lighthouses are maintained on our seacoasts and inland waters; but, as very many of these are mere beacons, the number worthy of the name is probably not over 500 to 700.

Light'ning-arrest'er, *n.* (*Elec.*) A number of devices have been manufactured under this name for protecting telephones, motors, &c., from the results of a current of sudden and excessive strength coming to them on the wires, as when the lightning strikes the wires of the circuit. They operate on the principle of furnishing an easier path for the current than is afforded by the coils of the instrument protected. The additional conductor is usually placed close to the wire leading to the instrument, with an air-space, across which the lightning may form an arc and pass to the ground, whereas the weak current ordinarily in use is unable to do so.

Light'ship, *n.* (*Naut.*) A strongly built vessel provided with beacon-lights, and permanently anchored in places where the building of a lighthouse is impossible or undesirable. These vessels are provided with masts upon which the lights are displayed by night and signal disks, &c., by day.

Lignal'oes, *n.* Same as aloes.—An Oriental wood having a pleasant odor; probably the aloes of Scripture.

Likin (*lē-kēn'*), *n.* [Chinese.] A transit tax between the different provinces of China, imposed by the Chinese people upon themselves during the Taiping rebellion (1850–64); it was to be used exclusively for military purposes, and was intended as a temporary measure, but has been continued until the present day, and has been recognized by nations trading with China. The rate at first was one cash per tael, *ad valorem*, on all sales, but it now varies at different inland stations, and foreign goods, formerly subject to it, are now exempted from it by the purchase at the custom house of transit passes, costing 2½ per cent. on value of goods.

Li'lith, *n.* A demon whom the Talmudists believe to have been Adam's first wife, who disappeared after the creation of Eve, and has ever since been seeking revenge upon women. She haunts lonely places, coming out at night to lure away children by singing to them.

Lilinokalani (*lē-lē-wo-kō-lā'-nē*), ex-Queen of the Hawaiian Islands, sister of the late King Kalakaua, was born on Sept. 2, 1838. She married an American, John O. Dominis, who was governor of Oahu. He died in 1891; and in the same year, on the death of the king, she acceded to the throne. In 1893 she was deposed, and a republican form of government was adopted in the islands. The ex-queen has since made unsuccessful efforts to regain her lost kingdom, and has sought the intervention and support of the United States, through prominent officials, but without avail. She came to the United States in 1896, remaining for some time, chiefly at Washington, D. C.

Lim'ited Liabil'ity. (*Law.*) A principle of modern statute law, differing from common law in that the members of a partnership, joint stock company or other undertaking are held liable for joint debts or responsibilities only to the extent of their personal interest therein, or to such further extent as some special law may prescribe.

Limp'kin, *n.* (*Ornith.*) A large, rail-like bird (*Aramus pictus*) of the coasts and islands of the Gulf of Mexico and Caribbean Sea. Its limping, though swift gait, gives it this name in Florida; but elsewhere it, and an allied species, are called courlans.

Linalo'a, *n.* The wood of a species of *Bursera*, or myrrh, growing in Mexico. It is somewhat used in furniture, and an oil employed in perfumery is obtained from it.

Lincoln, in *Washington*, an E. co.; *area*, 2,296 sq. m.; watered by numerous creeks and small lakes. *Surface*, undulating; *soil*, very fertile and well watered; *products*, wheat, barley, oats, rye, hay, potatoes, wool; live stock. *Cap.* Sprague. *Pop.* (1890), 9,312.

Linerus'ta Walton. A flexible material designed as a substitute for wall-paper. See PAPER-HANGINGS.

Linds'borg, in *Kansas*, a post-village of McPherson co., 20 m. S. by W. of Salina, on Mo. Pac. and Un. Pac. R.Rs.; has a foundry and machine shop, broom factory, flour and saw mills. Seat of Bethany College and Normal Institute. *Pop.* (1895) 1,305.

Lineviteh, General, a Russian soldier, born in 1840. Entering the army early, he was engaged in the Russo-Turkish war of 1877-78, and afterward in all the campaigns in Asia, being prominent in the march on Peking in 1900. In 1904 he was for a time governor general of the Amur territory, afterward commanded under Alexieff at Vladivostock, and on Nov. 14, took command of the First Manchurian army at Mukden, being second in command under Kuropatkin. On March 17, 1905, after the defeats at Mukden and Tie Pass, he was made commander-in-chief to succeed Kuropatkin.

Lingula (*ling'-gu-lă*), *n.* (*Zoöl.*) The genus typical of a family of brachiopods (*Lingulidæ*) having a bivalve shell supported upon a long, fleshy, spirally coiled peduncle, passing between the beaks of the valves. They live attached to rocks in the seas of warm climates, particularly of the Indian Archipelago and Polynesia. Although few recent species are known, fossil species are among the numerous objects in the rocks of the Silurian, Devonian, and Carboniferous periods in all parts of the world.

Lino'leum, *n.* (*Manuf.*) The name given to a peculiar preparation of linseed oil. In 1849, Nicles and Rocheider independently discovered that chloride of sulphur will solidify oil, and render it usable in many new ways. In 1859, M. Perra communicated to the Académie des Sciences the details of a mode of effecting this by mixing and melting the ingredients, and pouring the mixture out in a thin layer. By varying the proportions, the resulting substance assumes varying degrees of consistency. Thus, 100 linseed oil + 25 chloride of sulphur produces a hard and tough substance; 100 oil + 15 chloride, a supple substance like india-rubber; and 100 oil + 5 chloride, a thick pasty mass. This third kind dissolves well in oil of turpentine. Mr. Walton afterward found that by the application of heat linseed oil will become hard without the addition of chloride of sulphur. He conceives that it is not a mere drying, but a real oxidizing. Linseed oil, first boiled, is applied as a layer to surfaces of wood or glass, then dried; then another layer; and so on till the required thickness is produced. This sheet is then removed, and is found to be very much like India-rubber in elasticity; in fact, the production of a layer by this means is analogous to the smearing of clay-molds with caoutchouc juice to produce india-rubber, as practiced in South America. The drying is a little expedited by adding a small portion of oxide of lead. The solid oil is crushed, and worked thoroughly between heated rollers; when treated either with shellac or with naphtha, it becomes applicable to various manufacturing forms. The term *Linoleum* properly applies to the hardest or oxidized oil itself, but it is chiefly used as a designation for one of the substances made from or with it, a kind of floor-cloth. When the oxidized oil is rolled into sheets, it becomes a substitute for india-rubber or gutta-percha. When dissolved as a varnish or mastic, and applied to cloth, it is useful for waterproof textiles, felt carpets, carriage-aprons, wagon- and cart sheets, nursing-aprons, water-beds, tank-linings, table-covers, &c., according to the mode of, treatment. When used as a paint, it is useful for iron for wood, and for ships' bottoms. When used as a cement, it possesses some of the useful properties of marine glue. When vulcanized or rendered quite hard by heat, it may be filed, planed, turned, carved, and polished like wood, and used for knife and fork-handles, moldings, &c. When brought by certain treatment to the consistency of dough or putty, it may be pressed into embossed molds for ornamental articles. When used as a grinding-wheel, touched with emery, it becomes a good cutter. Lastly, when mixed with ground cork, pressed on canvas by rollers, the canvas coated at the back with a layer of the same oil in the state of paint, and the upper or principal surface painted and printed, it becomes the linoleum floor-cloth.

Lino'leumville, in *New York*, a post-village of Richmond co. (Staten Island), 2 m. N.W. of Richmond, now part of Greater New York.

Lin'otype, *n.* A machine for arranging matrices for the letters and characters of a line, and making a cast therefrom in one piece or "slug" equivalent to a line of type. The name is also applied to the slug so formed. See TYPE-SETTING MACHINE.

Linox'in, *n.* (*Chem.*) A resinous substance, an oxidized product of linseed oil.

Lin'sang, *n.* (*Zoöl.*) A curious civet-cat (*q. v.*) of Fernando Po (*Poiana poënsis*), 38 inches long, and having a tail 40 inches long.

Lin'ton, SIR JAMES DAUMGOLE, artist, born in London, Dec. 26, 1840. He was made president of the Royal Institute of Painters in Water-colors, (1844). His favorite branch of art was water-color, and he did all in his power to raise its status. He had most success with his single figures. Of his oil paintings, his best works are: *The Marriage of the Duke of Albany*, and a series of pictures illustrative of the 16th century, for a private house at Nottingham.

Linton, WILLIAM JAMES, wood engraver and author, born in London, 1812; contributed drawings to the *Illustrated London News* from the first publication of that paper until he removed to the U. S., in 1867, executing some of its finest work. He has published *The Plain of Freedom*; *Claribel and Other Poems*; *Some Practical Hints on Wood Engraving*; *Life of Thomas Paine*; *A Manual of Wood Engraving*, &c. Died 1884.

Lin'wood, in *New Jersey*, a post-borough of Atlantic co., on W. J. & S. R. R. *Pop.* (1895) 526.

Li'on of St. Mark's. The heraldic device of Venice; a lion sejant, winged, and holding a book in which is inscribed, *Pax tibi, Marce, Evangelista meus*

Above the book is a sword with the point uppermost, and the whole is surrounded by an aureola. In representations of St. Mark as one of the four Evangelists he is almost invariably portrayed with a lion, winged or unwinged, but more usually winged, to distinguish the evangelist from St. Jerome, who is accompanied by an unwinged lion. St. Mark was adopted as the patron saint of Venice about 815 A. D., when some Venetian merchants robbed the sepulchre in Alexandria where he had been entombed after his martyrdom; his relics were carried to Venice, and the church of St. Mark's was erected over them. The legends of St. Mark are illustrated by many famous paintings in Venice, and the device of the winged lion is conspicuous in all public places about the city.

Lips'comb, in *Texas*, a N.N.W. co.; *area*, 900 sq. m.; intersected by Wolf creek. *Surface*, rolling; *soil*, a dark, sandy loam; timber scarce. *Products*, wheat, corn, and rye; large quantities of Kaffir corn and sorghum. Cattle, horses, and some sheep are raised. *Cap.* Lipscomb. *Pop.* (1897) 740.

Liq'nor Li'cense Laws. (*Law.*) Laws defining the conditions upon which particular pursuits may be licensed, and especially upon which the sale of alcoholic liquors may be licensed. It is assumed that such sale may not be permitted without specified restrictions, and with these is connected a special tax or fee. The power to grant licenses is denied to the U. S. government by the Constitution, except as to certain matters specially named; nevertheless, for the sake of revenue, the government has issued licenses to factories, stores, saloons, and druggists, to sell fermented and distilled liquors; but such licenses give no right to sell in defiance of State or municipal restrictions. Towns, cities, and counties also may issue local regulations, but these are regarded as only police regulations to carry out the license laws of the State. The States alone are recognized as having authority to enact such laws, but such authority has been recognized by the courts, no matter how restrictive the law, even to absolute prohibition.

The license laws of the different States have varied greatly. In 1851 Maine enacted a law of prohibition, which, though temporarily repealed, was soon re-enacted, and is still maintained. The example of Maine was followed in 1852 by Massachusetts, Rhode Island, and Vermont; in 1853, by Michigan; in 1854, by Connecticut; and in 1855, by Indiana, Delaware, Iowa, Nebraska, New York, New Hampshire, and Illinois. In some of those States the law was soon declared unconstitutional, and in most it was replaced by license laws. The manner of licensing has varied in different States. In Connecticut, for many years, licenses were granted by county commissioners of three members each, appointed by the legislature; but in 1893, a law was passed allowing appeals from the action of the commissioners to the judge of the Superior Court. In New York, licenses were issued by local boards of excise appointed by mayors of cities and other local authorities; but in 1895 these local excise boards were abolished, and licenses were issued by the State excise commissioner and his deputies. The license fee was increased, and the fees for the city of New York for 1896 amounted to $6,000,000, as compared with $1,700,000 under the former law. Of this, one-third goes by law to the State treasury, and two-thirds to the city. It was said that the new law—popularly known as the "Raines law," from its framer—closed many of the smaller saloons. Its provision that hotels may sell liquor on Sundays, and at all hours, "with a meal," opened the way to evasion, as the courts construed that a sandwich constituted a meal, and many saloons made a pretence of being hotels. In 1897, therefore, the law was amended to prevent such evasion, but only partly succeeded. Ohio adopted, in 1886, a tax law, known as the "Dow Law," which levied a uniform tax of $250 on all places where liquor is sold, but granted a license to any one willing to sell. It was urged that this would "take the saloon out of politics," and reduce the number of saloons and the amount of drinking. Ten years' trial showed a divided opinion as to the success of the law; but it remains in force. In 1896, the tax was increased to $500. Pennsylvania has a law somewhat similar, but giving discretion to the License Court to refuse licenses in certain neighborhoods where they think best. South Carolina, in 1893, adopted a law abolishing all saloons, and establishing a system of State dispensaries. A State board of control bought and tested liquors, and appointed county boards which appointed local dispensers, who could sell liquor only in bottles, not to be drunk on the premises. A State constabulary was appointed to enforce the law, with powers of search, confiscation, and arrest. A local option section enabled a town to prevent, by vote, the opening of a dispensary within its limits. There was continual opposition to the law; at Florence a mob destroyed the liquor in a dispensary, and at Darlington the constabulary were riotously resisted, with loss of life on both sides. Some companies of the militia refused to obey the governor's call to assist the constabulary in restoring order. Many illegal saloons were carried on under the popular name of "blind tigers;" in April, 1894, the State Supreme Court declared the law unconstitutional, and April 21 the dispensaries were closed. They were reopened, however, August 1, by proclamation of the governor, the decision of the court being interpreted as not forbidding, and in December, 1895, the State liquor commissioner reported that the profits of the State dispensaries for the year were $210,000. On Jan. 18, 1897, the United States Supreme Court decided that, so far as the law attempted to prevent a citizen from importing liquor into the State for his own use, it was a violation of the interstate commerce clause of the United States Constitution, and therefore null and void. This decision is regarded as taking from the law its effective force; and July 21, 1897, Judge Simonton, of South Carolina, enjoined the State constables from interfering with the traffic in original packages of liquor.

Lis'bon, in *North Dakota*, a post-village, cap. of Ransom co., 56 m. S.W. of Fargo on Nor. Pac. R.R.; has flour mills and a foundry. *Pop.* (1897) 1,150.

Litch'field, in *Kansas*, a post-village of Crawford co., on St. L. & S. F. R.R. *Pop.* (1897) 1,050.

Litchfield, in *Minnesota*, a post-village, cap. of Meeker co., 76 m. W. of St. Paul, on Gt. Nor. R.R.; has flour and woollen mills, brewery, tannery, and other manufactures. *Pop.* (1895) 2,044.

Lithæ'mia, *n.* [Gr. *lithos*, stone, and *haima*, blood.] (*Path.*) A diseased condition of the blood from an excess of uric acid.

Lith'agogue, *n.* [Gr. *lithos*, stone, and *agōgos*, leading, drawing.] (*Med.*) A medicine or preparation intended to expel stone from the bladder or kidneys.

Lithec'tasy, *n.* [Gr. *lithos*, stone, and *ectasis*, a stretching out.] (*Surg.*) The operation of removing stone from the bladder by dilating its neck, cutting into the perineum, and opening the urethra.

Lith'ia Water, *n.* See MINERAL WATERS.

Lithure'sis, *n.* [Gr. *lithos* and *ourēsis*.] (*Pathol.*) The passage of stone, or gravel, from the bladder through the urethra.

Lithu'ria, *n.* [Gr. *lithos*, and *ouron*.] (*Pathol.*) Lithic acid diathesis, in which the urates are deposited in excessive quantity; commonly caused by errors in diet, use of intoxicants, or a sedentary habit of body.

Lit'tell, ELIAKIM, was born at Burlington, N. J., Jan. 2, 1797. He learned the trade of a printer and began the publication at Philadelphia (1819) of the *National Recorder*. *The Museum of Foreign Literature*, which contained selections from the best European periodical literature, was published by him 1822. He subsequently removed to Boston, where he founded *Littell's Living Age*. Mr. Littell drafted the Clay Compromise Tariff in 1833. Died May 17, 1870.

Littell, ROBERT, son of Eliakim Littell, born May 5, 1831. Succeeded his father as publisher of *Littell's Living Age*. Died April 7, 1896.

Lit'tle River, in *Arkansas*, a S.W. co.; *area*, 547 sq. m.; bounded on the S. by Red river and on the N.E. by Little river, which enters Red river at the E. extremity of the county. Formed in 1867 from parts of Hempstead and Sevier counties. *Surface*, diversified; *soil*, fertile. *Products*, cotton, corn, pork; live stock. *Cap.* Richmond. *Pop.* (1890) 8,903.

Littré (*lēt-trā'*), MAXIMILIEN PAUL EMILE, publicist and philologer, was born at Paris, France, in 1801, and was educated for the practice of the medical profession, but, instead, devoted himself to its history and to the study of philology, and was admitted into the Academy of Inscriptions for his translation of the *Works of Hippocrates* (1839–61). He then became one of the editors of the *National* newspaper, and published an able defence of the new philosophical and social doctrine advanced by Auguste Compte, under the title *De la Philosophie Positif* (1845). In 1844, he was engaged by the Academy of Inscriptions to form one of a commission appointed to continue the *Histoire Littéraire de France*, and in 1854 entered upon the editorship of the *Journal des Savants*. In 1867, he established a new review, *La Philosophie Positif*. In January, 1871, M. Gambetta appointed him professor of History and Geography in the Ecole Polytechnique, which was opened at Bordeaux during the siege of Paris; and in December of the same year he was elected to the French Academy. Foremost among his works are the *Dictionaire de la Langue Française*, the greatest and most admirable production of its kind which has yet appeared in any language, a *Supplement* to which appeared in 1878, and *Histoire de la Langue Française* (1862). In 1875, L. was elected a senator for life. Died in 1881.

Liu-kiu, or **Loochoo.** (*Geog.*) A group of islands lying S.W. of Japan, annexed to the Japanese Empire in 1874. The most important among them are Okinawa and Oshima. Their principal port is Nafa. There are in all about 30 islands, producing rice, millet, sugar, cotton, tobacco, indigo, and tea; also bananas, oranges peaches. The inhabitants are closely allied in descent to the Japanese, and their religion is a form of Buddhism. A delegation of nobles and their servants from L. reside in Tokio, Japan; and three L. ambassadors were present at the opening of the first Japanese railway, in 1872. *Pop.* (1897) about 440,500.

Live Oak, in *Florida*, a post-village, cap of Suwanee co., 82 m. W. of Jacksonville; has saw mills, turpentine-distilleries and cotton-gins; early vegetables are raised for the North. *Pop.* (1897) 1,120.

Liv'ermore, in *Iowa*, a post-town of Humboldt co., 105 m. N. of Des Moines, on B., C. R. & N. and M. & St. L. R.Rs.; has a large creamery, brick and tile factory, and farming and stock-raising interests. *Pop.* (1895) 631.

Liv'ingston, in *Montana*, a city, cap. of Park co., 100 m. E. of Helena, on Nor. Pac. R.R.; has a railroad car shop; in a mining district. *Pop.* (1897) 3,440.

Livo'nia Sta'tion, in *New York*, a post-village of Livingston co., 30 m. S. of Rochester, on Erie R.R. *Pop.* (1897) 780.

Lla'no Estaca'do. [Span.] (*Geog.*) The "staked plain;" a vast waterless plateau in Texas and New Mexico.

Lloyd's, *n.* (*Ins.* and *Com.*) An English corporation created for the purpose of facilitating the business of marine insurance. Though incorporated so recently as 1871, the institution dates back to the 17th century, when ship-brokers and marine insurers were accustomed to meet at "Lloyd's Coffee-House," kept by Edward Lloyd, first in Tower Street, London, and subsequently in Lombard Street. This place became the headquarters of the Board of Underwriters, who, in 1774, removed to rooms in the Royal Exchange, the first floor of which is now occupied by "Lloyd's." This is the center where the business of marine insurance is transacted in London, and where the earliest shipping intelligence from all parts of the world is posted for the information of subscribers, whether merchants, shippers or underwriters. The system is so arranged that individual underwriters risk no more than from £100 to £150 on any single vessel. The concerns of the corporation are administered by a committee of 12 members. *Lloyd's List*, published by the corporation, was issued as a weekly from 1716 to 1800, since which time it has appeared as a daily, with the fullest shipping intelligence. The name has become so famous that it has been applied to similar institutions elsewhere, of which the best known are the Austrian Lloyd's at Trieste, and the North German Lloyd's at Bremen.

Lo, *n.* A word sometimes sportively applied as a generic name for an American Indian—a play on the word in the line of poetry, "Lo! the poor Indian, whose untutored mind," &c., in Pope's *Essay on Man*.

Loan and Trust Company. In the United States, a chartered institution, empowered to accept and execute trusts, to issue obligations for money or other property on deposit with it, and to lend money, on security, at the legal rate of interest. These institutions very frequently act as underwriters for extensive issues of bonds secured by mortgage upon railroad or other large properties, &c.

Loan Society. An association established for the purpose of advancing money on loan to the working classes, to be repaid, with interest, by installments.

Loan'-office, *n.* A public office where loans are arranged for the public, the accounts of the lenders kept, and the interest paid to them.—A pawnbroker's shop.

Loan-word, *n.* (*Philol.*) A word taken from another language, usually to express an idea of some invention, product or social institution for which the language borrowing has no exact representative.

Loaves and Fishes. A figurative expression—taken from Christ's charge to the multitude (John vi., 26), that they followed Him for the "loaves and fishes;" denoting personal gains or advantages of a sordid character, or objects pursued from unworthy motives.

Lob Lie-by-the-fire. The lubber fiend, an ungainly brownie supposed to haunt the homesteads in the north of England and Scotland; described as having no more ambition than to do the hardest work of the laborers for the sake of food and shelter.

Lo'cal, *n.* An item or paragraph of news having reference to one particular locality.—A local battery or circuit.—An accommodation, or a suburban, railway train.

Lo'cal Op'tion (Liquor) Laws. (*Law.*) Laws by which a State empowers a town, city or other political division of itself to decide by vote of the locality whether the sale of liquor shall there be licensed or prohibited. Many of the States in the American Union have such laws, which differ in their specific details. Massachusetts repealed its law of prohibition in 1874, and enacted that towns and cities might, if they pleased, vote annually whether licenses should be granted within their borders. In 1881 the law was amended so that every city and town was required to submit this question annually to popular vote. In January, 1897, it appeared that in fifteen years there had been a steady growth in the number of votes cast against license, and in the number of towns and cities forbidding it. If the town votes to permit license, the commissioners are still authorized to refuse it wherever they think best. In 1887 the city of Cambridge voted to issue no license, and in May, 1897, the tenth anniversary of the permanent banishment of the saloon was celebrated in the churches, schools, and factories with great enthusiasm. Indiana passed in 1895 the "Nicholson Law," which provides for local option. Iowa had a prohibitory law until 1893, when a law was enacted permitting license in localities where a majority of the voters signify that as their desire. The law of New York allows the forbidding of license by local option, and in the spring election of 1897 of 942 towns 266 voted no license; 358 voted to grant licenses to saloons, stores, hotels, and druggists; 115 voted for hotel and drug licenses only; 34 for drug only; 24 for store, hotel and drug only; 23 for saloon, drug and hotel; 4 for store and hotel; 2 for saloon, hotel and store; and 1 for store and drug. Texas has a system of local option by towns, cities, counties, justice precincts, or school districts. Virginia has a local option law, under which the city of Norfolk was carried for prohibition in 1894.

Locale (*lo-cäl'*), *n.* A particular spot, place, or locality.—A form of speech or other thing of local use or limitation.

Lock, Yale. (*Mech.*) The Yale lock, invented by Linus Yale, Jr., marked a distinct step in advance of the tumbler lock. The idea that a big key was necessary for a safe and certain fastening went out with the adoption of the new principle. The principle of the Yale lock is best understood by reference to the illustration, in which *l* is the body or box of the lock; *b*, the movable barrel that turns within the box; *s*, springs tending to hold down the pins, *p*. When the key, *k*, is

inserted, it elevates the pins according to its contour, so that the division of the pins coincides with the upper line of the barrel, and allows the barrel to be turned, shooting the bolt of the lock (which is not shown in the illustration). The face of the key may be varied, and the pins arranged to correspond, so that each lock may be different from every other. The combinations are further broken up by placing lengthwise corrugations on the key, these also being subject to variation in form. Another style of Yale lock is used for front doors, and has a latch bolt, opened during the day by an ordinary Yale key. There is also a dead bolt, intended to be locked from the inside at night, for extra security, by means of a special key. When both

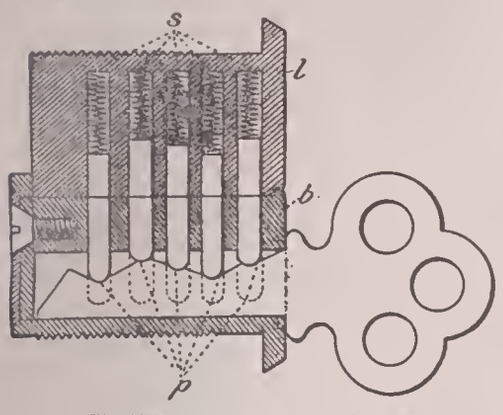


Fig. 2966.—SECTION OF A YALE LOCK.
s, springs; *l*, lock; *b*, barrel; *k*, key; *p*, pins.

bolts are shot, they may be opened from the outside by a full turn, which unlocks the dead-bolt, and a partial turn, which releases the latch-bolt. The Yale locks made for hotels, staterooms, &c., are double, a master-key being used that will open all the doors in one establishment, while the individual keys will only open their individual locks. These locks have two barrels and key-holes, and the turning of either draws the bolt. One set of barrels being made all alike, the master-key serves for all. The Corbin post-office lock-box, adopted by the U. S., is made on the Yale principle, but is so adjustable from the inside that when the keys are lost the postmaster can alter the pins, and furnish a new key for the same, the old keys being thereafter useless. The Corbins also make a master-key lock, having two different keys, operating on spring pins, one key in a manner reverse to the other, so that one may be used as a master-key, and the other as a minor or individual key. The Miller Co. make a keyless door-lock, which may be turned from the inside by a knob, but from the outside requires three turns, according to the numbers to which the combination is set. Another recent form of door-lock is the Sargent "easy-spring" lock, which has a reversible bolt, so that it may be used for either a right or a left hand door. For early forms of lock, see LOCK, in the body of this work, and for combination-locks, time-locks, and other forms of safe-locks, see SAFE-LOCK in SECTION II.

Lock'-step, *n.* (*Milit.*) A mode of marching by a body of men arranged in close file, the movement of each man being simultaneous with that of the one in front of him.

Lock'-stitch, *n.* A sewing-machine stitch, the lower thread being made to pass through a loop in the upper and interlocking.

Lock'wood, BELVA ANN BENNETT, lawyer, was born at Royalston, N. Y., Oct. 24, 1830. She attended a district school, and taught at fifteen; married at eighteen; was a widow at nineteen; wrote for papers and magazines; graduated at Genesee College, at Lima, N. Y., at twenty-seven; taught school eleven years; was married to Dr Ezekiel Lockwood in 1868; studied law; graduated at the National University at Washington, D. C., and was admitted to the bar of the District in 1873. She was nominated, in 1888, for President of the United States, by the Equal Rights party.

Lockwood, in *Missouri*, a post-village of Dade co., 8 m. W. of Greenfield, on K. C., Ft. S. & M. R. R. *Pop.* (1897) 720.

Lock'yer, JOSEPH NORMAN, astronomer, was born at Rugby, England, in 1836. His first important discovery, which was also made by Janssen, was that the solar protuberances were of glowing hydrogen, and might be observed on clear days with a spectroscope of sufficient power. In 1870, he was made secretary of the Royal Commission on Scientific Instruction and the Advancement of Science. Two years previously he had been elected a Fellow of the Royal Society. In 1862, he published an important monograph on *The Configuration of the Land and Water on the Planet Mars*, and in 1866 proposed a method for observing the red flames of the sun without an eclipse, which method he successfully applied in 1868. In 1870, Mr. *L.* was appointed chief of the English Government eclipse expedition to Sicily in 1870, and became Bede lecturer on Astronomy to the University of Cambridge in 1871. He is also editor of *Nature*, a popular scientific periodical commenced in 1869

Lo'comobile. A form of automobile in which steam, generated by a gasoline flame, is the motor power. See CARRIAGES, MOTOR.

Locomo'tive, *n.* (*Mech.* and *R. R.*) During the seventy years that have elapsed since the introduction of the steam locomotive, the development in the Old and New World has been marked by considerable differences of structure, arising from the dissimilar conditions of railway travel in sparsely settled America and thickly populated Europe. In the United States the trackage is much greater in comparison with the amount of haulage than is the case in the Old World, and lighter and cheaper rails and ties are as a consequence more desirable ne an economy. The difference in the cost of labor has also exercised an undoubted influence in the forms developed. To these causes may be added the desire on the part of American designers to produce engines which would pull heavy trains in quick time; whereas the English early settled the matter of heavy trains by dividing them into sections. European locomotives generally are distinguished by small cabs, heavy framing, with cylinders set inside, and by the more general absence of trucks or bogies. The lighter tracks and shorter curves used on American railways have caused the universal use of leading trucks to assist the locomotive in rounding curves by their ability to swing and afford lateral motion. The cylinders are universally placed outside the frames, and the commodious cab, cow-catcher, and single headlight have been other distinctive features of American manufacture.

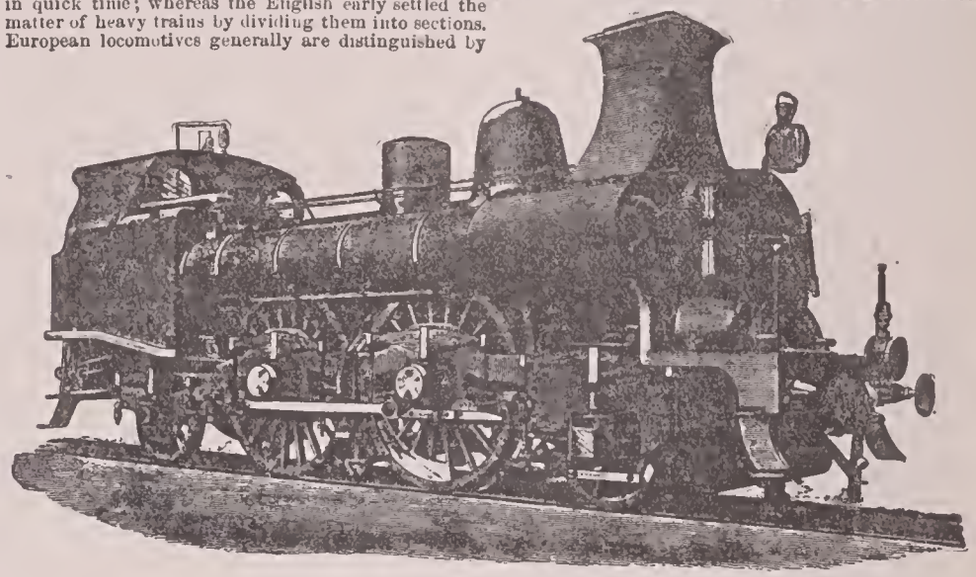


Fig. 2967.—TRIPLE-BOILER LOCOMOTIVE, BELGIAN STATE RAILWAY.

The distinction among locomotives designed for different uses begins with the passenger and freight engine, the former being constructed for speed, with a light train, and requiring but small tractive power, so that large-diameter drivers are employed, together with a small piston-stroke, and a boiler of large capacity; while the latter, being built for comparatively slow speed and great hauling capacity, permit of small drivers and large cylinders, but demand great adhesive weight. In American practice locomotives are further developed into types, as follows: (1) *Decapod heavy freight*, having 10 drivers, and a 2-wheeled truck in front. (2) *Consolidation heavy freight*, 8 drivers, and 2-wheeled truck in front. (3) *Fast freight ten-wheeler*, 6 drivers and 4-wheeled truck in front. (4) *Mogul freight*, 6 drivers, and 2-wheeled truck in front. (5) *Express passenger*, 4 drivers, and 4-wheeled truck in front. (6) *Express passenger*, 4 drivers, and 2-wheeled truck in front, and 2-wheeled truck in rear. (7) *Local passenger, back tank* (that is, with tank on rear of engine, instead of having tender, as have all the previous mentioned types), 4 drivers, 2-wheeled truck in front and 4-wheeled truck in rear. (8) *Local passenger, tank on boiler*, 4 drivers, 2-wheeled truck in front and 2-wheeled truck in rear. (9) *Heavy switching, tank on boiler*, 6 drivers, no trucks. (10) *Switching and local passenger*, 4 drivers, back tank, 2-wheeled truck in rear, and sometimes also in front. (11) *Switching and local*, 4 drivers, and various arrangements of tanks and trucks. (12) *Switching service*, 4 drivers, no trucks, tank on boiler, or with tender.

The principal parts of the locomotive are the boiler, cylinders, pistons, steam chests, frame, wheels, trucks, grate-work, link-motion, pilot, smoke-stack, bumpers, water-tank, steam-brake, &c. The boilers are made horizontal, with tubes running lengthwise, and fire-box in the rear and below, the gaseous products of combustion leading into the smoke-stack. The cylinders were placed singly, one on each side at the forward end, until the system of compounding came in, since which time two cylinders on a side have become common. The compounding of the cylinders is the most important of modern improvements in the steam locomotive. It has a double advantage, the steam being more fully expanded, thus getting more force from the same boiler pressure, and the heat being better retained, so that the same amount of fuel will produce more steam. The principle of its operation is the re-expansion of the steam, after use in a high-pressure cylinder, in another cylinder of low pressure. This practically necessitates the doubling of the number of cylinders, and the added low-pressure cylinders have to be made larger than the high-pressure cylinders. Three types of compounding are in use: (1) The Baldwin plan of placing 2 cylinders forward on each side. This is the most common form, presenting the advantages that the steam may pass directly from one cylinder to the other without the intervention of a receiver; short conduit between cylinders; simple valve construction; equal force on either side of engine; and either side of engine being operable without the other; no material interference with existing construction. (2) The Rogers plan of placing a large low-pressure cylinder in connection with the piston on one side, and a small high-pressure cylinder in connection with the piston on the other side, thus doing away with the need of 2 added cylinders, but at the loss of making the locomotive one-sided—that is, with more power on the high-pressure side. (3) The Providence plan of building concentric cylinders—that is, one within the other, the low pressure outside. This form presents most of the advantages of No. 1, but with the disadvantage that the increased width interferes more with existing construction of the remainder of the locomotive. A tandem arrangement of cylinders has also been tried, but never came into practical use. Tests were made in 1891 by the Pennsylvania Railroad Company of con-

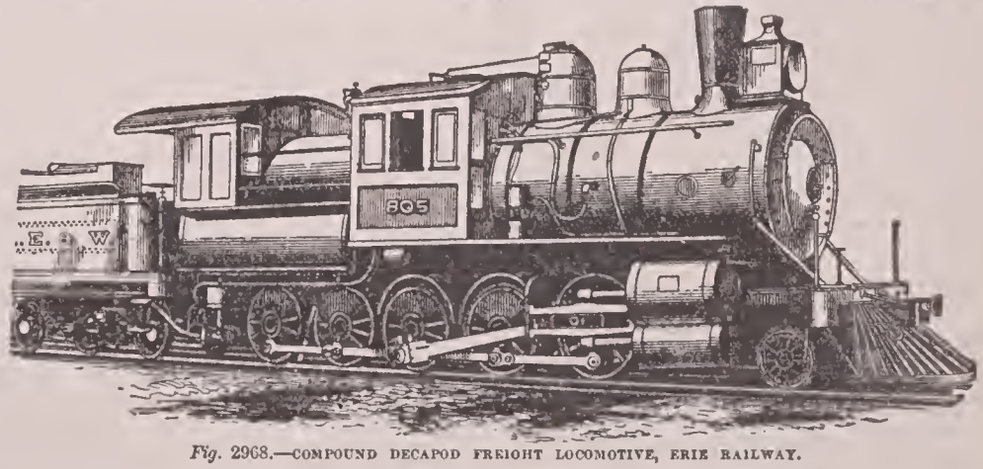


Fig. 2968.—COMPOUND DECAPOD FREIGHT LOCOMOTIVE, ERIE RAILWAY.

solidation locomotives of the old or standard type and of the compound type, with the result that the compound showed a saving of 36·2 in percentage of train hauled per pound of coal and a gain of 17·9 in percentage of water evaporated per pound of coal. The standard locomotive hauled 122·6 pounds of train per pound of coal, and the compound locomotive 192.2 pounds of train per pound of coal. The driving-wheels of locomotives vary between about 3½ feet on the switching engines to 7 and 8 feet on some passenger engines. Where more than 4 driving-wheels are used the flanges of the wheels are omitted from some of the couples to allow of greater ease in rounding curves, for the drivers, being all linked solidly together, cannot have their axles pivoted like those of a truck, which can pass around a short curve. In rounding a curve, the inner rail being shorter in circumferential measure, the drivers on that side must either slip, or drag the opposite drivers ahead. This is one principal reason why short curves are impracticable on steam railways, and the frequency of comparatively short curves on American railways is the cause of trucks being universally used on locomotives in the Western Hemisphere. The link-motion is important in the economy of the locomotive, since it constitutes a veritable cut-off for the steam, and also controls the valves for the purpose of starting or reversing the engine. When the locomotive requires little power to drive it, as when running easily on a good grade, the link-motion serves to cut off the supply of steam to the cylinders at an early point in the stroke of the pistons, thus saving steam; when the locomotive requires extra power, as in starting or taking a heavy grade the link-motion delays the cut-off of steam, giving the cylinders a greater quantity to accomplish the extra work demanded of them. The smoke-stack has been much reduced in size during the development of the locomotive, and the smoke nuisance correspondingly abated, owing to superior construction. The short straight stacks now in use are a vast improvement over the great broad stacks of 30 years ago.

The early locomotives were small, and even in 1845 the average American locomotive did not weigh over 20 tons, and carried a pressure of only about 100 pounds. The cylinders were 15 or 16 inches in diameter and 20 to 22 stroke, and the drivers 4½ to 5 feet. In 1848, the Baldwin works, having an order for a locomotive that would run 60 miles an hour, increased the cylinders to 17½ x 20, and the drivers to 6½ feet. Shortly after that date 7- and 8-foot wheels were tried, but found unsatisfactory, with the result of a return to 5- and 6-foot diameters. In recent practice, however, 7-foot drivers have come in again, the increased weights now used increasing the tractive adhesion so that these large sizes are practical. Steam pressures have also been increased, being now 180 to 200 pounds. The cost of an average locomotive is little less than $10,000, and its life about 30 years. A few minor parts require renewal in less than a year. Boiler-tubes last about 5 years and crank-axles 6 years. The boiler and fire-boxes will average 8 or 10 years, while most of the other parts ought to hold out the full 30 years. As a matter of fact, the railway companies do not allow the parts to wear out, preferring to throw them away when their life is presumably half exhausted to waiting for them to break down and cause accidents. The first 25 or 30 locomotives used in the U. S. were imported from England. It was not until 1846 that the industry of building them may be said to have become well established here. By that date the Baldwin works had turned out 42 locomotives, and the Rogers works 17. In 1896 the output of the Baldwin works footed up a total of 15,000, and the Rogers over 5,000, while perhaps as many more have been manufactured by smaller concerns, including railways conducting their own shops. It is estimated that 36,000 locomotives are now in use on American railways, their total value being about $300,000,000.

During several years past the yearly output of locomotives has been reduced, partly because the market was well supplied in advance, and partly because of hard times, but principally because the competition of the electric roads has diminished the passenger business of the large steam railways.

Two noteworthy speed records have been made in America, one on the New York & Hudson River Railroad, and one on the Lake Shore & Michigan Southern Railway. The former was made by engine No. 999, which hauls the Empire State Express between New York and Buffalo, and which is credited with making a single mile inside of 36 seconds. Its record between New York and East Buffalo (a distance of 436·32 miles) is 439·45 minutes, including all stops, or at a speed of about 64 miles an hour, exclusive of all stops. The train weighed 361,000 pounds, and the locomotive was built at the shops of the Central Company. The Lake Shore & Michigan Southern R. R. engine, built at the Brooks Locomotive Works, has a faster record than the foregoing, having made a 510-mile run from Chicago to Buffalo at a speed of a trifle over 65 miles an hour, exclusive of stops. The train weighed 305,000 pounds, and 86 miles of the distance was covered at the speed of 72·92 miles an hour, 33 miles at 80·6 an hour, 8 miles at 85·44 miles an hour; one mile in less than 39 seconds. The 33-mile record is considerably ahead of any locomotive speed recorded elsewhere, and that it should have been accomplished by an engine with simple cylinders, 17x24 inches, with six 5½-foot drivers, renders it still further remarkable. The N. Y. Central engine No. 999 has 19x24 simple cylinders, and four drivers over 7 feet in diameter; it carries a steam pressure of 190 pounds. Among the best speed records made in England may be noted the Manchester and London express, whose running time is 52 miles an hour, exclusive of stops. This train has a record of over 12 miles at a speed of 77·15 miles per hour. The Scotch express, from London to York, has made the run of 105 miles in 105 minutes, drawing a train of 210,000 pounds. The performance of freight locomotives cannot be measured in the same way as passenger locomotives, as these must be judged by what they will draw. The decapod freight engine No. 805, Lake Erie & Western Railroad (Baldwin make) is credited with the remarkable performance of hauling a train of over 1,100 tons, comprising 33 cars, from West Carbondale to Ararat Summit, with a consumption of but 8·28 pounds of fuel per car mile, and

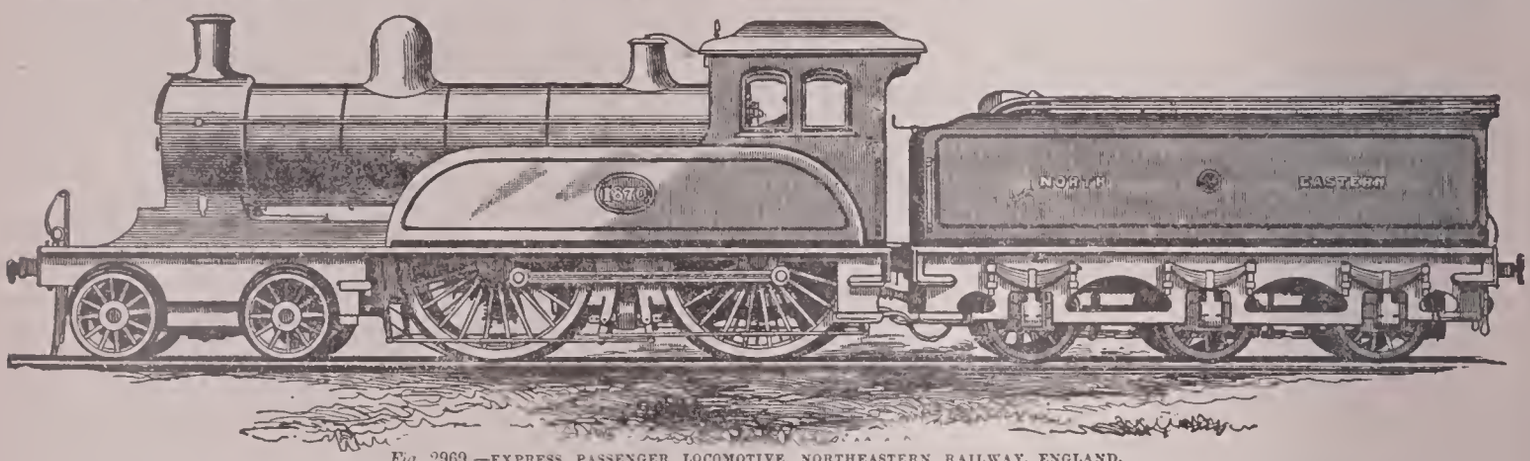


Fig. 2969.—EXPRESS PASSENGER LOCOMOTIVE, NORTHEASTERN RAILWAY, ENGLAND.

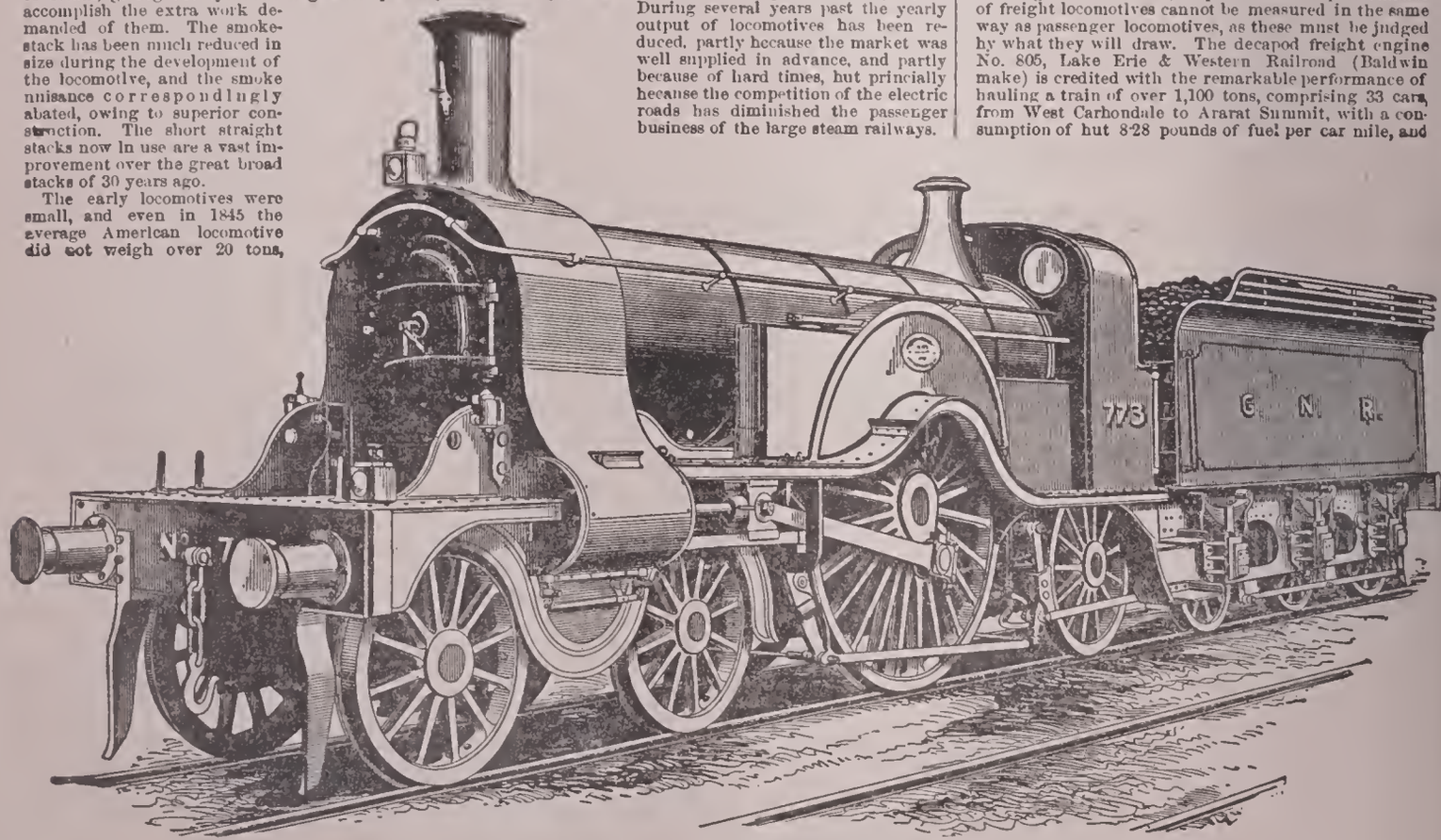
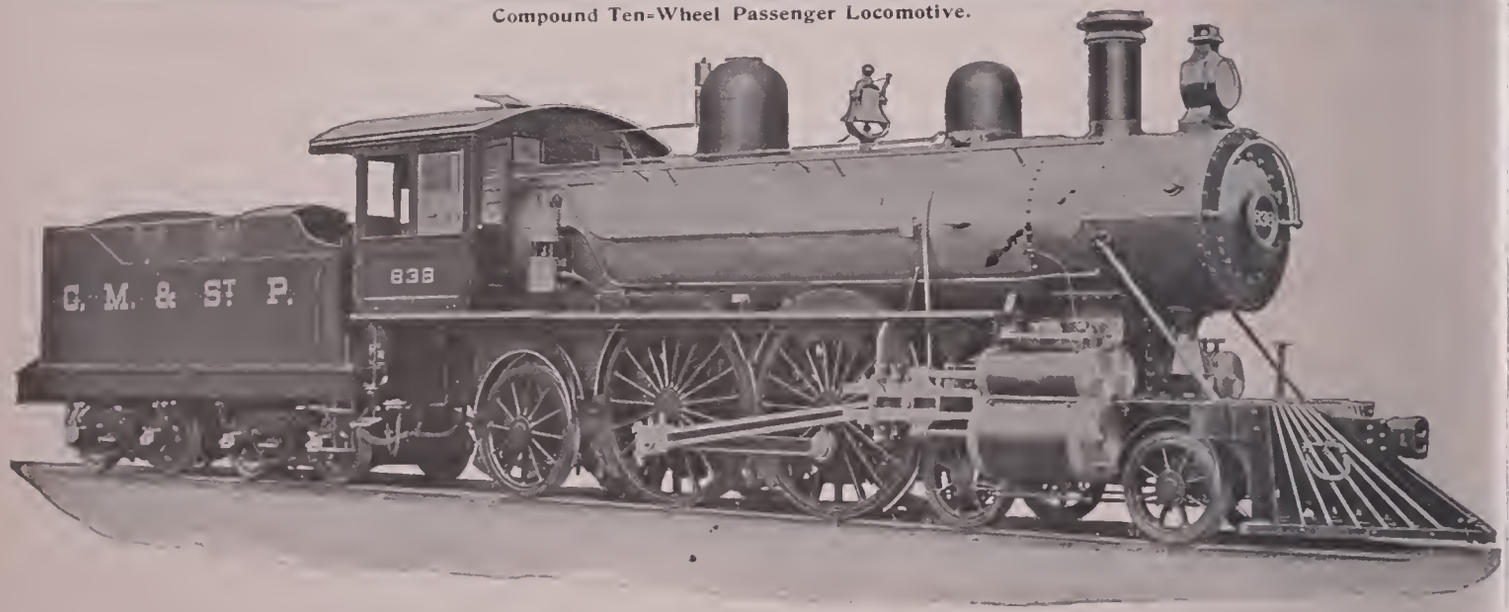


Fig. 2970.—EXPRESS PASSENGER LOCOMOTIVE, GREAT NORTHERN RAILWAY, ENGLAND.

Compound American Type Passenger Locomotive.

Compound Ten-Wheel Passenger Locomotive.



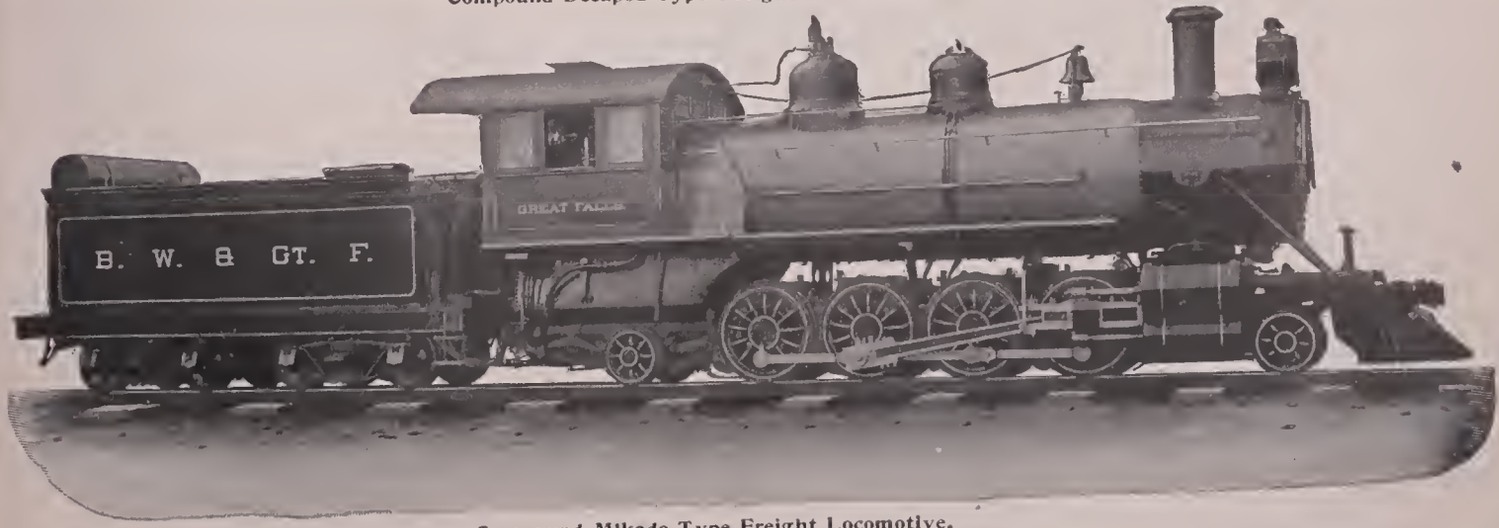
Compound Atlantic Type Passenger Locomotive.

Compound Prairie Type Passenger Locomotive.

Consolidation Type Freight Locomotive, with Vanderbilt Boiler.

Compound Mogul Type Freight Locomotive.

Compound Decapod Type Freight Locomotive.



Compound Mikado Type Freight Locomotive.

GR AND FREIGHT LOCOMOTIVES.

a water evaporation of 7·57 pounds per pound of coal. A considerable portion of the route had a grade of 1 per cent., which means that the locomotive was obliged to lift the whole train about 17 feet every time it covered its length. This locomotive has 50-inch drivers, and compound cylinders of 28-inch stroke, and of 16 and 27 inches diameter, respectively. The total weight is 192,000 pounds, of which 170,000 rests on the drivers, and is useful for tractive effect.

The annexed table gives a comparison between the best locomotives on American and English roads. It illustrates some of the differences in construction in the two countries. It will be noted that the English locomotives, though the lightest of the group, have the largest cylinders and materially larger drivers, while the heating surface is markedly less than that of the American locomotives.

Dimensions.	*G. N. R., England, 773.*	*N. E. R., England, 1870.*	*N. Y. C., 999.*	*C., B. & Q., 590.*	*N. Y., N. H. & H., 403.*
Total weight	90,300 pounds.	113,792 pounds.	124,000 pounds.	138,000 pounds.	131,000 pounds.
Cylinders	18 x 24 inches.	20 x 26 inches.	19 x 24 inches.	19 x 26 inches.	20 x 24 inches.
Weight on drivers	34,000 pounds.	77,056 pounds.	84,000 pounds.	84,000 pounds.	86,000 pounds.
Boiler type	Straight.	Straight.	Wagon top.	Straight.	Extended wagon top.
Boiler pressure	160 pounds.	180 pounds.	190 pounds.	200 pounds.	190 pounds.
Boiler diameter	50 inches.	52 inches.	58 inches.	58¾ inches.	62⅜ inches.
Number of tubes	174	201	268	210	312
Heating surface	1,045 square feet.	1,216 square feet.	1,930·37 square feet.	1,580·1 square feet.	2,114·24 square feet.
Grate area	17·75 square feet.	20·7 square feet.	30·7 square feet.	24·47 square feet.	30·22 square feet.
Maximum travel of valve	.....	4⅝ inches.	5½ inches.	6 inches.	6 inches.
Drivers—diameter	96 inches.	91¼ inches.	86 inches.	84¼ inches.	73 inches.
Driving-wheel base	.....	9 feet 6 inches.	8 feet 6 inches.	7 feet 6 inches.	8 feet 6 inches.
Tender—water capacity	3,500 gallons.	4,000 gallons.	3,587 gallons.	4,000 gallons.	4,500 gallons.
Tender—coal capacity	5 tons.	5¾ tons.	6½ tons.	7 tons.	8½ tons.

The Northeastern Railway locomotive, No. 1870, is probably the best of its type in England, being the most recent development of the competition between the east and west coast routes from London to Scotland. It was designed by Wilson Worsdell, and copies the American cab and forward truck. The cylinders are simple, like those of the record-breaking American engines, this type being considered productive of the highest speed, though more wasteful of coal than the compound cylinders.

The Great Northern Railway locomotive entered in the table differs from all the others in that it has a single pair of drivers, this accounting for the much less weight on the drivers than is the case with the others. Though of a type which has not been generally copied or approved, this engine possesses great speed combined with economy in coal consumption. While the American express locomotives have the greater hauling power, and in two instances have shown greater speed, it is probable that express speeds in England average higher than in America, as the better roadways render fast time safer. The English locomotives also have an advantage in saving coal.

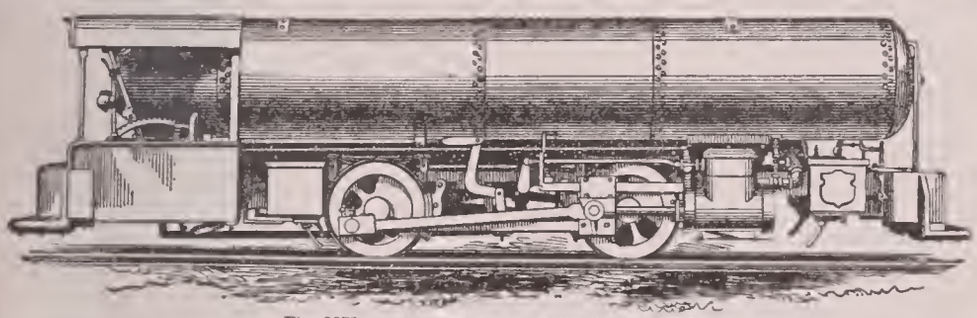


Fig. 2971.—COMPRESSED-AIR MINE LOCOMOTIVE.

Locomotives for mine use underground are constructed usually with 4 drivers of about 30 inches diameter, being necessarily small and low because of the small passages through which they have to travel. The Baldwins build them with a wheel base of 46 to 60 inches; piston-stroke of 12 to 14 inches; heating capacity of firebox, 24 to 38·5 square feet; heating capacity of tubes, 105 to 234 square feet; weight, 13,000 to 20,000 pounds empty; length, 15 to 18¼ feet. The smoke nuisance underground has led to the development and adoption of both compressed air and electric locomotives for mines. The Porter compressed-air mine-locomotive consists of a truck bearing a frame on which are supported two large cylindrical tanks of 130 cubic feet combined capacity, together with the necessary cylinders, pistons, &c., and a miniature cab for the engineer. The entire weight is 18,500 pounds, length 17½ feet, width 5 feet, and height 5 feet. The drivers are of 24 inches diameter, four-coupled, and the cylinder 7 inches diameter with 14 inches stroke. One of these locomotives, used by the Susquehanna Coal Company, at Glen Lyon, Pa., 1,000 feet below the surface, is supplied with air from a compressor on the surface, being piped down to three charging stations along the gangway. At each charging station a large tee is located on the main pipe, with a 1½ inch opening, and a flexible metallic joint for convenient connection with the tanks of the locomotive. Gate-valves are also provided for shutting off other sections of the line not in use. This locomotive hauls 16 empty cars up a 1·07 per cent. grade, their weight being 40,000 pounds, and brings them down grade loaded, over a round trip of 6,800 feet, with one charge of air, starting with a pressure of 575 pounds, and ending with 100 pounds. The Baldwin-Westinghouse electric mine-locomotives are built in sizes from 50 to 200 horse-power, and with a draw-bar pull of 3,000 to 10,000 or 12,000 pounds. The power is taken from a wire by a trolley-pole, or two trolley-poles in the larger sizes. The motors are hinged to the axle on one side, and supported by springs on the other, so as to avoid jar. Reduction gearing is used in oil-tight cases. The normal speed is 10 miles an hour, but by shifting the gearing this may be increased to 25 miles. The larger sizes, as the one shown in the illustration, have six drivers, connected with parallel rods, to reduce the tendency to slippage. The motors have fields of cast steel, and are ironclad, being little affected by moisture. They are shielded and protected so as not to be liable to injury from falling rock. This locomotive has 33-inch driving-wheels, is 18 feet long, 6·02 wide, and 5·06 high. It will draw 40 loaded cars up a 2 per cent. grade at a speed of 6 miles an hour. The electrical equipment includes 2 100-horse-power Westingbouse motors, 1 rheostat, 1 controller, 2 trolleys, 2 electric headlights, and a lightning-arrester. The controller is of the commutator type, and can be operated from either end. No reversing switch is required, the change of direction of travel being accomplished by changing the direction of rotation of the controller-handle. The lighting apparatus is not dependent upon the operation of the motors, and there being 2 trolley-poles, the likelihood of extinguishing the lights is much less than with electric street cars.

The tank locomotive is so called because the tank is built on the locomotive frame, and the tender is dispensed with. The arrangement adds to the tractive force, but is used only on small locomotives, as it adds too much to the length. Sometimes the tank is placed on top of the boiler, when the name saddle-tank locomotive is applied. Another form is named the camel-back, having a sloping fire-box, and the cab located midway of the length of the boiler. When constructed with two pilots and two headlights, to run either way, the name double-ender is applied, although this name was also given to Fairlie's locomotive, which resembled two locomotives built back to back, with a cab in the center. This had four cylinders, and was mounted on two center-pin trucks, each of six coupled wheels. The Meyers locomotive, of which a few have been operated in Belgium, had a single boiler, and four cylinders near the center. The Petiet locomotive, used on a French railway, also had four cylinders. Double-piston locomotives have also been tried, the object being to balance the cranks by placing them 180° apart; but although the engines were steadier, the complication of parts proved disadvantageous. For very steep grades, as at Mt. Cenis and Mt. Washington, locomotives have been built with central rollers made to press sidewise against a third central rail. The locomotives for other mountain railways, as those at Rigi and Pike's Peak, have slow-running gears that grasp a central-toothed rail. These are known as geared locomotives. (See INCLINED PLANES.) The Mason locomotive is mounted on two three-wheeled trucks, the boiler and tender being all on one long frame. Fink's locomotive, for steep grades and short curves, has ten wheels so coupled that the axles will work a little out of the parallel, and allow the turning of a comparatively short curve. The Strong locomotive has a cylindrical, corrugated and bifurcated fire-box, and a valve-gear that may be worked either forward or backward from a single eccentric. The Forney locomotive, used on the elevated roads in New York city, has a rear extension of the frame supported by a truck, on which are placed the tank and bunkers. Logging locomotives are sometimes built with wheels having enormous flanges on both sides, so that they present a concave tread, fitting them to ride on rails made from roughly hewn timber—a form that was previously used on some early American railways.

The first electric locomotive to travel any considerable distance is believed to be the one constructed by Prof. C. C. Page, of the Smithsonian Institution. (See ELECTRIC RAILWAY.) This was experimental, as was also the electric locomotive exhibited in 1879 by Dr. Siemens, in Berlin. Thomas A. Edison and Stephen D. Field exhibited an electric locomotive at the Chicago Railway Exposition in 1883. Their engine consisted of an electric motor mounted on a carriage and operating the driving wheels by simple belts and pulleys. This locomotive made a speed of 12 miles an hour on a short circular track. About 1883, Leo Daft developed an electric locomotive, and built several of them for exhibition purposes and pleasure railways. It was tried on the street railway in Baltimore, and also on the elevated system in New York city, but was not deemed efficient enough to supplant the trolley or steam. Mine locomotives operating by electricity were introduced by the Thomson-Houston Company about 1891, and are also built by the Baldwin and Westinghouse companies, as previously noted. The Heilmann electric locomotive, constructed in France, consists of an entire electric plant, mounted on a frame with 16 drivers. It is an enormous machine, comprising a modern boiler with compound condensing engine direct-connected with a large dynamo. The dynamo delivers the power to the motors, of which there are eight, one located on each

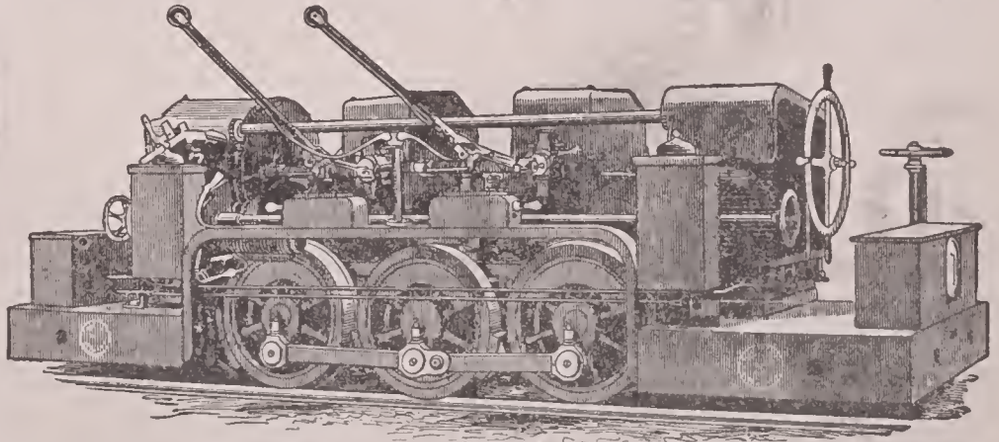


Fig. 2972.—SIX-WHEEL ELECTRIC MINE LOCOMOTIVE.

axle. The smoke-stack and boiler are at the rear end, and the cab in front. Three or more of these locomotives have been built, but they are still regarded as experimental, being severely criticized by electrical engineers for carrying a whole steam-manufacturing plant, which might be relegated to a power-house, the current being carried along on a conductor as a third rail. Nevertheless, the reports of their efficiency are encouraging to those interested, and some have been conditionally ordered by a French railway.

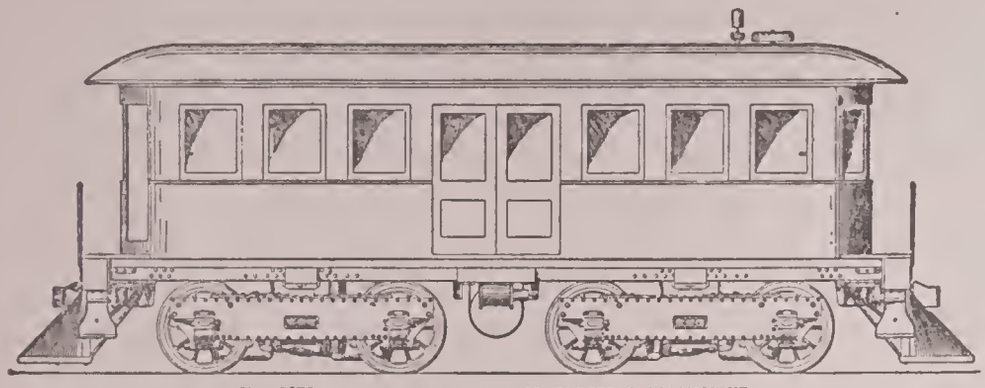


Fig. 2973.—EIGHT-WHEEL EXPRESS ELECTRIC LOCOMOTIVE.

The electric locomotive built by the General Electric Company for use in the Belt Line tunnel of the Baltimore & Ohio road is the largest and most efficient in operation up to that date (1895), weighing 95 tons. It takes its current from an overhead conductor, which is a heavy grooved bar of copper, along which runs a sliding piece in place of the trolley wheel common in street-railway service. In place of a trolley pole a lazy tongs device carries the current from the slider to the motors. There are four of these, mounted on as many axles, so that each axle becomes identical with the central rotating part of the motor. In other words, each pair of drivers is connected through the center of the armature of a motor, so that the connection is direct and gearless. The motors are six-pole and flexibly supported upon the trucks, the armatures being also flexibly coupled to the axles, each armature being on a hollow shaft, through which the axle passes. The drivers are 62 inches in diameter, and each pair being unconnected, the locomotive takes easily to curves. The cab stands very high, and is in the center of the engine, with windows on all sides. The series-parallel controllor, rheostat and air-pumps (the latter operated by a small motor) are all conveniently arranged here, within a commodious room, for the occupancy of the engine-driver and his assistant. The locomotive is double-ended, and has a Janney automatic coupler at each end. Its operation has been satisfactory, and it hauls the largest trains through the tunnel with as much speed as could be expected of any steam locomotive. The General Electric Company have built several other locomotives on practically the same design, for use as switch engines, &c. The Baldwin and Westinghouse Companies formed a combination in 1895 for the manufacture of a complete line of electric locomotives for all purposes. The largest of these is the double-ended, gearless locomotive, and was designed by Messrs. Sprague, Duncan, and Hutchinson. This has eight driving-wheels, which are made either with or without connecting-rods. The armature-speed and axle-speed being the same, the armatures are either mounted concentrically on the axles, or connected by means of cranks and parallel bars, the latter construction being generally preferred, as affording better opportunity to rest the motors on springs. Iron-clad motors are used, and the field-magnets consist of two steel castings, with field-coils at the ends of the motors. The magnets are compound-wound, and the armatures of the slotted Westinghouse type. In the cab is located the controller, which takes the place of the throttle and reversing lever in a steam locomotive. A controller serves to operate a number of switches and send the current through as many or as few resistances as desired. In starting, the current has to be let on gradually by directing it through strips of iron (or nickel-steel) arranged in series, so that the larger the number of strips included in the circuit the greater will be the resistance, and this resistance can be later reduced by cutting out certain series one by one. As soon as the locomotive is started, the current is switched by the controller so as to cut out some of the resistance, and, as greater speed is obtained, all the resistance is cut out, and the current flows through all the motors in series. The resistance is then switched on again and a further arrangement of the switches follows, so that the current may be divided and directed through the motors independently; after which the resistance is again cut out, step by step, until there is no resistance in the circuit, and all the motors receive independent currents. The employment of these resistances to reduce the current results in the heating of the strips of iron constituting the resistances into which the current is turned, and it is necessary to expose them to the air so that they may cool again as rapidly as possible. As a consequence of this method of starting the electric locomotive—which is practically true of all electric locomotives employing more than one motor—there is a waste or loss of electricity at the outset, which goes to make heat in the resistances, which heat is wasted. In this respect the electric locomotive is at a disadvantage as compared with the steam locomotive. The steam locomotive, however, is at a disadvantage as compared with the electric in hauling a heavy train at low speed, and at the further and greater disadvantage of having to transport its fuel and water, which under the electric system are stationary at the power-house. The Baldwin-Westinghouse concern also builds an express locomotive which resembles a neat passenger car, the application of pilots on the ends being the only thing at first glance to suggest that it is a locomotive. In fact, it is really a car supplied with electric locomotive machinery, that occupies little space, so that the bulk of the car-body may be used as a baggage car. The motors are hung in the trucks below, after the fashion of street cars. The controller and other mechanism take up small space, and may be operated from either end of the locomotive. There are double sliding doors on the sides, and the end-doors common to railway cars. This type of locomotive is built with motors from 100 to 1,000 horse-power. A very similar locomotive is built for freight use, and may be had with motors of 2,000 horse-power. These are built in several styles, with two 4-wheeled or two 6-wheeled trucks, and also with 6 or 8 wheels in one rigid frame, coupled with parallel rods. The larger sizes of electric switching locomotives resemble the freight locomotives. The 4-wheel switchers have the motors and axles set in a rigid frame, as shown in the illustration. The series of Baldwin-Westinghouse locomotives includes what may more properly be styled motor cars or locomotive cars, as they are simply passenger cars of the latest type, for use on suburban railways, and supplied with locomotive apparatus for propulsion, or for drawing other cars. This concern also builds electric rack locomotives for use on mountain railways, or other steep inclines.

While the electric locomotive is yet in its infancy, very many railway engineers are of the opinion that its general adoption is only a matter of time, and that it will monopolize suburban passenger traffic, yard-switching, and eventually long-distance passenger travel. The reasons for believing that the electric locomotive will thus replace the steam locomotive in many fields are: (1) It will start a greater load, the pull being constant throughout the entire revolution of the driving-wheels, whereas the steam locomotive is subject to the dead-center variance, which often renders the full power unavailable at the start. (2) Considerable economy in coal, the steam locomotive being much more wasteful in this respect than the stationary engines used to develop power in the electric-power stations. (3)) Reduction in hammering and side-strains to the track. (4) Practicability of use more hours during the 24. (5) Probable less cost of repairs. For freight traffic, however, the steam locomotive seems likely to hold its own for the present, though in this age of progress anything is apt to be thrown aside, and the wonderful machine of to-day may possibly occupy the scrap-heap to-morrow, making way for something better.

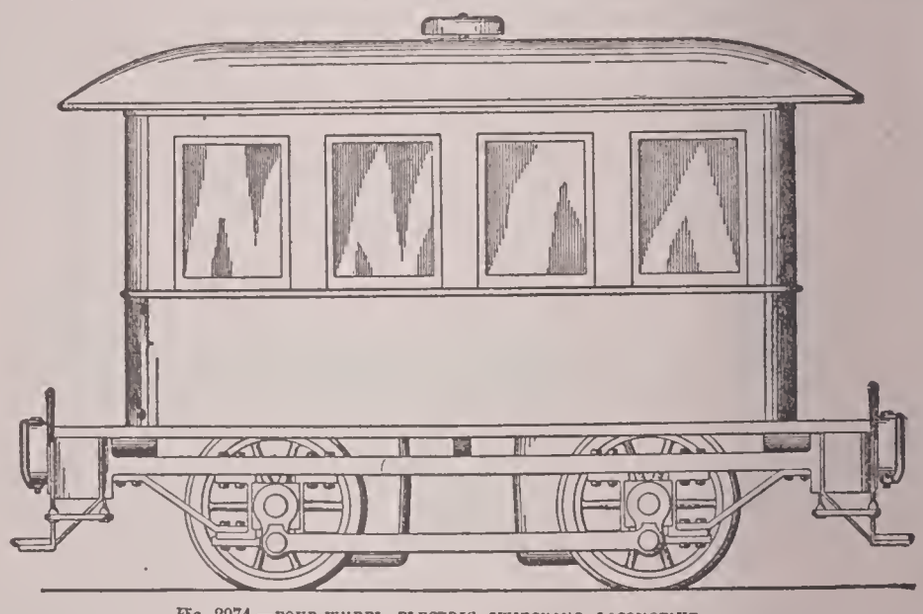


Fig. 2974.—FOUR-WHEEL ELECTRIC SWITCHING LOCOMOTIVE.

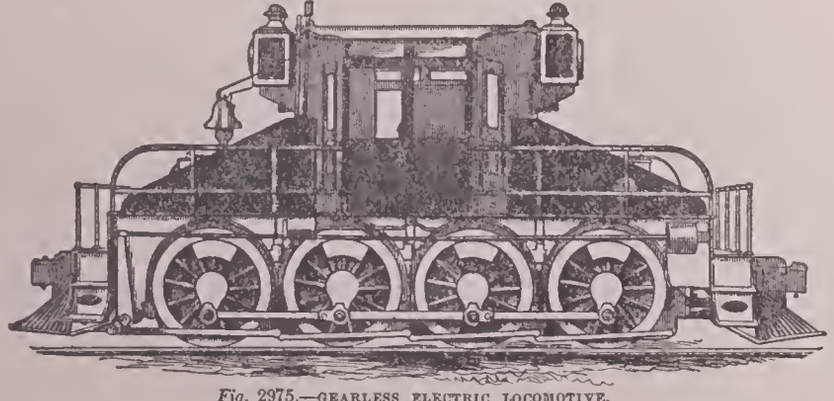


Fig. 2975.—GEARLESS ELECTRIC LOCOMOTIVE.

CHARLES E. COCHRANE, M.E.

Lo'da, in *Illinois*, a post-village of Iroquois co., 4 miles N.E. of Paxton, on Ill. Cent. R.R. *Pop.* (1897) 670.

Lo'gan, JOHN A., soldier and statesman, was born in Jackson co., Ill., Feb. 9, 1824; after successful practice of the law became a Democratic member of Congress in 1858. On the breaking out of the Civil War he took command of a regiment of volunteers in Sept., 1861, and became a major-general in 1862. He served with distinction at Fort Donelson and before Vicksburg, and in Oct., 1863, took command of the 15th Army Corps; commanded the Army of the Tennessee in an action fought near Atlanta, July 22, 1864, and was one of the most efficient generals under Sherman in the March to the Sea. Referring to the manner in which General Logan succeeded General McPherson, General Sherman said: "Logan commanded the Army of the Tennessee through this desperate battle with the same success and ability that had characterized him in the command of a corps or a division." In 1866 he entered Congress as a Republican member, and again in 1868, and in the latter year acted as one of the managers of the impeachment

of President Johnson. In 1871 was elected U. S. Senator from Illinois, and held the position of chairman of the Committee on Military Affairs. He was the nominee of the Republicans for Vice-President in 1884, with Blaine; the campaign resulted in the success of the Democrats. He was reelected to the Senate in 1885. Died Dec. 26, 1886.

Lo'gan, Sir William Edmond, geologist, was born in Montreal, Canada, April 23, 1798; educated at the Edinburgh High School; graduated at University of Edinburgh, in 1817; entered a commercial counting-house in London, 1818, where he remained for 10 years; then went to Wales. While there prepared geological maps of the coal basins, a work considered so excellent that it was incorporated in the 1-inch maps of the Geological Survey, 1842–71. He discovered the Stigmaria underclays, and a seeming fossil which he named *Eozoön Canadense*, and which has excited much controversy. His new mode of classification, in which physical as well as mineralogical criteria are considered, marks a distinct advance in scientific methods. Died June 22, 1875.

Logan, in *Arkansas*, a W. co.; *area*, 642 sq. m.; bounded on the N. by the Arkansas river and drained by the Petit Jean creek. *Surface*, broken and hilly; *soil*, fertile in the valleys. *Products*, corn, cotton; live stock. *Cap.* Paris. *Pop.* (1890) 20,774.

Logan, in *Colorado* a N.E. co.; *area*, 1,830 sq. m.; intersected by the South Platte river. *Surface*, rolling; *soil*, very fertile and well watered; irrigation is followed in the valleys. *Products*, live stock, wool, corn, oats, potatoes, alfalfa. *Cap.* Sterling. *Pop.* (1890) 3,070.

Logan, in *Iowa*, a post-town, cap. of Harrison co., 30 m. N. by E. of Council Bluffs, on C. & N.W. R.R. Has a stone quarry; ships grain, live stock and black walnut lumber. *Pop.* (1895) 1,102.

Logan, in *Kansas*, a W. co.; *area*, 1,080 sq. m. Smoky Hill river and numerous branches intersect it. *Surface*, gently undulating; *soil*, rich and very productive; building stone and brick clay in places. A good stock country, mild winters, with but little snow. *Cap.* Russell Springs. *Pop.* (1895) 2,071.

—A post-village of Phillips co., 18 m. S.W. of Phillipsburg, on Mo. Pac. R.R. Has abundant building stone. *Pop.* (1895) 329.

Logan, in *Nebraska*, a W. central co.; *area*, 576 sq. m.; watered by the South Loup river and its tributaries. *Surface*, undulating prairie; *soil*, very fertile. *Prod.*, corn, wheat, oats, rye, barley, potatoes, hay and wool; live stock. *Cap.* Gandy. *Pop.* (1890) 1,378.

Logan, in *North Dakota*, a S. central co.; *area*, 1,008 sq. m.; watered by Beaver creek and several fine lakes. *Surface*, smooth plains, and rolling ranges; *soil*, very fertile; building-stone of fine quality in several localities. *Products*, wheat, rye; oats barley, buckwheat, potatoes, and all vegetables; live stock is a leading feature. *Cap.* Napoleon. *Pop.* (1897) 1,450.

Logan, in *Oklahoma*, a N. central co.; *area*, 750 sq. m.; intersected by the Cimarron river. *Surface*, rolling, with much level valley lands; *soil*, fertile, rich sandy loam; timber. *Products*, wheat, corn, cotton, kaffir corn, oats, rye, potatoes, broom corn; a fine stock country. *County-seat*, Guthrie, which is also the territorial capital. *Pop.* (1897) 20,000.

Logarith'mic Spi'ral. (*Math.*) A curve-line intimately connected with the logarithmic curve. It intersects all its radiants at the same angle, which angle is the modulus of the system of logarithms represented by the particular spiral.

Log-Cab'in Campaign'. (*U. S. Hist.*) The presidential campaign of 1840, in which William Henry Harrison was the successful candidate. His supporters made political capital of his pioneer experiences; "hard cider" and "log-cabin" became catch-words of the canvass, and miniature log-cabins were features of the Whig parades.

Log'cock, *n.* (*Ornith.*) The great pileated woodpecker (*Ceophlœus pileatus*) of the southern part of the U. S.; it is black, with a scarlet crest, and has a white streak down the neck. It utters a shrieking cry.

Log'gerhead Shrike. (*Ornith.*) The common shrike, or butcher bird (see Lanidæ) of the southern parts of the U. S.

Loggerhead Turtle. See Turtle.

Logis'tics, *n.* (*Milit.*) That branch of military science or art which deals with the comparative warlike resources of countries between which war is likely to break out, and also with the conditions under which it has to be conducted, the means of transit, resources of food, geographical features, climate, &c.

Logom'achy. (*Games.*) A game of words or word-making, played by several persons with cards each containing one letter.

Log'othete, *n.* An accountant; an officer of the Byzantine Empire, who was the head of an administrative department; the public treasurer, or the chancellor of the empire.

Lo'gy, *a.* (*Local.*) Dull, heavy, sleepy, stupid.

Lo'ka, *n.* A Sanskrit word, signifying one of the subdivisions of the universe. The number of lokas vary in the Hindu writings from three—heaven, earth and hell—to as many as fourteen when the division is more elaborate.

Lom'bard, in *Illinois*, a post-village of DuPage co., 20 m. W. of Chicago, on Chic. Gt. Western and C. & N.W. R.Rs. *Pop.* (1897) 700.

Lom'poc, in *California*, a post-town of Santa Barbara co., 50 m. W. by N. of Santa Barbara. *Pop.* (1897) 1,175.

Lon'don Mills, in *Illinois*, a post-village of Fulton co., 19 m. S. by E. of Galesburg, on the Iowa Central R.R. *Pop.* (1897) 825.

Long Beach, in *California*, a post-village of Los Angeles co., 20 m. S. of Los Angeles, on L. A. T. and So. Pac. R.Rs. *Pop.* (1890) 564.

Long Branch, in *New Jersey*, a post-town and fashionable watering-place of Monmouth co., on the Atlantic coast, stretching some five miles along the beach, and distinguished for its magnificent ocean drive. It was the first summer resort to be established by New Yorkers, and became the home of many prominent public men. Its suburb, Elberon, contains only expensive residences. Long Branch itself has a population of about 8,000, often temporarily increased in summer to 30,000. A number of vast hotels, built in the fashion of a half century ago, lend character and permanence to the place, in spite of the ephemeral appearance of villas and pavilions and the summer shops.

Long Prai'rie, in *Minnesota*, a post-village, cap. of Todd co., 46 m. N.W. of St. Cloud, on Gt. Nor. R.R.; has several mills. *Pop.* (1895) 1,079.

Long'bow, *n.* The common bow, drawn and discharged by hand, in contradistinction to the cross-bow. Particularly, a bow over five feet long, such as the great war and hunting bows of the middle ages.

Long'dale, in *Virginia*, a post-village of Alleghany co., 52 m. W. S.W. of Staunton, on C. & O. R. R.; has a blast furnace. *Pop.* (1897) 890.

Long'fellow, Samuel, clergyman (brother of the poet, Henry W. Longfellow), was born at Portland, Me., June 18, 1819. In 1839 he graduated from Harvard, and from its Divinity School in 1846; became pastor at Fall River, Mass., in 1848, and from 1853 to 1860 was minister of the Second Unitarian Church, Brooklyn. His health failing, he visited Europe. On his return to America, settled at Cambridge, Mass., and about 1880 occupied a pulpit at Germantown, Philadelphia. He was a contributor to the *Radical* and other periodicals, and published *Hymns of the Spirit*, and books for service in Unitarian churches. At the time of his death was engaged in writing his brother's biography. Died Oct. 3, 1892.

Long'-hand, *n.* Ordinary writing with words in full, in distinction from shorthand, or stenographic writing.

Long'mont, in *Colorado*, a post-village of Boulder co., 36 m. N.N.W. of Denver, on B. & M. R. and Un. Pac., D. & G. R. Rs. It is surrounded by grand mountain scenery, and gold and lignite are found in the vicinity. *Pop.* (1897) 1,820.

Long'pine, in *Nebraska*, a post-village of Brown co., 10 m. E. of Ainsworth, on F., E. & M. V. R. R.; has several mills. *Pop.* (1897) 660.

Long'-spur, *n.* (*Ornith.*) An Arctic finch (*Plectrophanes lapponicus*), of northern Europe and America, which comes south in midwinter to the northerly parts of the U. S. It breeds only in high latitudes, making a nest of moss, &c., on the ground. It usually associates in small flocks with the snow buntings.

Long'ton, in *Kansas*, a post-village of Elk co., 25 m. N.W. of Independence, on A., T. & S. Fé R. R. *Pop.* (1895) 548.

Long'view, in *Texas*, a post-town, cap. of Gregg co., 23 m. W. of Marshall, on I. & G. N., and 2 other R. Rs.; has foundry and plow works, saw and planing mills. Lumber, cotton and hides are shipped. *Pop.* (1897) 2,340.

Loo'mis, Elias, physicist, was born in Conn. in 1811; graduated at Yale in 1830, and became (1844) professor of Natural Philosophy in New York University. In 1860 he was appointed to the chair of Natural Philosophy and Astronomy at Yale. He assisted in the first experiments by which the speed of the electric current on wires was determined, in 1848. Died in 1889. He wrote *Elements of Natural Philosophy*, and an *Introduction to Practical Astronomy*.

Lord Lieuten'ant. (*Eng. Pol.*) An official of high rank, representing the sovereign; as, the Viceroy or *L. L.* of Ireland, who is a member of the ministry, retiring from office with them. He has control of the government of the country, subject to the approval of the ministry in office, and nearly all the patronage is also vested in him. He is assisted in his government by a privy council nominated by the sovereign.—The *L. L.* of a county in Great Britain is the principal official of the county, at whose nomination all deputy-lieutenants and justices of the peace are appointed, and first commissions in the yeomanry, militia and volunteers are given.

Lord of Misrule, or Master of the Revels. Formerly in English aristocratic families, an officer who superintended the Christmas revels, from All-hallow Eve to Candlemas Day.

Lordol'atry, *n.* (*Humorous.*) Excessive regard or reverence for nobility or aristocracy.

Lorettine', *n.* (*R. C. Ch.*) One of an order of nuns called *Sisters of Loretto*, or *Friends of Mary at the Foot of the Cross*, established in Kentucky in 1812. The members devote themselves to the care and education of destitute orphan girls. There are other orders of the name in different countries.

Lo'rin, in *California*, a post-town of Alameda co., about 2 m. N. of Oakland. *Pop.* 743.

Lo'ring, William H., born in North Carolina, Dec. 4, 1818. He was engaged in the war of Texan independence, and in the Florida war (1836–42); member of the Florida legislature for four years; served in the Mexican war. Besides other services, he marched to New Mexico (1856), and afterward to Utah to assist General A. S. Johnston's expedition; visited Europe (1859), and on his return (1860), took command of the department of New Mexico. He entered the Confederate service in the Civil War as brigadier-general; was promoted to the rank of major-general. After the war he became inspector-general of the Egyptian army; subsequently had command of the coast of Egypt, and (1875–76) was second in command and chief-of-staff of the army in the expedition to Abyssinia. Returned to the U. S. in 1879. His services were rewarded by several distinguished marks of honor. Died Dec. 3, 1886.

Lorne, John George Edward Henry Douglas Sutherland Campbell, Marquis of, eldest son of the Duke of Argyll, was born in London, Aug. 6, 1845; educated at Eton, St. Andrew's University, and Trinity College, Cambridge. He represented Argyllshire as a Liberal member of Parliament (1868–78); was married to the Princess Louise in 1871; and was Governor-general of Canada (1873–88). He has contributed to magazines both in England and in America, and has also published several books and poems.

Los'sing, Benson John, historian, was born at Beekman, N. Y., Feb. 12, 1813; engaged as watchmaker at Poughkeepsie (1826–35), and later as a journalist there. Removing to New York city (1838) he became a wood-engraver, and edited *The Family Magazine*, an illustrated monthly. The *Young Peoples' Mirror* was published under his supervision in 1848–49, and from 1872 to 1885 he edited the *American Historical Record*. He is best known by his historical works, of a popular rather than profound character, which include: *Pictorial Field-book of the Revolution; History of the United States; Lives of the Presidents; The Civil War in America; Cyclopædia of United States History*, &c. Died June 3, 1891.

Lo'tah, *n.* [East Ind.] A small brass or copper pot, spherical or melon-shaped in form, made and used in India as a water-jar. It is usually highly decorated by intricate incised designs.

Lotha'rio, *n.* [Name of a character in Rowe's drama of *The Fair Penitent* (1703).] A gay deceiver; a seducer; a libertine.

Loti (*lō-tē'*), Pierre (pseudonym of Julien Viaud), novelist, was born at Rochefort, France, Jan. 14, 1850; a voluminous writer of stories, chiefly of Japan, Tahiti, Senegal, Morocco, &c., and with sailors and fishermen as conspicuous characters. He is one of the much-read authors of the day; was elected a member of the Academy in 1891.

Lotze (*lot's'h*), Rudolf Herrman, philosopher, was born in Germany in 1817; was a professor at Leipsic, and subsequently at Göttingen; a follower of Leibnitz and Herbert. Wrote several works on metaphysics and physiology.

Lou'don, in *Tennessee*, an E. co.; *area*, 256 sq. m.; watered by the Holston, Clinch, and Little Tennessee rivers. *Surface*, hilly; *soil*, fertile. *Products*, corn, wheat, oats, butter, wool, pork, live stock. *Cap.* Loudon. *Pop.* (1890) 9,273.

Louisine (*loo-ē-zēn'*), *n.* A light summer silk.

Louis'ville, in *Colorado*, a post-village of Boulder co., 8 m. E. of Boulder, on Un. Pac. and D. & G. R.Rs. *Pop.* (1897) 860.

Louk'oum, *n.* A Turkish and Greek sweetmeat of figs; fig-paste.

Loup, in *Nebraska*, a central co.; *area*, 576 sq. m.; intersected by North Loup and Calamus rivers. *Surface*, partly high rolling and partly level valley; well watered; *soil*, very fertile. *Products*, barley, wheat, oats, corn, and potatoes; excellent grazing for cattle and horses. Cattle and hog raising are the chief industries. *Cap.* Taylor. *Pop.* (1890) 1,662.

Loup, or **Loup City,** in *Nebraska*, a post-village, cap. of Sherman co., 42 m. N. of Kearney, on B. & M. R. and Un. Pac. R.Rs.; has large flour mills. *Pop.* (1890) 671.

Love'-child, *n.* A euphemism for a child born out of wedlock.

Love'-day, *n.* A day appointed for the settlement of quarrels and differences.—A day when one neighbor helps another without hire.

Love'land, in *Colorado*, a post-village of Larimer co., 59 m. N. of Denver, on Un. Pac., D. & G. R.Rs. A summer resort with grand mountain scenery. *Pop.* (1897) 750.

Love'locks, in *Nevada*, a post-village of Humboldt co., on Un. Pac. R. R. *Pop.* (1897) 662.

Lov'ing, in *Texas*, a W. co.; *area*, 900 sq. m.; bounded on the W. by the Rio Pecos. *Cap.* Mentone.

Low, Seth, educator, was born in Brooklyn, N.Y., Jan. 18, 1850. He was educated at the Brooklyn Polytechnic Institute and at Columbia College. He entered the tea-importing house of his father, and finally became a member of the firm and of the Chamber of Commerce, serving on some of its most important committees. He was elected mayor of Brooklyn in 1881 and re-elected in 1883, an office which he filled with rare distinction. In 1890 he was elected president of Columbia College (now University). He was an unsuccessful candidate for mayor of New York in 1897, but was elected to this office in 1901, serving during 1902–03.

Low'moor, in *Virginia*, a post-village of Alleghany co., 5 m. S. E. of Covington, on C. & O. R. R. Iron ore is mined here. *Pop.* (1897) 1,080.

Luala'ba, *n.* (*Geog.*) The Congo river. This was the name given to the river by Dr. Livingstone, who discovered its central portion, but was not certain of its sources or its mouth.

Lub'ber's Point. (*Naut.*) A black vertical line on the inside of the case of a mariner's compass. This line and the pin in which the card turns are in the same vertical line with the keel of the ship, and hence the rhumb opposite the lubber's point shows the course of the ship at any time. The lubber's point, however, deviates from its proper position when the ship is heeled over; hence, seamen do not implicitly depend on it—as its name implies.

Lub'bock, Sir John, Bart., a distinguished naturalist and ethnolographer, was born in London, in 1834; president of the Entomological Society, and vice-president of the Linnæan and Ethnological Societies; has published *Pre-Historic Times, as Illustrated by Ancient Remains and the Manners and Customs of Modern Savages; The Origin of Civilization and the Primitive Condition of Man; The Origin and Metamorphoses of Insects; On British Wildflowers, Considered in Relation to Insects; Ants, Bees, and Wasps; The Senses and Instincts of Animals; The Beauties of Nature; The Use of Life,* and an interesting book on *The Scenery of Switzerland.*

Lubbock, in *Texas,* a N. W. central co.; *area,* 900 sq. m.; intersected by the Brazos river. *Cap.* Lubbock. *Pop.* (1890) 33.

Luce, in *Michigan,* a N.E. co.; *area,* 915 sq. m.; watered by the Sucker, Big Two-hearted, and Tahquamenon rivers, and numerous lakes. *Soil,* fertile, especially adapted for grazing; has pine and hard wood lumber. *Products,* hay, oats, wheat, and other cereals; peas; lumber, shingles, and pig iron. *Cap.* Newberry. *Pop.* (1894) 2,348.

Lucerne', *n.* (*Bot.* and *Agric.*) Perennial, clover-like forage-plant, yielding several crops in a season; it is tall and slender, of a peculiarly vivid green, and bears racemes of large purple flowers. It is particularly adapted to dry, hot climates and sandy soils, as its long roots enable it to live through drought, and is therefore extensively cultivated throughout the Rocky Mountain region, where it is known as alfalfa.

Lu'cigen, *n.* A simple mechanism for illumination, which is especially useful out-of-doors, where a cheap light of large illuminating power is required. It operates on the principal of mixing air with minutely divided particles of oil, and lighting the mixture in a superheated chamber, from which the flame rises in a high stream, due to the strong pressure of the released air. Almost any kind of crude or waste oil may be employed. The usual arrangement consists in a small oil-tank supported on a shelf, and connected by a pipe with the burner. Another pipe leads in compressed air, which draws the oil out in a fine spray, on the well-known principle of a cologne spray. The oil being let in through a pipe that spirals about the lower part of the flame, is half vaporized when it escapes, and the mixture proves very inflammable.

Lu'cule, *n.* [Lat., dim. of *lux* (*lucis*), light.] A luminous spot on the sun.

Lu'ders, Alexander Nicolaievitch, Count von, a distinguished Russian general, was born in 1790, of German descent. He served in the campaigns of 1812–14, and in 1848 occupied Wallachia with an army corps, and in the year following entered Transylvania, where he joined his forces to those of the Austrian general, Packner, took Kronstadt and Hermannstadt, July 21, and on the 31st defeated the Hungarian army under Bem. August 4, he again defeated the latter, and combining his troops with those of Rüdiger, compelled Gen. Görgey to surrender, 13th. He afterward held an important command in the Crimea, and in 1861 was made lieutenant-general of Poland. Died in 1874.

Ludington, in *Michigan,* a city, cap. of Mason co., on Lake Michigan, 70 m. N. of Grand Haven, on E. L. and F. & P. M. R. Rs.; has an excellent harbor, and extensive saw and shingle mills with a very large product; also salt works, iron works, and other manufactures. *Pop.* (1894) 8,244.

Ludolfian Number. (*Math.*) The number (3·1415926) expressing the ratio of the circumference of a circle to its diameter; so called from Ludolf van Ceulen, a mathematician of the 17th century, who investigated this ratio.

Luf'kin, in *Texas,* a post-village, cap of Angelina co., 290 m. N.E. of Austin, on H., E. & W. T. and St. L. S. W. R Rs. *Pop.* (1897) 680.

Lu'genbeel, in *South Dakota,* a S.W. co.; *area,* 1,080 sq. m; intersected by the South Fork of White river. Unorganized.

Lu'ling, in *Texas,* a post-town of Caldwell co., 44 m. S. of Austin, on S. A. & A. P. and So. Pac.. R. Rs.; has a cottonseed-oil mill, several gins, and grist mills. Cotton, live stock, and pecans are extensively shipped. *Pop.* (1897) 2,320.

Lum'bering, *n.* The lumber interests of the U. S. are under the quasi-control of the Forestry Division of the Department of Agriculture. The report for 1896 shows that about one-fourth of the whole country still remains an uncut forest, there being about 495,000,000 acres, exclusive of the Alaskan forests and those in the Indian reservations. The present demand for wood and lumber results in the cutting of about 24,000,000,000 feet annually, of which 5,000,000,000 feet go into building-lumber and the manufactures, 500,000,000 into fences, 600,000,000 for railway tiles, 250,000,000 for charcoal, 150,000,000 for mining timbers, and the balance, or nearly 18,000,000,000 feet, or more properly about 140,000,000 cords, goes for fuel. It is evident from these figures that a stoppage of the use of good timber for fuel would go far to save the lumber interests of the country, which at the present rate of consumption are dangerously near an extinction. There are about 500 species of trees in the U. S., and almost all of them are useful for lumber. In Maine is found the white pine, spruce, hemlock, and cedar. A little westward grow the oak, elm, hickory, sassafras, ash, linden, and laurel. Around the Great Lakes the timber is mostly pine. West of these are found the spruce, cypress, pine, aspen, willow, and juniper. In the Middle and Southern States grow the yellow pine, cypress, cottonwood, and buttonwood. On the Pacific coast are found more species of pine, giant cedars and spruces, and various firs. In California grows the famous redwood, and within Alaska gigantic spruces, firs, poplars, and birches. In 1890, there was invested in the lumber business in the country a total of $622,000,000 of capital, as against $109,000,000 in 1860. The rate of wages paid employees in the business has almost doubled during the same period, an increase of 65 per cent. being recorded between 1860 and 1870. In 1860 Maine, New York, and Pennsylvania were the heaviest producers of lumber, but in 1890 the center of lumber production had moved into Michigan, Minnesota, and Wisconsin. The New England woods have been heavily denuded, the white pine being mostly cut. The yellow pine of the South is largely taking its place, and the cypress has come largely into use for shingles. Cherry has been nearly exhausted, and birch is much used as a substitute, or gum and elm where cheaper woods are wanted. Spruce and hemlock have also replaced the white pine in many uses, and poplar, cypress, cottonwood, and basswood are much in vogue where formerly white pine was wanted. Spruce is stronger than white pine, and hence grows in popularity for structural purposes. Yellow pine is stronger, handsomer and more durable than the white, though not so easily worked. The universal method of lumbering is to cut the timber into logs where it is felled, and to haul it or float it to the saw-mill, where it is sawn into timber, boards, scantling, shingles, &c., and shipped by rail or schooner to destination. The specific methods used in a given region differ according to the conveniences, the lay of the land, water-courses, &c. In Maine and Nova Scotia a great deal of lumber has been felled, floated down the streams in drives, and sometimes made into great rafts and towed down the coast. The ground being hilly, it was often possible for the woodman to bring down a row of trees growing on a line on rising ground by chopping each tree half in two, and then felling the highest of the row, so that it might fall and bring down the others with it. Oxen were employed to haul the logs, rude sledges being used in winter. The logs were rolled on the sledges by passing a chain under and around them, so that the oxen could roll them up on skids. As the railways were extended the floating of logs has decreased, and large lumber rafts are now seldom seen along the Maine coast. The increased tariff of 1897 has also cut off the influx of lumber from the Nova Scotia woods. In the Wisconsin region, where pine is the principal product of the forest, the sawmills follow the forests as they are cut. These mills are usually located on some small lake, and railways or tramways are run out into the standing timber. The timber near the streams is cut first, and a great deal of the work is accomplished in winter, because the frozen ground makes hauling easy, especially in swampy places. The men who cut paths through which to haul the logs are known as swampers. An expert woodman selects the trees to be cut, notes which way they tend to fall, and notches them on the lower side with his axe. He is followed by 2 sawyers with a long cross-cut saw. They each take an end, and, cutting on the side opposite to the notch, saw away until a cracking sound gives evidence that the tree is tumbling. They then give a peculiar warning cry and scramble out of the way, while the tree comes crashing down. They next saw the log into lengths. If it is large, the lengths are usually 16 feet; if small, 32 feet. For hauling the logs the "big wheels" are much used. These wheels are probably the largest vehicle wheels made anywhere, being 10 to 12 feet in diameter, and having 6-inch tires. The logs are chained to the axle, and a pair of horses drag them usually to some near-by lake or stream, where they are made up in rafts and floated to the railway. Where the logs are to be taken from the water, rails are run down the beach to afford a support on which the logs may be rolled. A car is then conveniently located, and skids placed against the side. A chain or rope is attached to the end of a log, and it is drawn out of the water by allowing it to lie across another log, which serves as a roller. A pair of horses by this means can readily draw large logs up the skids on to the car. The cars are usually drawn to the sawmill by horses, though some mills having several miles of railroad employ locomotives. In a great many sections one of the methods of transporting the logs is to lay a double row of smooth logs, and grease their upper surfaces, forming a track upon which logs may be hauled along lengthwise by horses, with little effort and not much danger of the logs leaving its path. In other cases logs are handled by means of flumes, or great troughs of water run down an incline.

A small quantity of lumber is exported from the United States to a number of European and some South American ports, but the great bulk of the lumber sawed is for home consumption. See Forestry.

Lu'na Moth. (*Entom.*) A large and beautiful North American moth (*Actias luna*), having delicate light green wings, with a purplish anterior margin, the other margins edged with pale yellow. Each wing has a luniform spot surrounded by yellow, blue and black rings. The larva feeds on the leaves of hickory, sassafras or maple.

Lupulin (*loo'pu-lin*), *n.* The fine yellow powder of hops, often used in medicine. It has a penetrating, aromatic odor, and consists of minute glands found on the fruit. It is obtained by drying, heating, and sifting the hops.

Lure, *n.* A long, curved trumpet, of old-fashioned form; it is still used in Scandinavia for calling cattle, and by travellers for signalling.

Lusk, William Thompson, physician and surgeon, was born at Norwich, Conn., in 1838; spent one year at Yale, and then went abroad to study medicine in Berlin and Heidelberg, whence he returned to serve in the Union army from 1861 to 1863. In 1864 he received his diploma from Bellevue Hospital Medical College, when he returned to pursue his post-graduate studies in Edinburgh, Paris, Vienna, and Prague. In 1865 he began practicing in New York, making a specialty of obstetrics and diseases of women; was lecturer on Physiology at Harvard in 1871, professor of Obstetrics in Bellevue Hospital Medical College, and visiting physician at Bellevue Hospital, a post which he filled until the time of his death in June, 1897. He was co-editor of the *New York Medical Journal* and author of several books, among which the most important, *The Science and Art of Midwifery,* has been translated into several languages.

Lu'ther, in *Michigan,* a post-village of Lake co., 18 m. N.E. of Baldwin, on the G. R. & I. and M. & L. R. Rs. *Pop.* (1894) 823.

Lutuami'an, *n.* A North American language-stock spoken by the Modoc and Klamath Indians of northern California.

Luverne', in *Minnesota,* a post-village, cap. of Rock co., 32 m. W. of Worthington, on B., C. R. & N. and C., St. P., M. & O. R. Rs.; has some manufactures. *Pop.* (1895) 1,890.

Lux, *n.*; *pl.* luces. [Lat.] (*Elec.*) A name proposed by Preece for the unit of intensity of illumination, this being the illumination given by a standard candle at the distance of 12·7 inches, or that from one carcel at the distance of one meter, or that from a lamp of 10,000 candles at 105·8 feet.

Luz, *n.* [Heb.] In Rabbinical legends, an unidentified bone in the human body, destined to be the germ of the glorified body at the resurrection.

Luzerne', in *Pennsylvania,* a post-borough of Luzerne co., 8 m. S.W. of Lackawanna Junction, on Leh. Val. and W. & N. R. Rs.; has drill factories and flour and feed mills. *Pop.* (1897) 2,540.

Ly'all, Edna, the pen name of Ada Ellen Bayley, born at Brighton, Eng., where she was educated. Her first published novel, *Won by Waiting,* appeared in 1879. This was followed by her most popular story, *Donovan.* Then came *In the Golden Days; Knight Errant; Derrick Vaughan; A Hardy Norseman,* &c. Died Feb. 10, 1903.

Lycée, *n.* [Fr.] A lyceum; a public classical secondary school whose graduates are admitted to the university.

Ly'man, in *South Dakota,* a S. central co.; *area,* 575 sq. m.; bounded on the N. and E. by the Missouri river, and is intersected by the White river. *Cap.* Oacoma. *Pop.* (1895) 804.

Lynch Law. To speak of lynching as law is a contradiction in terms, since it is a defiance of all law. A mob of persons, disregarding entirely the legal forms designed to protect an accused man, decide, without judicial investigation, and without any sworn testimony, that a certain person has committed a certain crime. Whereupon this mob takes the person, even out of the hands of the officers of the law, and kills him—frequently in a brutal and inhuman way. The phrase has been variously traced to a Virginia soldier of the Revolution, to a Virginia farmer who is said to have exercised unauthorized judicial functions in the early history of the State, to one Lynch who was sent out from England about 1687 to suppress piracy, and to a mayor of Galway, in Ireland. Still another tradition refers it to Lynch creek, in North Carolina, where, during the Revolutionary War, the forms of a court-martial and execution were gone through over the lifeless body of a loyalist who had already been precipitately hanged.

Lynn, in *Texas,* a N. W. central co.; *area* 900 sq. m. Unorganized.

Ly'on, Nathaniel, soldier, was born in Connecticut, in 1819; graduated at West Point (1841); served in the Mexican War (1846–47), and in 1861 held command of the U. S. Arsenal at St. Louis. In June of the same year he was given the command of the military department of Missouri, on the 17th defeated the Confederates at Boonville, and on Aug. 10 was killed in the battle of Wilson's Creek.

Ly'on, in *Iowa,* an extreme N.W. co.; *area,* 600 sq. m.; bounded on the W. by Big Sioux river, and is intersected by Rock river and its South Fork. *Surface,* rolling; *soil,* deep black loam, with clay subsoil. *Products,* corn, wheat, oats, flax, grasses, and all kinds of vegetables; stock-raising. *Cap.* Rock Rapids. *Pop.* (1895) 11,684.

Lyon, in *Minnesota,* a S. W. co.; *area,* 720 sq. m.; drained by the Redwood, Big Cottonwood, and Yellow Medicine rivers. *Surface,* undulating prairie, with numerous lakes and streams; *soil,* black loam, with clay subsoil, very productive. *Products,* wheat, oats, barley, corn, hay, wool, and dairy products; timber. *Cap.* Marshall. *Pop.* (1895) 12,425.

Ly'ons, in *Colorado,* a post-village of Boulder co., about 40 m. N. of Denver, on B. & M. R. R. R.; in a coal and gold-mining district. *Pop.* (1897) 700.

Lyons, in *Kansas,* a city, cap. of Rice co., 231 m. W. of Kansas City, on A., T. & S. Fé, Mo. Pac., and St. L. & S. F. R. Rs.; has wagon and carriage works, flour mill and elevators. Here is a salt bed of fine quality, 265 feet thick. *Pop.* (1895) 1,445.

Lyons, in *Nebraska,* a post-village of Burt co., 40 m. N. of Fremont, on C., St. P., M. & O. R. R.; has large roller mills and brick yards. A trade center and shipping point for grain and live stock. *Pop.* (1897) 610.

Lysim'eter, *n.* [Gr. *lysis,* loosing, and *metron.*] A gauge to measure the rate of percolation of rain through the soil.

M. The thirteenth letter and the tenth consonant of the English language. It is the labial letter of the liquid series, and in all positions has one uniform, well-known sound, as in *mine, camp, jam.* It is pronounced with a kind of humming inward, the lips closed, open and full in the beginning, obscure in the end, and mainly in the midst. It is one of the easiest to articulate, and is therefore one of the first uttered by children, and in most languages it forms a prominent letter in the words for mother. The letter *m* has a place in all known languages, and the English sound of it is that which it has also in most of the European tongues. In French and Portuguese, however, at the end of a word, and in most cases at the end of a syllable, it loses its proper sound, and serves only to give a nasal sound to the vowel which generally precedes it. Among the ancient Romans, too, *m* was but faintly pronounced, being rather a rest between two syllables than an articulation; and hence it was subject to elision. *M* passes easily into other letters, losing itself in the preceding or succeeding letter, — a circumstance which the etymologist must bear in mind in seeking the derivation or connection of words having that letter in their root. *M* interchanges with *n, b, p, v,* and *w,* and frequently disappears altogether. Like other liquids, it also not unfrequently changes its position with regard to the vowel of a root. In writing two *m*'s successively, the Germans frequently drop one and replace it by a stroke over that which they retain; thus, *m̄.* As an abbreviation, M. stands for Marcus, Manlius, Martius, and Mucius; M.A. for *Magister Artium* (Master of Arts), MS. for manuscript, and MSS. for manuscripts. M, or more properly a symbol somewhat resembling it, was used by the Romans to denote 1,000; and the moderns have also adopted that letter. In medical prescriptions, M stands for *misce,* or *mix:* also for *manipulus,* a handful.

(*Typog.*) See Em.

(*Law.*) A brand or stigma formerly impressed, in England, on the brawn of the thumb of persons convicted of manslaughter.

Ma, (*mȧh,*) *n.* An abbreviated form of *mamma;* — used as a term of fondness.

Ma, *adv.* [It., but.] (*Mus.*) Employed in cautionary phrases; as, "Vivace, *ma* non troppo presto,"— Lively, *but* not too quick.

Ma'acah, or Maachah. (*Script.*) A city or region of Syria, or Aram, somewhat near the foot of Mount Hermon, and Geshur. — A wife of David, and the mother of Absalom.—The wife of Rehoboam and mother of Abijah, kings of Judah.—Six others of the same name are mentioned in Scripture.

Maad, (*mad,*) a town of Austria, in Hungary, in the Hegyalla Mountains, 6 miles N.W. of Tokay. It is celebrated for its vineyards. *Pop.* 6,000.

Ma'am, *n.* [A colloquial, and very common contracted form of *madam.*] Madam; my lady.

Maas. The river Meuse, *q. v.*

Maash'a, *n.* (*Numis.*) An East-Indian coin, in value rather more than one anna.

Maastricht. See Maestricht.

Mab, *n.* [W. *mæban,* a baby.] A slattern; an untidy, careless person; sometimes, a simpleton. (Used in some parts of England.)

(*Fairy Myth.*) The name of a fairy celebrated by Shakspeare, and other English poets. The name has been variously derived; but the most probable derivation of it is from the Cymric *mab,* a child. According to Voss and others, Mab was not the queen of the fairies, that dignity having been ascribed to her from a mistaken use of the old English word *queen,* or *quean,* which meant only a woman.

—*v. n.* To act as a sloven; to dress untidily.

Mab'bettsville, in *New York,* a post-vill. of Dutchess county.

Mab'by, *n.* An ardent spirit distilled in Barbadoes from potatoes.

Mabillon, (*mȧ-bē'yon,*) Jean, a learned French Benedictine, famous as a writer on ecclesiastical antiquities and the science of diplomatics, was b. in 1632, at Pierremont, in Champagne, and studied at the college of Rheims. He published several laborious works, among which are *De Re Diplomatica,* the *Museum Italicum* (2 vols.), and *Annals of the Order of St. Benedict.* D. 1707.

Ma'bly, Gabriel Bonnet de, a French abbé, eminent as a political and historical writer, was the brother of Condillac, and b. at Grenoble, in 1709. He was educated by the Jesuits at Lyons, but soon abandoned theological studies for Thucydides, Plutarch, and Livy. His works include *Parallele des Romains et des Français, Le Droit public de L'Europe, Observations sur les Grecs, Observations sur les Romains, Observations sur l'Histoire de la France, Sur la Constitution des Etats Unis de l'Amérique,* &c., forming altogether 15 vols. D. 1785.

Mac, (abbreviated *Mc.,*) a prefix to Scottish nomenclature, signifying *son,* and equivalent to the English *Fitz,* Irish *O,* and Welsh *Ap;* as, *Mac*Donald, *i. e., son* of Donald.

Macabre Dance, or Danse des Morts. (Fr., the dance of death; Lat. *chorea machabæorum;* Ger. *todtentanz.*] A name given to a certain class of allegorical representations, illustrative of the universal power of death, dating from the 14th century, and long a favorite subject of painting and poetry, in which persons of all ranks and ages were represented as dancing together with the skeleton form of Death, which led them to the grave. The dance and the drama being at that time intimately connected, the grotesque allegory soon assumed a dramatic form. This drama was most simply constructed, consisting of short dialogues bet. Death and 24 followers, and was undoubtedly enacted in or near churches by religious orders in Germany during the 14th century, and at a rather later period in France. It would appear that the seven brothers, whose martyrdom is recorded in the 7th chapter of the 2d Book of *Maccabees,* either played an important part in the drama, or the first representation, which took place at Paris in the Cloister *aux Innocents,* fell upon their festival, and hence the origin of the ancient name, Choræa Machabæorum, or La Danse Macabre. As early as 1400, the dramatic poem was imitated in Spain, and appears there in 79 strophes of 8 lines each (*La Danca General de los Muertos*), but it did not spread; while the French, having a love for pictorial representation, very early affixed an illustration to each strophe, and in 1425 painted the whole series on the churchyard-wall of the Cloister of the Innocents, where the Dance of Death was habitually enacted. From Paris, both poem and pictures were transplanted to London (1430). But nowhere was the subject so variously and strikingly treated as in Germany. The celebrated Dance of Death on the cloister-walls of the Klingenthal, a convent in Basle, departs somewhat from the original form; but a picture in one of the chapels of the Marienkirche, at Lübeck, still, in spite of repeated re-paintings, bearing the unmistakable impress of the

Fig. 1664.

A LINK OF THE DANCE OF DEATH AT LÜBECK, 14TH CENTURY.

14th century, exhibits the very simplest form of the drama, and has some genuine Low-German verses attached to it. Here we see 24 figures, partly clerical, partly lay, arranged in a descending scale, from the pope himself down to a little child, and between each of them a dancing-figure of Death, not in the form of a skeleton, but a shrivelled corpse, the whole being linked in one chain, and dancing to the music of another Death (Fig. 1664). This representation is almost the same as a very ancient one at La Chaise-Dieu, in Auvergne, and points to the identity of the original dramatic spectacle in both countries. — In the 15th century, the *D. M.,* or Dance of Death, became only a subject of pictorial representation; and, descending from the walls of the quiet convent into public places, it gave a new impulse to popular art. But Holbein has the credit of availing himself most effectually of the original design, and giving it a new and more artistic character. Departing from the idea of a dance, he illustrated the subject by 53 distinct sketches for engravings, which he called *Imagines Mortis,* in which Death assumes various ironical costumes, while meeting with and overcoming persons in every condition of life.

Macacu, (*ma-ka-koo',*) a river of Brazil, rises in the Organ Mountains, and flows into the bay of Rio Janeiro.

—A town of Brazil, abt. 10 m. N.E. of Rio de Janeiro.

Maca'cus, Macaque, *n.* (*Zoöl.*) A genus of Old World monkeys, characterized by having a fifth tubercle on their last molars; ischial callosities and cheek-ponches; comparatively short and thick limbs; a projecting muzzle, and prominent superciliary arches. They have generally a pendent tail. When they cry out, they inflate a membranous sac, which communicates with the larynx above the thyroid cartilage.

Macadamiza'tion, Macad'amizing, *n.* [See the verb.] (*Engineering.*) A method of making roads entirely of angular pieces of stone, without any kind of binding material. The stones used for this purpose must be hard and tough, such as the whinstones, basalts, granites, and beach-pebbles, so that they may resist the action of the wheels. Hardness alone is not sufficient, for flintstones are hard but brittle, and are soon crushed into powder, as are also the softer sandstones. The angular stone fragments used in macadamizing must be of such a size as to pass freely, by their largest dimensions, through a ring 2½ in. in diameter.

Macad'amize, *v. a.* [From James *MacAdam,* the originator, b. in Scotland, 1756; d. 1836.] To cover, as a road, with small, fractured stones, in order to form a hard, even, durable surface.

Macad'am-road, *n.* A road or way made hard and smooth with a superficial covering of small, broken stones.

Macahe, (*ma-ka'hā,*) a river of Brazil, flowing into the Bay of St. Anna.

—A town of Brazil, at the mouth of the Macahe River, abt. 40 m. N.N.E. of Cape Frio.

MacAle'vy's Fort, in *Pennsylvania,* a post-office of Huntingdon co.

MacAl'listerville, in *Pennsylvania.* See Calhounsville.

Macao, (*ma-kai'o.*) a seaport-town and settlement of the Portuguese in China, province of Kwang-tung, on a peninsula projecting from the S.W. corner of the island Macao, on the W. side of the æstuary formed at the mouth of the Tigre or Canton River, 84 m. S.W. of Canton. Lat. 20° 11′ 30″ N., Lon. 113° 32′ 30″ E. The town has a very imposing appearance from the sea. It is built chiefly on the declivity of two hills, meeting each other at a right angle, in front of a small semicircular bay forming the harbor. At one extremity of the town is a mansion called the *Casa;* in the grounds belonging to which is the Cave of Camoens (Fig. 1665). In this sequestered retreat Camoëns is said to have composed the greater part of the *Lusiad,* while holding at Macao the post of Portuguese judge. Macao was given to the Portuguese by the Chinese emperor in 1586, in return for assistance afforded by them against pirates that had infested the coast.

Fig. 1665.

CAVE OF CAMOENS, AT MACAO.

Maca'o, *n.* (*Games.*) A game at cards formerly in vogue.

(*Zoöl.*) See Macaw.

Macapa, (*ma-ka-pa',*) a town of Brazil, on the river Amazon, abt. 200 m. N.W. of Para. The town is strongly fortified, and commands an extensive commerce. *Pop.* about 6,000.

Maca'rius, St., (*the Elder,*) a celebrated anchoret of the 4th century, who passed 60 years in a monastery on Mount Sceta, in Egypt, and d. 387. — St. Macarius (*the Younger*), and a contemporary of the preceding, was a monk of Alexandria, who being persecuted by the Arians, and banished to an island, converted its inhabitants to Christianity. D. 393.

Mac'arize, *v. a.* [Gr. *macarizein,* to confer a benediction.] To congratulate; to wish joy to, on account of some auspicious event.

Macaro'ni, *n.* [Fr., from It. *maccaroni, maccheroni,* from *maccare,* to bruise or crush. *M.* consisted originally of lumps of paste and cheese squeezed together.] A peculiar manufacture of wheat, which for a long time was peculiar to Italy, and, in fact, almost to Genoa; it is now, however, made all over Italy, at Marseille in France, and in this country at Philadelphia and other places. Strictly speaking, the name *M.* applies only to wheaten paste in the form of pipes, varying in diameter from an ordinary quill up to those now made of the diameter of an inch; but there is no real difference between it and the fine threadlike vermicelli, and the infinite variety of curious and elegant little forms which, under the name of *Italian pastes,* are used for soups. — Only certain kinds of wheat are applicable to this manufacture, and these are the hard sorts, which contain a large percentage of gluten. At present, the Italian manufacturers prefer the wheats of Odessa and Taganrog; but they also employ those of their own country grown in Sicily and in Apulia. The wheat is first ground into a coarse meal, from which the bran is removed — in that state it is called *Semola* (see also Semolina); during the grinding, it is necessary to employ both heat and humidity, to insure a good semola. The semola is worked up into a dough with water; and for *M.* and vermicelli, it is forced through gauges, with or without mandrels, as in wire and pipe-drawing; or for *pastes,* it is rolled out into very thin sheets, from which are stamped out the various forms of stars, rings, &c. — The manufacture of this material is of great importance to Italy, where it forms a large article of home consumption, and is exported to all parts of the world. In Genoa alone, nearly 170,000 quintals of wheat are annually consumed in this manufacture. The finest qualities of *M.* are those which are whitest in color, and do not burst or break up in boiling; it should swell considerably, and become quite soft; but if it does not retain its form when boiled, it has not been made of the best wheat. Some makers flavor and color it with saffron and turmeric, to suit certain tastes, but this is limited to very few.

(*Costume.*) The year 1772 introduced into England a new style for gentlemen, imported by a number of young men of fashion who had travelled in Italy, and who formed an association called the Macaroni Club, in contradistinction to the Beef-steak Club of London. Hence these new-fashioned dandies were styled Macarouis, a name which was afterwards applied to ladies of

the same genus. The name gave place, toward the beginning of the century, to the term of *Dandy*. The true *M.*, as delineated in Fig. 1666, was an exquisite, usually dressed in the extreme of fashion, with an abundance of finery, jewels, perfumes, and an assumption of airs and graces. The perfect *M.* was generally distinguished by two watches, one in either fob, and by huge rings. The hair was dressed in an enormous toupee, with very large curls at the sides; while behind, it was gathered and tied up into a large club, or knot, that rested on the back of the neck like a porter's knot; upon this an exceedingly small hat was worn, which was sometimes listed from the head with the case, generally very long, and decorated with extremely large silk tassels; a frilled white handkerchief was tied in a large bow around the neck; frills from the top of the shirt-front projected from the top of the waistcoat,

Fig. 1666. — A MACARONI.

reaching very little below the waist, and being without the flap-covered pockets. The coat was also short, reaching only to the hips, fitting closely, having a small turn-over collar as now worn: it was edged with lace or braid, or decorated with frog-buttons, tassels, or embroidery; the breeches were tight, of spotted or striped silk, with large bunches of stringa at the knee.

(*Amer. Hist.*) The term applied, during the Revolutionary war, to the men of a Maryland regiment, on account of the showy colors (scarlet and buff) of their uniform.

Macaro'nian, Macaron'ic, *a.* [Fr. *macaronique.*] Resembling or pertaining to a macaroni; hence, frivolous; fribble trifling; foppish; affected; vain. — Consisting of a mixture or jumble of words of different languages.

Macaron'ic, *n.* A jumble or medley of things thrown pell-mell together. — A kind of burlesque poetry, in which words of different languages are intermixed, and native words are made to end in Latin terminations, or Latin words are modernized; — as in the following book inscription, the author of which seems resolved, at all hazards, to maintain his right of property:

> "Si quisquis furetur
> This little libellum,
> Per Phœbum, per Jovem,
> I'll kill him I I'll fell him;
> In ventrem illius
> I'll stick my scalpellum,
> And teach him to steal
> My little libellum."

Macaroon', *n.* [Fr. *macaron.* See MACARONI.] A small cake, compounded of flour, eggs, almonds, and sugar. — A fop; an exquisite; a fribble; a macaroni.

MacArthur, in *Ohio*, a township of Logan co.; *pop.* abt. 1,800.

— A post village, cap. of Vinton co., abt. 60 m. S.S.E. of Columbus; *pop* abt. 1,300.

Macarthy Island, (*mak-är'te,*) an island off the W coast of Africa, in the river Gambia, 130 m. from its mouth: *area*, 3 sq. m. It belongs to Great Britain. *Pop.* 2,000, mostly liberated Africans.

Macas'sar, the chief settlement of the Dutch in the island of Celebes, 250 m. S.E. of Borneo. The harbor is safe and convenient, but difficult of access. The town is situated on the S.W. coast, and is mostly inhabited by the Chinese, who carry on an extensive trade, principally with China. The exports are chiefly rice, sandal wood, ebony, tortoise-shell, gold, spices, &c. *Pop.* of town 12,000.

Macas'sar Oil. *n.* [From *Macassar*, a town in the island of Celebes.] (*Toilet.*) A kind of hair-oil, used in the toilet, and originally brought from Macassar. The name has been given in modern days to a popular preparation for the hair, invented by Rowland, a celebrated London perfumer, and immortalized by Byron:

> "In virtues nothing earthly could surpass her,
> Save thine 'incomparable oil,' *Macassar.*"

Macas'sar, (Straits of,) the channel or arm of the sea which separates the islands of Borneo and Celebes. *Ext.* 350 m. long, and from 100 to 140 broad.

Macauba, (*ma-kow'ba,*) a town of Brazil, abt. 370 m. W.S.W of Bahia.

Macau'lay, THOMAS BABINGTON, LORD, a celebrated English historian, orator, essayist, and poet. He was the son of Zachary Macaulay, a Scottish Presbyterian of stern principles and life, and was b. at Rothley Temple, Leicestershire, 1800. His mother, whose maiden name was Mills, had been a schoolmistress at Bristol, was the daughter of a Quaker, and had been trained under the care of the celebrated Hannah Moore. His father's sister having been the wife of Thomas Babington, a merchant, the future historian received those names at the baptismal font. From his birth he exhibited signs of superiority and genius, and more especially of that power of memory which startled every one by its quickness, flexibility, and range. From school he went to the university of Cambridge, where he earned reputation by his verses and his oratory, and by his youthful contributions to Charles Knight's "Quarterly Magazine." He graduated A. B. in 1822, and M. A. in 1826. He had already entered himself of Lincoln's Inn, and been called to the bar. His real entry into literature was through the gates of the "Edinburgh Review," his first effort being the brilliant essay on Milton. During twenty years this first contribution was followed by many others, some from books, some from life, of which

Fig. 1667. — LORD MACAULAY.

the best were unquestionably those on Hastings and Clive. His political career commenced in 1830, under the auspices of Lord Lansdowne, who, seeing an article on the ballot by the young barrister, at once sought him out, and introduced him to Parliament as member for Calne. The government soon made him secretary of the Board of Control for India, and thus secured his talents for the service of the Whigs. In 1834 he went to India as member of the Supreme Council of Calcutta, in two years and a half made a very considerable addition to his fortune, and came back to England to acquire fame. For a few years he united both politics and letters, representing Edinburgh in the House of Commons, and writing articles for the "Edinburgh Review." A quarrel with his constituents severed his connection with the House of Commons, and restored him to literature. It is true, the citizens of Edinburgh again chose him as their representative in 1852; but he was little more than a nominal member, for he only spoke once or twice, and then on questions of no public moment. During the last twelve years of his life his time had been almost solely occupied with the *History of England*, four volumes of which were completed and published. Although he was generally believed to be closely engaged with the continuation of his History, he frequently turned aside for other literary tasks; such as the memoirs of Oliver Goldsmith, William Pitt, and others, given — literally given, to Mr. Black for his edition of the "Encyclopædia Britannica." At the time of his death he had nearly completed the fifth volume of his History, which was shortly afterwards published, though in an incomplete form; indeed, the whole work, as we have it, can only be regarded as a magnificent fragment. Of his History, a literary journal of influence remarked: "The verdict of mankind on the merits of this very considerable contribution to the history of England is not likely to be unanimous; the taste of contemporaries is never decisive. Lord Macaulay's ambition was to stand in the same rank with Hume. The Messrs. Longman, publishers, have paid to him the revenues of a prince, a single one of their checks to the historian being for $100,000." Besides the "History" and the *Essays*, he wrote a collection of beautiful historic ballads, the well-known *Lays of Ancient Rome*. His parliamentary and miscellaneous speeches have also been given to the world in a more accessible form than the pages of Hansard. In 1849 he was elected Lord Rector of the university of Glasgow; about the same time he became a bencher of Lincoln's Inn. In 1850 he was appointed honorary professor of ancient history in the Royal Academy; three years later, he was rewarded with the Prussian order of Merit, and, in 1857, his honors culminated in his creation as Lord Macaulay. A distinguished French critic paid the following tribute to the English historian: "Lord Macaulay's history is well adapted to exalt our souls. On beholding the struggles, the efforts, and — why should we not add — the weaknesses of the men who have founded the greatness and the liberties of England, we have learned not to despair of generations which seem to be the most debased. We do not doubt that men of all times and of all countries will thus find in the writings of Lord Macaulay an inexhaustible source of information. He combined with the exact knowledge of facts, which is but the smallest part of the historian's talent, an astonishing variety of judgment, of ingenious parallels, and of elevated considerations, of which the fruit will never be lost. He brought to the study of events, and to the estimate of character, the constant application of those moral laws with which genius itself cannot dispense, and which avenge themselves in a late triumph on those who have disregarded them. It is by this that he has his place among those who have not merely charmed humankind, but who deserved to instruct them. It is to the honor of our age that the loss of such men is deplored not only in the country in which it occurs. The death of Lord Macaulay has been felt wherever there are men who know how to honor noble talent, a life without a stain, and the love of liberty based upon laws." D. 1859.

Macaw', MACAO. *n.* (*Zoöl.*) See ARARINÆ.

Macaw'-tree, *n.* (*Bot.*) The *Cocos fusiformis*, a palm of the genus *Cocos*, native of the West Indies and of the warm parts of America. It is called *Macoya* in Guiana, and *Macahuba* in Brazil. It is from twenty to thirty feet high, and with pinnated leaves from ten to fifteen feet long. The fruit yields an oil, of a yellow color, of the consistence of butter, with a sweetish taste, and an odor of violets, used in the native regions of the tree as an emollient in painful affections of the joints, and extensively imported into Britain, where it is sometimes sold as *Palm Oil*, to be used in the manufacture of toilet-soaps.

Macayo, or MACEIO, (*ma-si'o,*) a town of Brazil, cap. of the prov. of Alagoas, on the Atlantic, abt. 125 m. S. by W. of Pernambuco.

MacBean, in *Georgia*, a village of Richmond co.

MacBean's Creek, in *Georgia*, enters the Savannah River between Richmond and Burke cos.

Mac'beth, the hero of Shakspeare's tragedy of that name, was a Scottish chief related to the reigning king Duncan, whom he assassinated in order to usurp his power, 1040. He fell in battle by the hand of Macduff, 1057.

Mac'cabaw, Mac'caboy, *n.* [Fr. *macouba.*] A choice kind of brown snuff.

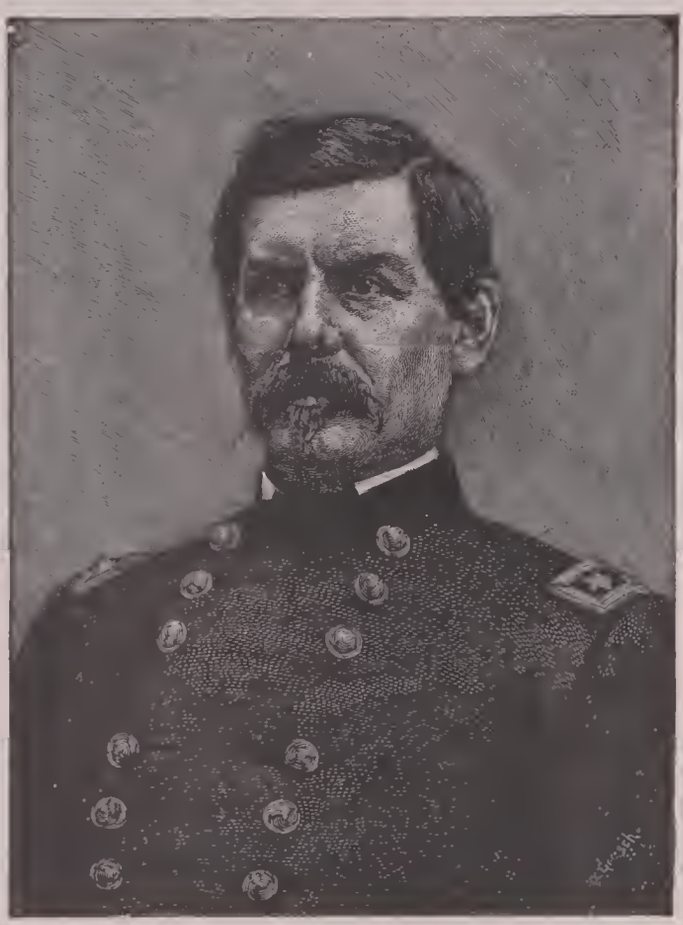
Maccabe'an, *a.* Pertaining or having reference to the Maccabees.

Maccabees, (*mäk'ä-bēez.*) [Etymology unknown.] (*Script.*) As a family, the Maccabees commenced their career of patriotic and religious heroism during the persecution of Antiochus Epiphanes, abt. the year B. C. 167. At this time the aged Mattathias, a descendant of the Asmoneans, and his five sons, inhabited the town of Modin, to which place Antiochus sent certain of his officers with instructions to erect an altar for heathen sacrifices, and to engage the inhabitants in the celebration of the most idolatrous and superstitious rites. The venerable Mattathias openly declared his resolution to oppose the orders of the tyrant, and one of the recreant Jews approaching the altar which had been set up, he rushed upon him and slew him with his own hand. His part thus boldly taken, he called his sons and his friends around him, and immediately fled to the mountains, inviting all to follow him who had any zeal for God and the law. Their number soon increased; and not long after, they were able to make descents into the adjacent villages and cities, where they circumcised the children, and restored everywhere the ancient religion of Jehovah. At the death of Mattathias (166 B. C.), Judah Makkabi (166–161 B. C.) took the command of the patriots, and repulsed the enemy, notwithstanding his superior force, at Mizpah (6,000 against 70,000), Bethsur (10,000 against 65,000), and other places, reconquered Jerusalem, purified the temple (Feast of Reconsecration—Chanukah), and reinaugurated the holy service (164 B. C.). Having further concluded an alliance with the Romans, he fell in a battle against Bacchides (161 B. C.). His brother Jonathan, who succeeded him in the leadership, renewed the Roman alliance, and taking advantage of certain disputes about the Syrian throne, rendered vacant by the death of Antiochus, acquired the dignity of high-priest. But Tryphon, the guardian of the young prince Antiochus Theos, fearing his influence, invited him to Ptolemais, and had him there treacherously executed. Simon, the second brother, was elected by the Jewish commonwealth to assume the reins of the national government, and was formally recognized both by Demetrius, Tryphon's antagonist, and by the Romans, as "chief and ruler of the Jews." He completely re-established the independence of the nation, and the year after his succession (141 B. C.) was made the starting-point of a new æra. The almost absolute power in his hands he used with wise moderation; justice and righteousness flourished in his days, and "Judah prospered as of old." But not long (seven years) after his accession to the supremacy, he was foully murdered (136 B. C.) by his own son-in-law, Ptolemy, who vainly hoped to succeed him. For the subsequent history of this family, see JEWS; and HYRCANUS. — The Feast of the Maccabees — *i. e.*, both of the sons of Mattathias, and of the seven martyr children (2 *Macc.* vii.) — is found in the Roman martyrology under the date of the first of August.

Mac'cabees, (Books of,) (*Script.*) The name given to certain apocryphal books of the Old Testament, containing principally the details of the struggles of the Jews against the civil and religious tyranny of the Syrian kings in the heroic period of the Maccabees. The books are connected only by their subjects, being by different authors, and of widely unequal literary merit. The two first in order were declared canonical by the councils of Florence and Trent, and are also contained in the original translation of Luther. The first book of Maccabees contains a history of the Jews from the reign of Antiochus Epiphanes till the death of the Jewish priest Simon, *i. e.* from 175 to 135 B. C. It may be divided into four parts; viz., — 1. From the commencement of Antiochus Epiphanes's reign till the death of Mattathias (i. ii.); 2. the history of the presidency of Judas Maccabeus (iii.–ix. 22); 3. the government and high-priesthood of Jonathan (ix. 23–xii. 53); 4. history of the high-priest Simon (xiii.–xvi.) The Greek text of the Septuagint version is the original of all the others; but there is little doubt that it was written originally in Hebrew. Of the author nothing is known; but he must have been a Palestinian Jew, and have lived some time after the events recorded in the book. Though in some instances unsatisfactorily defective and uncritical, and occasionally extravagant, it

Thomas Babington Macaulay

1800–1859



George Brinton MacClellan

1826–1885

is upon the whole entitled to credit for general accuracy. The second book of Maccabees is inferior in many respects to the first in simplicity, credibility, naturalness, correctness, &c. It professes to be an abridgment of an earlier historical work by a Jewish writer of Cyrene, named Jason, relating the principal events of Jewish history in the reigns of Seleucus IV., Antiochus Epiphanes, and Antiochus Eupator. It partly goes over the same ground with the first book, but commences 10 or 12 years earlier, and embraces in all a period of fifteen years. The precise age, either of the author or his predecessor Jason, is unknown. The two letters with which the book begins are generally regarded as spurious, and the other parts abound with inaccuracies, and even self-contradictions. The third book of Maccabees is prior in time to the first and second, and, indeed, does not touch on the time of the Maccabean heroes. It gives an account of a sacrilegious attempt of Ptolemy Philopator, after his victory over Antiochus the Great, at Raphia (217 B. C.), to enter the Holy of Holies at Jerusalem, which was baffled by a miracle. Upon his return to Egypt he resolved to avenge himself upon the Jews there; and those of them who would not consent to be initiated into the orgies of Bacchus, he caused to be chained in the great circus at Alexandria, in order to be trampled to death by elephants. Two angels appeared, in a terrible form, between the Jews and the elephants, when the latter went backwards and crushed the soldiers. The king caused the Jews to be released, appointed a festival, and made an edict that none of his subjects should injure a Jew on account of his religion. The author and his age are both unknown; and, indeed, the entire history is nothing else than a most absurd Jewish fable. The fourth book of Maccabees is generally supposed to be the same with the "Supremacy of Reason," attributed to Josephus by Jerome, Eusebius, and others. It contains an ascetic treatise on the dominion of right reason over the passions, as illustrated by the history of the martyrdom of Eleazar, the seven brothers, and their mother; being an inflated amplification of that history as given in 2 Macc. vi. vii. The author makes many historical blunders, and the whole manner and diction disprove it to be the work of Josephus. Nothing is known of its author, and it is believed not to be earlier than the 2d century of our æra. The fifth book of Maccabees is now extant only in the Arabic. It comprises a history of Jewish affairs from the attempt on the treasury at Jerusalem by Heliodorus, and brings it down to the extermination of the house of the Maccabees by Herod the Great. The work was originally written in Hebrew, but who the translator was it is impossible to say; but he seems to have lived after the destruction of the temple at Jerusalem by Titus.

MacCall's Ferry, in *Pennsylvania*, a P. O. of York co.

MacCam'eron, in *Indiana*, a post-township of Martin co.

MacCam'mish, in *Kansas*, a township of Johnson co.

MacCand'less, in *Pennsylvania*, a township of Allegheny co.

—A post-office of Butler co.

MacCar'tysville, in *California*, a village of Santa Clara co., abt. 10 m. S.W. of San José.

MacCar'tyville, in *New Jersey*, a village of Burlington co., abt. 28 m. S.E. of Mount Holly

Macchiavelli, or **Machinvel,** NICCOLÒ, (*mak-e-a-vail'le,*) a celebrated Florentine statesman and historian, was B. of an ancient family in 1469. As secretary of the council named "The Ten," a post which he held for fourteen years, 1498–1512, he was one of the most prominent actors in the foreign and diplomatic affairs of the republic during that period. The great capacity for business and diplomacy which he showed led to his being employed on a great number of political missions, the most important of which were those to the king of France, to whom he was sent on four occasions; to the popes Pius III. and Julius II.; to Cæsar Borgia, in whose camp he passed three months; and to the Emperor Maximilian. On the restoration of the Medici, in 1512, *M.* was banished, and in the following year he was arrested and subjected to the torture on the charge of conspiracy against the Medici, but was soon pardoned and liberated. The next 8 years he spent in retirement and literary labors, was then again employed as ambassador, and died at Florence, June 22, 1527. The principal works of *M.* are: *Il Principe*, the famous treatise in which are expounded the obnoxious principles and system of policy ever since designated *Macchiavellism*, and which was probably written to gratify the Medici; it was published in 1532; *Storie Florentine; Discourses on the First Decade of Titus Livius; Seven Books on the Art of War;* and valuable Reports of his negotiations. Letters, Comedies, and other writings completo the 6 vols. 4to. of his works, which, both in point of matter and of style, stand in the highest rank of Italian literature. The intellectual tendencies of *M.* were for the unity and progress of Italy, — hence, the republicans of modern Italy consider him as their precursor; which explains the extraordinary enthusiasm manifested during the celebration of his centenary at Florence, in May, 1869.

Fig. 1668. — MACCHIAVELLI.

MacClains'ville, in *California*, a village of Humboldt co., abt. 12 m. S. by W. of Eureka. It was formerly called HOOKTOWN.

MacClear'y, in *Ohio*, a post-office of Noble co.

MacClel'lan, GEORGE BRINTON, major-general in the U. S. army, B. at Philadelphia, 1826, was educated at West Point, which he quitted in 1846 as Second Lieut. of Engineers, served in the Mexican War of 1846–8, and greatly distinguished himself at the battles of Contreras, Cherubusco, Molino del Rey, and Chapultepec. For his gallant conduct in the latter engagement he was advanced to the brevet rank of Captain, and placed in command of a company of sappers and miners; and on the conclusion of the war returned to West Point, where he remained on duty with his company until 1851. During this portion of his career he introduced the bayonet exercise into the United States army, and translated and adapted a military manual, which is the authorized textbook for the service. In the latter part of 1851 he superintended the construction of Fort Delaware, and in the spring of 1852 served under Major Marcy in the expedition for exploring the Red River. Soon after this he went to Texas on the staff of Gen. Persifer Smith as senior engineer, and was engaged for some months in surveying the rivers and harbors of the State. In 1853 he was ordered to the Pacific coast in command of the western division of the survey of the North Pacific Railroad route; returned in 1854, received a commission in the cavalry in 1855, and was soon after appointed, with Col. (the Confederate general) Robert Lee, a member of the commission sent by the U. S. Government to the seat of war in the Crimea. As the result of his observations, he drew up a critical report on the *Organization of European Armies, and the Operations of War,* which enhanced his reputation as a scientific soldier. He quitted the army in 1857 to become Vice-President and Engineer of the Illinois Central Railroad, which post he held for three years, when he was offered the presidency of the Ohio and Mississippi line. On the breaking out of the civil war, he received a commission as Maj.-Gen. of Volunteers, with the command of the department of Ohio, took the command of the Union troops in Western Virginia, June 21, 1861, and distinguished himself by defeating a Confederate force at Rich Mountain, July 11; and after the disastrous defeat of Gen. McDowell at Bull Run, July 21, the President appointed McClellan to the command of the Army of the Potomac. Gen. Scott, the commander-in-chief, having been allowed, by reason of his great age, to retire in Nov., Gen. McClellan was appointed to succeed him, but resigned this post, when he took the immediate control of the Army of the Potomac, in March, 1862. Meanwhile he had been actively occupied for several months in organizing that army, and left Washington in March for a forward movement on Richmond. As the Confederate army had fallen back upon that city, Gen. McClellan resolved to land on the peninsula between the York and James rivers, and march upon Richmond, drawing his supplies as he required them from either river. Unfortunately for the Federal commander, his plan of the campaign was betrayed to the Confederates, while his most important arrangements were marred by the interference of President Lincoln, who, being afraid that Washington would be attacked, impeded the active co-operation of Gen. McDowell and his army, whose task was to have been the turning of the Confederate flank. After fighting his way, with much loss, to the Chickahominy, and taking possession of Yorktown, Gen. McClellan gradually advanced northwards, until his troops approached Richmond. The Confederate commander, Gen. Joseph Johnston, having been wounded at the battle of Fair Oaks, June 1, 1862, Gen. Lee was appointed to succeed him, and Gen. McClellan found in his old associate a more skilful and powerful opponent. After the desperate combats, known as the "Seven Days before Richmond," McClellan found it necessary to withdraw his army to the protection of his gunboats. Gen. Halleck, having been appointed General-in-chief of the land forces of the U. States, ordered Gen. McClellan to evacuate the peninsula of Virginia; and this he did under protest, arriving with the portion of the army under his immediate command at Alexandria, and taking charge of the defences of Washington. The occasion of this movement was the attack made by "Stonewall" Jackson on the army of Gen. Pope and the fears of the of the officials at Washington for the safety of that city. Lee being set free by this movement, attacked and disastrously defeated Pope in the field of Bull Run, and subsequently advanced into Maryland. McClellan, again in command of the Army of the Potomac, re-organized it and followed his old antagonist, meeting him, after a minor engagement at South Mountain, on the field of Antietam, where was fought McClellan's most brilliant battle. Though successful in forcing Lee to re-cross the Potomac, he was so deliberate in later movements that the Cabinet relieved him, Nov. 5, 1862, from his command of the Army of the Potomac, which was transferred to Gen. Burnside. In Sept., 1864, McClellan was chosen by the Chicago Convention as the Presidential candidate of the Democratic party; but he was left in a minority at the polling-places, and President Lincoln was re-elected. Gen. McClellan resigned his commission in the army, Nov. 8, 1864, and soon after left the U. S. for Europe, returning in 1868. He was cordially greeted by the Democratic party, by whom he was nominated and elected governor of New Jersey in 1877. He d. at Orange Mountain, N. J., Oct. 29, 1885.

MacClel'landstown, in *Pennsylvania*, a post-village of Fayette co., abt. 8 m. W. of Uniontown.

Mac'clesfield, a town of England, co. Chester, on the Rollin, 16 m. S.E of Manchester, and 163 N.W. of London. It is pleasantly situated, and well built. Within the present century it has rapidly advanced as a seat of textile industry. The silk manufactures of *M* afford employment to the greater portion of the inhabitants. *Pop.* 37,101.

MacClin'tock, SIR FRANCIS LEOPOLD, F. R S., LL.D., a British naval officer and Arctic explorer, B. in Dundalk, Ireland, 1819. At an early period of his career, Capt. *Sir F. McC.* devoted his attention to the problem of the Arctic N.W. passage, and succeeded, in the course of several voyages to the N. Pole, in making many and important discoveries, besides ascertaining the fate of Sir John Franklin, (*q. v.*) Sir Francis is the author of the *Narrative of the Discovery of the Fate of Sir John Franklin and his Companions,* London and Boston, 1860.

MacCla'ney, in *Ohio*, a former post-office of Perry co.

MacClure', an Irish navigator. See NORTHWEST PASSAGE.

MacClure', in *Nebraska*, a township of Holt co.

MacComb', in *Ohio*, a post-village of Hancock co., on 2 R. Rs., 9 m. N. N.W. of Findlay. *Pop.* (1897) 1,450.

MacCon'nell, in *Illinois*, a post-village of Stephenson co., about 140 m. W. N.W. of Chicago.

MacCon'nellsburg, in *Pennsylvania*, a post-borough, cap. of Fulton co., about 70 m. W. S.W. of Harrisburg. *Pop.* (1897) 642.

MacCon'nellstown, in *Pennsylvania*, a post-village of Huntingdon co., abt. 95 m. W by N of Harrisburg.

MacCon'nellsville, in *Ohio*, a post-village, cap of Morgan county, about 27 miles S.S.E. of Zanesville. There is an artesian salt well here, which throws up brine and hydrogen gas. The gas is collected in a holder and led by a pipe under the boiler; the flame caused by ignition of the gas supplies heat enough to evaporate all the salt produced by the well. The well, about 200 ft. in depth, was bored about 40 years ago, and was one of the first artesian wells made in the country.

MacCoys'ville, in *Pennsylvania*, a P. O. of Juniata co.

MacCrack'en, in *Kentucky*, a W. co., adjoining Illinois; *area*, about 330 sq. m. *Rivers.* Ohio, Tennessee, and Clark's rivers. *Surface*, low and level; *soil*, fertile. *Cap.* Paducah

MacCul'loch, JOHN RAMSAY, a Scotch political economist and statistician, B. in Wigtownshire, 1789. In 1828 he was appointed prof. of political economy in London University, but he filled that chair only a short time. In 1838 he was made comptroller of the Stationery Office, and remained in that post till his death. His principal works are, the *Statistical Account of the British Empire*, first published in 1837, since enlarged, and several times republished; the *Dictionary of Commerce and Commercial Navigation*, annually reprinted; the *Geographical Dictionary;* his *Principles of Political Economy;* and a work on *Succession to Property vacant by Death.* He contributed to the *Encyclopædia Britannica*, and to various periodical works, and published a work on the bibliography of political economy. He was a member of the Institute of France. D. 1864.

MacCutch'conville, in *Ohio*, a post-village of Wyandot co., abt. 78 m. N. by W. of Columbus.

MacCutch'conville, in *Indiana*, a post-office of Vanderburgh co.

MacCutch'con's Landing, in *Louisiana*, a post-office of St. Charles parish.

MacDan'iel's, in *Ohio*, a post-office of Gallia co.

Macdon'ald, ETIENNE JACQUES JOSEPH ALEXANDRE, Duke of Tarentum, a marshal of France, B. in Sancerre, 1765. Descended from a Scottish family, he entered the French army in 1784, and embracing the revolutionary cause, served on the staff of Dumouriez at Jemappes, and greatly distinguished himself in the campaign in the Low Countries under Gen. Pichegru. In 1796, as general of division, he took the command of the army of the Rhine; he then joined the army of Italy, where he became governor of Rome, and having soon afterwards been sent against Naples, his skilful retreat saved the French army from the utter ruin with which it was menaced by Suwarrow. During the 18th Brumaire, he commanded at Versailles. In 1800 he was appointed to the command of the army in Switzerland, and immortalized his name in military annals by his celebrated passage of the Splugen. In 1802 he was appointed French ambassador at the court of Copenhagen; but there he incurred the displeasure of Napoleon, and was withdrawn from active service. In 1809, nevertheless, he took part in the Italian campaign, shared the glories of the victories at Laybach, Raab, and Wagram, his gallant conduct in the last earning for him a marshal's baton at the emperor's hands, and was appointed governor of Gratz, where his humanity gained him "golden opinions from all ranks of people." In 1810 he was created duke of Tarentum, and appointed to the command in Catalonia. He subsequently shared in the Russian campaign, and distinguished himself in the battles of Bautzen and Lützen; but met with a severe reverse at Katzbach, where he had imprudently engaged Marshal Blücher with a greatly inferior force. After the fall of Napoleon, he was called to the Chamber of Peers, and made chancellor of the Legion of Honor; but he took little or no part in politics. D. 1840.

Macdon'ald, FLORA, the courageous young Scotchwoman, who, after the defeat of the young Pretender, Prince Charles Edward, at Culloden, in April, 1746,

risked her own life that she might aid his escape from his pursuers. She had the prince dressed as a woman, and giving him out as her maid-servant, succeeded in conveying him safely to the Isle of Skye, whence, after many wanderings, perils, and hardships, he ultimately escaped to France. Flora was afterward imprisoned for a short time in the Tower of London. She died in 1790.

MacDon'ald, in *Alabama*, a village of Dallas co.

MacDonald, in *Florida*, a village of Orange co.

MacDonald, in *Georgia*, a village of Thomas co.

MacDonald, in *Missouri*, an extreme S.W. co., adjoining Arkansas on the S., and Indian Territory on the W.; *area*, about 580 sq. m. *Rivers.* Elk or Cowskin river, and numerous smaller streams. *Surface*, generally level: *soil*, fertile. *Cap.* Pineville. *Pop.* (1890) 11,283.

—A village of Carter co.

Macdonald, in *Ohio*, a township of Hardin co.

MacDonald's Mill, in *Virginia*, a post-village of Montgomery co.

MacDonaldsville, in *Ohio*, a post-village of Stark co.

MacDonough (*mac-don'o*), in *Delaware*, a post-village of New Castle co.

MacDonough, in *Georgia*, a post-village, cap. of Henry co., about 65 m. N.W. of Milledgeville. *Pop.* (1897) 586.

MacDonough, in *Illinois*, a W. co.; *area*, about 580 sq. m. *Rivers.* Crooked, Downing's Fork, Turkey, and Grindstone Creeks. *Surface*, mostly level; *soil*, very fertile. *Cap.* Macomb. *Pop.* (1890) 27,467.

MacDonough, in *New York*, a post-town and township of Chenango co., about 15 m. W. by S. of Norwich. *Pop.* (1897) 1,085.

MacDow'ell, Irwin, an American brigadier-general, b. in Franklin co., Ohio, 1818, was educated in France, and on his return to the United States entered the Military Academy at West Point, where he graduated in 1838, and was appointed to the artillery. On the breaking out of the civil war he was appointed, with the rank of Brigadier-General, to command the Federal troops at Alexandria; and the Union army, which had been hastily got together in July, 1861, to oppose Beauregard, and had been concentrated at Manassas, was placed under his command. Unfortunately, the troops were still undisciplined, and the disgraceful defeat and flight of Bull Run, July 21, followed. Gen. McClellan took the command after that battle, and Gen. McDowell was placed in charge of the troops at Arlington. He was made a Major-Gen., March 14, and commander of the Department of the Rappahannock, April 14, 1862. He took part in the various battles fought by Gens. McClellan and Pope in June and Aug., 1862, but was relieved Sept. 5, at his own request. In 1882 he was retired, and d. in California, May 5, 1885.

MacDow'ell, in *N.C.*, a W. co.; *area*, abt. 450 sq. m. *Rivers*, Catawba and numerous smaller streams. *Sur.*, diversified, the Blue Ridge forming the W. and N.W. boundry of the co., and attaining the height of 6,000 ft. above sea-level. *Cap.* Marion. *Pop.* (1890) 10,929.

MacDowell, in *Virginia*, a post-village of Highland co.

MacDowell, in *West Virginia*, an extreme S. co., adjoining Virginia; *area*, about 680 sq. m. *Rivers.* Tug Fork of Sandy river, and Camp Creek. *Surface*, hilly; *soil*, fertile. *Cap.* Welch. *Pop.* (1890) 7,300.

Mace, in *Indiana*, a post-village of Montgomery co.

Mace, *n.* [It. *mazza*, a club; Lat. *massa*; Fr. *masse.*] A club of metal used in warfare from the most remote times. The gradual course of improvement having rendered armor impenetrable by edged weapons, the mace was used as an instrument of effectual demolition. In its simplest form the mace was only a short strong iron club, and its shape varied among different nations and at different times: sometimes a ball was attached to the end by a triple chain. At present the mace, in a more ornamental form (Fig. 564), is used in England as an ensign of authority borne before magistrates: of this kind is the mace placed before the Speaker of the House of Commons while that officer presides at the sittings of the House.

—The heavier rod employed in the game of billiards.

Mace, *n.* [It. *mace;* Fr. *macis;* from Lat. *macir, macis.*] A well-known spice, forming the aril or inner envelope of the growing nutmeg. When the capsule of the nutmeg bursts — which it does, like the husk of a filbert, when the fruit is nearly ripe — it discloses a bright scarlet net-work, investing the whole nut in a thin, fibrous membrane. This inner coat or tunic is the mace, which is eventually peeled off and dried, when it loses its bright color, and becomes of a reddish-yellow. Mace is regarded as the most choice of all the spices, and accordingly always realizes a high price. It contains a very large proportion of essential oil, on account of which mace is never employed alone in medicine, though in its properties possessing the usual carminative character of other spices.

Mace'-ale, *n.* Ale spiced with mace.

Mace'-bearer, *n.* An officer who carries the mace in state or judicial proceedings; a macer.

Mac'edon, a name applied by English writers to the empire of the Macedonians; while *Macedonia*, q. v., is used by them to designate the land, or country.

Macedon, (*mas'se-don,*) in *New York*, a post-township of Wayne co.

Macedon, in *Ohio*, a post-village of Mercer co., abt. 12 m. S.W. of Celina.

Macedon Cen'tre, in *New York*, a post-village of Wayne co., abt. 200 m. W. by N. of Albany.

Macedo'nia. (*Anc. Geog.* and *Hist.*) A celebrated country, which originally was confined to a small district called Emathia, gradually extended until, in the time of Philip, father of Alexander, it reached, on the N., the Scardian Mountains, a portion of the Hæmus (mod. Balkan) Range; on the W., the frontiers of Epirus and Illyria; on the E., the river Nestos (mod. Karasu); and on the S., Thessaly. The country is on the whole mountainous, especially in the south and west, but there are several large plains of great fertility. The principal rivers were called the Strymon, the Axius, and the Haliacmon. It contained a number of flourishing cities, of which the names are well known in ancient history, particularly Pella, the capital, Pydna, Thessalonica, Potidæa, Olynthos, Philippi, and Amphipolis. The history of *M.* is involved in much obscurity till about 490 B. C., when the Persians subdued it, so that the Macedonian king, Alexander I., was compelled to take part with Xerxes in his invasion of Greece. On the retreat of the Persians after the battle of Platæa in 479 B. C., *M.* again recovered its independence. Under the wise and vigorous reign of Archelaus, who died 399 B. C., it greatly increased in prosperity and power; but after his death, a period of civil wars and contests for the throne ensued, which ended in the accession of Philip II. (359 B. C.), who not only seated himself firmly on the throne, but greatly extended his dominions. His son, Alexander III., surnamed The Great, brought half the then known world under his empire; but after his death, the Macedonian empire was broken up, and at the end of a period of 22 years of incessant wars, formed into four principal kingdoms under his greatest generals. *M.* itself fell to the lot of Antipater, after whose death ensued another period of civil wars and contests for the throne, of which the Greeks endeavored to take advantage for the recovery of their ancient independence. But the Athenians having called in the assistance of the Romans against Philip V. of *M.*, by whom their city was besieged, the Macedonians were defeated by the Romans in the great battle of Cynocephalæ (197 B. C.), and both Greece and *M.* became subject to the Roman power. Perseus, the successor of Philip, was finally defeated at Pydna (168 B. C.), and adorned the triumph of Æmilius Paulus. In B. C. 148, *M.* became definitely a Roman province, in which Thessaly and part of Illyria were included.

Macedo'nia, in *Iowa*, a post-township of Pottawattomie co.

Macedonia, in *Pennsylvania*, a P. O. of Bradford co.

Macedonia, in *Tennessee*, a village of Carroll co.

Macedonia Depot, in *Ohio*, a post-village of Summit co., abt. 19 m. S.E. of Cleveland.

Macedo'nian, *a.* (*Geog.*) Relating or pertaining to Macedonia.

—*n.* A native or an inhabitant of Macedonia.

Macedo'nians, *n. pl.* (*Eccl. Hist.*) The name given to the sect of the Semi-Arians is derived from Macedonius, a deacon who was made bishop of Constantinople by the Arians in 341, and was acknowledged as Patriarch in 342. When the Arians separated into the Ariaus and the Semi-Arians, in 359, Macedonius took part with the latter, and he was expelled from the see in 360, after which time the Semi-Arians were called Macedonians. They were condemned by the 2d general council, held at Constantinople May–July 30, 381. They are also called Pneumatomachians, or Adversaries of the Spirit.

MacElhat'tan, in *Pennsylvania*, a P.O. of Clinton co.

MacElroy, in *W. Virginia*, a P. O. of Doddridge co.

MacElwains, in *S. Carolina*, a village of York dist.

Mace'-proof, *a.* Exempt from arrest.

Mac'er, *n.* A mace-bearer.

"*A macer*, or officer in attendance on the Supreme Court." *W. Scott.*

Macerata, (*ma-chai-ra'ta,*) a town of Italy, cap. of a prov. of the same name, 21 m. S.W. of Ancona. It is finely situated on an eminence in the midst of hills, and commands picturesque views of the sea and the Apennines. *M.* contains a university of great repute, besides other literary institutions. *Pop.* 20,000.

Macerate, (*mās'er-āt,*) *v. a.* [Lat. *macero, maceratus*, to soften by steeping. The meanings of *macerate* are divided between *macer*, lean, meagre, and *marceo*, to be drooping, feeble.] To make lean; to wear away; to attenuate; to cause to droop; to mortify; to fret. (R.)

—To steep almost to solution; to soften and disintegrate the parts of a substance by saturation, or by the digestive process; as, to *macerate* a drug.

Macera'tion, *n.* [Lat. *maceratio.*] Act or process of macerating, or of making lean and attenuate by wearing away, or by mortification. (R.)

(*Chem.*) The infusion of substances in cold liquids. The term is usually employed with regard to vegetable substances, when they are reduced to powder and exposed to the action of water, or any other liquid, without the assistance of heat, in which last respect it differs from *digestion*. Maceration is useful either when it is required merely to soften the parts of the substance operated on, as when cinnamon and cloves are macerated in water before distillation, or in cases where heat would be injurious, as when volatile or aromatic substances are used.

Mace'-reed, *n.* (*Bot.*) The great Cat's-tail. See Typha.

MacEw'ensville, in *Pennsylvania*, a post-village of Northumberland co., abt. 75 m. N. of Harrisburg.

MacFar'land, in *Wisconsin*, a post-village of Dane co., abt. 7 m. S.E. of Madison.

MacGil'licuddy's Reeks, a mountain-range of Ireland, in the co. Kerry, Munster. It is abt. 10 m. in length, the most elevated on the island, and extends between lakes Killarney on the E. and Carra on the W. It culminates in the peak of Gurran Tual, 3,404 feet in height.

MacGil'livray's Coo'tanie, or Kootenay, a river rising in the Rocky Mountains of British North America, and flowing S.E. into Montana, turns to the W. and then N.W., flows back into the British possessions from Idaho, and joins the Columbia river. It is sometimes called the Flat Bow River.

MacGraw'ville, in *New York*, a post-village of Cortland co., about 140 m. W. of Albany. *Pop.* (1897) 785.

MacGreg'or, in *Iowa*, a post-village of Clayton co., on the Mississippi river, about 61 m. above Dubuque. *Pop.* (1895) 1,201.

Machair'odus, *n.* [Gr. *machaira*, a dagger, and *odous*, tooth.] (*Pal.*) An extinct mammal, allied to the existing Felidæ, in which the upper canines were much elongated, trenchant, sharp-pointed, and sabre-shaped. Species varying from the size of a lion to that of a leopard have been found in miocene, pliocene, and cave-deposits in Auvergne, Eppelsheim, the Val d'Arno, Devonshire, the Pampas, the Braziliau bone-caves, and the Sewalik tertiaries of India.

Machete, (*mă-tchā'ta,*) *n.* [Sp.] A large, heavy knife, used by the Hispauo-Americans both as a weapon and hatchet.

MacHen'ry, in *Illinois*, a N. by E. co., adjoining Wisconsin; *area*, about 620 sq. m. *Rivers.* Pishtaka or Fox, and Kishwaukee rivers, and Nippersink and Piskasliaw creeks. *Surface*, mostly level; *soil*, fertile. *Cap.* Woodstock.

—A post-village of MacHenry co., about 52 m. N.W. of Chicago.

Machiana, (*ma-che-a'na,*) an island of Brazil, at the mouth of the Amazon River; Lat. 0° 5′ S., Lon. 49° 40′ W.

Machias, (*match-i'as,*) in *Maine*, a post-town, township, and port of entry, and the cap. of Washington co., on the Machias River, near its mouth, about 205 m. N.E. of the city of Portland. The inhabitants are principally engaged in ship-building, and trading along the coast.

Machi'as, in *New York*, a post-village and township of Cattaraugus co., about 40 m. S.E. of Buffalo.

Machi'as Port, in *Maine*, a post-village, township, and seaport of Washington county, at the mouth of Machias River, about 200 miles N.E. of the city of Portland.

Machi'as River, in *Maine*, rises in the central part of Washington co., and flowing S.E., enters Machias Bay, an inlet of the Atlantic Ocean, abt. 200 m. N.E. of Portland.

Mach'iavel. See Machiavelli.

Machiavelian, (*māk'i-a-vēl'yan,*) *a.* [From *Machiavel*, q. v.] Relating or pertaining to Machiavel, or to his ascribed doctrines; — hence, diplomatically crafty; politically astute; jesuitical; ambidextrous; practising deception or bad faith in public affairs; as, a *Machiavelian* policy.

—*n.* One who adopts the principles of Machiavel; a crafty intriguer; an unscrupulous politician.

Machiavel'ism, Machiavel'ianism, *n.* [It. *Macchiavellismo.*] The principles imputed to Machiavel, as set forth more particularly in his work *Il Principe*. The meaning and object of this work have been much discussed; but from a letter of the author's, not discovered until 1810, in which he speaks of being then engaged upon it, there can be little doubt that it was written with a view to recommend himself to the Medici. The *Principe* is an account of how tyrannical power is to be acquired and preserved — by overlooking every law, and making use of any means, however criminal, to promote its purposes. Some have regarded the work as satirical; others, that its object was to make tyrants odious; others, that he was desirous of seeing a tree and united Italy, and that he believed any means to be lawful for the attainment of that object. In judging of the work, we must take into account the circumstances and character of the times in which it was written. Had his book taken the form of a commentary upon history, all that he says would have only been matter of fact; but whatever may be the character of the book, the term Machiavelianism is used to denote whatever is infamous and perfidious in politics.

Machic'olated, *a.* Possessing machicolation.

Machicolation, (*mă-shik-o-lai'shun,*) *n.* [Fr. *mâchecoulis*, from *mâcher*, lighted materials, and *coûler*, to pour down.] A term bestowed on those openings in the parapet of a fortified building through which ignited substances, or melted lead, stones, &c., were poured or hurled down at the besiegers. Machicolations were made in the soffit, or under-surface of the projecting parapet, which was supported on corbel-stones, the perforations themselves being in the soffit between those stones. By means of these arrangements, the besieged, while protected by the parapet, were enabled to harass the attacking party in a most formidable manner.

Machinal, (*māk'i-nal,* or *ma-shēn'al,*) *a.* [Lat. *machinalis.*] Pertaining or having reference to machines.

Machinate, (*māk'i-nāt,*) *v. a.* [Fr. *machiner.*] To plan; to plot to scheme; to contrive, as a conspiracy.

Machina'tion, *n.* [Fr., from Lat. *machiner, machinatus*, to contrive, devise, design, or invent skilfully; from *machina*. See Machine.] Act of planning or devising a scheme for the carrying out of some design; — generally in a bad sense. — A hostile or malicious scheme; a subtle or offensive contrivance; a design artfully and deliberately conceived and conducted.

Machina'tor, *n.* An evil intriguer; an insidious plotter or contriver.

Machine, (*ma-shēn',*) *n.* [Fr.; Lat. *machina*; Gr. *mēcha-nē*, from *mēchos*, a means, expedient, remedy.] Any artificial means or contrivance for performing any kind of work; any thing or contrivance which serves to increase or regulate the effect of a given force, or to produce or regulate motion; a complex structure, consisting of a combination or peculiar modification of the mechanical powers. Machines are either *simple* or *com-*

pound. The simple machines, otherwise called the *simple mechanical powers*, are usually reckoned six in number; namely, the *Lever*, the *Wheel and Axle*, the *Pulley*, the *Wedge*, the *Screw*, and the *Funicular Machine*. Compound machines are formed by combining two or more simple machines. They are classed under different denominations, according to the forces by which they are put in motion, as *hydraulic* machines, *pneumatic* machines, *electrical* machines, &c.; or the purposes which they are intended to serve, as *military* machines, *architectural* machines, &c.

- Any organized combination of principles by which power is intensified or made effective; the complete and complicated system by which any institution or organized combination or structure is founded or carried into practical operation; as, "the whole *machine* of government." (*Landor.*) — Supernatural agency in a poem, or a superhuman actor introduced therein to act the part of hero.

"The marvellous fable includes whatever is supernatural, and especially the *machines* of the gods."—*Pope.*

Machine', *v. a.* To effect or operate on by means of machinery; to subject to the action of machinery, particularly to imprint by a printing-machine. (R.)

—*v. n.* To tend machinery; to perform work by the action or co-operation of machinery. (R.)

Machin'ery, *n.* [Fr. *machinerie.*] Machines in a general or collective sense; as, *machinery* of war. — The component parts of a complex machine; as, the *machinery* of a watch. — Superhuman beings or agency introduced by a dramatic poet to solve difficulties, or perform some exploit which exceeds human power — The *modus operandi* which governs or sustains the action of any thing; as, the *machinery* of state.

Machine'-shop, *n.* A place or manufactory in which machinery is constructed or fitted.

Machine'-tool, (sometimes called ENGINE-TOOL,) *n.* In England, a machine used for shaping metallic substances by cutting.

Machin'ist, *n.* [Fr. *machiniste.*] One who constructs or fits together the parts of engines or machinery; an adept in the principles of machinery.

Macigno, (*mā-chēn'yo,*) *n.* [It., from Lat. *machina.*] (*Min.*) A hard, silicious sand-stone.

Mac'Indoe's Falls, in *Vermont*, a post-village of Caledonia co., abt. 29 m. E. by S. of Montpelier.

MacIn'terfer's Creek, in *Michigan*, enters Stony Creek in St. Joseph co.

Mac'Intosh, in *Florida*, a village, former cap. of La Fayette co., about 109 m. S. E. of Tallahassee.

Mac'Intosh, in *Georgia*, a S. E. co., bordering on the Atlantic Ocean. *Rivers.* Altamaha and Sapelo rivers, besides several creeks. *Surface*, mostly level; *soil*, in some places exceedingly fertile. *Cap.* Darien. *Pop.* (1890) 6,470.

Mac'Intyre, in *Pennsylvania*, a township of Lycoming county.

MacKay, in *Ohio*, a post-office of Ashland co.

MacKean, in *Ohio*, a flourishing township of Licking county.

MacKean, or McKEAN, in *Pennsylvania*, a N.N.W. co., adjoining New York; *area*, about 1,065 sq. m. *Rivers.* Allegheny river and numerous creeks. *Surface*, hilly; *soil*, moderately fertile. *Cap.* Smethport. *Pop.* (1890) 46,863.

—A post-township of Erie co.

MacKeans'burg, in *Pennsylvania*, a post-village of Schuylkill co., about 10 m. E. of Pottsville.

Mackee', in *Illinois*, a township of Adams co.

Mackee, in *Kentucky*, a post-village, cap. of Jackson co., about 60 m. S. S. E. of Lexington.

MacKee's Half Falls, in *Pennsylvania*, a post-village of Snyder co. *Pop.* (1897) 310.

MacKees'port, or McKEESPORT, in *Pennsylvania*, a post-borough of Allegheny co., on the Monongahela river, about 15 m. S.E. of Pittsburg. *Pop.* (1897) 22,700.

Macken'zie, HENRY, a Scottish author, born in Edinburgh, 1745. His popularity, speaking in a literary sense, rests upon his first novel, *The Man of Feeling*, published anonymously in 1771. Died in 1831.

Macken'zie, ROBERT SHELTON, D.C.L., an English and American journalist and man of letters, born in Ireland in 1809. After a highly successful journalistic experience in England, Dr. *M.* became a citizen of the U. S. in 1852, where he undertook the literary and foreign editorship of the Philadelphia *Press*, a position which he ably filled. Dr. *M.* was the author of *Titian*, an art novel; *Bits of Blarney*; *Tressilian and his Friends*, &c.; he edited a choice edition of Kit North's *Noctes Ambrosianæ*, and was generally a prolific and reliable author. In 1872 there appeared from his pen a very graphic and reliable *Life of Charles Dickens*, which was favorably received by the reading public. Died in 1881.

Mackenzie, (*mak-ken'zee,*) an important river of British N. America, and including the Athabasca, one of the largest in the world. The Athabasca River rises on the N.E. slope of the Rocky Mountains, in about Lat. 52° N., Lon. 116° 30′ W., and flowing a general N E and N. course of 800 m., enters Athabasca Lake. Thence under the name of Slave River it continues N. to Great Slave Lake, from the extreme W. part of which issues Mackenzie River proper. From this point to Mackenzie Gulf, in the Arctic Ocean, the course is N. and N. by W., receiving several large rivers besides the superfluous waters of Great Bear Lake, and flowing through a vast level plain except where it approaches the Rocky Mountains. It was discovered and navigated in 1789 by Alexander Mackenzie, a Scottish traveller, who D. in 1820, after whom it is named. Total length abt. 2,500 m.

Macken'zie, in *Oregon*, a village of Lane co., about 4 m. N E. of Eugene City.

Macken'zie Point, in *Alaska*, a cape on the N. shore of Cook's Inlet.

Mack'erel, *n.* [D. *makreel*; Ger. *makrele*; Fr. *maquereau*; allied to Lat. *macula*, a spot, a stain.] (*Zoöl.*) A well-known member of the *Scombridæ*, a family of acanthopterygious fishes, in which it composes the genus *Scomber*. It is a native of the European and American seas, generally appearing at stated seasons, in vast shoals, round particular coasts. The European *M.*, *Scombo scomber*, distinguished by the brilliancy of its colors, is about 14 inches long. Its color on the upper parts, as far as the lateral line, is a rich deep blue, accompanied by a varying tinge of green, and marked by numerous black transverse streaks, which in the male are nearly straight, but in the female beautifully undulated; the jaws, gill-covers, and abdomen are of a bright silvery hue, with a slight varying cast of gold-green along the sides. The scales are small, oval, and transparent; the pinnules or spurious fins are small, and five in number both above and below; the nose is pointed; the under jaw the longest; the teeth are alike in both jaws, curving slightly inward; and the tail is crescent-shaped. Beautiful as are the colors of the *M.* when alive, no sooner is it caught than its lustre begins to disappear. It is a voracious feeder, and its growth is rapid; but the largest is not accounted the best for the table. Those taken in May or June are considered superior in flavor to such as are caught either in the spring or autumn. There are various modes of fishing for *M.*; but the way in which the greatest numbers are taken is by drift-nets. The common *M.* of our coasts, *S. vernalis*, is from 16 to 18 inches long, dark steel-blue above, becoming lighter on the sides, and with 24 to 30 vertical deep-blue half-bands; beneath silvery, with smaller reflections. They are caught in the waters of Massachusetts Bay from the 10th of May through the summer, sometimes in immense quantities, sometimes almost wanting. The *M.* makes another visit in autumn, but the quantity then taken is generally smaller. From 8,000 to 10,000 barrels are sold

Fig. 1669. — MACKEREL, (*Scomber vernalis.*)

fresh every year in Boston, and 200,000 to 300,000, worth about $1,500,000, are exported, the poorest quality to the West and East Indies, and the better qualities to New York, Philadelphia, and other towns of the Union. In some years the number of vessels from Massachusetts alone has been nearly 1,000, employing in the various processes of catching, salting, and packing, more than 5,000 persons.

Mackerel-gale, a state of wind and weather peculiarly favorable to the catching of mackerel. — *Mackerel-sky.* (*Meteor.*) Same as CIRRO-CUMULUS, *q. v.*

Mack'erel-gnide, *n.* (*Zoöl.*) See GAD-FISH.

Mack'ford, in *Wisconsin*, a village and township of Green Lake co., abt. 50 m. N.N.E. of Madison.

Mackinac', in *Michigan*. See MACKINAW.

Mackinaw', in *Illinois*, a post-village and township of Tazewell county, about 55 miles N.N.E. of Springfield.

Mackinaw', or MACKINAC, or MICHILIMACKINAC, in *Michigan*, a S.E. co. of the upper peninsula, bordering on the Strait of Mackinaw and lakes Huron and Michigan, which separate it from the lower peninsula; *area*, about 1,045 sq. m. *Rivers*, few and of little importance. *Surface*, broken and uneven; *soil*, in some places fertile. *Cap.* St. Ignace. *Pop.* (1894) 7,237.

—A post-village of Cheboygan co.

Mackinaw' Creek, in *Illinois*, enters the Illinois river in Tazewell co.

Mackinaw (or MACKINAC) **Island**, in *Michigan*, a post-village of Mackinaw co., on a small island in the extreme N.W. part of Lake Huron, about 320 m. N.N.W. of Detroit; Lat. 45° 54′ N., Lon. 84° 30′ W. It is beautifully situated upon a safe and capacious harbor and is defended by a strong fort 150 feet above the village. A national park, authorized by Congress, containing 911 acres, has been established on the island of *M.*

MacKin'ney, in *Texas*, a city, cap. of Collins co., 31 m. N. by E. of Dallas, on the Hous. & Tex. Cent. and S., S. & South. R. Rs. Has some manuf. and a large shipping trade in cotton, &c. *Pop.* (1897) 3,100.

Mack'intosh, SIR JAMES, a British statesman and historian, B. in Inverness, in 1766. His father, Capt. Mackintosh, intended him for the medical profession, and conferred on him an excellent education. In 1787, after taking his degree of M. D. at Edinburgh, he visited the Continent of Europe. He preferred however, the study of law to that of medicine; and, after the death of his father, devoted himself entirely to study for the bar. The French Revolution, which had just then commenced, gave a new impulse to his mind, and politics and legislation became the paramount objects of his attention. In conjunction with other partisans of reform, he published several works in advocacy of this cause, especially his *Vindiciæ Gallicæ*, or defence of the French revolution, against the strictures and accusations of Edmund Burke. In 1799 he was appointed lecturer of Lincoln's Inn, where, in his splendid course of lectures on the Law of Nature and Nations, he exhibited himself as an uncompromising censor of the doctrines he had approved in the *Vindiciæ Gallicæ*. In 1803 he was appointed recorder of Bombay; and his administration there rendered him highly popular, especially his able protection of the rights of native and British subjects. On returning to England, he was elected member of Parliament for Nairn, and from this time coöperated with the popular party. During the Canning administration of 1827, Sir James acted in concurrence with the premier, and held office for a short time, but went out on its dissolution; and on the fall of the Wellington ministry in 1830, joined Lord Grey's, which succeeded it, as President of the India Board. Besides the *Vindiciæ Gallicæ* and other political works, Sir James published a *History of England*, of which he completed only 2 vols. Continued by Wallace and Bell, it forms 10 vols. of Lardner's Cabinet Cyclopædia. D. 1832.

Mack'intosh, *n.* [From the name of the inventor.] A water-proof outer garment; an oil-skin coat.

MacKis'sack's, or MACKISSACK'S GROVE, in *Iowa*, a post-village of Fremont co.

Mackle (*mák'l*), *n.* (*Printing.*) See MACULE.

—*v. a.* To contrive.—To sell to tradesmen;—said exclusively of weaver's goods.

Macks'ville, in *Indiana*, a village of Randolph co., about 69 m. E. N. E. of Indianapolis.

—A post-vill. of Vigo co., about 2 m. W. of Terre Haute.

Macks'ville, in *Iowa*, a village of Guthrie co.

Macks'ville, in *Mississippi*, an unimportant village of Clarke co.

Mack'ville, in *Kentucky*, a post-village of Washington co., about 35 m. S.S.W. of Frankfort.

MacLaughlinsville (*mak-lok'lins-vil*), in *Pennsylvania*, a post-village of Westmoreland co., about 20 m. E. N. E. of Pittsburg.

Ma'cle, *n.* (*Min.*) Same as ANDALUSITE (*q. v.*).

MacLean', in *Illinois*, a central co.; *area*, about 1,166 sq. m. *Rivers.* Mackinaw, Kickapoo, Salt and Sugar creeks. *Surface*, mostly level; *soil*, very fertile. *Cap.* Bloomington. *Pop.* (1890) 63,036.

—A post-village of McLean co., about 15 m. S. W. of Bloomington. *Pop.* (1897) 545.

MacLean, in *Minnesota*, a township of Ramsey co.

MacLean, in *Kentucky*, a W. co.; *area*, about 256 sq. m. *Rivers.* Green and Pond rivers, with several smaller streams. *Surface*, diversified; *soil*, fertile. *Cap.* Calhoun. *Pop.* (1890) 9,887.

MacLean, in *New York*, a post-village of Tompkins co., about 150 m. S.W. of Albany. *Pop.* (1897) 490.

MacLean, in *Ohio*, a township of Shelby co.

MacLeans'boro, in *Illinois*, a city, cap. of Hamilton co., on the Louisv. & Nash. R. R., 48 m. S.E. of Centralia. Has some manufactures. *Pop.* (1897) 1,550.

MacLean's Corners, in *Pennsylvania*, a post-office of Crawford co.

MacLeans'ville, in *North Carolina*, a post-village of Guilford co., on the Southern R. R.

MacLemores Cove, in *Georgia*, a village of Walker county.

MacLemorsville, in *Tennessee*, a post-village of Carroll co., about 114 m. W. by S. of Nashville.

MacLeu'nan, in *Texas*, an E. central co.; *area*, about 1,040 sq. m. *Rivers.* Brazos, Basque, Middle Basque and South Basque rivers. *Surface*, mostly level or undulating; *soil*, fertile. *Cap.* Waco. *Pop.* (1890) 39,204.

MacLeod (*lowd'*), a lake and fort of British North America; Lat. 55° N., Lon. 122° 15′ W.

MacLeod, in *Minnesota*, a S. central co.; *area*, about 504 sq. m. *Rivers.* Hassan and Crow rivers, and Buffalo creek. *Surface*, almost level; *soil*, very fertile. *Cap.* Glencoe. *Pop.* (1895) 19,134.

Maclise', DANIEL, a British artist, B. in Cork, 1811. In childhood he showed great talent for drawing, and became, in 1828, a student at the Royal Academy, where he received the gold medal twice successively. His fine pictures, *A Love Adventure of Francis I. with Diana of Poictiers*; and *Chivalrous Vow of the Ladies and the Peacock*, established his fame, and in 1835 he was elected an associate of the Royal Academy. These pictures were followed, in 1838, by *Robin Hood and Richard Cœur de Lion*; *Salvator Rosa painting Masaniello*; *Merry Christmas in the Baron's Hall*, and several others, including the *Banquet Scene in Macbeth*, in 1840; *Gil Blas dressed en Cavalier*; *Scene from Twelfth Night*; and the *Sleeping Beauty*; and in 1841 he was elected R. A. He became then one of the most popular of English painters, though, from the widely different character of his style from that of most other public favorites, he had to endure his share of adverse criticism. *The Play Scene in Hamlet*; *The Return of the Knight*; and *The Origin of the Harp*, were painted in 1842; *Actor's Reception of the Author Gil Blas*, in 1843; *The Lady released by Sabrina from the Enchanted Chair*, a scene from Milton's *Comus*, in 1844; *Ordeal by Touch*, in 1846: *The Sacrifice of Noah*, and his famous design of Shakspeare's *Seven Ages*, in 1847. His later pictures include *The Spirit of Chivalry*, and *The Spirit of Justice*, both painted in oil and fresco for the House of Lords; certain cartoons of various subjects, such as *Alfred in Guthrum's Tent*, and a different treatment of the same subject in oils; *Caxton showing Edward IV. his first Proof-sheet in the Almonry in Westminster*; *Prospero and Miranda*; the wrestling scene in *As you like it*; *Peter the Great working as a Shipwright in Deptford Dockyard*; *The Marriage of Strongbow and Eva in Ratification of the Conquest of Ireland under Henry II.*, his largest and most important picture: and *Othello, Desdemona*, and *Emilia*, and *A Winter Night's Tale*, exhibited at the Royal Academy in 1867. D. 1870.

Maclu'ra, *n.* [In honor of W. *Maclure*, an American geologist.] (*Bot.*) A gen. of the natural order *Moraceæ*. The wood of the species *M. tinctoria*, a native of the West Indies and South America, is of a golden-yellow

color, and is much employed in this country and elsewhere as a dyeing agent. It is commonly known as *fustic*, or *old fustic*, to distinguish it from *young fustic*. (See RHUS.) The fruit is edible. Another species, *M. aurantiaca*, supplies the fruit called the *Osage orange*, the juice of which is used by some of the Red Indians as a yellow war-paint.

Mac'lurite, Maclu'reite, *n.* (*Min.*) Same as CHONDRODITE, *q. v.*

MacMa'hon. See MAGENTA (DUKE DE).

MacMa'hon's Creek, in *Ohio*, enters the Ohio River from Belmont co.

MacMan'us, in *Mississippi*, a village of Greene co.

MacMeek'ins, in *S. Carolina*, a village of Fairfield district.

MacMinn', in *Tennessee*, a S.E. co.; *area*, about 480 sq. m. *Rivers.* Hiawassee river, and several considerable creeks. *Surface*, almost level; *soil*, fertile. *Cap.* Athens. *Pop* (1890) 17,890.

MacMinn'ville, in *Oregon*, a city, the cap. of Yam Hill co., on the So. Pac. R. R., 50 m. S.W. of Portland. *Pop.* (1897) 1,850.

MacMinnville, in *Tennessee*, a post-town, cap. of Warren co., on the Nash., Chatt. & St. L. R. R., 70 m. S.E. of Nashville. *Pop.* (1897) 1,750.

MacNab', a village and township of Renfrew co., Upper Canada, on the Ottawa river, about 85 m. N. of Kingston.

MacNairy (*mak-na'ree*), in *Tennessee*, a S.W. co., adjoining Mississippi; *area*, about 550 sq. m. *Rivers.* Hatchie river and South Fork of Forked Deer river, besides several smaller streams. *Surface*, elevated tableland; *soil*, fertile. *Cap.* Selmer. *Pop.* (1890) 15,510.

MacNean', the name of two lakes of Ireland, called UPPER and LOWER, in the cos. Fermanagh and Leitrim respectively, about 10 m. S.W. of Enniskillen.

MacNeil's Harbor (*mak-neelz'*), an inlet of the Pacific Ocean, in Vancouver's Island; Lat. 50° 39′ N., Lon. 127° 10′ W.

MacNutt', in *Mississippi*, a post-village of Le Flore co.

Macomb (*ma-koom'*), in *Illinois*, a city, cap. of McDonough co., on the Chi., Bur. & Quincy R.R., 59 m. N. E. Of Quincy; has some extensive manufactures. *Pop.* (1897) 5,200.

Macomb, in *Michigan*, a S.E. co., separated from Upper Canada by Lake St. Clair; *area*, about 468 sq. m. *Rivers.* Clinton river, and several of its affluents. *Surface*, undulating; *soil*, very fertile. *Cap.* Mount Clemens. *Pop.* (1894) 32,382.

—A post-township of Macomb co.

Macomb, in *New York*, a post-township of St. Lawrence co. *Pop.* (1897) 1,480.

Mac'on, NATHANIEL, an American statesman, b. in Barren co., N. C., 1757. He was educated at Princeton, N J. In 1777 he left college, served for some time as a private in a company of volunteers, and at the expiration of this first service enlisted again as a volunteer, and served as a common soldier under the command of his brother, Col. John Macon, till the provisional treaty of peace in 1782, refusing any pay or military distinction. While yet in the army, in 1780, he was elected, in his 24th year, a member of the Senate of N. Carolina; and when the Constitution of the U. States was submitted to the vote of the people of that State, he firmly opposed it, as conferring too much power to the new government, as making it in effect independent of the State, and so of the people, and tending to corruption. He retained till the end of his life this dislike to the Constitution, and his unlimited confidence in the capacity of the people for self-government; his favorite saying being, that "if left alone they would always do what was right." He was elected a member of the U. S. House of Representatives in 1791, and continued in that office by successive re-elections till 1815. In 1816 he was elected to the Senate, where he served till 1828, when he resigned his seat, having been then a member of Congress for 37 successive years, the longest term of service that has fallen to the lot of any other legislator in our country. Though he was in no sense an orator, few men in Congress were listened to with more respectful attention. Mr. Jefferson called him "the last of the Romans;" and Mr. Randolph pronounced him "the wisest man he ever knew." D. on his plantation, in the same county where he was born, 1837.

Macon (*ma'kon*), in *Alabama*, an E. co., *area*, about 622 sq. m. *Rivers.* Tallapoosa river and Eufaukee creek, with some less important streams. *Surface*, generally level; *soil*, fertile. *Cap.* Tuskegee. *Pop.* (1890) 18,439.

—A village of Calhoun co.

—A village of Hale co.

Macon, in *Georgia*, a W. by S. central co.; *area*, about 288 sq. m. *Rivers*, Flint river, and Buck's, Juniper, and Whitewater creeks. *Surface*, level; *soil*, generally fertile. *Cap.* Oglethorpe. *Pop.* (1890) 13,183.

—An important city, cap. of Bibb co., on the Ocmulgee river, about 191 m. W.N.W. of Savannah, and 100 m. S.E. of Atlanta. *M.* is one of the leading cities of the State, and contains several eminent educational institutions. *Pop.* (1890) 22,746.

Macon, in *Illinois*, an E. central co.; *area*, about 580 sq. m. *Rivers.* North branch of the Sangamon river, and some smaller streams. *Surface*, mostly level prairies; *soil*, very fertile. *Cap.* Decatur. *Pop.* (1890) 38,083.

—A city of Macon co., about 10 m. S. of Decatur. *Pop.* (1897) 1,010.

—A village and township of Bureau co.

Macon, in *Michigan*, a post-township of Lenawee co.

Macon, in *Mississippi*, a post-town, cap. of Noxubee co., about 125 m. E. of Jackson. *Pop.* (1897) 1,620.

Macon, in *Missouri*, a N. central co.; *area*, about 820 sq. m. *Rivers.* Charitou river, and the South Fork of Salt river, besides several smaller streams. *Surface*, mostly level; *soil*, fertile. *Cap.* Macou City. *Pop.* in 1890, 30,575.

Ma'con, in *North Carolina*, a W. co., adjoining Georgia on the S.; *area*, about 524 sq. m. *Rivers.* Tennessee river and numerous smaller streams. *Surface*, much diversified, the Iron or Great Smoky Mountains forming the N.W. border; *soil*, fertile. *Min.* Iron. *Cap.* Franklin. *Pop.* (1890) 10,102.

Macon, in *Tennessee*, a N. co., adjoining Kentucky; *area*, about 332 sq. m. *Rivers.* Few, and of little importance. *Surface*, uneven; *soil*, generally level. *Cap.* La Fayette. *Pop.* (1890) 10,878.

—A post-village of Fayette co., about 190 m. W.S.W. of Nashville.

Macon, in *Virginia*, a post-village of Powhatan co., about 38 m. W. of Richmond.

Macon (*ma'kawng*), a town of France, dept. of Saône-et-Loire, on the Saône, 38 m. N. of Lyon. It is pleasantly situated, and contains extensive manufactures of watches, jewelry, copper, and earthenware. It has also a considerable trade in wine, corn, cattle, &c. *Pop.* 19,800.

Ma'con Bay'ou, rises in Chicot co., Arkansas, and flowing S. and S.W., joins the Tensas river on the W. border of Tensas co.

Macon, or Macon City, in *Missouri*, a prosperous city, cap. of Macon co., on the Wabash and C., B. & Q. R. Rs., 70 m. W. of Hannibal; has extensive manufactures and a fine local trade. *Pop.* (1897) 4,200.

Macon River, in *Michigan*, formed by the union of several branches in Monroe co., and flows into the river Raisin, about 12 m. W. of Monroe City.

Macoupin (*ma-koo'pin*), in *Illinois*, a S. W. co.; *area*, about 864 sq. m. *Rivers.* Macoupin, Otter, and Cahokia creeks. *Surface*, somewhat diversified; *soil*, very fertile. *Cap.* Carlinville. *Pop.* (1890) 40,300.

—A post-village and township of Macoupin co., about 27 m. N.N.E. of Alton.

Macou'pin Creek, in *Illinois*, enters the Illinois River at the N.W. corner of Jersey co.

Macpher'son, JAMES, a Scottish poet, b. at Inverness, 1738. Having, in 1760, produced *Fragments of Ancient Poetry, translated from the Gaelic or Erse Language*, they were so well received, that a subscription was formed to enable the author to collect additional specimens of national poetry. The result of his researches was *Fingal, an Ancient Epic Poem*, in six books, together with several other poems (professedly translated from originals), by Ossian, the son of Fingal, a Gaelic prince of the 3d century, and his contemporaries. Dr. Johnson treated him as an impostor, and a violent controversy ensued concerning their authenticity. From the evidence of the contending parties, it may be concluded, that Macpherson's prose epics were founded on traditional narratives current among the Highlanders; but the date of the oldest of their lays is comparatively modern; and it is now impossible to ascertain the precise extent of his obligations to the Gaelic bards of former ages. In 1764 he accompanied Governor Johnstone to Florida, as secretary. After his return he translated the "Iliad" into Ossianic prose; wrote a *History of Great Britain, from the Restoration to the Accession of the House of Hanover;* and also employed his pen in vindicating the measures of government during the American war. He was afterwards appointed agent to the nabob of Arcot, became a member of Parliament, and D. 1796.

MacPher'son, JAMES BIRDSEYE, a major-general of U. States volunteers, b. in Sandusky co., Ohio, Nov. 14, 1828. He entered West Point in 1849, graduated at the head of his class in 1853, and was immediately appointed brevet second lieutenant of engineers and assistant instructor of practical engineering at the academy, a compliment never before awarded to so young an officer. He was soon raised to the full rank of second lieutenant of engineers, and appointed assistant engineer on the defences of New York harbor, and on the improvement of the navigation of the Hudson River. In 1857 he was placed in charge of the construction of Fort Delaware, and subsequently of the fortifications on Alcatras Island, in San Francisco Bay, California, being at the same time connected with the survey of the Pacific coast. In 1858 he was promoted as first lieutenant, and in 1861 placed in charge of the fortifications of Boston harbor. During the same year he was made captain, and upon Maj.-Gen. Halleck being assigned to the command of the Department of the West, he was appointed aide-de-camp to that general, with the rank of lieutenant-colonel. He was chief engineer of the army of Tennessee in the expeditions against Forts Henry and Donelson, and subsequently participated in the events of Shiloh. Still on the staff of Gen. Halleck, and with the rank of colonel, he had charge of the approaches to Corinth, which ended in its evacuation. In May, 1862, he was commissioned brigadier-general of volunteers, and in the following June was appointed general superintendent of military railroads in the district of West Tennessee. Soon after he held a position on the staff of Gen Grant, and was promoted major-general for his gallantry at Corinth, and his subsequent conduct until the fall of Vicksburg was such as to elicit the highest praise from his commanding general, and to well earn for him the rank of brigadier-general in the regular army. In the expedition to Meridian he was second in command to Gen. Sherman, and during the first Atlanta campaign, his command was the Department of Tennessee, and included the entire 15th, 16th, and 17th corps. He distinguished himself at Resaca, Dallas, Allatoona, Kulp House, and Kennesaw. In the battles before Atlanta, Gen. *MacP.*'s grand division held the left of the line, and in the engagement of July 22, having superintended in person the advance of his skirmish line, and while in the act of ordering a brigade to fill up a gap in his troops, made by a charge of the Confederate General Hardee, he was shot by one of the enemy's sharpshooters. Gen. MacPherson is described as an officer of indefatigable energy, tireless industry, and a bravery which almost amounted to recklessness. A fine statue to his memory has been erected in Cincinnati.

Macquarie (*mak-war're*), a river of E. Australia, formed by the junction of the Fish and Campbell rivers, 80 m. W. of Sydney, and after a N.W. course of 230 m. losing itself in marshes, whence issue tributaries of the Darling, in Lat. 30° 45′ S., Lon. 147° 10′ E.

Macquar'ie Island, in the Pacific Ocean; Lat. 54° 30′ S., Lon. 158° 50′ E. *Ext.* 20 m. long, and 4 broad. It is mountainous; is frequented by seals and visited by sealing vessels.

Macrauche'nia, *n.* [Gr. *makranchen*, long-necked.] (*Pal.*) A genus of colossal Perissodactyle (three-toed) mammalia, which exhibits the character peculiar to the existing camels and llamas, of having the cervical vertebra not perforated by the usual arterial foramina. Its fossil remains have been found in Patagonia and Bolivia. It resembled the llama in form, but was as large as the hippopotamus.

Macrobiot'ic, *a.* [Gr. *makros*, long, and *bios*, life.] Long-lived.

Macrobiot'ics, *n. pl.* [Gr. *makros*, long, and *bios*, life.] The science of prolonging life.

Macro'bius, AURELIUS AMBROSIUS THEODOSTUS, a Latin author in the reign of the emperor Theodosius. He held the consular dignity, and was the author of a miscellaneous work, entitled *Saturnalia*, curious for its criticisms, and valuable for the light it throws upon the manners and customs of antiquity. He wrote other works, of which his commentary on Cicero's *Somnium Scipionis*, and an epitome of a grammatical work, have come down to us.

Macroceph'alous, *a.* [Gr. *makros*, and *kephalē*, the head.] Having a large head.

Ma'crocosm, *n.* [Gr. *makros*, long, far-extending, and *kosmos*, the world.] The great world; the universe, or the visible system of worlds; — in contradistinction to *microcosm*, or the small world constituted by man.

Macrodac'tylic, Macrodac'tylous, *a.* (*Zoöl.*) Long-toed; — applied to tribes of wading-birds

Macrodiag'onal, *a.* [Gr. *makros*, and Eng. *diogonal.*] The longer of two diagonals.

Macrol'ogy, *n.* [From Gr. *makros*, and *logos*, speech.] Prosy talk; empty, discursive rant; senseless verbiage; fustian; twaddle.

Macrom'eter, *n.* [Gr. *makros*, and *metron*, measure.] An instrument for measuring the distance of inaccessible objects by means of two reflectors.

Ma'cron, Mac'rotone, *n.* [From Gr. *makros*, long.] (*Pron.*) A mark [-] noting the long, open sound of a vowel, as *ā* in *fāte*, and *ō* in *tōne*

Macroom', a town of Ireland, in Munster, co. Cork, about 20 m. W. of Cork; *pop* 4,500.

Macroph'yllous, *a.* [Gr. *makros*, and *phyllon*, leaf.] (*Bot.*) Long-leaved.

Macropi'per, *n.* [Gr. *makros*, long, and Lat. *piper*, pepper.] (*Bot.*) A genus of plants, order *Piperaceæ*. The species *M. methysticum* is the celebrated Ava Pepper-shrub, from the rhizome of which the South Sea Islanders prepare an intoxicating and narcotic drink, called *ava* or *cava*. The plant has been used medicinally in chronic rheumatism and venereal affections.

Macrop'odal, *a.* Having long or large feet.

(*Bot.*) Possessing a highly distended radicle, as wheat.

Macropod'idæ, *n. pl.* (*Zoöl.*) See KANGAROO.

Mac'ropus, *n.* [Gr. *makros*, and *pous*, foot.] (*Zoöl.*) The generic name of the kangaroo.

Macrothe'rium, *n.* [Gr. *makros*, and *therion*, a beast.] (*Pal.*) A genus of Bruta, which was originally founded on a single ungual phalanx, discovered in the miocene deposits at Eppelsheim. The conclusions of Cuvier, drawn from an examination of this toe-bone, were, that it belonged to an animal allied to the existing Pangolin (*Manus*), and this induction has been verified by the discovery of similar bones, in deposits of the same age at Sansan, in the S. of France. The discovery of two molar teeth, the humerus, ulna, and femur, leads to the conclusion that it also offered much analogy to the existing *Orycteropus*.

Mac'rotone, *n.* (*Pron.*) Same as MACRON, *q. v.*

Macrot'ypous, *a.* (*Min.*) Having a long form.

Macru'ral, MACAU'ROUS, MACROU'RAL, MACAOU'ROUS, *a.* Pertaining to the MACRURANS, *q. v.*

Macru'rans, MACAOU'RANS, *n. pl.* [From Gr. *makros*, and *oura*, tail.] (*Zoöl.*) A section of decapod Crustaceans, including Lobsters, Prawns, Shrimps, &c. At the end of the tail is a sort of fin, expanded laterally, which serves, by its vertical strokes, to propel the animals through the water.

MacSher'rystown, in *Pennsylvania*, a post-borough of Adams co., about 12 m. E. of Gettysburg. *Pop.* 1,100.

MacSher'rysville, in *Pennsylvania*, a small village of York co.

Mac'tra, *n.* (*Zoöl.*) A Lamarckian genus of bivalve shells, in which the ligament is attended on both sides with a lateral tooth, which locks within two laminæ of the opposite valve.

Mac'ula, *n. pl.* MACULÆ. [Lat., blot.] A spot on the surface of the sun. See SUN.

(*Med.*) Any spot or blotch upon the skin.

Mac'ulate, *v. a.* [Lat. *maculo, maculatus*, from *macula*, a spot.] To spot; to stain; to smear; to blotch.

—*a.* Spotted; blotched; besmirched; — hence, stained with impurity; blemished.

Maculation, *n.* [Lat. *maculatio.*] Act of spotting. A blotch, spot, blur, or stain.

Mac'ule, Mack'le, *v. a.* To maculate; to blot; — specifically, in printing, to blur an impression from type. —*n.* (*Typog.*) A blur, caused by a double impression of type; a mackle.

Macun'gie, in *Pennsylvania*, a post-borough of Lehigh co., 10 m. S.W. of Allentown, on P. & R. R.R.; has cigar factories, roller flouring mill, iron works, foundry, hosiery mill, and creamery. *Pop.* (1897) 710.

MacVey'town, in *Pennsylvania*, a post-borough of Mifflin co., on the Juniata River, abt. 10 m. above Lewistown. It was formerly called WAYNESBURG.

Mad, *a.* [A. S. *gemaad*, trouble in mind; Goth. *mods*, *moths*, wrath, anger; Ir. *amad*, a madman; Sansk. *mad*, to be mad or drunk; probably akin to Ar. *majrun*, mad.] Insane; disordered in intellect; demented; deranged; crazy; lunatic.

"She was just not ugly, and was just not *mad*." — *Pope.*

—Proceeding from disordered intellect, or denoting it; proceeding from folly or infatuation; exhibiting distraction; as, a *mad* idea or attempt. — Frenzied; inflamed or excited with excessive rage, passion, appetite, or desire; infatuated with folly; having the mind thrown from its balance with excitement, trouble, or anxiety.

"The world is running *mad* after farce." — *Dryden.*

—Angry; raging; furious; full of wrath or bitterness.

"Holy Writ represents St. Paul as . . . being exceedingly *mad* against them." — *Decay of Piety.*

—*v. a.* To madden; to make furious or enraged.

"This will witness . . . to the *madding* of her lord." — *Shaks.*

—*v. n.* To be mad, furious, or intensely excited.

"The *madding* wheel of brazen chariots raged." — *Milton.*

Mad, Made, *n.* [A. S. *madha.*] An earth-worm.

Madagas'car, a large island of the Indian Ocean, off the E. coast of Africa (from which it is separated by the Mozambique channel), between Lat. 12° 2′ and 25° 40′ S., and Lon. 44° 20′ and 51° 30′ E. Length, 930 m.; average breadth, 300 m. *Area*, estimated at abt. 234,400 sq. m., being somewhat greater than that of France. *Desc.* The coast is, for the most part, flat and low; but the interior is considerably diversified, and though it is not traversed by any continuous chain, many parts, especially the E., N., and S. districts, may be called mountainous. The highest point, Ankaratra, in Lat. 19° 40′ S., Lon. 47° 20′ E., is nearly 9,000 ft. above sea-level. These mountains consist of granite, sienite, and quartz, covered in the lower parts with clay-slate, primitive limestone, and old red sandstone; volcanic rocks occur in several places, and coal strata, abounding with iron, are widely distributed throughout the island. Rock-salt and nitre occur near the coast; and iron pyrites, oxide of manganese, and plumbago have been found in some districts. The rivers of *M.* are numerous, and many of considerable size, the greater number flowing into the sea on the W. side; but most of them are choked with sand, have frequent falls and rapids, and are almost entirely unnavigable. There are likewise

Fig. 1670. — BETSIMASARAKA WOMAN AND CHILD.

numerous lakes, not only in the central parts of the island, but also in the low alluvial districts near the sea, some of which are remarkable for their size and beauty. The most fertile parts are the valleys, most of which produce rice or other grains, or else are clothed with a rich and luxuriant verdure. — *Meteor.* The climate of *M.* is exceedingly diversified, that of the coast being oppressively hot, while in the interior the temperature seldom exceeds 85° Fahr. The heat at Antananarivo, the cap., fluctuates between 40° and 85°; the middle of the day in summer is often extremely sultry, but the mornings and evenings are always pleasant. From May to Oct. (the winter months of this island) the ground is often covered with hoar-frost, and the heat seldom exceeds 44°. At other seasons, however, the fluctuations between heat and cold are extreme and sudden, the temperature in the morning being seldom more than 40°, whereas, in the same day, the afternoon heat often exceeds 80°. The climate of *M.* is, on the whole, generally considered to be prejudicial to people belonging to the temperate zones, in consequence, chiefly, of the effluvia arising from stagnant bayous and swamps near the coast; but in the central parts, and especially in Ankora, the metropolitan province of the island, the malaria does not exist. The weather on the coast is usually hot and damp or rainy; but in the interior the rains are periodical, in a great measure regulating the divisions or seasons of the year. The trade-winds from the E. and S.E. prevail during the greater part of the year; but the rains are often accompanied by violent gales from the N.W., W., and S.W. Earthquakes are occasionally felt, and the cap. has more than once suffered considerable damage from such visitations.—*Zoöl.* This island is specially the home of the lemurs, and contains about half the known species of chameleons. Fossil remains of an immense bird have been found, whose eggs were the largest ever seen. Crocodiles swarm in nearly all the rivers and lakes, and are objects of great dread to the natives; serpents also, some of large size, abound in the woods; and lizards, scorpions, and centipedes are very numerous and troublesome. Birds also, of various kinds, are found in the forests, the principal of which are the paroquet, flamingo, falcon, kite, turtle-dove, pigeon, turkey, and different varieties of land-and water-fowls. The sea abounds with fish of various kinds, and oysters are numerous on the coast. *Soil and Veget.* The soil in many parts is highly prolific, but still largely susceptible of improvement, and

Fig. 1671. — PANDAMUS TREES.

the island produces numerous and highly valuable plants. The forests yield abundance of timber, of varied durability and value; some used as dye-woods, others in building, with ebony, betel, the pandamus (see Fig. 1671), mangrove, dragon-tree, bamboo, sugar-cane, locust-tree (*Urania speciosa*), caoutchouc-tree, plantain, banana, zabana (*Bignonia articulata*), hibiscus, mimosa, castor-oil plant, longoza (*Curcuma zedoaria*), cotton, indigo, and tobacco plants, allspice, pepper, ginger, turmaric, and rice. Various other vegetable exotics have been introduced, such as the cocoa-nut, bread-fruit, yam, manioc, lemon, orange, beech, mulberry, quince, fig, and pomegranate. Several varieties of the Cape vine have been found to thrive well. the coffee-plant has been brought from the Mauritius, and the potato is largely cultivated as well as highly esteemed; but the common European cerealia have met with little encouragement. The flora of *M.* is luxuriant; but the brilliant aspect peculiar to the gardens of tropical countries is here missed, in consequence of the quick alternations of heavy rains and extreme drought The husbandry of *M.*, pursued by a distinct class, consists, in a great measure, in the cultivation of rice, which is conducted with great care and success. —*Ind.* Besides rice, cotton is cultivated to a considerable extent; the rearing of the silk-worm also flourishes. Iron is, too, an important industrial element in the constitution of the commercial economy of this island; it is variously manipulated into warlike weapons and domestic utensils. The weaving of silk, cotton, and linen fabrics also obtains, and the art of dyeing textile goods is very successfully carried on. The markets are great places of resort for all classes; and not only is there a daily general market at Antananarivo, but 4 or 5 large markets are held in different parts of the province, and well attended by a vast concourse of people from the adjoining districts. Animal and vegetable productions, native and foreign manufactures and cattle, are exposed promiscuously; and in no nation are there more clever and persevering bargainers than in Madagascar. The greater part of the trade is carried on by barter. Most goods are sold by measure; rice by the bushel, meat by the *eye*, snuff by the spoon, fuel by the bundle. An intercourse has long been carried on with Madagascar by Arabs from Muscat, Indians from

Fig. 1672. — MALAGASY WIDOW.

the presidency of Bombay, Europeans from the Cape of Good Hope, and Americans from Brazil and the United States. The taste of the people for foreign goods is also on the increase; and horses, saddles, and bridles, scarlet cloth, gold lace, red satin, purple, green, and yellow silk, silk handkerchiefs, sewing-silk, calico, and printed goods, hosiery, gloves, finger-rings, watches, and musical boxes, hardware, salt, and, above all, arrack and rum, are sought after in the markets of Ankova. The great obstacle to trade, however, is an entire want of roads. Owing to an idea, which has long been entertained by the Hovas, that the best means of preserving their country from foreign invasion is to have no roads, none have ever been made. Travellers, as well as merchandise for

HETSILEOS. HOVAS.

Fig. 1673.

the interior, have therefore, to be conveyed over extensive tracts on men's shoulders.—*Population, &c.,* The inhabitants differ materially in appearance and character; nor is there any doubt, though the people are nominally comprised in one political empire, and speak one language, that they include several distinct and peculiar nations. The distinction of color separates the population into two great classes—the Hovas, and a few other tribes, having olive complexions, handsome features, graceful persons, and lank dark hair (Fig. 1673); whereas the inhabitants of the shore, and indeed the majority of the people, greatly resemble the Papuans, being short and stout, almost black, with low foreheads, broad flat faces, large eyes and mouth, and long crisped hair (Fig. 1672). There are differences also in the languages spoken by various sections of the population, and many of their customs vary so much as to make it clear that, however amalgamated, they are not one nation, but a combination of several distinct races. The Hovas, the most advanced, civilized, and intelligent of the Malagasy peoples, inhabit the central province of Imerina, and since the beginning of the 19th century

have been the dominant race. They are probably the latest immigrants, and appear to be of puro Malayan origin. The darker element of the population, seemingly of Melanesian origin, comprise a number of tribes, the most important being the Betsileo, Bara, Tanala, Betsimisaraka, Sihanaka, and Sakalava. All these coast peoples seem to be closely allied in language. There is also an admixture of African blood, and an Arab element. There are said to be traces of an aboriginal race called Vazimba, driven from the central provinces by the Hovas, yet having descendants on a part of the west coast. A forest tribe is also spoken of, living chiefly in the trees. Circumcision is universal; marriages are formed in very early life, and divorces are very common, and easily effected. The law permits polygamy, restricting the husband to 12 wives; but few have more than two, or at most three. Fidelity to the marriage engagement, however, forms no part of the female character, and modesty is a virtue almost unknown. Their houses are usually of rude construction, except in the capital of the Hova country, where European improvements have been partially introduced. The diet of the people consists, in great part, of rice and manico, with smaller portions of beef and poultry, and the cookery is extremely simple. The practice of holding slaves appears to have existed from the earliest times. Slaves are derived from three or four different sources—viz., captives taken in war; persons condemned to slavery, together with their families, for crimes and political offences; and people who are sold for debts, as well as the decendants of all these. Malagasy slavery does not often occasion cruelty and hardship. It has much of a patriarchal family character, and the condition of the servile population is often far more comfortable than that of the poorer classes of free people. The Malagasy had no written language till the early part of the 19th century, and have therefore no ancient

Fig. 1674.—SLAVE-GIRLS DRAWING WATER.

literature, but possess an abundant store of proverbs, fables, folk-tales, songs, &c., proving some degree of intellectual activity. The capital, Antananarivo, centrally situated, had in 1896 a population of 43,000, and contains many large and handsome buildings, including the royal palace, residences of the nobles, and churches, schools, &c., erected by European residents. Tamatave, on the east coast, and Mojanga, on the northwest, are the principal ports. The leading exports are cattle, hides, gum-copal, india-rubber, rice, ebony and other valuable woods; the chief imports, cotton and iron goods, crockery, and rum. Iron is abundant, and is mined and smelted with considerable skill; copper seems to exist in great quantity, lead ore has been found in abundance, tin is said to exist, and gold has been found in many parts of the interior. —*History.* *M.* was known to the Greek and Arabian geographers, was visited by Arab merchants a thousand years ago, and was greatly influenced in its civilization by Arab settlements. It is first mentioned under its present name by Marco Polo, and its first European visitor appears to have been Fernam Soares, a Portugese traveller, in 1509. Up to the middle of the 17th century no extensive government appears to have existed in *M.*, but at that time wide conquests seem to have been made by the warlike Sakalavas, who brought much of the island under their control. In the early part of the 19th century the Hovas, led by two energetic chiefs, and with the aid of English arms and discipline, threw off the Sakalava yoke, and made themselves masters of the island, except in some of the southern districts. In 1889 the turbulent tribes of the southwest were subdued. Radama I., the first Hova king, abolished the export slave trade and encouraged the English missionaries, whose work in the capital began in 1820. They introduced many civilized arts, gave the people a literature, built churches, &c. Queen Ranavalonat, who acceded in 1828, repressed the missionaries, forced them to leave the island in 1838, and severely persecuted the native Christians. She died in 1861, and her son, Radama II., re-admitted Europeans, a policy which was continued by Queen Rasoherina (1863–68), and by Ranovalona II., who, with her husband and many of her nobles, became baptized and had the royal idols burned. Under Ranovalona III., who came to the throne in 1883, the progress of civilization and the development of Christianity were checked. —*European settlements.* The Dutch made the first settlements in Madagascar, but these continued only for a short time. The French, who followed, were more persistent, and for two centuries sought to maintain military posts on the east coast. In 1840 they obtained the island of Nosibe, on the northwest coast, and in 1883 went to war with the Malagasy, hostilities continuing for over two years. The result won France the right to maintain a Resident and other officials at the capital, and to control the foreign affairs of the island. This protectorate, acknowledged by the Queen in 1885, was admitted by Great Britain in 1890. The Hova government, however, disputed the French claims and a crisis arose, which led to an invasion in 1895. The capital was occupied Oct. 1, and France became master of the island, though the old governmental forms were kept in force. In June, 1896, *M.* was declared a French colony. A rebellion which broke out in the island was subsequently suppressed, and the Queen banished as a fomentor of trouble.

Madale'na, an island of Chili in the Pacific Ocean, off the S. coast of the island of Chiloe.

Mad'am, *n.* [Fr. *madame*—*ma*, my, and *dame*.] My dame; my lady; a gentlewoman;—an appellation or complimentary title given to matrons and elderly ladies, or chiefly to females of a certain age.

Mad'ame, *n.*; *pl.* MES'DAMES, a French title, originally applied only to female saints and ladies of quality, but which is now common to all married women, of whatever rank or condition. Under the old French monarchy, the daughters of the sovereign received this title; the eldest being simply Madame, the others Madame Elizabeth, &c. More strictly, however, it belonged to the wife of the king's eldest brother, the sister of the king's father or mother, or the eldest daughter of the dauphin, by only one of whom could the title be borne at the same time. Mesdemoiselles was the title of honor borne by the daughters of the king's younger sons, and of his brothers and uncles; the one taking precedence of the others in rank or birth being Mademoiselle.

Mad-apple, *n.* (*Bot.*) See SOLANUM.

Mad'brain, *n.* A rash person; one who is hot-headed or reckless.

Mad'bury, in *New Hampshire*, a township of Strafford co.

Mad'cap, *n.* A wild, hot-brained, reckless person; sometimes playfully applied to a romp, tomboy, or frolicsome youth.

Maddale'na, (La,) an island off the N. coast of Sardinia, 10 m. from Capo Lougo-Sardo. It has a small town, with a good harbor. *Pop.* 1,500.

Maddalo'ni, a town of S. Italy, prov. of Caserta, 14 m. N.N.E. of Naples. It is situated in a fertile district, and enjoys a salubrious climate. It is an industrious and thriving place, with several fine palaces and churches. *Pop.* 16,946.

Mad'den, *v. a.* To make mad; to drive deranged or distracted; to excite with violent anger or passion.

"Now melt into sorrow, now *madden* to crime."—*Byron.*

—*v. n.* To become mad; to act as if mad.

"They rave, . . . and *madden* the land."—*Pope.*

Mad'der, *n.* [A.S. *mæddere, mædre.* Etymol. unknown.] (*Bot.*) See RUBIA.

Madder Carmine, or *Field's Carmine.* (*Painting.*) A pigment prepared from madder, and differing from the rose lakes of madder principally in texture, and in the greater richness, depth, and transparency of its color, which is of various hues, from rose-color to crimson.—*Madder orange*, or *Orange lake*, is a madder lake of an orange hue varying from yellow to rose-colored brown.—*Madder purple, purple rubiate*, or *Field's purple*, is a very rich and deep carmine, prepared from madder. Though not a brilliant purple, its richness, durability, transparency, and superiority of color, have given it the preference to the purple of gold-purple, and to burnt carmine.—*Madder yellow* is also a preparation from the madder-root. The best is of a bright color, resembling Indian color, but more powerful and transparent, though hardly equal to it in durability of hue; metallic, terrene, and alkaline substances acting on and reddening it as they do gamboge; even alone, it has by time a natural tendency to change in appearance.

Made, *imp.* and *pp.* of MAKE, *q. v.*

Made, *n.* See MAD.

Made'eass, Madeeas'see, Madegas'sy, *n.* (*Geog.*) A native or inhabitant of Madagascar; a Malagasy.

Madeeas'see, Madegas'sy, *a.* (*Geog.*) Of, or belonging to Madagascar or to its inhabitants.

Mad'efy, *v. a.* [Lat. *madefacere.*] To moisten; to make wet. (R.)

Madeira, (*mă-deer'a,*) a celebrated Island in the N. Atlantic Ocean, belonging to Portugal; Funchal, its cap., on its S.E side, being in Lat. 32° 38′ N., Lon. 16° 54′ 26″ W.; length of *M.* abt. 46 m.; breadth abt. 7 m.; *area*, abt. 300 sq. m. It consists altogether of a collection of lofty mountains, the highest upwards of 6,000 feet. On the declivity of these mountains all the productions of the island are raised. Vines form the chief object of cultivation, but small quantities of wheat, barley, oats, coffee, and arrowroot are produced. Goats and hogs abound, and the rabbit is very common in the mountainous districts. Bees are plentiful, and the honey they produce is very delicate. The peasants, like most mountaineers, are healthy and vigorous, but wretchedly poor; while the Portugnese gentry live in a proud and retired manner, associating little with strangers. The cap. abounds in churches; and in the country, at every fifty yards is found a chapel. The commerce of the island consists almost entirely in the export of its wine. On account of the salubrity of its climate, the island is much resorted to by invalids. In 1431 this island was settled by the Portugnese. Adjacent to Madeira is Porto Santo, a small island, and the Desertas, which, with Madeira itself, as we have said, compose the group of the Madeiras.

Madeira, MADERA, or CAYARI, (*ma-da'ra,*) a river of S. America, formed by the Beni, Mamore, Branco, and Guapore rivers, all of which rise in Bolivia and unite at various points along the W. border of Brazil; thence, flowing N.E., it joins the Amazon River in Lat. 3° 30′ S., Lon. 58° W. *Length*, including its longest branch, the Mamore, abt. 2,000 m.

Madei'raville, in *Indiana*, a village of White co., abt. 44 m. S. of Michigan City.

Madeira Wine, or MADEIRA-MALMSEY, *n.* A rich and well-known wine made in the island of Madeira. It has been for long a very fashionable wine; but every sort of deception was practised with respect to it, and such large quantities of spurious trash were disposed of for the genuine vintage of the island, that it has fallen into disrepute.

Madeley, (*măd'le,*) a town of England, co. Salop, on the Severn, 13 m. E.S.E. of Shrewsbury. It is noted for its mining and manufacturing industry. *Pop.* 9,000.

Mad'e'lia, in *Minnesota*, a post-village, former cap. of Watonwan co., 27 m. W.S.W. of Mankato. *Pop.* 1,185.

Mademoiselle, (*măd-mwah-zĕl'.*) *n.*; *pl.* MESDEMOISELLES, (*măd-mwah-zĕl'.*) [Fr., from *ma*, my, fem. of *mon*, and *demoiselle*, young lady.] An appellative title given in France, and among French-speaking people, to a young woman. (Its English equivalent is *Miss*, and it is written, in an appreviated form, *Mlle.* and *Mdlle.*) See MADAME.

Made'ra, in *Pennsylvania*, a post-village of Clearfield co., abt. 25 m. N. of Altoona.

Madge, Madge-howlet, (*măj'.*) *n.* An owl.

"I 'll sit in a barn with *Madge-howlet*, and catch mice first."
B. Jonson.

Mad'house, *n.* A house or institution where mad or insane persons are confined for cure or for safe custody; a lunatic asylum; a bedlam.

Mad'ia, *n.* [Gr. *mados*, bald.] (*Bot.*) A genus of plants, order *Asteraceæ*, of which the only species, *M. sativa*, a native of Chili and California, is there cultivated for the oil extracted from its fruit.

Mad'id, *a.* [From Lat. *madere*, to be wet] Moist, wet; humid; as, a *madid* eye.—*B. Disraeli.* (R.)

Mad'ison, JAMES, 4th President of the U. States, b. in King George co., Va., 1751, was the son of James *M.*, of Orange, a planter of ample means and high standing. He was intended for the bar, but deserted law for politics when the struggle for independence began, and does not seem to have ever followed any profession. A zealous asserter of the rights of America, he became a member of the Virginian legislature; in 1780, of Congress; and in 1787, of the convention which framed the Constitution of the U. States. In this last body he was very prominent, and his share in framing the Constitution was considerable. At this time he was a decided Federalist, and wrote about a third of the celebrated papers afterwards known as the *Federalist*, in which the new Constitution was supported and recommended. In

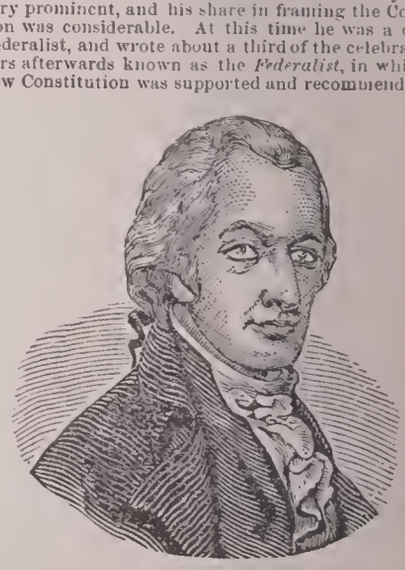
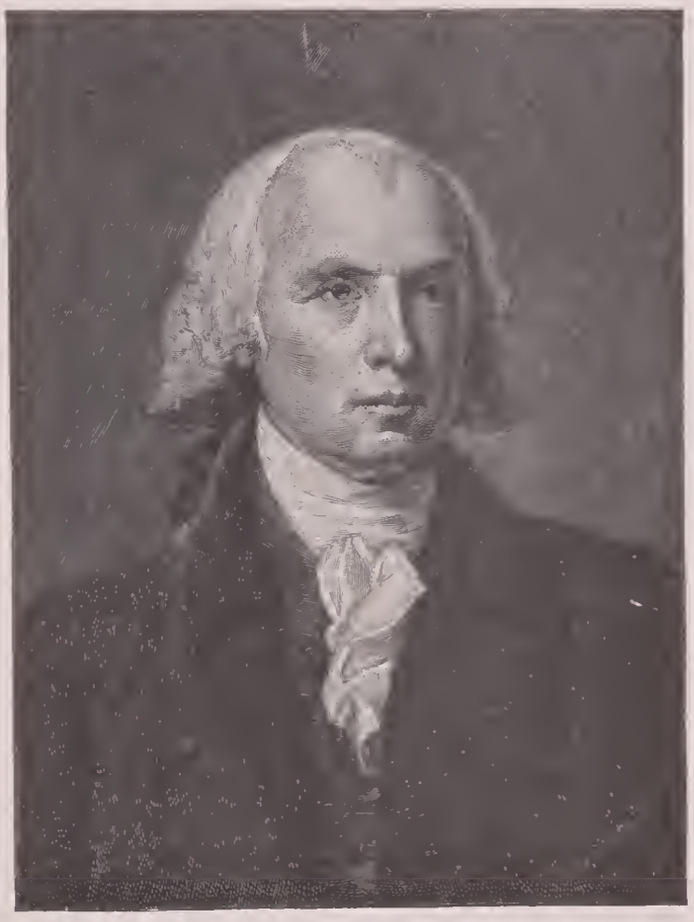


Fig. 1675.—JAMES MADISON.

the absence of its original author, it was *M.* who successfully fought the battle in Virginia of Jefferson's bill for the establishment of so-called religious freedom, by which all endowments for religious purposes were abolished in their native State. Afterwards (1798) he headed the opposition in the Virginia legislature to the alien and sedition laws of the administration, defending "state-rights" from what he alleged to be the encroachments of Congress. When Jefferson was elected President in 1801, he appointed *M.* his secretary of state; and at the



James Madison

1751–1836

close of Jefferson's second Presidency, *M.* was chosen his successor. Although the inheritor of Jefferson's general policy, *M.* seems to have beeu indisposed to indorse the entire policy of his predecessor. Iu conducting continued discussions with France aud England on the rights of ueutrals, in which he had already taken an active part as secretary of state, he was Inclined to conciliation; and on assuming power, he substituted a non-intercourse for the embargo policy of Jefferson. When, after frequent collisions between the ships of the two countries, Madison at last recommended to Congress the declaration of war with England, which it voted on the 18th of June, 1812, he is said to have been himself in favor of peace, and to have beeu induced to take that course by a pressure from without, and by menaces of a withdrawal of support at the coming Presidential election. He was rewarded by being elected in 1813 President for a second term. *M.* acquiesced in the commencement of hostilities with unfeigned reluctance, but afterwards he displayed considerable energy in organizing and employing the resources of the States When, after the glorious victory at New Orleans, the contest was closed by the treaty of Ghent, Dec. 24, 1814, though one of the chief questions which had produced the war was still left unsettled — namely, the right of impressment — the country, tired of the war, hailed the treaty with acclamation, and in this general joy no one shared more heartily than *M.* At the expiration of his second Presidential term, *M.* retired from active public life, and died in his 86th year, 1836. His *Papers*, purchased and published by Congress, appeared in 1841. They contain his contemporary diary of the debates in the important convention of 1787, by which the Constitution of the U. States was framed. After Washington, no public man of his time was more widely respected and beloved by the people; and it was his rare good-fortune to have a whole nation for his friends. *M.* had married, in 1794, Mrs. Todd, a Virginian lady, and the widow of a distinguished lawyer of Philadelphia; but their union was not blessed with children.

Mad'ison, in *Alabama*, a central co., adjoining Huntsville; *area*, about 800 sq. m. *Rivers.* Tennessee river, Fliut and Paint Rock creeks. *Surface*, hilly; *soil*, very fertile. *Cap.* Huntsville. *Pop.* (1890) 38,119.

Madison, in *Arkansas*, a N.W. co.; *area*, about 1,030 sq. m. *Rivers.* White, War Eagle, and King. *Surface*, much diversified; *soil*, mostly fertile. *Cap.* Huntsville. *Pop.* (1890) 17,402.

—A post-village, former cap. of St. Francis co., about 40 m. W. by S. of Memphis, Tennessee.

Madison, in *Connecticut*, a post-town and township of New Haven co., about 21 m. E. of New Haven. *Pop.* (1897) 1,464.

Madison, in *Florida*, a N. co., adjoining Georgia; *area*, about 830 sq. m. *Rivers.* Suwanee and Ocilla. *Surface*, nearly level; *soil*, fertile. *Cap.* Madison. *Pop.* (1895) 14,000.

—A post-town, cap. of Madison co., about 60 m. E. of Tallahassee.

Madison, in *Georgia*, a N.E. co., *area*, about 300 sq. m. *Rivers.* North Fork and South Fork of Broad River, besides several less important streams. *Surface*, diversified; *soil*, in the S.E. part, fertile. *Min.* Gold, iron, and granite. *Cap.* Danielsville. *Pop.* (1890) 11,024.

—A city, cap. of Morgan co., about 103 m. W. of Augusta. *Pop.* (1897) 2,250.

Madison, in *Illinois*, a S.W. co., adjoiuing Missouri; *area*, about 740 sq. m. *Rivers.* Mississippi river, and several creeks. *Surface*, elevated and hilly; *soil*, fertile, *Cap.* Edwardsville. *Pop.* (1890) 51,535.

—A village of Macon co. about 9 m. S.W. of Decatur.

—A post-village and township of Madison co., on the Mississippi river, nearly opposite the mouth of the Missouri river.

—A township of Richland co.

Madison, in *Indiana*, an E. central co.; *area*, about 450 sq. m. *Rivers.* West Fork of White river, aud Fall and Pipe creeks. *Surface*, mostly level; *soil*, very fertile. *Min.* Abundance of marble and limestone of superior quality. *Cap.* Anderson. *Pop.* (1890) 36,487.

—A township of Allen co.
—, " Carroll co.
—, " Clinton co.
—, " Daviess co.
—, " Jay co.

—A city and township, cap. of Jefferson co., on the Ohio River, abt. 86 m. S.S.E. of Indianapolis; Lat. 38° 46′ N., Lon. 85° 21′ W. *M.* is for the most part regularly laid out, handsomely built, and contains some fine edifices. It is also conveniently located for trade, which is carried on extensively.

—A township of Montgomery co.
—, " Morgan co.
—, " Pike co.
—, " Putnam co.
—, " St. Joseph co.
—, " Tipton co.
—, " Washington co.

Madison, in *Iowa*, a S.W. central co.; *area*, abt. 576 sq. m. *Rivers.* North and Middle. *Surface*, mostly level prairie-lands; *soil*, fertile. *Min.* Coal in abundance. *Cap.* Winterset.

—A township of Buchanan co.
—, " Butler co.
—, " Clarke co.
—, " Fremont co.
—, " Hancock co.
—, " Johnson co.

—A post-village and township of Jones co., abt. 12 m. E.S.E. of Anamosa.

—A township of Lee co.

Madison, in *Iowa*, a township of Madison co.

—A township of Mahaska co.
—, " Polk co.
—, " Poweshiek co.
—, " Winneshiek co.

Mad'ison, in *Kansas*, a post-village of Greenwood co., about 20 m. S. of Emporia. *Pop.* 700.

Mad'ison, in *Kentucky*, an E. central co.; *area*, about 385 sq. m. *Rivers.* Kentucky river, Silver and Paint Lick creeks. *Surface*, undulating; *soil*, fertile. *Cap.* Richmond. *Pop.* (1890) 24,348.

Mad'ison, in *Louisiana*, a N.E. parish, adjoining Mississippi; *area*, about 664 sq. m. *Rivers.* Tensas and Bayou Macon. *Surface*, low and level; *soil*, very fertile. *Cap.* Tallulah. *Pop.* (1890) 14,135.

Mad'ison, in *Maine*, a post-town and township of Somerset co. *Pop.* (1897) 1,920.

Mad'ison, in *Michigan*, an unimportant village of Lenawee co., about 130 m. W.N.W. of Detroit.

—A township of Lenawee co.

—A post-office of Livingston co.

Mad'ison, in *Mississippi*, a W. central co.; *area*, abt. 740 sq. m. *Rivers.* Pearl and Big Black rivers. *Surface*, generally level; *soil*, fertile. *County-seat.* Canton.

Mad'ison, in *Missouri*, a S.E. co.; *area*, abt. 625 sq. m. *Rivers.* St. Francis River aud Castor Creek, besides many smaller streams. *Surface*, mostly level; *soil*, moucrately level. *Min.* Lead, iron, and limestone. *Cap.* Fredericktown.

—A township of Johnson co.

—A post-village of Monroe co., abt. 12 m. W. of Paris.

Mad'ison, in *N. Carolina*, a W. co. adjoining Tennessee; *area*, abt. 450 sq. m. *Rivers.* French Broad River, and some smaller streams. *Surface*, mountainous, the Bald Mountain forming the N.W. boundary; *soil*, in some parts fertile. *Cap.* Marshall.

—A post-village of Rockingham co., abt. 116 m. N.W. of Raleigh.

Mad'ison, in *New Hampshire*, a post-township of Carroll co.

Mad'ison, in *New Jersey*, a post-village of Morris co., abt. 14 m. W. of Newark. It was formerly called Bottle Hill.

Mad'ison, in *New York*, a central co.; *area*, abt. 620 sq. m. *Rivers.* Unadilla and Chenango rivers, besides several smaller streams. Oneida Lake washes a portion of its W. border. *Surface*, agreeably diversified; *soil*, fertile. *Min.* Limestone, iron, salt, aud sulphur. *Cap.* Morrisville.

—A post-village and township of Madison co., abt. 95 m. W. by N. of Albany.

Mad'ison, in *Ohio*, a S.W. central co.; *area*, abt. 480 sq. m. *Rivers.* Little Miami River, and Deer, Darby, and Little Darby creeks. *Surface*, generally level; *soil*, fertile. *Cap.* London.

—A township of Butler co.
—, " Clarke co.
—, " Columbiana co.
—, " Fairfield co.
—, " Fayette co.
—, " Franklin co.
—, " Guernsey co.

—A village of Hamilton co., abt. 8 m. E.N.E. of Cincinnati.

—A township of Hancock co.
—, " Highland co.
—, " Jackson co.

—A post-village and township of Lake county, on Grand River, about 40 miles east-north-east of Cleveland.

—A township of Licking co.

—A township of Montgomery co.

—A village of Muskingum co.

—A township of Perry co.
—, " Pickaway co.
—, " Richland co.
—, " Saudusky co.
—, " Scioto co.
—, " Vinton co.
—, " Williams co.

Madison, in *Pennsylvania*, a township of Armstrong co.

—A township of Clarion co.
—, " Columbia co.
—, " Lackawanua co.
—, " Perry co.

—A post-borough and township of Westmoreland co., about 6 m. S. W. of Greensburg.

Mad'ison, in *Tennessee*, a W. by S. co.; *area*, about 520 sq. m. *Rivers.* North Fork and South Fork of Forked Deer River. *Surface*, mostly level; *soil*, fertile. *Cap.* Jackson. *Pop.* (1890) 30,497.

—A post-village of Davidsou co., on the Louis. & Nash. R. R., 10 miles N.E. of Nashville.

Madison, in *Texas*, an E. central co.; *area*, about 450 sq. m. *Rivers.* Trinity river, Bidais creek, and several smaller streams. *Cap.* Madisonville. *Pop.* 8,512.

Mad'ison, in *Virginia*, a N.E. central co.; *area*, about 280 sq. m. *Rivers.* Rapidan, Robertson's, and Hazel rivers. *Surface*, much diversified, the Blue Ridge forming the N.W. boundary of the co.; *soil*, in the valleys fertile. *Min.* Copper is said to exist in large quantities. *Cap.* Madison Court-House.

Mad'ison, in *Wisconsin*, a city, seat of justice of Dane co., cap. of the State, is finely situated on a neck of land between Third and Fourth Lakes (Monona and Mendota), abt. 80 m. W. of Milwaukee; Lat. 43° 5′ N., Lon. 89° 20′ W. *M.* is regularly laid out, the State capitol occupying a central part of the city, in the midst of a public park, 70 ft. above the level of the lakes, and the main streets diverging towards the cardinal points of the compass. It contains, besides the capitol, which cost $500,000, many other handsome and substantial edifices, both public aud private. About 1 m. W. of the capitol, and 125 feet above the lakes, is located the University of Wisconsin. *M.* has extensive commerce and manuf. *Pop.* (1895) 15,950.

Mad'ison Bridge, in *Maine*, a village of Somerset co., about 38 m. N. of Augusta.

Mad'isonburg, in *Ohio*, a post-village of Wayne co., about 5 m. N. of Wooster.

Madisonburg, in *Pennsylvania*, a P. O. of Center co.

Madison Center, in *Maine*, a post-village of Somerset co., about 40 m. N. of Augusta.

Madison Court-House, in *Virginia*, a post-village, cap. of Madison county, about 70 miles N.W. of Richmond.

Madison Mills, in *Ohio*, a post-office of Fayette co.

Madison Mills, in *Virginia*, a post-vill. of Madison co.

Mad'ison Run Sta'tion, in *Virginia*, a post-office of Orange co.

Madison's River, in *Montana*, has its source by several branches near the N.E. slope of the Wind River Mountains, in the S.W. part of the territory, and flowing N., unites with the Jefferson River, being one of the three main branches which form the Missouri River.

Mad'ison Springs, in *Georgia*, a village of Madison co., abt. 95 m. N. of Milledgeville.

Mad'isonville, in *Kentucky*, a post-village, cap. of Hopkins co., abt. 200 m. W.S.W. of Frankfort.

Mad'isonville, in *Louisiana*, a post-village of St. Tammany parish, abt. 35 m. N. of New Orleans.

Mad'isonville, in *Mississippi*, a village of Madison co., abt. 20 m. N.E. of Jackson.

Mad'isonville, in *Missouri*, a post-village of Ralls co., abt. 80 m. N.E. of Jefferson City.

Mad'isonville, in *Ohio*, a post-village of Hamilton co., abt. 6 m. E.N.E. of Cincinnati.

Mad'isonville, in *Tennessee*, a post-village, cap. of Monroe co., abt. 172 m. E.S.E. of Nashville.

Mad'isonville, in *Texas*, a post-village, capital of Madison co., abt. 145 m. N.N.W. of Galveston.

Madjicosi'ma Islands. See Babuyanes.

Madjoun, Majoun, *n.* A narcotic preparation resembling hashish, used in Oriental countries.

Mad'ly, *adv.* In a mad or insane manner; without reason or understanding; furiously; rashly; wildly.

—With infatuation, folly, or misguided zeal.

"He, . . . *madly* vain,
Sought godlike worship from a servile train."—*Dryden.*

Mad'man, *n.*; *pl.* Madmen. A man who is mad, raving, or furious with disordered intellect; a distracted man; a maniac; a man without understanding; a lunatic; one inflamed with extravagant passion, and acting contrary to reason.

Mad'ness, *n.* State of being mad; a condition of disordered reason or intellect, in which the person raves or is furious; derangement; insanity; lunacy; dementia; mania; craziness; distraction; headstrong passion and rashness that act in opposition to reason; infatuate folly. — See Lunacy, Insanity.

—Fury; rage; vehemence or wildness of passion; concentrated anger.

"He raved with all the *madness* of despair." — *Dryden.*

Mad'oc, a village of Hastings co., Upper Canada, about 12 m. N. of Belleville.

Mado'nian Moun'tains, a group in the island of Sicily, between the rivers Grande and Pollina.

Madonna, (*mä-don'nä,*) *n.* [It., my lady.] A word originally used in Italy, like *madame* in France, as a title of honor and dignity, but now exclusively applied to the Virgin Mary, as in other languages she is called *Our Lady.* It is also applied to a number of celebrated pictures, in which the Virgin forms the sole or principal object, as the Madonnas of Raffaelle.

Madras', a province, and the second in extent of the nine administrations of British India, formerly called a presidency. It comprises the whole of Hindostan S. of the river Krishna, the N. Circars and Canara, extending from 8° to 20° N. Lat., and from 74° to 85° E. Lon. It is of triangular shape, the base of the triangle being formed by a line drawn from Ganjam, on the coast of Coromandel, to Sadasharagur, near Lat. 50°, on the coast of Malabar, the sides by their coasts, and the apex by Cape Comorin, at the S. extremity of the Indian peninsula. It is consequently bounded on two of its sides, the E. and W., by the ocean, while on the third, or N., it has the dom. of the Nizam, and the rajah of Berar, parts of the presids. of Bengal and Bombay, and the Portuguese territory of Goa. Its greatest length, N. to S., is about 950 m. — *Area*, 140,917 sq. m. — *Gen. Desc.* The surface consists of a central tableland, surrounded on all sides by an undulating country, gradually diminishing in elevation as it approaches the sea. The mountain-ranges in the interior are the E. and W. Ghauts, the Neilgherry Hills, averaging 5,000 to 6,000 feet elevation, &c. The principal rivers are the Godavery and Krishna, with their numerous tributaries. The Lake of Colair, in Masulipatam, is the only considerable inland water-expanse. There are, however, along the coast, numerous salt-lagoons or inlets of the sea, but they are of little navigable use; and the whole of the Coromandel coast has a shelving shore, and is beat by so heavy a surf as to be at all times difficult to reach, and during the monsoon it is quite unapproachable. The Malabar coast within this presidency is also very destitute of good harbors. — *Clim.* Generally very hot and dry Excessive rains fall during the S.W. monsoon, while the country above the Ghauts is decidedly salubrious. — *Geol.* The geological features of S. India have been noticed in the art. Hindostan, *q. v.* The upper

soil on the coasts is usually sandy, and not very productive, but in the valleys of the interior it frequently consists of a rich alluvium or loam.—*Min.* Iron is found in rich quality and abundance; copper, diamonds, and salt are also met with.—*Zoöl.* The zoölogical character of this presidency presents much the same variety as that of India generally.—*Prod.* Teak, sandal-wood, ebony, and other valuable timber-trees thickly clothe large tracts of the surface. The toddy-palm, cocoanut-tree, and other palms, the sugar-cane, aroca, yam, plantain, and other fruits, ginger, turmeric, cotton, and hemp grow luxuriantly. Pepper is an important article of cultivation, and rice, paddy, wheat, maize, &c., form staple agricultural products. Excellent tobacco and sugar are also staple growths.—*Manuf.* Cottons, muslins, silks, &c.; iron, salt, &c. The principal trade arises from the large exports of rice, pepper and other spices, areca, &c.—*Railroads.* Three great lines of railway, connecting with the Indian main lines, extend throughout the presidency.—*Govt.* The executive is in the hands of a governor, subordinate to the governor-general of India. He is assisted by a council of three members, and by three secretaries, placed over the revenue and judicial, political, and military departments.

Madras', a maritime city, and cap. of above presidency, on the Coromandel coast, 650 m. S.E. of Bombay, and 870 S.W. of Calcutta by road. The city is not well situated, being almost unapproachable by sea, on account of the heavy surf on the bar of the harbor. It is, however, a noble city, and contains many fine streets. The principal public buildings are the Government Offices, the Arsenal, Custom-house, Exchange, Council-house, some fine churches, and the Mohammedan mosque. Many schools, asylums, and literary and philanthropic institutions maintain a lively existence. *M.* is not so hot as Calcutta; the mean annual temperature being 81·7° Fahr. Provisions and wages are high, and fuel scarce and dear. The cantonment of the Royal Artillery here is considered one of the best military stations in S. India. The territory in which *M.* is situated formed the first acquisition made by the British on the continent of India, being obtained by a grant from the rajah of Bijnagur in 1639, with permission to erect a fort thereon. The latter, which was forthwith built, was besieged in 1702, by one of Aurungzebe's generals; and, in 1744, by the French under M. de la Bourdonnais, to whom it surrendered after a bombardment of three days. Restored to the English at the peace of Aix-la-Chapelle, it sustained with success a memorable siege by the French under Lally-Tollendal, in 1758–9.

Madrepo'ral, *a.* Pertaining, resembling, or having reference to, the madrepores.

Fig. 1676. MADREPORUS ABRATANOIDES.

Mad'repore, *n.* [Fr. *madrépore*, from *marbré*, spotted, and *pore*, a pore.] (*Zoöl.*) A term first employed by Imperati to designate a genus of coral-building animals, in which the calcareous axis has its whole surface beset with small lamellate and stellate depressions. The genus was adopted by Linnæus, who ranked it among his *Vermes Zoöphita*, and characterized it as follows: "Animal resembling a medusa; coral with lamellate star-shaped cavities."

Mad'reporite, *n.* (*Min.*) A species of columnar carbonate of lime, found in Norway and Greenland.

Madrid, (*mad-rid'*,) a celebrated city, and the cap. of Spain, on the Manzanares, a tributary of the Tagus, 39 m. N. by E. of Toledo, 320 m. E.N.E. of Lisbon, and 240 m. S.W. of Bayonne; Lat. 40° 24′ 57″ N., Lon. 3° 41′ 15″ W.; on a table-land nearly 2,000 feet above sea-level. It is of an oblong form, surrounded by a high wall with fifteen gates, three of which are erected as triumphal arches, with trophies, inscriptions, and other ornamental work. The old streets are narrow and crooked, but many others are wide, straight, and regular; and some of them equal those of the finest cities in Europe. The squares are numerous, but most of them are very small; the best are the Plaza Mayor and the Puerta del Sol. The private houses are generally low, with grated windows; those of the first grandees are distinguished only by their magnitude. The only exceptions are the palaces of the families of Berwick, Altamira, and Veraguas. The houses of the dukes of Infantado, Alba, Medina-Cœli, and some others, possess valuable collections of paintings. The churches are also distinguished by the same simplicity. The most remarkable churches are St. Jerome's, with a portal richly ornamented with Gothic sculpture; the church of St. Isidore, with a fine front; that of the Mendicant Friars, which is one of the largest in the city; the church of the Incarnation; that of the Visitation, or Las Salesas, a large building, richly ornamented with paintings, statues, and marble pillars. The monument of the bishop of Placencia, in the chapel called Del Obispo; the silver tabernacle in the church of St. Martin; the altar and monument of Don John of Austria, in the church of the Franciscan nuns, are worthy of notice. Of the other public buildings, one of the most remarkable is the Saladero, a large and handsome edifice, also the quarters of the Guards, the largest building in Madrid; the Custom-house, Post-office, Prison, and the Council-house. The Royal Armory contains a valuable collection of the armor of different ages. There are several theatres, a bull-ring, and two palaces on a large scale,—the Palacio Real, at the western extremity of the city, and the Buen Retiro, founded by Philip IV., at the eastern. Both are insulated buildings; the Palacio Real is of a square form, and contains a large collection of paintings by the best masters of Flanders, Italy, and Spain; also the crown-jewels and other regalia. The Buen Retiro has very extensive gardens, and also a large collection of paintings. Of the public walks, the principal is the Prado, which runs along a great part of the E., and part of the N. side of the city. It forms a broad walk, planted with trees, for carriages, and an

Fig. 1677.—FOUNTAIN OF CYBELE, IN THE PRADO, (MADRID.)

alley on each side for pedestrians. *M.* enjoys almost always a cloudless sky, and a pure and serene atmosphere; but the air is extremely keen, from its elevated site and the vicinity of the snowy mountains of Guadarrama. The great school of *M.* occupies a building which formerly belonged to the Jesuits. There is a botanical garden; also a chemical school, classes for engineering, for anatomy, and the practice of medicine; academies for the study of history, painting, sculpture, and architecture; also for the Spanish language. The charitable institutions are numerous. The principal industrial establishments are manufactories of carpets and porcelain. Paper, jewelry, hats, and silks are also extensively made. *M.* occupies the site of the ancient *Mantua Carpetanorum*. It was afterwards called *Majoritum*; and was taken and sacked, in 1109, by the Moors, who gave it its present name. Philip II. made it the cap. of Spain. It was occupied by the French from 1808 till 1812; and was again, in 1823, visited by the French army, under the Duke d' Angoulême. The population in 1897 was closely estimated at 482,500.

Madrid', in *Maine*, a post-town of Franklin co.

Madrid', in *New York*, a post-town and township of St. Lawrence co. *Pop.* (1897) 2,010.

Madridejos, (*ma-dre-dai'hose,*) a town of Spain, in New Castile, 40 m. N.E. of Toledo, 65 m. S. of Madrid. *Manuf.* Sugar and woollens. *Pop.* 7,500.

Madridle'uian, *n.* [Sp. *Madrileño.*] (*Geog.*) A native or inhabitant of Madrid, the Spanish capital.

—*a.* (*Geog.*) Pertaining or having reference to Madrid, or to its inhabitants.

Mad'rier, *n.* [Fr., from Sp *madero.*] (*Mil. Engineering.*) A thick plank covered with plates of iron, and having a cavity sufficient to receive the mouth of a petard, with which it is applied against a gate or any other obstacle intended to be broken down. Also, the flat beams laid in the bottom of a moat or ditch to support the wall. There are also madriers lined with tin and covered with earth, to form roofs over certain portions of military works, in order to afford protection against fires in lodgments, &c.

Madrigal, (*mād're-gal,*) *n.* [Sp. and Fr.; It. *madrigale*; O. It. *mandriale*, perhaps from Lat. *mandra*, a herd of cattle = Gr. *mandra*, a fold, an enclosed place.] (*Poetry.*) A kind of short poem, having generally fewer verses than the sonnet, and admitting of greater liberty in the arrangement of the rhymes and verses. It expresses in simple language some tender and delicate thoughts, generally of an amatory or pastoral character, though occasionally it ventures upon a higher strain. The earliest madrigals were those of Lemmo of Pistoia, set to music by Casella, who is mentioned by Dante. They were generally cultivated in Europe from the latter part of the 15th to the end of the 18th century. In England, they obtained a high degree of excellence during the reign of Elizabeth, and are said to be in no way inferior to those of Italy the best known among English madrigal-writers being Orlando Gibbons. The madrigals of Tasso are among the finest specimens of Italian poetry.

(*Mus.*) An elaborate vocal composition, commonly in five or six parts, much in fashion in Italy and England in the 16th and 17th centuries.

Mad'rigaller, *n.* A composer of madrigals.

Mad River, in *California*, rises in Trinity co., and flows into the Pacific Ocean between Humboldt and Klamath cos.

Mad River, in *Connecticut*, enters the W. branch of Farmington River from Litchfield co.

Mad River, in *New Hampshire*, enters the Pemigewasset River from Grafton co.

Mad River, in *Ohio*, enters the Miami River at Dayton.

—A township of Champaign co.

—A township of Clarke co.

—A township of Montgomery co.

Mad River, in *Vermont*, enters the Onion River abt. 7 m. below Montpelier.

Madu'ra, an island of the Eastern Archipelago, immediately adjacent to the N.E. coast of Java, with which island it is politically included under the Dutch government. It is separated from Java by a narrow channel called the Strait of Madura. *Area*, 1,330 sq. m. *Desc.* The country throughout is fertile and tolerably cultivated; but it is inferior in this respect to Java. *Pop.* 300,000.

Madu'ra, a marit. dist. in the S. of British India, province of Madras, near the S. extremity of Hindostan, between Lat. 9° and 10° 45′ N., Lon. 77° 10′ and 79° 10′ E.; *area*, 7,656 sq. m. The N. and W. parts are mountainous, the S. and E. level. The hilly parts are interspersed with fertile valleys, the principal being that of Dindigal. It is intersected by the Vighey, which rises in this district, and after an E. course of 145 m., falls into the Gulf of Manaar. The climate is healthy. *M.* is celebrated for its piece-goods, and its dyers; and its artisans in gold and silver are very expert. *Pop.* 1,756,791.

MADURA, a city, cap. of the above dist., on the Vighey, 136 m. N.N.E. of Cape Comorin, and 270 S.W. of Madras. It contains some of the most extraordinary specimens of Hindoo architecture extant. The principal attractions are the palace and the great temple. The latter, with its spacious porticoes, pyramids, &c., covers an extent of ground almost sufficient for the site of a town.

Mæander, Mendere, or **Meinder,** (*me-an'der,*) a river of European Turkey, rising near Celænæ, in Phrygia, and flowing in a S.W. direction into the Icarian Sea at Miletus. It is noted for its numerous windings, which has caused its name to be used as a common term both in ancient and modern times.

Mæce'nas, CAIUS CILNIUS, whose name is imperishably associated with the Augustan literature of Rome, was descended from the ancient kings of Etruria, and flourished in the 1st century B.C. He was the companion of Augustus in nearly all his campaigns, and his most trustworthy counsellor in political matters. For the three years 18–15 B.C., he was invested with the government of Italy, and he was always sent to Rome on any emergency, either with the senate or the people, in case he was absent with Augustus. His great glory, however, was the happy influence that he exercised over the emperor as a patron of learning, and his own munificence and taste in the same direction. Virgil, Horace, and Propertius are best known to us as the guests of his hospitable mansion on the Esquiline Hill; but many others enjoyed his protection and friendship. Some poetical fragments of his remain to this day. D. B.C. 8.

Maelar, (Lake of,) (*ma'lar,*) a lake of Sweden, running inland from the Baltic. It is about 81 m. in length, and average breadth 13 m. *Area*, 525 sq. m. It contains upwards of 1,200 islands. Its E. end is closed by Stockholm, where its waters are poured into the Baltic, the difference of level being about 6 feet. It is surrounded by the districts of Stockholm, Nykioping, Upsal, and Westeras.

Maelstrom, (*māl'strum,*) *n.* (*Geog.*) A famous whirlpool on the Norwegian coast;—hence, any vortex or eddying gulf.

Maese. See MEUSE.

Maeseyick, (*mar'sai-eek,*) a town of Belgium, prov. of Limburg, on the Meuse, 17 m. N.E. of Maestricht. It is the birthplace of the brothers Van Eyck, the inventors of painting in oil. *Pop.* 4,500.

Maesto'so, *a.* [It.] (*Mus.*) A direction to the performer that the music to which the word is prefixed is to be performed majestically and with grandeur.

Maestricht, or **Maastricht,** (*maise'treecht,*) a town of Holland, cap. of prov. of Limburg, on the Meuse, 14 m. N.E. of Liege. It is one of the strongest towns in Holland, being defended by numerous bastions and trenches. The industry of the town comprises the manufacture of woollen cloths and flannels, cotton and woollen yarns, fire-arms, tobacco, &c. A considerable trade is carried on on the Meuse. On the other side of the river, in the suburb of Wyk, is the citadel or fortress of Petersburg, famous for its subterranean stone quarry, containing many intricate galleries and passages abounding in curious marine and saurian fossils. *M.* was taken by the French in 1794. *Pop.* 28,679.

Maes'tro, *n.* [It., master.] A master in any art, particularly in music.

Magadox'o, or **Mukdi'sha,** a town of the E. coast of Africa, on the Somali coast, in Lat. 2° 2′ N., Lon. 45° 25′ E. It was built by the Arabs in 924, for the purposes of trade, and was formerly very flourishing. It exports dhourra, beans, peas, cattle, cotton, &c. *Pop.* 5,000.

Magal'haens. See MAGELLAN.

Maga'lia, in *California*, a post-village of Butte co., about 24 m. N. of Oroville.

Magazine, (*mag-a-zeen',*) *n.* [Fr. *magasin*; Sp. *magacén, almagacén*; It. *magazzino*, from Ar. *makhan, al-mazun*, a shed.] A store-house; a depôt; a repository for arms, ammunition, or provisions; a warehouse; a granary; any receptacle for the storage of goods or merchandise.—The powder-room in a ship or fort.

(*Lit.*) A book, in pamphlet-form, published periodically, containing a miscellany of literary matter; as, the Gentleman's *Magazine*.

—*v. a.* To store up and set apart for future use.

Magazin'er, Magazin'ist, *n.* A writer for magazines.

Mag'dala, a strongly fortified city of Abyssinia, stormed by the British, under Lord Napier, 10th June, 1868, on which occasion the emperor Theodorus was killed.

Magda'la. (*Anc. Geog.*) The ancient Migdal-el, in the border of Naphtali (*Josh.* xix. 38); now a small Turkish village called Medjel. It lay near the shore of the sea of Galilee, at its most westerly point, 3 m. N.W. of

Tiberias; in the S. part of a small plain on which stood also Capernaum at the other end, and Dalmanutha in its immediate vicinity, (*Matt.* xv. 39; *Mark* viii. 10.) Mary Magdalene was born, or resided, at Magdala; and it was the seat of a Jewish school after Jerusalem was destroyed.

Mag'dalen, *n.* [From Mary *Magdalene.*] A repentant, fallen woman.

Magdale'na, Banco, Ubaby, or San Miguel, a river of Bolivia, rises about Lat. 17° S., Lon. 60° W., and flowing N.W., enters the Madeira River about Lat. 12° 50′ S., Lon. 65° W.

Magdale'na, a lake of Bolivia, about Lat. 14° 5′ S., Lon. 64° 25′ W. It covers an area of about 60 sq. m.

Magdale'na, a town of Bolivia, on the river Magdalena, about Lat. 13° 51′ S., Lon. 64° 31′ W.

Magdalena (*mag-da-le'na*), in the Republic of Colombia, a river which rises on the N.E. slope of the Eastern Andes, about Lat. 2° N., and flowing N. enters the Caribbean Sea by several embouchures, about Lat. 11° N., Lon. 74° W.

—An extreme N. dept., adjoining Venezuela on the E., and washed by the Caribbean Sea; *area*, about 54,000 sq. m. *Rivers.* Magdalena, Sagomogo, and Cezar rivers. *Surface.* much diversified, two ranges of the Andes traversing it. *Cap.* Cartagena. *Pop.* 275,000.

Magdale'na, a town of Mexico, on a branch of the Sonora River, about 900 m. N.W. of the city of Mexico.

Magdale'na, (Santa,) a bay on the N.E. coast of Malta, 4 m. from Valetta.

Mag'dalene, Mary. See Mary Magdalene.

Mag'dalen Is'lands, a group of islands in the Gulf of St. Lawrence, about 54 m. N.W. of Cape Breton, and about 100 m. W.S.W. of Newfoundland. The chain extends about 56 m. in length, and includes several considerable islands. Aggregate pop. about 2,000.

Mag'dalen Sound, an arm of the Strait of Magellan, in Terra del Fuego, between Clarence and Dawson islands. There is a good harbor on the W. side, and near the coast is Mount Sarmiento, 6,800 ft. in height.

Magda'leon, *n.* [Gr. *magdalia*, a loaf-crumb.] (*Med.*) A plaster or any other medium rolled into the form of a cylinder. — *Dunglison.*

Mag'deburg, a city of Prussia, prov. of Saxony, on the Elbe, 74 m. S.W. of Berlin, and 50 E.S.E. of Brunswick; Lat. 52° 8′ N., Lon. 11° 40′ E. *M.* is a fortress of the first class, and from the recent improvement in its defences may be considered one of the strongest in Europe. This city, one of the most important commercial places of Prussia, is divided into 5 parts: the Old Town, the New Market, and the Friedrichstadt, or tower fort, the New Town, and the quarter called Sudenburg. The most remarkable among its public buildings are, the Cathedral, containing the tomb of Otho the Great, the ducal palace, and the town-hall. The citadel, on an island in the Elbe, serves also as a state prison, Baron Trenck and Lafayette having, among others, been confined in it. *Manuf.* Considerable, consisting of silk, linen, cotton, and woollen fabrics, oil-cloth, gloves, leather, tobacco, &c., with numerous tanneries, distilleries, &c. A large quantity of salt is made in the neighborhood. The transit and commission trade is very considerable. *M.* is a city of old date, having been mentioned as early as the reign of Charlemagne. It suffered greatly in the wars of the 16th and 17th cent. In 1806 it was taken by the French, and was annexed to the new kingdom of Westphalia by the treaty of Tilsit in 1807. It was restored to Prussia in 1814.

Mag'deburg Cent'uries. See Centuries of Magdeburg.

Mage, (*ma-zha'*,) a town of Brazil, abt. 16 m. E.N.E. of Rio-de-Janeiro.

Magel'lan, the incorrect but generally received name of **Magalhaens,** Ferdinand, a celebrated Portuguese navigator, who, in 1520, discovered and passed the straits which have since been called by his name, and was the first to circumnavigate the world. His services not being valued by his own country, he offered them to Charles V. of Spain, who intrusted him with a fleet destined to attempt a westward passage to the Moluccas: hence his discovery. He was slain in 1521, in a skirmish with the natives of one of the Philippine Islands.

Magel'lan, or **Magalhaens, (Strait of,)** a strait separating the islands of Terra del Fuego from the continent of S. America. It extends between Lat. 52° 10′ and 55° S., and Lon. 80° 20′ and 75° W. It is abt. 300 m. in length, and of difficult navigation. The tides here rise 50 ft. Discovered by Magellan in 1520.

Magellan'ic, *a.* Relating or pertaining to Magellan, the circumnavigator.

Magendie, François, (*ma-zhen'de,*) an eminent French physician, b. at Bordeaux, 1783. He was a pupil of the anatomist Boyer, but subsequently devoted his attention chiefly to medicine and physiology. About 1804 he was appointed demonstrator of anatomy at the Faculty of Medicine, and later, physician to the Hôtel Dieu. He contributed greatly to the progress of physiology by his numerous and laborious experiments; investigating the functions of the brain and special nerves, the absorption and action of poisons, the properties of certain kinds of food, absorbing power of the veins, &c.: and making some important discoveries. He practised vivisection to a great extent, and was restrained by the French government. Among his works are: *Formulaire pour la Préparation et Emploi de plusieurs Nouveaux Médicaments; Elémens de Physiologie; Leçons sur les Phénomènes Physiques de la Vie; Leçons sur le Sang*, &c. He was chosen professor of anatomy at the College of France in 1831; was also a member of the Academy of Sciences and a commander of the Legion of Honor. He was founder and editor of the *Journal de Physiologie Expérimentale*, and contributed to various medical and other dictionaries. D. 1855.

Magen'ta, a town of Italy, in Lombardy, province of Pavia, 12 m. S. of Milan. It was the scene of a desperate battle in which the French and Sardinians defeated the Austrians, in 1859. *Pop.* 4,000.

Magen'ta, *n.* The name given to one of the red or crimson dyes derived from aniline. — See Rosaniline.

Magen'ta, Marie Edme Patrick Maurice de McMahon, Duke of, marshal of France, President of the French Republic, was born at the Château of Sully, near Autun, June 13, 1808. He was descended from an Irish family who took refuge in France after the fall of the Stuarts; was educated in the military school of St. Cyr; served in the French army in Algeria; returned, and was present at the siege of Antwerp. Once more transferred to Africa, he distinguished himself as an officer, and received repeated promotions, in 1845 being made colonel, and in 1848 brigadier-general. In 1852 he became general of division; and in 1855 was recalled to assume command of a division in the Crimean War. In the storming of Malakoff, when the French commander, losing heart, ordered McMahon's return, the latter made his now historic reply, *J'y suis; j'y reste.* Fortunately his act of disobedience resulted successfully: he remained, and drove out the Russians. For this daring deed he received the Grand Cross, and was created a senator, in which office he manifested the same independence of judgment. In 1857 he fought again in Algeria, and in 1859 in the campaign against Austria. He commanded the second corps at the battle of Magenta, where his brilliant flank movement won the battle for Napoleon, who then and there made him marshal of France and Duke of Magenta. McMahon's career thereafter was continuously successful, notwithstanding the inevitable disasters of the Franco-German War. Immediately after the armistice in 1871, Marshal McMahon was entrusted by Thiers with the command of the French army. Up to this time he had been a soldier, caring little for politics; but after he had, in his military capacity, subdued the revolution of the Commune in Paris (and subsequently published his views as opposed to the Commune), he became the man on whom those parties of the National Assembly which feared radicalism and revolution rested their hopes. He was made President by the Conservative party; his administration was orderly, and aimed at the restoration of the power of France. On Nov. 19, 1873, his term of office was prolonged by the National Assembly to seven years. He resigned Jan. 30, 1879, and for several years occupied his leisure in preparing his military memoirs. He died on his estate at Montcressou Oct. 17, 1893. He had a national funeral, being buried in the Hôtel des Invalides, Paris.

Maggiore, (Lake,) (*mâd-jo'rā,*) or Lake Lo-Carno, (anc. *Lacus Verbanus.*) [It. *Lago Maggiore.*] A famous lake of N. Italy, lying partly in the Italian kingdom and partly within the Swiss canton of Tessin. It is long and narrow, stretching above 40 miles from Magadino, at its N., to Sesto-Calende, its S. extremity, while in its widest parts, opposite to the mouth of the Toce, it is about 6 miles across, though its ordinary breadth does not exceed from 2 to 3 miles. Its general direction is S.S.W. and N.N.E., and it may, in fact, be considered as an expansion of the Tessino, which enters it at its N., and leaves it at its S. extremity. In addition to the waters of the Upper or N. Tessino, it receives on its W. the waters of the Toce, and on its E. side those of the Tresa, flowing from the Lake of Lugano. Its only outlet is the Lower or S. Tessino. It is in some places not less than 300 fathoms deep. Its waters, which are clear and of a greenish tinge, are well stocked with fish; and, like all Alpine lakes, its navigation is dangerous from sudden squalls. The scenery of the lake is very varied. That of the upper part is bold and mountainous, its N. branch opening into one of the most beautiful valleys of the Rhætian Alps, which form a magnificent theatre in the background. Toward the E. and S. the mountains gradually decline to the plain of Lombardy; and the lower part of the lake is of a more quiet and dreamy character, yet still very beautiful. Its immediate shores are richly fringed with wood, occasionally broken by picturesque crags, crowned with castles and churches, and with numerous villages dotted along the margin. Though inferior in wildness and sublimity to the Lake of Como, and perhaps, also, to that of Lugano, the softer beauties of *M.* are generally allowed to be the more attractive, contrasted as they are with the distant grandeur of the Alpine chain. The Borromean Islands, from which this lake has received a great portion of its celebrity, are situated in the bay on the W. side, opposite to the mouths of the Toce. Of these, the *Isola Bella* and *Isola Madre* are the most famous. They are of small size, and previously to the middle of the 17th century were little better than bare rocks; but being the property of Count Vitaliano Borromeo, a descendant of the celebrated San Carlo Borromeo, he resolved to make them his residence, and to convert them, according to the taste of the time, into a sort of Italian paradise. They were consequently covered with earth brought from the adjacent mainland, formed, especially the Isola Bella, with splendid terraces, lined with trees and statues, and ornamented with superb palaces.

Mag'got, *n.* [W. *macai*, pl. *maceiod*, *magiod*, *magu*, to breed. See Moth.] (*Zoöl.*) The fly-worm, which breeds or is generated in meat, vegetables, &c.; a grub; a worm.

Mag'goty, *a.* Full of maggots; as, *maggoty* cheese.—Capricious; whimsical; fantastic.

Ma'gi, *n. pl.* [From Gr. *magos*; Lat. *magnus*, great.] A sect of priests among the ancient Medes and Persians. They formed one of the six tribes into which the Medes were originally divided, and on the downfall of the Median empire they continued to retain a great degree of power and authority with the conquerors, being the recognized ministers of the national religion. The great apostle of their religion was Zoroaster. They were so celebrated for their enchantments, that they have given name to the art of magic or enchantment. They were also learned as astrologers, and their name was applied to any one celebrated for wisdom: hence, the wise men of the East who came to see Jesus are simply called magi. — See Gueber.

Ma'gian, *a.* Pertaining to the Magi (*q. v.*), or to the æra in which they flourished; as, the *Magian* age.

—*n.* One of the sect of the Persian Magi, or priests of the religion of Zoroaster; a Zoroastrian worshipper.

Ma'gianism, *n.* The philosophical doctrines or religious tenets of the Magi.

Magic, (*măj'ik,*) *n.* [Lat. *magia.*] In its ancient sense, this word signified the science and doctrine of the Magi, or wise men of Persia; in a more modern sense, *M.* is a science which teaches how to perform wonderful and surprising feats, or to produce unexpected effects. Originally, the word *M.* carried with it an innocent and praiseworthy meaning, being used to signify the study of wisdom and the more sublime parts of knowledge. When, however, the ancient magi engaged themselves in astrology, divination, sorcery, and other similar branches of the occult sciences, the term *M.* became in time of bad repute, and was only used to signify an unlawful and diabolical art, depending on the assistance of the devil and the spirits of the dead. The possession of magical powers has formed a portion of superstitious belief among all nations at all times; but of all people, the ancient Romans were the most superstitious in this and other respects. They placed the utmost belief in auguries and divinations. It is also a remarkable fact, that while their religion decreed these rites, they were always searching after fresh excitement from others, which were not only unauthorized but condemned by their own laws. Among these may be mentioned the magical practices of the Thessalian witches, of the Persian Magi, and of the sorcerers of Egypt and Phrygia, and the numberless other foreign nations with whom they were brought in contact by their conquests. The emperors were constantly issuing and renewing edicts against these practices in the most ineffectual manner, and it is probable from this circumstance that *M.* began to be looked upon as a black and unholy art, — an idea which became rooted in the minds of the inhabitants of Southern Europe. In the North, supernatural power was looked upon with high respect; and in the East, the favorite land of sorcery and magic, the professors have been looked upon as venerable rather than as hateful, from time immemorial. According to Cornelius Agrippa, *M.* may be divided into three kinds, — natural, celestial, and ceremonial or superstitious. *Natural M.* is simply the application of natural active causes to passive subjects, by means of which many surprising, but yet natural, effects are produced. Without doubt, such have been some of those miracles wrought by ancient magicians, whose knowledge of the various powers of nature, there is reason to believe, was much greater than the self-sufficiency of modern vanity is willing to admit. Among the Crusaders and other Christian warriors of the Middle Ages, *M.* was looked upon as a peculiar ally of the infidels, with whom they were in contact. In their imagination, also, the inhospitable North was peopled with enchanted castles and spectral illusions. In the romances of the period, founded on historical encounters, there is usually a good magician, who sides with the Christian party; while necromancers, who work evil, back up with the Infidels. *Celestial M.* closely resembles judicial astrology. It attributes to spirits a kind of rule or dominion over the planets, and to the planets a rule over the destinies of men. On this foundation, a ridiculous kind of system was built up. *Superstitious M.* consists in the invocation of devils. Its effects are usually evil, but surpassing the powers of nature, being supported by some supposed compact, either tacit or express, with evil spirits. There is every reason to believe that this species of *M.* originated in Egypt. The first magicians mentioned in history were Egyptians; and that people, so famed for their wisdom, not only believed in the existence of demons, but also that different orders of these spirits presided over the elements of fire, air, earth, and water, as well as over the persons and affairs of men. Consequently, every disease which flesh is heir to was laid to the charge of some particular demon. When a person was seized with a fever, or other complaint, they never thought of searching for the natural cause of the disease, and so curing it; but, attributing the complaint to the possession of some demon, they endeavored to drive it forth by means of incantations and charms. These notions spread from the Egyptians to the Hebrews, among whom we find a belief that nearly every disease was due to the agency of demons or devils. Superstitions of a similar stamp were also brought from Egypt and Chaldea by Pythagoras, and transmitted by him and his followers to the Platonists of Greece. The advance of the Christian religion, the revival of learning, and the progress of natural science, long ago banished this kind of superstition from all the enlightened European nations.

Mag'ic, Mag'ical, *a.* Pertaining to magic; used in, resembling, or performed by, magic, spiritual, or occult agency, or by the invisible powers of nature: hence, wonderful, or seemingly superhuman and startling in performance

"By *magic* numbers and persuasive sound."— *Congreve.*

—Belonging or having reference to the secret wisdom accredited to the Magi; necromantic; sorcerous; pertaining to the occult arcana of nature, and the phenomena produced by their agency.

Mag'ically, *adv.* By the arts, or accordiug to the rules, of magic; by enchantment.

Magician, (*ma-jĭsh'an,*) *n.* [Fr. *magicien.*] One skilled in magic; a sorcerer; a necromancer; an enchanter; a conjurer; a professor or practiser of the black art or diablerie.

Magic Lantern, *n.* A species of optical instrument,—chiefly made use of as a toy,—the object of which is to obtaiu an enlarged representation of figures on a screen in a darkened room, by means of light issuing from a lamp or candle, and passing through a convex lens The principle of its construction is very simple. A lamp, L (Fig. 1678), with a powerful Argand burner, is placed withiu a closed lautern, and in the focus of a concave mirror, M N. At the opposite side of the lantern is fixed a tube, A B, containing an hemispherical illuminating lens, A, and a convex lens, B; and between A and B is a slit, C D, through which the sliders of painted

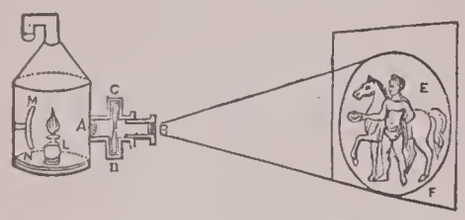


Fig. 1678. —MAGIC LANTERN.

glass are introduced. In this manner the picture is placed in the axis of the tube, and strongly illuminated, in consequence of the light being concentrated upon it by the mirror. The picture being also in one of the conjugate foci of the lens, B, an enlarged image of it is formed upon a wall or screen, E F, at some distance behind. The tube, A B, is made to pull out, so that the distance of the lens, B, from the slider, can be increased or diminished at pleasure, and consequently an image formed of any size within moderate limits, by increasing or diminishing the distance between the lantern and the screen. The magic lantern was invented by Athanasius Kircher.

Magic Square, *n.* A term used to denote a series of numbers in arithmetical progression, arranged in the equal cells of a square in such a manner that the vertical, horizontal, and diagonal columns give the same sum. For example, let the first sixteen numbers be arranged, as in the annexed table, and a magic square will be produced; for the numbers in each vertical column, in each horizontal column, and in the two diagonal columns, being added together, give the same sum, namely, 34. This is, however, only one of a great number of ways in which the same numbers may be arranged so as to fulfil the conditions. Frenicle (*Divers Ouvrages,* Paris, 1693) has shown that there are 878 such arrangements.

1	16	11	6
13	4	7	10
8	9	14	3
12	5	2	15

Magilp', Magilph', Megilp', Megilph', *n.* (*Painting.*) A gelatinous compound produced by the mixture of linseed oil and mastic varnish. It is used by artists as a vehicle for colors.

Mag'iins, *n.* (*Zoöl.*) A name given by Montfort to a genus of Tubulibranchiate Gastropods in the system of Cuvier, chiefly remarkable for the form, length, and solidity of their shell. There is but one species.

Magindanao, or **Mindanao,** (*ma-hin-da-na'o,* or *min-da-na'o,*) the most S. of the Philippine Islands, in the Eastern Archipelago; Lat. between 5° 40′ and 9° 55′ N., Lon. 119° 30′ and 125° E.; *area,* estimated at 36,000 sq. m. *Desc.* The interior is intersected by lofty chains of mountains, with intervening plains, which afford pasture for vast herds of cattle. The country is well wooded, and in many parts towards the sea-coast is covered with impenetrable jungle and forests. In the interior, near the Bay of Illano, is a considerable lake, which is between 15 and 20 m. in width. Of the rivers only 2 are known, one on the N. side flowing into the Bay of Butnan, and the other called Pelangy, flowing W. into the Bay of Illano, opposite the island of Bunwat. Great numbers of cattle, hogs, goats, and horses are reared; the latter are of small breed, but remarkable for their spirit. *Prod.* Rice, wax, cassia, tobacco, and rattans. The principal town is Magindanao, situated on the Pelangy, in Lat. 7° 9′ N., Lon. 124° 40′ E. It is the residence of the sultan of Mindanao. *Pop.* of the island, 74,560.

Magister, (*măj-,*) *n.* [Lat., master, head.] Master; sir;—a compellation used during the Middle Ages, corresponding with the modern designation of *doctor.*

Magiste'rial, *a.* [L. Lat. *magisterialis.*] Pertaining to, or resembliug, a master; such as suits a master; authoritative; dogmatic;—hence, Imperious; pompous; characterized by pride or arrogance; haughty; domineering; as, *magisterial* authority, *magisterial* opinions. (*Chem.*) Having reference or belonging to magistery. See MAGISTERY.

Magiste'rially, *adv.* Arrogantly; authoritatively; dogmatically.

Magiste'rialness, *n.* Air and demeanor of a master; imperiousness; haughtiness; authoritativeness; peremptoriness; as, a "*magisterialness* in matters of opinion." — *Govt. of the Tongue.*

Mag'istracy, *n.* [Lat. *magistratus,* from *magister.*] The office or dignity of a magistrate.

"Duelling is an insult upon *magistracy* and good government." *Richardson.*

—The collective body of magistrates.

Mag'istral, *a.* [Lat. *magistralis.*] Magisterial; befitting a magistrate; authoritative; peremptory.

Magistral line. (*Fortif.*) See the uonu.

—*n.* (*Fortif.*) The line of the tops of the scarp of a work. (*Metallurgy.*) The roasted and pulverized copper of pyrites added to the ground ores of silver for the purpose of decomposing the horn-silver present.

Mag'istrate, *n.* [Lat. *magistratus,* from *magister,* master, Sansk. *mann,* to increase, when also Lat. *magnus,* great; Lith. *macnus,* powerful.] One placed in power or authority, as a public civic functionary; a public civil officer, invested with executive governing powers, especially in so far as concerns the maintenance and enforcement of legal authority. The term is also frequently applied to the chief officer of a state or government, and also to officials, as governors, mayors, prefects, &c.

Mag'ma, *n.* [Lat.] Any crude mixture of mineral or organic matters, in the form of a thin paste.

—A confection; a sweetmeat; a bonbon.

(*Med.*) The thick residuum, obtained after expressing certain substances to extract the fluid parts from them. —The grounds which remain after treating a substance with water, alcohol, or any other menstruum. —Also, a salve of a certain consistence.

Magna Charta, (*măg'nă-kar'tă,*) *n.* [Lat., the great charter.] (*Eng. Hist.*) "The Great Charter of Liberties" extorted from king John in 1215. This charter is usually regarded as the constitutional basis of English liberties; but in many of its provisions it seems only to have been a declaration of the rights which had been enjoyed in England before the Conquest. The Anglo-Saxons' institutions and usages, which were very favorable to liberty, had been almost entirely suppressed by the Norman conquerors. Henry I., when he first seized the crown, to the exclusion of his elder brother Robert, being desirous to win the favor of the Saxon as well as the Norman inhabitants of the country, granted a charter, restoring many of the ancient liberties, and removing many of the feudal oppressions to which the military tenants of the crown were liable at the hands of the king. To the weakness or imbecility of king John is owing the possession of the Magna Charta, which, if it did not found the liberties of the English nation, at least defined and settled them. The barons, by the illegal and violent measures of the king, were driven to take measures for their own defence. At length a conference was held at Runnymede, on the Thames, between Staines and Windsor, on the 15th of June, 1215, and after a long discussion the Magna Charta was signed. To secure the execution of the charter, John was compelled to surrender the city and Tower of London, to be held by the barons till August 15, or until he had completely executed the charter. Further, the barons chose 25 of their number to be guardians of the liberties of the realm, with power to make war upon the king if he should violate the charter. The Magna Charta redressed many grievances incident to feudal tenures; prohibited unlawful amercements, distresses, or punishments, and restrained the royal prerogative of purveyance and preemption; it regulated the forfeiture of lands; established the testamentary power of the subject over part of his personal estate; laid down the law of dower; enjoined a uniformity of weights and measures; gave new encouragement to commerce; forbade the alienation of lands in mortmain; guarded against delays and denials of justice; fixed the Court of Common Pleas at Westminster, and brought the trial of issues within the reach of all freemen by means of assizes and circuits; confirmed and established the liberties of the city of London, and other cities, boroughs, towns, and ports of the kingdom; and protected every individual of the nation in the enjoyment of his life, liberty, and property, unless declared to be forfeited by the judgment of his peers or the law of the land. The *M. C.* was confirmed by the guardians of the youthful king Henry III. at Bristol, Nov. 12, 1216, and subsequently by other kings so frequently, that Sir Edward Coke counted 32 confirmations, additions, or renewals, about the year 1600.

Mag'na Grae'cia, or MAJOR GRÆCIA. (*Anc. Hist.*) This name was applied by Greek writers to their colonies formed on the southern shores of Italy. Cumæ having by general consent the precedence in point of antiquity, although the date of its found[illegible]n, B. C. 1050, is not to be relied upon. There is much uncertainty as to the precise dates of the various settlements; but the greater number of them were probably made between B. C. 735 and B. C. 685. Sybaris, B. C. 720, and Crotona, B. C. 710, the two most powerful cities, were founded by the Achæans. Tarentum, a Spartan colony, was established about B. C. 708; Metapontum by the Achæans, B. C. 700–680; and Locris by the Locrians, abt. B. C. 700.

Magnanim'ity, *n.* [Fr. *magnanimité*; Lat. *magnanimitas.*] Greatness of soul or mind; that elevation of soul or dignity of character which invests its possessor with equanimity in encountering danger and difficulty, raises him above the ignoble spirit of revenge, causes him to scorn and repudiate injustice, spleen, and meanness, and urges him to, and sustains him in, acts of self-sacrifice, self-control, and devotion.

Magnan'imous, *a.* [Lat. *magnanimus* — *magnus,* great, and *animus,* mind.] Great of soul or mind; elevated in soul or in sentiment; brave; disinterested; self-sacrificing; of high and noble spirit; raised above mean, sordid, unjust, or ungenerous thoughts or actions. — Prompted or dictated by magnanimity; exhibiting noble spirit and elevation of soul; generous; honorable; just; liberal; not narrow-minded, sordid, mean, or selfish.

"Great in youthful courage and *magnanimous* thoughts." *Milton.*

Magnan'imously, *adv.* In a magnanimous manner; with greatness of mind or elevation of soul; bravely; nobly; disinterestedly.

Mag'nase, *a.* (*Painting.*) Denoting a color of intense body, which dries readily with an admixture of oil.

Magnase Black, *n.* (*Paint.*) The best of black pigments for drying in oil without addition, or preparation of [illegible] oil; it is a color of immense body and tinging power.

Mag'nate, *n.*; *pl.* MAGNATES, (*mag-nā'tēz.*) [Fr. *magnat,* from Lat *magnus.*] A person of elevated rank; a great noble; a grandee; a person of superior wealth or position: a person of prominent note or distinction in any circle of society; as, a political *magnate.*

—The title of the noble estate in the national representation of Hungary, and formerly of Poland. The Hungarian magnates are divided into greater and lesser; certain high state officers belonging to the first class, the counts and barons of the kingdom to the second.

Magne'sia, an ancient city of Lydia, near the Mæander, south-east of Ephesus. — Also, another in the same kingdom near the junction of the rivers Hermus and Hyllus, and celebrated for the victory gained by the two Scipios over Antiochus the Great, king of Syria. B. C. 190.

Magnesia, (*măg-ne'she-ȧ,*) *n.* [From *Magnesia,* a city of Lydia, near which it was originally found.] (*Chem.*) One of a group of alkaline earths, of which baryta, strontia, and lime form the other members. It is the oxide of the metal magnesium, *q. v.*, and is generally prepared by calcining the carbonate at a high heat, until it glows with a peculiar luminous appearance, called brightening. It is much used in pharmacy, under the name of *calcined magnesia.* For the laboratory, it may be procured in a state of purity by igniting the pure nitrate. It is a white powder, varying in density according to the source from which it is obtained. It is unalterable by heat, and has never been fused. It slowly absorbs carbonic acid and water from the air; moistened with water, it combines with it, raising the temperature during the union, and giving rise to *hydrate of magnesia.* Crystallized hydrate of magnesia occurs in nature as the mineral brucite. It forms a white powder, which slowly absorbs carbonic acid from the air. Its water is easily expelled by heat. It is sparingly soluble in water, forming a solution exhibiting an alkaline reaction. It is used in pharmacy as an antacid and cathartic.

Carbonates of M. There are three carbonates of magnesia,—the bicarbonate, monocarbonate, and subcarbonate. The monocarbonate is found in nature in a hydrated condition, as the mineral magnesite. The anhydrous salt may be prepared by placing a tube containing a solution of carbonate of soda in a strong glass tube containing a solution of sulphate of magnesia, sealing the outer tube hermetically, heating it to 320° Fahr., and inverting the whole, so that the solutions may mix — crystalline grains of anhydrous carbonate being deposited. It is insoluble in water, but dissolves in acids. Heated, it becomes converted into magnesia. It dissolves in water saturated with carbonic acid, forming bicarbonate of magnesia. The subcarbonate is prepared by boiling a solution of the sulphate with excess of carbonate of potash or soda, and filtering and washing until the washings give no precipitate with chloride of barium. Prepared thus, it forms a bulky white powder, and is known as *light carbonate of magnesia.* The *heavy carbonate* has the same composition, and is prepared by mixing hot solutions of carbonate of soda and sulphate of magnesia. It is much less bulky than when prepared in the preceding manner. Both forms are extensively used in medicine as a cathartic and antacid. Carbonate of magnesia is capable of combining with other carbonates to form double salts. The double carbonates of magnesia, potash, soda, ammonia, and lime, are instances of this.

Citrate of M. This salt is much used in pharmacy as a gentle aperient. It is prepared by mixing powdered carbonate of magnesia and citric acid into a paste with a small quantity of water, and granulating. A teaspoonful in water forms a pleasant effervescing cathartic of a gentle character.

Nitrate of M. It occurs in the mother-liquors of the sulphate refiners. It may be prepared by evaporating a solution of the carbonate in dilute nitric acid to crystalization. The salt forms deliquescent prisms of the formula $Mg(NO_3)_2Aq$. Exposed to a temperature of 482° Fahr., it is converted into a baric nitrate, and all the nitric acid is expelled by a red heat.—*Phosphate of M.* The bibaric salt may be obtained by mixing hot concentrated solutions of the sulphate with phosphate of soda. It crystallizes in hexagonal needles, containing fourteen equivalents of water, which are entirely expelled at a high temperature, giving rise to pyrophosphate of magnesia. Phosphate of magnesia is only interesting from entering into the composition of bones of animals. It is also found in combination with ammonia, as a constituent of urinary calculi.—*Silicates of M.* Numerous examples of these occur in the mineral kingdom. Meerschaum, steatite, chrysolite, olivine, and peridate, are all silicates of magnesia. Angite, amphibole, asbestos, and hornblende, are double silicates of lime and magnesia, more or less colored by oxide of iron. Serpentine is a mixture of the silicate and hydrate, colored with metallic oxides and talc is a hydrated silicate.

Sulphate of M. This salt occurs in nature as *hair salt*, as an efflorescence on certain magnesian minerals. It exists in sea-water and certain spring-waters in considerable quantity. The springs of Epsom and Seidlitz are especially famous for the amount of this salt they contain. The sulphate of magnesia of commerce, so extensively used in medicine as a cathartic, is prepared in several ways; the most common of which is to dissolve dolomite, or magnesian limestone (carbonate of lime and magnesia), in dilute sulphuric acid; by which means sulphate of lime is precipitated, and the sulphate of magnesia may be obtained by evaporating to crystallization. Its other sources are the mother-liquor of sea-salt, and refuse alum-liquors. This salt crystallizes in rectangular four-sided prisms, containing six equivalents of water, which effloresces slightly in dry air. It is very soluble in water, 100 parts of water dissolving 68 parts of the salt at ordinary temperatures, and 150 parts at boiling-point. It is sparingly soluble in alcohol. It is employed in the laboratory as a re-ageut; in which case it should be made by dissolving the pure carbonate in sulphuric acid, as the commercial salt is largely adulterated with sulphate of soda. Its water of constitution is capable of being replaced by alkaline sulphates, giving rise to double salts.

Magnesian, (*-nē'zhan,*) *a.* Pertaining to, containing, resembling, or partaking of the properties of magnesia.

Magnesian Limestone. (*Geol.*) A marine deposit found in vast masses in Thuringia and in England, and forming a component element in the new red sandstone system, and frequently above the coal-measures; its aggregation, however, differs greatly, — in some places it is a soft powdery substance, in others a hard compact stone, frequeutly traversed by spiral veins, and full of singular crystallized cavities. It is generally white below, or yellow, brown, or reddish, and of a grayish or purple hue above.

Mag'nesite, *n.* (*Min.*) A native carbonate of magnesia, occurring in serpentine, in compact, hard, amorphous masses.

Magnesium, (*-nē'zhi-ŭm,*) *n.* (*Chem.*) The metallic base of the alkaline earth magnesia, first isolated by Bussy, who obtained it by decomposing the chloride with potassium at a high temperature. It is a white malleable silvery metal, constaot in dry air, but becoming covered with a white film of magnesia in the presence of moisture. It decomposes water at the boiling-point, eliminating hydrogen. Heated to dull redness in air or oxygen, it burns with a bright light, and is converted into magnesia. It fuses at a red heat, and may be distilled out of contact with the air. It forms only one oxide — magnesia. The best method of preparing magnesium is that lately patented by Mr. E. Sonstadt, which consists in evaporating a mixed solution of the chlorides of magnesium and sodium to a dry mass, which, when heated with sodium in an iron vessel, yields the metal in a state of comparative purity. This process promises to yield magnesium in quantities, at a price that would secure its common use. In many of its characters, metallic magnesium resembles zinc. It is the lightest known metal that remains constant in the air at ordinary temperatures. *Equiv.* 24; *sp. grav.* 1,743; *Symbol,* Mg.

Chloride of M. This salt is found in large quantities, in company with the iodide and bromide, in the mother-liquors of salt-works; but the pure salt is best prepared by dissolving the carbonate in hydrochloric acid, evaporating and crystallizing. The anhydrous chloride is made by saturating hydrochloric acid with carbonate of magnesia, and adding excess of chloride of ammonium, evaporating to dryness, and heating in a platinum-dish. The double chloride is decomposed, the whole of the chloride of ammonium being expelled, and the anhydrous chloride of magnesium remaining behind. The anhydrous chloride forms white deliquescent needles, containing six equivalents of water. It forms double salts with the chlorides of the alkaline metals.

Sulphide of M. This compound is obtained with difficulty by precipitating sulphate of magnesia with sulphide of barium. Its properties are as yet but little known.

Magnet, Natural. [See MAGNETITE.] A body endowed with magnetic polarity. The *natural magnet*, or *loadstone*, is a species of iron ore found in various parts of the earth, in irregular or crystalline fragments, and occasionally in beds of considerable thickness. Its property of attracting small pieces of iron was recognized at a very early date by the Greeks, and its wondrous directive power has been known to the inhabitants of China from time immemorial. If a piece of this magnetic iron ore be carefully examined, it will be found that the attractive force for ferruginous particles is greater at certain points of its surface, while elsewhere it is much diminished, or even altogether absent. The attractive points are called the *poles* of the magnet, (Fig.

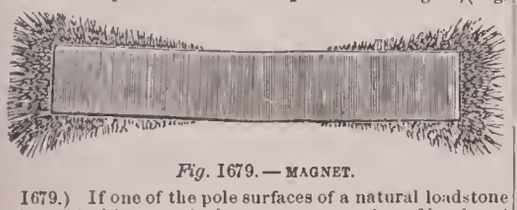


Fig. 1679. — MAGNET.

1679.) If one of the pole surfaces of a natural loadstone be rubbed in a particular manner over a bar of hardened steel, its characteristic properties will be communicated to the bar, which will then be found to attract iron-filings like the loadstone itself. Further, the attractive force will appear to be greatest at two points situated very near the extremities of the bar, and least of all towards the middle. The bar of steel so treated is said to be *magnetized*, or to constitute an *artificial magnet*. For general purposes, artificial magnets are made from straight bars, or from bars bent into a curvilinear form, resembling a horse-shoe. The latter are particularly well adapted for displaying the attractive force, as the two poles can be brought into contact with the object to be lifted. Straight bars must, of course, be used in experiments upon the directive power. Many artificial magnets, either straight or curved, may be combined together so as to form a *compound magnet*. The poles of a compound horse-shoe magnet are generally armed with pieces of very soft iron, to which a movable piece of soft iron, called a *keeper* or *lifter*, may be conveniently applied. This keeper is found to preserve and increase the force of the poles in a very remarkable manner. A natural magnet may be armed in a similar manner. An *electro-magnet* is a bar of soft iron in which magnetism is temporarily induced by a circulating current of electricity.—See MAGNETISM, ELECTRO-MAGNETISM, and MAGNETO-ELECTRICITY.

Magnet'ic, *n.* Any metal susceptible of receiving the properties of the loadstone.

Magnet'ic, Magnet'ical, *a.* Relating or pertaining to the magnet; having the properties of the magnet, or their equivalents; as, a *magnetic* needle, a *magnetic* body.—Belonging or referring to terrestrial magnetism; as, the *magnetic* amplitude. — Attractive; having the power of drawing to a focus; as, *magnetic* influence.

M. Iron Ore. See MAGNETITE.

M. Iron Pyrites. (*Min.*) A variety of iron pyrites having magoetic properties, found in hexagonal prisms of a bronze color. The composition of magnetic pyrites may be represented by the formula F_7S_8.

Magnet'ical Island, an island in the Pacific Ocean, off Porto Pnebla, Guatemala; Lat. 8° 4′ 6″ N., Lon. 81° 47′ W. — Another, in Halifax Bay, off the E. coast of Australia; Lat. 19° 8′ S., Lon. 146° 45′ E.

Magnet'ically, *adv.* By the influence of attraction; by means of magnetism.

Magnet'icalness, *n.* State or quality of being magnetic.

Magnetician, (*-tish'an,*) *n.* One versed in magnetic science; a magnetist.

Magnet'ics, *n. sing.* The science of magnetism.

Magnetif'erous, *a.* [Lat. *magnes, magnetis,* and *ferre,* to bear.] Producing or imparting magnetism.

Mag'netism, *n.* [Fr. *magnétisme.*] (*Physics.*) Literally, the attractive and repulsive power of the loadstone; generally, that peculiar property possessed by many mineral bodies, and by the whole mass of the earth, through which, under certain circumstances, they mutually attract and repel one another, according to determinate laws. When a magnetized bar, or natural magnet, is suspended at its centre in any convenient manner, so as to be free to move in an horizontal plane, it is always found to assume a particular direction with regard to the earth, one end pointing nearly north, and the other nearly south. If the magnet be moved from this position, it will tend to reassume it, and, after a few oscillations, settle at rest as before. The extremity which points towards the astronomical north (*a*, Fig. 1680) is usually distinguished as the *north pole* of the magnet, and that which points southward (*b*) as the *south pole*. Every magnet, whether natural or artificial, has two poles; and as these are the points of greatest attraction, their position can be readily ascertained by plunging the magnet into fine iron filings. A suspended bar magnet serves to exhibit certain phenomena of attraction and repulsion in the presence of a second magnet, which deserves particular attention. When a north pole is presented to a south pole, or a south pole to a north, attraction ensues between them, the ends of the bars approach each other, and, if permitted, adhere with considerable force. When, on the other hand, a north pole is brought near a second north pole, or a south pole near another south pole, mutual repulsion is observed, and the ends of the bars recede from each other as far as possible. Poles of an opposite name attract, and of a similar name repel each other. A small bar, or needle of steel, properly magnetized and suspended, and having its poles marked, thus becomes an instrument fitted not only to discover the existence of magnetic powers in other bodies, but to estimate the kind of polarity affected by their different parts. — When a magnetic substance is placed in contact with a magnet, the opposite forces of the former appear to separate; and so long as the contact remains, it is a complete magnet, having its two poles and its neutral line. For instance, if a small cylinder of soft iron, *a b* (Fig. 1681), be placed in contact with one of the poles of a magnet, the cylinder can in turn support a second cylinder; this in turn a third, and so on, to as many as seven or eight, according to the power of the magnet. Each of these little cylinders is a magnet; if it be the north pole of the magnet to which the cylinders are attached, the part *a*

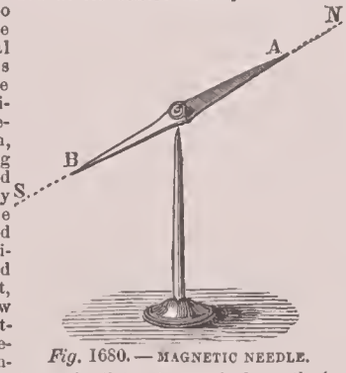


Fig. 1680. — MAGNETIC NEEDLE.

will have south, and *b* north magnetism; *b* will in like manner develop in the nearest end of the next cylinder south magnetism, and so on. But these cylinders are only magnets so long as the influence of a magnetized bar continues. For, if the first cylinder be removed from the magnet, the other cylinders immediately drop, and retain no trace of magnetism. The separation of the two forces is only momentary, which proves that

Fig. 1681. — MAGNETIC INDUCTION.

the magnet yields nothing to the iron. Hence we may have *temporary* magnets as well as *permanent* magnets; the former of iron and nickel, the latter of steel and cobalt. How this difference in action is explained will be shown directly. This action, in virtue of which a magnet can develop magnetism in iron, is called *magnetic induction* or *influence*. When steel is substituted for iron, the inductive action is hardly perceptible at first, and only becomes manifest after the lapse of a time. The steel bar, on being removed from the magnet, does not entirely lose the induced polarity. It becomes, indeed, a permanent magnet, similar to the first, and retains its peculiar properties for an indefinite period. Magnetic attractions and repulsions are not in the slightest degree interfered with by the interposition of substances destitute of magnetic properties. Thick plates of glass, shell-lac, metals, wood, &c., may be placed between a magnet and a suspended needle, or a piece of iron under its influence, the distance being preserved, without the least perceptible alteration in its attractive power or force of induction. One kind of polarity cannot be exhibited without the other. If a magnetized bar of steel be broken at its neutral point, or in the middle, each of the broken ends acquires an opposite pole, so that both portions of the bar become perfect magnets; and if the division be carried still further, if the bar be broken into a hundred pieces, each fragment will be a complete magnet, having its own north and south poles. The direction spontaneously assumed by a suspended needle indicates that the earth itself has the properties of an enormous magnet, whose south magnetic force is concentrated in the northern hemisphere. A line joining the two poles of such a needle or bar indicates the direction of the so-called *magnetic meridian* of the place. This is not usually coincident with the geographical meridian of the place, but makes with it a certain angle, called the *declination* of the needle. The amount of the declination of the needle from the true north and south not only varies at different places, but in the same place is subject to daily, yearly, and secular fluctuations, which are called the *variations of declination*. If an unmagnetized steel bar be supported on an horizontal axis passing exactly through its centre of gravity, it will of course remain equally balanced in any position in which it may happen to be placed; if the bar so adjusted be then magnetized, it will be found (in the latitude of London) to take a permanent direction, the north pole being downwards, and the bar making an angle of about 68° 32′, with an horizontal plane passing through the axis. This is called the *dip* or *inclination* of the needle, and shows the direction in which the force of terrestrial magnetism is most energetically exerted. The amount of dip is different in different latitudes; near the equator it is very small, the needle remaining nearly, or quite, horizontal; as the latitude increases, the dip becomes more decided, and over the magnetic pole the bar becomes completely vertical. The mariner's compass (see COMPASS) is nothing more than a suspended needle attached to a circular card marked with points. Probably every substance in the world contributes something to the magnetic action of the earth; for, according to the discoveries of Faraday, *M.* is not peculiar to those substances which have more especially been called magnetic, such as iron, nickel, and cobalt, but is rather to be considered as a universal agency. Faraday divides all bodies into two classes, calling the first *magnetic*, or, better, *paramagnetic*, and the other *diamagnetic*. The matter of which a paramagnetic body consists is attracted by both poles of a powerful horse-shoe magnet; on the contrary, the matter of a diamagnetic body is repelled. When a small iron bar is hung by untwisted silk between the poles of the magnet, so that its long diameter can easily move in an horizontal plane, it arranges itself axially, that is, parallel to the straight line which joins the poles. A diamagnetic bar formed of bismuth, for instance, arranges itself equatorially, that is, at right angles to the magnetic axis. It is believed that *M.* resides in the molecules, each of which is a minute magnet, the aggregate of these small forces comprising that of the mass.

M., Animal—See MESMERISM.

M., Terrestrial—See MAGNETISM.

Mag'netist, *n.* A magnetician; one versed in magnetism.

Mag'netite, *n.* (*Min.*) Magnetic iron-ore, or oxidulated iron. One of the richest and most important of the ores of iron, and that from which the finest kinds of steel are made. It is a widely diffused metal, occurring

crystallized in iron-black octahedrons and dodecahedrons, also massive and in the form of sand.

Mag'netizable, *a.* That may be magnetized.

Magnetiza'tion, *n.* Act of magnetizing.

Mag'netize, *v. a.* [Fr. *magnétiser.*] To render magnetic; to communicate magnetic properties to; as, to *magnetize* a bar of iron.

—To attract as if by a magnet; to influence irresistibly.

"The calmy depths of her pellucid eyes
Repel, the more to *magnetize.*" — *Davies.*

—*v. n.* To receive magnetic properties; to become magnetic. (R.)

Magnetizee', *n.* One who is subjected to the attraction of animal magnetism. (R.)

Mag'netizer, *n.* The person who, or thing which, conveys magnetism.

Magneto-elec'tric, Magneto-elec'trical, *a.* Relating or belonging to magneto-electricity.

Magneto-electric'ity, *n.* An important branch of electrical science which has sprung from Faraday's discovery of the development of electrical currents by the action of magnetism. If two extremities of the coil of an electro-magnet be connected with a *galvanometer*, and the iron temporarily magnetized by the application of a permanent steel horse-shoe magnet to the ends of the bar, a momentary current will be developed in the wire, and pointed out by the movement of the galvanometer-needle. It lasts but an instant, the needle returning, after a few oscillations, to a state of rest. On removing the magnet whereby the polarity of the iron is at once destroyed, a second current or wave will become apparent, but in the opposite direction to that of the first. By employing a very powerful steel magnet, surrounding its iron keeper or armature with a very long coil of wire, and then making the armature itself rotate in front of the faces of the magnet, so that its induced polarity shall be rapidly reversed, magneto-electric currents may be produced of such intensity as to give bright sparks and powerful shocks, and exhibit all the phenomena of voltaic electricity. Many powerful arrangements of this kind have been devised for the medical application of current electricity. Our figure (1682) represents the simplest, in which N S is a fixed permanent magnet; and B B is a soft iron plate, to which are attached two cylinders of soft iron, around which the coils C and D are wound. C B B D is thus the revolving armature of the magnet. A A is a brass rod rigidly connected with the armature, and also serving as the rotating axle. F is a cylindrical projection on A A, and is pressed upon by two fork-like springs, H and K, which are also the poles of the machine. The ends, *m*, *n*, of the coil are soldered to two metal rings on F, insulated from each other. When the armature revolves, A A and F move with it. F, H, and K are so constructed as to act as a commutator, reversing the current at each semi-revolution. By this arrangement, the opposite currents proceeding from the coil at each semi-revolution are transmitted to H and K in the same direction, so that these, which constitute the poles of the battery, so to speak, remain always of the same name. But for this, the effect of the current derived from one semi-revolution would be neutralized by that proceeding from the next. When the armature is made to revolve with sufficient rapidity, a very energetic and steady current is generated. Compared with the galvanic battery, the magneto-electric machine is a readier, steadier, and cleanlier source of electricity, and is, in consequence, extensively used instead of it. It is employed in the dynamo and the electric motor, steam power being used to overcome the resistance to the rapid revolution of the armature.

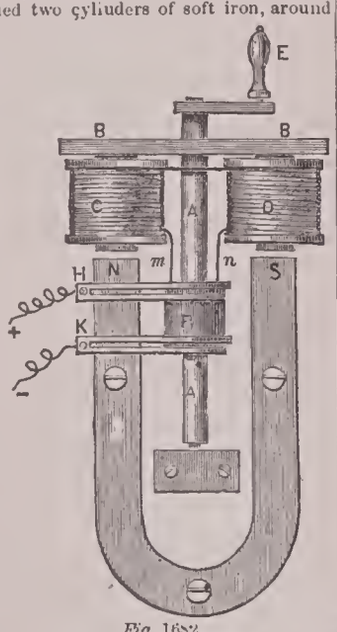


Fig. 1682
MAGNETO-ELECTRICAL MACHINE.

Magnet'ograph, *n.* [Eng. *magnet*, and Gr. *grapho*, to write.] An instrument for taking photographic impressions to show the variations of the magnet.

Magnetom'eter, *n.* [From Gr. *magnêtes*, magnet, and *metron*, measure.] An instrument for measuring the intensity of terrestrial magnetism.

Magnetomet'ric, *a.* Belonging to, or used in, the measurement of magnetic forces; received by means of a magnetometer; as, *magnetometric* measurements.

Magnetomo'tor, *n.* [Gr. *magnêtes*, and Lat. *motor*, a mover.] A voltaic series of two or more large plates, which, producing a great quantity of electricity of low tension, is well adapted to the exhibition of electro-magnetic phenomena.

Mag'nifiable, *a.* That may be magnified; that merits being magnified.

Magnifie, Magnifical, *a.* [Fr. *magnifique*; Lat. *magnificus—magnus*, great, and *facio*, to make.] Grand; splendid; illustrious; great; noble.

"These are thy *magnific* deeds, thy trophies." — *Milton.*

Magnifically, *adv.* In a grand or magnificent manner.

Magnificat, *n.* [Lat., it magnifies, from *magnificare*, to magnify.] (*Eccl.*) The song of the Virgin Mary, — so styled from its commencing with this word in the Latin Vulgate.

Magnificence, (*-nif'i-sens.*) *n.* [Fr.; Lat. *magnificentia*, from *magnificus*, great, noble, distinguished.] State, condition, or quality, of being magnificent; greatness; grandeur of appearance; pomp; splendor of show or state; munificence.

Magnificent, *a.* [L. Lat. *magnificens*, corrupted from *magnifico.* See MAGNIFY.] Great; grand in show or appearance; splendid; pompous; imposing; munificent; liberal.

"It is suitable to the *magnificent* harmony of the universe." *Locke.*

—Exhibiting pomp or grandeur; stately.

Magnificently, *adv.* In a magnificent, splendid, or stately manner; with grandeur of appearance, or pomp of show.

Magnifico, *n.; pl.* MAGNIFICOES. [It.] A title of courtesy given to a Venetian noble of former days.

"The duke . . . and the *magnificoes* of greatest port." — *Shake.*

—In Germany, a rector of a university.

Mag'nifier, *n.* One who, or that which magnifies; that which has the power of amplifying apparent size; one who vaunts or extols; an encomiast.

(*Optics.*) An optical instrument or lens which increases the apparent magnitude of bodies.

Mag'nify, *v. a.* [Lat. *magnifico — magnus*, great, and *facio*, to make. See MAGISTRATE.] To make great or greater; to amplify the apparent dimensions of a body; to enlarge; to augment; to expand; as, an object is *magnified* to the eye when looked at through a convex lens. — To make great in representation; to raise high in description or praise; to extol: to exalt; to raise in estimation; to elevate in consideration; to uplift in pretension.

"He shall *magnify* himself in his heart." — *Dan.* viii. 25.

—*v. n.* To enlarge the apparent dimensions of an object or body; to possess the power of giving any thing an illusive degree of magnitude.

Magnifying-glass. (*Optics.*) A double convex lens.

"The greatest *magnifying-glasses* in the world are a man's eyes, when they look upon his own person." — *Pope.*

Magnil'oquence, *n.* [Lat. *magniloquentia.*] Elevated language, or a lofty manner of speaking; tumid or bombastic words or style.

Magnil'oquent, *a.* [Lat. *magnus*, great, and *loquens*, speaking, from *loquor*, to speak.] Using bombastic or high-flown language; speaking pompously and loftily; practising a tumid style of speech.

Magnil'oquently, *adv.* With loftiness or pomposity of speech; in a bombastic or magniloquent manner.

Mag'nitude, *n.* [Lat. *magnitudo*, from *magnus*, great. See MAGISTRATE.] Greatness; size; bulk; extent or dimension of part; — said of anything which has length, breadth, and thickness. — Greatness, in reference to influence or effect; importance.

"He was . . . a star of the first *magnitude.*" — *Congreve.*

—Greatness; grandeur.

"He with plain heroic *magnitude* of mind." — *Milton.*

—That which permits a greater or less degree of predication, as time, weight, force, &c.

(*Math.*) Every kind of quantity that admits of exhibition or mensuration, or of which greater or less can be predicated.

Magno'lia, in *Arkansas*, a post-village, cap. of Columbia co., about 40 m. S.W. of Camden. *Pop.* (1897) 1,588.

Magnolia, in *Delaware*, a post-town of Kent co.

Magnolia, in *Illinois*, a post-village and township of Putnam county, about 100 miles N. by E. of Springfield.

Magnolia, in *Indiana*, a post-village of Crawford co., about 6 m. N.W. of Leavenworth.

Magnolia, in *Iowa*, a post-village and township, the former cap. of Harrison co., about 35 m. N. by E. of Council Bluffs.

Magnolia, in *Kentucky*, a post-village of La Rue co.

Magnolia, in *Maryland*, a post-village of Harford co., about 19 m. E.N.E. of Baltimore.

Magnolia, in *Mississippi*, a post-town, cap. of Pike co., about 88 m. S. by W. of Jackson.

Magnolia, in *N. Carolina*, a post-village of Duplin co., abt. 49 m. N. of Wilmington.

Magnolia, in *New York*, a village of Chautauqua co., abt. m. S E. of Maysville.

Magnolia, in *Ohio*, a post-village of Stark co.

Magnolia, in *Wisconsin*, a post-village and township of Rock county, about 15 miles west of Janesville.

Magno'lia, *n.* [Named after the French botanist, *Magnol.*] (*Bot.*) The typical genus of the order MAGNOLIACEÆ, *q. v.*

Magnolia'ceæ, *n. pl.* (*Bot.*) An order of plants, alliance *Ranales.* DIAG. Distinct carpels, (usually) large convolute stipules, an imbricated corolla, and homogeneous albumen. — They are trees or shrubs with alternate leaves. Sepals and petals with a ternary arrangement of their parts, hypogynous, the former deciduous, the latter with an imbricated æstivation. Carpels distinct. The plants of this order are remarkable for the fragrance and beauty of their flowers and foliage; and they are favorite objects of culture in this country, either as hardy plants, as several magnolias and the tulip-tree (*Liliodendron tulipifera*), or as stove and greenhouse plants. *M. grandifolia* (Fig. 1683), native of the

Fig. 1683. — MAGNOLIA GRANDIFOLIA.

Southern States, is the noblest species of the genus *Magnolia.* Its great height (80 feet), its shining, dark-green leaves, its fragrant, white flowers a foot in diameter, form a combination of rare magnificence. Medicinally, the plants are chiefly remarkable for their bitter, tonic, aromatic properties. The bark of *Magnolia glauca*, the swamp-sassafras, or beaver-tree, resembles cinchona in its action. The unripe fruits of other species of the typical genus, as *M. Frazeri* and *acuminata*, have similar tonic and aromatic properties. The majority of the order are found in N. America. Some also occur in the West Indies, Japan, China, India, S. America, and Australia. There are 12 genera and 168 species.

Mag'nus, ALBERTUS. See ALBERTUS MAGNUS.

Mag'nus Bay, (St.,) a bay of Shetland. It runs 7 m inland, and has a width of from 8 to 11 m.

Magoffin, in *Kentucky*, an E. co.; *area*, abt. 425 sq. m. *Rivers.* Licking River, and several less important streams. *Surface*, uneven; *soil*, in some places fertile. *Cap.* Salyersville.

Magoffinsville, in *Texas*, a town of San Antonio co., on the Rio Grande, opposite El Paso.

Magog. See GOG AND MAGOG.

Magog, a village of Stanstead co., Lower Canada, abt. 80 m. E. of Montreal.

Mag'ot, BARBARY APE, PIGMY APE, *n.* (*Zoöl.*) A small species of monkey, the characters of which agree with those of the genus *Macacus*, except that the tail is reduced to a mere tubercle. It is interesting as the only one of the monkey-race which is found in Europe. The only European locality, however, in which it occurs is the Rock of Gibraltar, and it is said to have been originally brought from the north of Africa. It is gregarious, and large numbers are often seen together, the females carrying their young upon their backs. In some parts of the north of Africa the Magot is extremely abundant, inhabiting rocky mountains and woods. It displays great agility in passing from tree to tree, and its bands often plunder gardens, one of their number keeping careful watch.

Fig. 1684. — MAGOT, OR BARBARY APE.

Mag'pie, *n.* [W. *piog*: Lat. *pica*, with the prefix *mag*, for Margaret, Madge, or Maggie.] (*Zoöl.*) A common species of the *Corvidæ* or Crow family, *Corvus Pica* of Linnæus; now the type of a distinct genus, *Pica caudata.* They continue in pairs throughout the year, and prey on a variety of food, chiefly animal, as the young of hares, rabbits, and feathered game, young poultry, eggs, carrion, and occasionally fruit and grain. The *M.* is easily tamed, becomes impudently familiar, and learns to articulate a few words. Both in a wild and tame state it has a propensity to seize and carry off bright or glittering articles. It abounds in most parts of Europe and the north of Asia. The American spe-

cies, *Pica Hudsonica*, though closely allied to the European *M.*, differs from it in some respects. It is of larger size, being 19 inches long, and having, it is said, a different voice and habits. Its general color is black; the belly, scapulars, and inner webs of primaries white, and the neck spotted with white. It is found in the U. States from the high central plains to the Pacific, N. of California.

Fig. 1685. — MAGPIE, (*Pica caudata.*)

Mag'pie-moth. *n.* (*Zoöl.*) See ABRAXAS.

Maguey, (*mag'wā,*) *n.* [Mex. *maguei.*] (*Bot.*) See AGAVE.

Maguire's Bridge, (*ma-gwīrz',*) a market-town of Ireland, in Ulster, abt. 7 m. S.E. of Enniskillen.

Magyar, (*mŏd'yor,*) *n.* An Hungarian. See HUNGARY.

Mahabharata, or **Bharata,** (*ma-hab-a-ra'ta.*) (*Hindoo Lit.*) The most celebrated epic poem of the Hindoos, after the Ramayana. This poem is chiefly devoted to an account of a long civil war between two dynasties of ancient India, — the Kurus and the Pandus; but around this history an immense collection of ancient traditions, moral reflections, and popular stories have been gathered. The earlier sections of the book are chiefly occupied in solving theogonical and cosmogonical problems, while in the last chapters are didactic and moral episodes on religious duties and sacrifices, forming an almost complete system of Hindoo ethics, and a compendium of the Brahminical faith. As compared with the Ramayana, the Mahabharata is wanting in unity and internal coherence; but, at the same time, it contains a greater variety of pleasing scenes and attractive situations. The poem is a work of great antiquity, but neither the time of its composition nor the period in which it assumed its present shape can be ascertained. The great war is, undoubtedly, an historical event, and is supposed to have taken place in the 12th cent. B. C.; and the entire poem is a valuable mine of antiquarian lore on the early history of the Hindoos. A complete edition of the Mahabharata, in the original Sanskrit, has been published by the Asiatic Society of Bengal; and a number of detached fragments and stories have been translated by Sir Charles Wilkins, Prof. Wilson, and Mr. Milman.

Mahade'va. (*Hindoo Myth.*) A deity who shares the attributes of Siva in the latter Indian Trimûrti, or Triuity. These attributes vary greatly, Mahadeva being regarded as a generator as well as a destroyer.

Maha'dian. See AFRIKIAH.

Mahaleb. *n.* [Ar.] A kind of cherry, whose expressed juice forms the base of a fermented liquor resembling Kirschwasser. It is used by some Eastern nations.

Mahana'im. [Heb., two hosts.] (*Script.*) A place so named because a host of angels here met the host of Jacob, on his return from Padan-aram (*Gen.* xxxii. 2). It lay north of the Jabbok, and near Penuel, and afterwards became a Levitical city in the tribe of Gad (*Josh.* xxi. 38). It was apparently a town of some strength; for Ishbosheth lived there during his short reign, and David took refuge there during Absalom's rebellion (2 *Sam.* ii. 8; xvii. 24, 27).

Mahanoy' City, in *Pennsylvania*, a post-town of Schuylkill co., about 13 m. N.E. of Pottsville. *Pop.* (1897) 13,500.

Mahanoy Creek, in *Pennsylvania*, enters the North Branch of the Susquehanna river from Northumberland co.

Mahanoy Mountain, in *Pennsylvania*, a ridge of the Allegheuies, traversing the N. part of Schuylkill co.

Mahanoy Plane, in *Pennsylvania*, a post-village of Schuylkill co. *Pop.* (1897) 2,320.

Mahantan'go Creek, in *Pennsylvania*, enters the Susquehanna River from Schuylkill co.

Mahanuddy, (*ma-ha-nud'de.*) a river of Hindostan, having its source in the prov. of Gundwana, in Lat. 21° 30′ N., Lon. 81° E., and flowing mostly to the Bay of Bengal, which it enters by several mouths. It is 500 m. in length, and during the rainy season is navigable for 300 m.

Maharajah, (*mäh-ăh-rä'jŭh,*) *n.* [Hind., great king.] The title-designate of certain East Indian potentates; as, the *Maharajah* of Lahore.

Maharanee, (*mäh-ăh-răn'nee.*) [Hind., great queen.] An appellation boruo by a female sovereigu iu Hindostan.

Mahas'ka, in Iowa, a S.E. central co.; *area*, abt. 576 sq. m. *Rivers.* Des Moines, and orth Fork and South Fork of Skunk River, besides numerous smaller streams. *Surface*, level or undulating; *soil*, very fertile. *Min.* Coal and limestone. *Cap.* Oskaloosa.

Mahavelliganga, (*ma'ha-vel-le-gan'ga,*) the principal river of Ceylon, rising in the centre of the island, and entering the Indian Ocean by several mouths at Trincomalee.

Mahl-stick, (*mal'stik,*) **Maul-stick,** *n.* (*Painting.*) A painter's stick, upon which he leaus his hand when at work.

Mah'mond (or MOHAMMED) **I.,** sultan of Turkey, and son of Mustapha II., was B. at Constantinople in 1696. After the deposition of his uncle, Achmet II., in 1730, *M.* was raised, by the aid of the janissaries, to the vacant throne, on the condition that he should continue the war begun against the ruler of Persia, Nadir Shah. After a disastrous campaign, a peace was concluded in 1736. Meanwhile, in 1734, the Russians had commenced hostilities against the Ottoman empire, and obtained several successes; their Austrian allies at the same time invading the Turkish prov. of Wallachia. The latter, however, being badly defeated by the Moslems at Krotska, on the Danube, in 1739, were forced to make peace, and also surrender Belgrade. The Russians also effected a treaty, but one more advantageous, they retaining their previous conquests. In 1743, renewed hostilities broke out between Persia and Turkey, in which the latter power was the sufferer. *M.* D. in 1734.

Mahmoud II., sultan of Turkey, B. 1789, succeeded his brother Mustapha IV. in 1808, and shortly afterwards, during an insurrection among the janissaries, caused the former monarch and his infant to be put to death. The janissarics, however, getting the upper hand, obliged *M* to submit to their demand. He continued to carry on the war with Russia and Servia until 1812, when a treaty of peace was effected, by which the Pruth was made the boundary of the two empires. This able ruler next successively crushed the Arabian Wahabees, and the revolt of Ali Pasha (*q. v.*), in 1822. A rebellion of his Greek subjects, in 1821, was put down with such relentless severity that Great Britain, France, and Russia found it their duty to interfere, when mediation proving unavailing, their united squadrons annihilated the Turkish fleet at Navarino, in 1827. Having organized his army on European principles, *M.* after a fierce struggle destroyed the power of the janissaries, and next undertook a war against Russia, but being defeated by the latter under Diebitsch, he was induced by the representations of England, France, and Prussia, to sigu the treaty of Adrianople, in 1829. In 1832, *M.*, endeavoring to drive tho rebellious Mehemet Ali (*q. v.*) out of Syria, was defeated by Ibrahim Pasha, son of the latter. In 1839 a second attempt to reduce his formidable vassal again subjected the Turkish arms to defeat by Ibrahim. *M.* was an able and enlightened monarch, and one who contributed moro to the civilization of his country than any of his predecessors. He D. in 1839.

Mahog'anize, *v. a.* To give to any wood the appearance of mahogany.

Mahog'any, *n.* [Carib. *mahogani.*] (*Bot.*) The timber of the tree known as *Swietenia mahogani* See SWIETENIA.

Mahom'edan, Mahom'etan, *n.* Same as MOHAMMEDAN, q. v.

Mahom'et. See MOHAMMED.

Mahom'et, in *Illinois*, a post-village of Champaign co.,

Mahom'etanism, *n.* Same as MOHAMMEDISM, q. v.

Mahom'etanize, *v. a.* To convert to Islamism; to proselyte to the Mohammedan religion.

Mahom'etism, *n.* See MOHAMMEDISM.

Ma'hon, in *Indiana*, a village of Huntingtou co., abt. 17 m. S.W. of Fort Wayne.

Mahone', *n.* (*Naut.*) A large Turkish vessel.

Mahone Bay, an arm of the Atlantic Ocean, on the S.E. coast of Nova Scotia, extending uto Lunenburg co., abt. 35 m. W.S.W. of Halifax.

Mahon'ing, in *Ohio*, a river rising in Ashtabula co., and flowing S. and S.E., enters Beaver River from Mahoning co.

—An E. co., adjoining Pennsylvania; *area*, about 422 sq. m. *Rivers.* Mahoning and Little Beaver rivers. *Surface*, undulating; *soil*, very fertile. *Min.* Iron and coal. *Cap.* Youngstown. *Pop.* (1890) 55,979.

Mahon'ing, in *Pennsylvania*, a post-township of Armstrong co.

—A township of Carbon co.

—A township of Indiana co. See EAST, NORTH, and WEST MAHONING.

—A township of Lawrence co.

—A township of Montour co.

Mahon'ing Creek, in *Pennsylvania*, euters the Alleghany River above Kittanniug.

Mahoning Mountain, in *Pennsylvania*, an elevated range in Carbon co.

Mahonton'ga (or MAHANTANGA) **Mountains,** in *Pennsylvania*, extend along the N. border of Dauphin co.

Mahoo'peny, in *Pennsylvania*, a township of Wyoming co.

Mahoopeny Creek, in *Pennsylvania*, enters the Susquehanna River from Wyoming co.

Mahoopeny Mountains, in *Pennsylvania*, two spurs of tho Alleghanies, one in the S.W. and the other in the N.W. part of Wyoming co., and called, respectively, BIG and LITTLE MAHOOPENY.

Maho'pac, in *Michigan*, a post-office of Oakland co.

Mahopac, in *New York*, a post-village of Putnam co., on a small lake of the same name, abt. 50 m. N. by E. of New York city.

Mahout', *n.* In Hindostan, one who tends and drives an elephant.

Mai'a, Mal'au, *n.* (*Zoöl.*) See OXYRHYNCHA.

Maid, Maiden, (*mād'n.*) *n.* [A. S. *mæden, mægden*; D. *meid*; Ger. *magd, mädchen*; Icel. *mey*; Gael. *maighdean*, a maid; Lett. *meita*, a maid, a daughter; Hind. *moogdha*, a virgin.] An unmarried woman; a virgin; a damsel.

"*Maidens* like moths are ever caught by glare." — *Byron.*

—A female servant; as, a waiting-*maid*, a lady's *maid*, a dairy-*maid*, a kitchen-*maid*, &c.

(NOTE. *Maid* is sometimes used in composition in a compound sense; as, a *maid*-servant, a *maid*-child, &c.)

Maida, (*mī'da,*) a town of Italy, prov. of Catanzaro, 8 m. S.E. of Nicastro. It is noted for the defeat of the French by the British, in 1806. *Pop.* 4,500.

Maid'en, *n.* A contrivance for washing linen.

—A machine for decapitating criminals, &c., formerly used in England, and later in Scotland. It closely resembled the modern guillotine, and was also called HALIFAX GIBBET and WIDOW.

Maid'en, *a.* Pertaining or having reference to an unmarried or young woman or virgin.

"Nor mark . . . her blush of *maiden* shame." — *Bryant.*

—Consisting of young women or virgins. — Fresh; new; unused; untarnished; pure; virgin; as, a *maiden* effort.

"He fleshed his *maiden* sword." — *Shaks.*

Maiden assize. (*Eng. Law.*) An assize at which there is no criminal business to be transacted. It is customary on such rare occasions to preseut the judge with a pair of spotless white gloves.

Maiden speech, the first speech delivered by any one before an audience.

Maid'en Creek, in *Pennsylvania*, enters the Schuylkill River from Berks co.

—A post-township of Berks co.

Maid'en-hair, *n.* (*Bot.*) See ADIANTUM.

Maid'enhead, Maid'enhood, *n.* [A. S. *mægdenhad, mædenhad.*] State or quality of being a maid or virgin; virginity; virginal purity.

"The modest love of *maidenhood*." — *Fairfax.*

—Newness; freshness; uncontaminated state or condition.

Maid'enhead, a town of England, co. of Berks, on the Thames, 27 m. W. of London; *pop.* 4,000.

Maid'enliness, *n.* Maidenhood; quality of being a maiden; modesty; purity.

Maid'en-lip, *n.* An herb or plant.

Maid'enly, *a.* Befitting a maid; gentle; modest; retiring; coy.

"What a *maidenly* man-at-arms are you become." — *Shaks.*

—*adv.* In a maiden-like manner.

Maid'en-pink, *n.* (*Bot.*) A species of Dianthus.

Maid'ens, a cluster of rocky islets off Ireland, in the Irish Sea, about 6 m. E.N.E. of Larne. The two highest rocks have each a light-house (84 ft and 94 ft high), exhibiting fixed white lights; Lat. 54° 55′ 6″ N., Lon. 5° 44′ W.

Maid'hood, *n.* [A.S. *mægdhad.*] Maidenhood; virginity.

"By *maidhood*, honor, and everything, I love thee." — *Shaks.*

Maid Mar'ian, *n* A title given to a May-queen; the lady of the May-games in a morris-dance — A kind of old English dance — A character impersouated by a man in feminine attire.

Maid of Honor, *n.* An attendant of high rank on the person of a queen. — Also, in England, a kind of cake.

Maid of Or'leans. See JOAN OF ARC.

Maid'-pale, *a.* Pale, like a sick maiden.

Maid'-servant, *n.* A female domestic or servant.

Maid'stone, a town of England, co. Kent, on the Medway, 30 m. E.S.E. of Londou. *Manuf.* Paper, linens, felt, and blankets. *Pop.* 25,317.

Maidstone, iu *Vermont*, a township of Essex co.; *pop.* about 259.

Maigre-food, (*mā'ger,*) *n.* (*Eccl.*) In the Roman Catholic Church, an appellation for food permitted to be eaten upon fast-days.

Mai'hem, *n.* (*Law.*) Same as MAYHEM, *q. v.*

Mail, (*māl,*) *n.* [Fr. *maille*, mesh; It. *maglia* Sp., Port., and Prov. *malla*, from Lat. *macula*, a mesh in a net.] A coat of steel net-work, formerly worn for defending the body against swords, poniards, &c.; cham-armor; any defensive covering for the body; as, a shirt of *mail.*

(*Naut.*) A square contrivance, resembling ringed network, used on shipboard for rubbing off the loose hemp on white cordage.

(NOTE. *Mail* forms a compound in *mail*-clad, *mail*-sheathed, &c.)

—*v. a.* To arm defensively; to cover, as with armor or mail.

"The *mailed* Mars shall on his altar sit." — *Shaks.*

Mail, *n.* [Fr. *malle*, a trunk; Norm., O. Fr., a portmanteau, from Lat. *manticula*, dim. of *mantica*, a wallet, from *manus*, the hand.] A bag for the conveyance of letters, papers, &c., transmitted by the public postal service. — The letters, &c., sent in a mail-bag; mailed matter, as letters, books, papers, &c.

—The person who carries, or the vehicle which conveys, the mail or public post.

—*v. a.* To seud by mail; to post; to prepare for transmission by the mail from one post-office to another; as, to *mail* letters.

Mail'able, *a.* That may he mailed by public post; suitable for transmission by mail; as, *mailable* matter.

Mailage, (*māl'aj,*) *n.* Charge for postal transmission of letters, &c.

Mail'-boat, *n.* A boat by which the public mail is transmitted.

Mail'-coach, *n.* A coach that carries the public mail.

Mailed, (*māld,*) *a.* Spotted; speckled; mottled.

(*Zoöl.*) Protected by a scaly coat or covering.

Mail'-guard, (*-gärd,*) *n.* In England, an officer who has charge of the public mail during its transmission from one place to another.

Mailleehort, *n.* (*Chem.*) See ARGENTANE.

Mail'-route, (*-rōōt.*) *n.* A road over which the public mail is regularly carried.

Mail'-service, *n.* Act of carrying the public mail; postal duty.

Mail'-stage, *n.* In the U. States, a mail-coach or stage for carrying the mails.

Mail'-steamer, *n.* A steamship employed on postal service.

Mail'-train, *n.* A railroad train upon which the public mail is conveyed.

Maim, (*mām,*) *v. a.* [O. Fr. *mehaigner*, to maim; Prov. *maganhar*; It. *magagnare*, to mutilate.] To mutilate; to deprive of the use of a limb, so as to render a person less competent, whether for aggressive or defensive action. — To lame; to cripple; to disfigure; to disable; to deprive of a necessary part.

—*n* [See MAYHEM.] The privation of the use of a limb

or essential member of the body. — A crippling; mutilation; a laming; injury; privation of an essential part; as, "a *maim* in history." —*Hayward.*

Maim'edness, *n.* A state or conditiou of being maimed or crippled.

Main, *n.* [A. S. *mægn*, power, strength, from *magan*, to be strong or able.] Strength; force; power; might; violent effort.

"With might and *main*, he hasted to get up again."—*Hudibras.*

—That which is principal or chief; gross; bulk; major part; greater portion; — hence, the ocean; the high or great sea, as distinguished from bays, straits, rivers, &c.

"She looked and saw the heaving of the *main*." — *Byron.*

—The mainland or continent, as distinguished from an island.

"In the pleasant isle of Alves, upon the Spanish *Main*."—*Kingsley.*

—A principal pipe conducting from a meter or reservoir; as, a gas-*main*, a water-*main*.

(*Naut.*) In a vessel with three masts, the centre mast, hatchway, &c. If she have but two masts, it is the aftermast; unless the vessel be a yawl or ketch, when the mast nearest the bow is the mainmast. In one-masted vessels, if the mast be given a name, it is the mainmast. In all rigs, the main or mainmast is the principal and tallest mast.

Forcing-main, the supply-pipe of a pump. — *In the main*, for the most part; principally; on the whole; as, he is a good fellow *in the main*.

Main, *a.* [See above.] Mighty; huge; vast; powerful; as, "the *main* abyss." (*Milton.*)—Chief; principal; foremost; leading; first in size, quality, rank, importance, &c.

"Be careful still of the *main* chance, my son." — *Dryden.*

—That has most power in producing an effect.

"*Main* reason to persuade immediate war."—*Milton.*

Main, *n.* [Fr., hand, from Lat. *manus*.] A hand at dice; as, to throw a *main* in the game of hazard.

(*Sports.*) A match fought by two cocks.

Main'-beam, *n.* (*Mach.*) See BEAM

Main Body, *n.* (*Mil.*) The principal body of an army.

Main'-boom, *n.* (*Naut.*) A spar for extending the mainsail of a vessel of small size.

Main'-couple, (*-kŭp'l*,) *n.* (*Arch.*) The chief truss in a roof.

Main'-deck, *n.* (*Naut.*) The deck immediately below the spar-deck in frigates and line-of-battle ships.

Maine, the most easterly State of the American Union, extends between 42° 57′ and 47° 30′ N. Lat., and 5° 45′ and 10° 10′ E. Lon. from Washington, having N. W. and N. Lower Canada, E. New Brunswick, W. New Hampshire, and S. and S.E. the Atlantic Ocean. Its greatest length in a diagonal line from the mouth of Piscataqua River to the N. Angle is 320 m.; its maximum width from the sea to the Canada line is 160 m; and, on a straight line from the embouchure of the Piscataqua to Quoddy Head, 250 m. *Area*, 31,766 sq. m. GEN. DESC. *M.* has a greater extent of coast, and more good harbors, than any other State of the Union. Its shores are all aloug indeuted by deep bays; and the opposite sea is studded with numerous, fine, and considerable islands, one of the largest of which, Mount Desert, is noted for its 13 mountain peaks, the highest being upwards of 2,000 feet above sea-level. Near the seaboard, the surface is level, but it rises on proceeding inland, and most part of the State is hilly. In the N.W. a mountain-chain forms the watershed between the streams that join the St. Lawreuce and those that fall into the Atlantic; and a lateral branch from this chain, between Lat. 46° and 46° 30′, separates the Kennebec, Penobscot, &c., on the S., from that of the St. John's on the N. Several of the summits in *M.* reach an elevation of 4,000 feet; and Mt. Katahdiu, near Lat. 46°, which attains an altitude of 5,335 feet, is reckoned the highest ground between the Atlantic and the St. Lawrence. It has beeu estimated that one-sixth part of the surface of the State consists of water; there are numerous lakes, chiefly in the N., the largest of which, Moosehead, is 50 m. in breadth. Other considerable sheets of water are the Chesuncook, Millinoket, Schoodic, Umbagog, and Lebago. The principal rivers are the St. John's, Penobscot, Kennebec, Androscoggin, and St. Croix, all having a generally S. direction, emptying into bays on the Atlantic coast. Several of these rivers are navigable for the greater part of their course.—*Meteorol.* The climate is cold; ice aud snow last, in the N. and central parts, from Oct. to April, and the summer is short; hut the atmosphere is generally clear, the weather uniform, and the country salubrious. — *Soil and Veget.* The soil on or near the coast is sandy and poor; but it improves greatly as it recedes inwards, especially along the banks of the rivers, and is especially adapted to grazing. The greater portion of the State was originally covered with dense forests of fine fir and birch. Much of this has been cut off, especially the large pines and the best of the spruce; the amount of pine cut in 1880, reached over 100,000,000 feet. Of late efforts have been made toward a better protection of the forests of this State. Viewed as a whole, *M.* is undoubtedly one of the most interesting portions of this continent, or, indeed, of the world. Its immense extent of seacoast and numerous harbors, its unequalled water power and the proximity of that power to the sea, its variety of surface, its plains, valleys, mountains and lakes render *M.* not only a rich field for the agriculturist, but unparalleled for its manufacturing facilities.—*Agriculture* is the leading industry of *M.*, yet it does not occupy that advanced position as an agricultural State to which it is entitled. In the northern and eastern portions of the State large areas of rich farming lands lie dormant, notably in the great county of Aroostook. The soil is deep and rich, markets are readily accessible, and prices of produce remunerative. The climate, although severe, is mild when compared with that of other portions of the country; no "blizzards," no devastating tornadoes, no lack of fuel, no malarial diseases. The agricultural products of the State embrace a wide range. While the leading staples are hay, potatoes, corn and oats, excellent yields of wheat, barley and sugar-beets reward the skilled farmer. Of fruit, the apple is plentiful in the western portions of the State, while pears, peaches, grapes, strawberries and many of the small fruits flourish and find place in the markets. The products of *M.*, other than agricultural, are important. The storing and importation of ice, which forms on its numerous lakes and rivers, is fast becoming a vast business. It is a "crop" that never fails, and finds a ready market.—*Manufactures.* *M.*'s leading manufacture is that of lumber. On her many rivers and along the interior railroad lines, water and steam saw-mills abound. Lumber-laden vessels swarm out from the numerous bays and inlets along the coast like so many bees from a hive, and take their "departure" for the great markets of the world, while the railroad lines supply the home demand. The business of lime burning is also extensively carried on. The manufacture of cotton goods is exteusive, in which Lewistown and Auburn rank first, having some of the largest and finest mills in New England. Other manufacturing industries include woollen goods, leather, boots and shoes, flour, paper, and foundry products, the canning of fruit, lobsters, &c., and ship building, once the leading industry of *M.*, but at preseut much reduced in importance. The gathering of ice is an important winter industry, it being exported south in summer. There are extensive quarries of granite, which presents many handsome varieties; vast beds of copper exist, some of them rich; slate of high grade is very abundant, and there are many other mineral products. Extensive fisheries of cod, mackerel, herring, and salmon employ a very considerable amount of labor and capital.—*Pol. Div.* The State is divided into 16 counties, as follows:

Androscoggin,	Hancock,	Oxford,	Somerset,
Aroostook,	Kennebec,	Penobscot,	Waldo,
Cumberland,	Knox,	Piscataquis,	Washington,
Franklin,	Lincoln,	Sagadahoc,	York.

Chief towns. Augusta (cap.), Portland, Bangor, Lewiston, Bath, Belfast, Rockland, Saco, &c. — *Govt., &c.* The legislative power is vested in a senate of 31 members, and a house of representatives of 151 members, who, together with the governor, are chosen annually by all male citizens, other than paupers, who have resided in the State during the three months immediately preceding the election, and paid taxes. The governor is assisted by an executive council of 7 members, elected by the legislature. The general assembly of the two houses convenes annually at Augusta. The supreme judicial court has all the usual powers of a court of chancery. The judges are appointed by the governor with the consent of the council, and hold office during good behavior. All judicial offices are, however, vacated at the age of 70 years. Each town is required by law to raise annually a sum equal to $1.00 for each head of population, which is distributed among the town schools in the ratio of the number of scholars for each. The scholastic system pursued is excellent, and education very generally prevails. There are several State normal schools, and the diffusion of higher education is provided for by Waterville College, at Waterville; Bowdoin College, at Brunswick; Bates College, at Lewistown, and Maine State College, at Orono. The Maine Liquor Law, the earliest of the State laws for the prevention of the sale of liquor, was enacted in 1851, and is still maintained with considerable, though far from complete, efficiency. *M.* sends 4 members to Congress, and has 6 votes in the electoral body. The bulk of the people of this State are of the Puritan stock of New England, but a considerable body of the French Acadians have occupied for about 150 years a fertile region on the St. John's river, and there is a large element of French Canadians of more recent immigration. An old German colony near the coast has become completely Americanized, but there has been a later influx of German, Swedish, and Irish settlers.—*Hist.* After the probable early visits of the Northmen, and the voyage of Cabot in 1498, it seems to be a fairly established fact that the coast was not visited by voyagers until the French expedition under Verrazano, in 1524, of Gomez, the Spaniard, in 1525, and of Rut, under the English, in 1527, which were simply cursory visits without any results. In 1556, André Thevet, a Jesuit priest, sailed in a French ship along the entire coast, entered Penobscot Bay, where he spent five days, and had numerous conferences with the natives. This is the last notice we have of *M.* to the close of the 16th century. The first attempt to settle upon the territory was made by the French, under De Monts, who, having received a patent from the French king, planted a large colony on Neutral Island, in the River St. Croix, to which he gave that name in 1604; but the location being unfavorable, it was abandoned the next year. In 1605, the coast in the neighborhood of the River St. George was visited by Capt. Weymouth and partially explored, which led to the well-appointed expedition to the mouth of the Kennebec River in 1607, under command of Capt. George Popham as president, and Capt. Raleigh Gilbert as admiral, sent forth by Sir John Popham and Sir Ferdinando Gorges, with a view to colonize this portion of the coast, for which, and the whole country from 34° to 44° N. Lat., a charter had been obtained from James I., in 1606. But owing to various unfortunate circumstances, the colony became discouraged, and returned to England in the following year. In 1613, French Jesuits established a mission on Mt. Desert Island, which was expelled by the English the next year. In 1616, Sir Ferdinando Gorges, a leading promoter of colonization in *M.*, sent his agent, Richard Vines, with a small company, to Saco, to remain during the winter, explore the country, and test the climate. Captain John Smith visited and explored the coast in 1614, examining it as far south as Cape Cod. He prepared a map on which he gave this region the name of *New England*, which designation, as we know, has been maintained. In 1620 the king of Great Britain made a division of the grand charter of 1606, and granted to the Plymouth Company, in England, the whole country lying between 40° and 48° N. Lat., and to the Virginia Company, the S. portion of the original patent. This gave a new impulse to commercial operations, and numerous vessels were fitted out for the fisheries and fur trade. In 1622, Gorges and Capt. John Mason obtained of the Plymouth Company a grant of the territory lying between the Merrimac and Kennebec rivers, and the next year planted a colony at the mouth of the Piscataqua, which was the first permanent occupation of the mainland in Maine. Gorges and Mason divided their possessions, the former taking all E. of the Piscataqua, Mason all W. In 1624, Gorges established a colony at York. In the next year, Pemaquid was occupied, under grants from the Plymouth Company. From 1630 to 1632 settlements were commenced in Saco, Biddeford, Scarborough, Cape Elizabeth, and Portland, all of which continued to prosper until the Indian war of 1625, when they were all overthrown, as well as those between the Kennebec and Penobscot rivers. E. of the Penobscot the French had possession, and very little improvement was made there till after the revolution of 1775, although Sir William Alexander, Earl of Stirling, had a grant of the whole country to Pemaquid, including Nova Scotia. On the division by the Plymouth Company of their patent among the proprietors, the portion lying between Piscataqua and Kennebec rivers was awarded to Gorges, in 1635, confirmed by the king in 1639, and he forthwith established a regular govt. over it, under his deputy, assisted by an assembly of delegates chosen by the people; and by the royal patent of confirmation it received the name which is now extended over the whole territory. His govt. continued under himself and heirs, with occasional interruption, during the period of the Commonwealth in England, and the usurpation of Massachusetts, until 1677, when the heirs, wearied of the conflicts with Massachusetts for jurisdiction, sold their interest to that persistent colony for $6,250. The prov. between the Kennebec and Penobscot rivers was granted by Charles II., in 1664, to his brother the Duke of York (afterwards James II.), who had the year before purchased the territory awarded to the Earl of Stirling in the division of the country, of his heirs, and immediately established a seat of govt. there at the city of Pemaquid, where a strong fort was built. This country was surrendered to Mass. in 1686, who took possession, exercised govt. over it as far E. as Penobscot, which, with all the territory E. to the St. Croix and Nova Scotia, was confirmed to her by the Provincial charter of 1691. She afterwards relinquished Nova Scotia, but all the remainder was secured to her by the treaty of 1783, which established the independence of the U. States, and she retained possession and jurisdiction until the separation of 1820 took place, which constituted *M.* a separate and independent member of the Federal Union. *Pop.* The population has not rapidly increased, it being 628,279, in 1860; 648,936, in 1880; and 694,466, in 1890. This includes a small remnant of Indians.

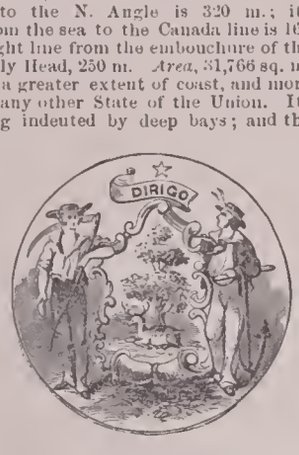


Fig. 1686. — SEAL OF THE STATE.

Fig. 1687. — PORTLAND.

Maine, Main, or **Mayn,** a river of Central Germany, formed by the junction of the White and Red Maine, in Bavaria, 24 m. N.W. of Bayreuth. The *M.* flows generally W., a course of 300 m., falling into the Rhine opposite Mentz. It is navigable for the last 220 m.

Maine, an ancient prov. in the W. of France, now comprised in the depts. of Mayenne and Sarthe.

MAINE

SCALE OF MILES
0 10 20 30 40 50

State Capital ⊛ County Seats ○

Places of 50,000 and over ... PORTLAND
" " 20,000 to 50,000 ... Bangor
" " 10,000 to 20,000 ... Augusta
" " 5,000 to 10,000 ... Eastport

Hammond's 8 x 11 Map of Maine.

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Longitude West from Greenwich

MAINE

Land surface, Sq. m. 29,895
Water surface, Sq. m. 3,145
Pop. 1900...694,466
White....692,226
African 1,319
Indian 798
Chinese.....119
Japanese 4
Native-born, 601,136
Foreign-born, 93,330
Males 350,995
Females..343,471

COUNTIES

Androscoggin.C 7
Aroostook ....F 2
Cumberland ..C 8
Franklin.....B 5
Hancock .....G 6
Kennebec.....D 7
Knox .....E 7
Lincoln .....D 7
Oxford .....B 6
Penobscott....F 5
Piscataquis ...E 4
Sagadahac....D 7
Somerset.. .. C 4
Waldo .....E 7
Washington...H 6
York .....B 9

CITIES-TOWNS

Pop. Thousands.

50 Portland....C 8
23 Lewiston ...C 7
21 Bangor. ...F 6
16 Biddeford ..B 8
12 Auburn.....C 7
11 Augusta....D 7
10 Bath.....D 8
9 Waterville...D 6
8 Rockland ...E 7
7 Calais.....J 5
7 Westbrook...C 8
6 Brunswick.. D 8
6 S. Portland..C 8
6 Saco. .....B 8
6 Sanford .....B 9
5 Old Town....F 6
5 Gardiner ....D 7
5 Eastport.....J 5
5 Skowhegan .D 6
4 Brewer ..... F 6
4 Caribou .....G 2
4 Houlton.....H 3
4 Belfast.....E 7
4 Eden .....G 7
4 Ellsworth ...F 6
3 Fairfield ....D 6
3 Presque Isle.H 2
3 Rumford Falls B 5
3 Lisbon .....C 7
3 Farmington C 7
3 Orono .. ....F 6
3 Paris .....B 7
3 Waldoboro..D 7
3 Lubec .....J 6
2 Dexter.....E 5
2 Norway .....B 7
2 Pittsfield....D 6
2 Kittery .....B 9
2 Bridgton....B 7
2 Camden.... E 7
2 Madison.....D 6
2 Jay .....C 7
2 Hallowell ...D 7
2 Thomaston ..E 7
2 York .....B 9
2 Bristol .....D 8
2 Gorham. ...C 8
2 Fort Kent ...F 1
2 Vinalhaven F 7
2 Bucksport...F 6
2 Freeport ....C 8
2 Rockport....E 7
2 Berwick.....B 9
2 Winslow.....D 5
2 Yarmouth ..C 8
2 St. George..E 7
2 Hampden...F 6
2 E. Livermore C 7
2 Jonesport...H 6
2 Kennebunkport B 9
2 Topsham....D 8
2 Winthrop ...D 7
2 Machias.....J 6
2 Warren .....E 7
2 Vassalboro..D 6
2 Richmond ..D 7
2 Deer Isle . F 7
2 Wells..... B 9
1 Windham...C 8
1 Boothbay Har. D 8
1 Millbridge..H 7
1 Oakland.....D 6
1 Dover.....E 5
1 Vanburen ..H 1
1 Scarboro ... C 8
1 Cherryfield.H 5
1 Turner .....C 7
1 Buxton.....B 8
1 Bethel.....B 7
1 Anson. .....D 6
1 Bluehill.....F 6
1 Boothbay ...D 8
1 N. Berwick..B 9
1 Lincoln..... F 5
1 Mechanic Falls C 7
1 Pembroke.. J 6
1 Poland .....C 7
1 Stonington..F 7
1 Wilton .....C 7
1 Foxcroft.....E 5
1 Winterport. F 7
1 Mt. Desert. G 7
1 Brownville..E 5
1 Guilford ....E 5
1 Newport ....E 6
1 East Machias J 6
1 Falmouth....C 8
1 Norridgewock D 5
1 Ft. Fairfield H 2
1 Eliot.....B 9
1 Cumberland C 8
1 Phillips.....C 6
1 Clinton .....D 5
1 St. Agatha ..G 1
1 Gray.....C 8
1 China.....E 6
1 Fryeburg ...B 7
1 Lebanon ....B 9
1 Monticello..H 3
1 Frenchville.G 1
1 Bowdoinham D 7
1 Sangerville .E 5
1 Hollis .....B 8
1 Wiscasset...D 7
1 Ontonagon..B 2
1 Orrington...F 6
1 Gouldsboro..G 7
1 Phippsburg.D 8
1 Orland .....F 6
1 Union ..... .E 7
1 Perry .....J 5
1 Monmouth ..D 7
1 Durham.....C 8
1 Washburn ..G 2
1 Lincolnville.E 7
1 Machiasport.J 6
1 Easton .....H 2
1 Frankfort...F 7
1 Franklin....G 6
1 Mars Hill....H 2
1 Hermon. ..F 6
1 Bridgewater H 3
1 Patten... .. G 4
1 Brooksville..F 7
1 Corinna. ...E 6
1 Waterboro..B 8
1 Harrington H 6
1 New Gloucester C 8
1 Penobscot...F 5
1 Whitefield ..D 7
1 Jefferson ....D 7
1 Milo .....F 5
1 Buckfield....C 7
1 Parsonsfield.B 8
1 Limestone...H 2
1 Hodgdon ...H 3
1 Livermore..C 7
1 Greenville ..D 5
1 Monson. ....E 5
1 Hartland ....E 6
1 Grant Isle..G 1
1 Benton.....D 6
1 Princeton ...J 5
1 Danforth....H 4
1 Ashland.....G 2
1 Newcastle. D 7
1 Leeds .....C 7
1 Island Falls..C 3
1 Enfield.....F 5
1 Addison.....H 6
1 Belgrade... D 5
1 Litchfield ...D 7
1 Dixfield .... C 5
1 Corinth .....E 6
1 St. Albans...E 6
1 Sullivan ....G 5
1 Brownfield ..B 8
1 Hiram ... ..B 8
1 Limington...B 8

Pop. Hundreds.

9 Solon .....D 6
9 Readfield....D 7
9 Cornish.....B 8
9 Sherman....G 4
9 Canaan .....D 6
9 Appleton ....E 7
9 Harrison....B 7
9 Old Orchard B 8
9 Rangeley....B 5
9 Monroe.....E 6
9 Littleton....H 3
9 Blaine.....H 2
9 Bradford ....F 5
9 Searsmont. E 7
9 Canton.....C 7
9 New Sharon C 7
9 Alfred.....B 8
9 Bowdoin ....D 7
9 Kingman ...G 4
9 Brooklin ....F 7
9 Carmel .....E 6
9 Castine.....F 7
9 Islesboro ....F 7
9 Waterford...B 7
9 New Portland C 6
9 Mt. Vernon .D 6
9 Sedgwick... F 7
9 Steuben ....H 7
9 Surry..... F 6
9 Hancock ....G 7
8 Athens.. D 6
8 Cape Elizabeth C 8
8 Porter. .....B 8
8 Dresden ....D 7
8 Woolwich ...D 8
8 Exeter.....E 6
8 Albion..... .E 6
8 Unity .....E 5
8 Damariscotta D 7
8 Limerick ....B 8
8 New Sweden.G 2
8 Oakfield ....G 3
8 Garland.....E 5
8 Mapleton ...G 2
8 Shapleigh ...B 8
8 Robbinston..J 5
8 Dixmont ....E 5
8 Charlestown E 5
8 Bingham....D 5
8 Milford.....F 6
8 Linneus.....H 3
8 Greene.....C 7
8 Raymond....C 8
8 Baldwin.....C 8
8 Mexico ....B 6
8 Friendship ..E 7
8 Naples .....B 8
8 Sumner.....B 7
8 Lee.....G 5
7 Georgetown D 8
7 Wallagrass..F 1
7 Casco .....B 7
7 Windsor ....D 7
7 Peru.....C 7
7 Troy.....E 6
7 Burnham.. E 6
7 Swans I.....F 7
7 Palermo.....E 7
7 Weld.....C 6
7 Liberty. ....E 7
7 Newburg....E 6
7 Otisfield.....B 7
7 Andover.....B 6
7 Chesterville.C 7
6 Kingfield ....C 6
6 Lovell.....B 7
6 Cornville....D 6
6 Winn..... ..G 5
6 Newfield.....B 8
6 Brooks..... E 6
6 Eddington ..F 5
6 Hartford.....C 7
6 Plymouth...E 6
6 Prospect....F 7
6 N.Yarmouth C 8
5 Strong.....C 6
6 Denmark....B 8
6 Edgecomb...D 8
6 Cushing.....E 7
6 New Limerick H 3
5 Hope .....E 7
5 Sebec .....E 5
5 Pownal.....C 8
5 Greenbush . F 5
5 New Vineyard C 5
5 Perham .....G 2
5 Sebago .....B 8
5 Lagrange....F 5
5 Hamlin.....H 1
5 Harmony ...D 5
5 Winter Harbor G 7
5 Columbia Falls H 6
5 St. Francis ..F 1
5 Castle Hill...G 2
5 Embden.....D 6
5 Cutler .....J 6
5 Knox .....E 7
5 Veazie .....F 5
5 Vanceboro...J 4
5 Northport...F 7
5 Springfield ..G 5
5 Etna .....E 5
5 Mattawamkeag G 5
5 Detroit .....E 6
5 Columbia....H 6
5 Stetson .....F 6
5 Prentiss.....G 5
4 Mercer.....D 6
4 Smithfield ..C 7
3 Freeman.....C 6
3 Temple.....C 5
3 Ludlow.....G 3
3 Somerville.. D 7
3 Amherst ....G 5
3 Benedicta....G 4
3 Carthage....C 5

Maine, a river of Ireland, flowing into Castlemain Harbor.

Maine, in *Illinois*, a post-township of Cook county.

Maine, in *Iowa*, a township of Linn co.

Maine, in *New York*, a post-village and township of Broome county, about 70 miles south of Syracuse.

Maine, in *Pennsylvania*, a township of Columbia co.

Maine Prairie, in *California*, a post-village of Solano co., abt. 18 m. N.E. of Suesin City.

Maine Prairie, in *Minnesota*, a post-township of Stearns co.

Maines'burg, in *Pennsylvania*, a post-village of Tioga co., abt. 42 m. N. of Williamsport.

Maine-et-Loire, (*main-ai'lwawr,*) a dept. of France, formed from the old prov. of Anjou, in Lat. between 47° and 47° 50′ N., Lon. 0° and 1° W., having N. the depts. Mayenne and Sartho, E. Indre-et-Loire, S. Vienne, Deux-Sevres, and Vendee, W. Loire-Inférieure. *Area*, 2,784 sq. m. The surface is generally undulating. Tho soil is very fertile and well cultivated. The principal rivers are the Loire, which intersects it from E. to W., the Anthion, Maine, Thonet, and Layon. *Prod.* Hemp, flax, fruits, grain, and cattle. *Min.* Granite, marble, flint, and slate. *Manuf.* Linens, ginghams, calicoes, sailcloth, &c. The chief towns are Angers, the cap., Bauge, Beaupreau, Saumur, and Segré. *Pop.* 532,325.

Main'-hamper, *n.* [Fr. *main*, hand, and Eng. *hamper.*] A hamper portable by the hand; a hand-basket for carrying grapes to the wine-press.

Main'-keel, *n.* (*Naut.*) The chief or inner keel of a vessel, as distinguished from the *false keel.* See KEEL.

Main'-land, *n.* The continent; the principal land, as distinguished from an *island.*

Main'land of Shetland, or **Zetland,** the largest of the Shetland islands. *Ext.* 60 m long from N. to S., and from 6 to 18 broad. *Desc.* The interior is mountainous and barren; but along the shores the soil is only moderately fertile, and interspersed with marshy plains. *Pop.* 16,000.

Main'-links, *n.* (*Mach.*) The links in the parallel motion which connect the piston-rod to the beam of a steam-engine.

Main'ly, *adv.* Chiefly; principally; cardinally

"A vice inductive *mainly* to the sin of Eve." — *Milton.*

—Greatly: to a high degree; mightily; absolutely.

Main'mast, *n.* (*Naut.*) The principal mast in a ship or vessel.

Main'or, *n.* (*Old Eng. Law.*) See MANNER

Main'pernable, *a.* (*Law.*) Bailable: admissible to mainprise; permitting the giving of surety of mainpernors.

Main'pernor, *n.* (*Law.*) A surety or bail for appearance at a specified day.

Main'prise, *n.* [Fr *main*, the hand, and *pris*, taken.] (*Eng. Law.*) The taking or receiving of a person into friendly custody, who might otherwise be committed to prison, upon security given that he shall be forthcoming at a time and place assigned. Mainprise differs from bail in that he who is mainprised is said to be at large until the day of his appearance; but he that is bailed is not said to be at large, or at his own liberty, but may be confined by his sureties. The writ of mainprise is directed to a sheriff, commanding him to take sureties for the prisoner's appearance, usually called mainpernors, and to set him at large.

—*v. a.* (*Law.*) To allow to go at large, on surety of mainpernors; —said of a prisoner.

Main'sail, *n.* (*Naut.*) The principal sail of a ship.

Main'sheet, *n.* (*Naut.*) The sheet of the mainsail.

Main'spring, *n.* The chief spring or fountain; the principal spring of any mechanical contrivance, as a watch or timepiece; —hence, the governing motive; the ruling cause of action.

Main'stay, *n.* (*Naut.*) The stay reaching from the foot of a ship's foremast to the maintop. —Chief reliance; main dependence; principal support.

Maintain', *v. n.* [Fr. *maintenir;* Lat. *manus*, the hand, and *teneo*, to hold.] To hold, preserve, or keep in any particular state, position, or condition; to sustain; to support; to keep or bear up; to uphold; to keep; not to suffer to fail or to decline; as, to *maintain* one's present reputation, to *maintain* the blood in a state of richness, to *maintain* a certain head of steam. —To hold or defend; to keep possession of; to hold out; not to surrender, lose, or relinquish.

"This place, these pledges of your love *maintain.*" — *Dryden.*

—To justify; to vindicate; to support argument; to sustain by intellectual force; to stand to as being just or defensible; as, his claim cannot be *maintained* by law. —To continue; to keep up; to persist in; not to suffer to cease or fail; as, to *maintain* secrecy.

"Some did the song, and some the choir *maintain.*" — *Dryden.*

—To support; to keep up; to bear or sustain the expense of; to supply with things needful and necessary; as, to *maintain* a family.

—*v. n.* To assert, as a tenet; to affirm a position.

Maintain'able, *a.* That may be maintained, supported, preserved, or sustained; that may be defended or kept by force or resistance; vindicable; defensible; justifiable.

Maintain'er, *n.* One who maintains; one who supports, defends, preserves, justifies, sustains, or vindicates.

"The *maintainers* and cherishers of a regular devotion." *South*

Maintain'or, *n.* (*Crim. Law.*) One who maintains or seconds a cause depending between others by furnishing money, &c.

Main'tenance, *n.* Act of maintaining; sustenance; sustentation; support by means of supplies of food, clothing, and other conveniences; defence; vindication; protection; security from failure or decline.

"God assigned Adam *maintenance* of life."—*Hooker.*

—That which maintains, upholds, or supports; that which supplies conveniences; means of sustenance or protection; as, a bare *maintenance*, a separate *maintenance.*

(*Crim. Law.*) An officious intermeddling in a suit that in no way belongs to one, by maintaining and assisting either party with money, or otherwise to prosecute or defend it.

Cap of Maintenance. (*Her.*) In England, a cap of honor formerly worn by dukes, as indicative of their rank. — A fur cap of office worn by the Lord-Mayor of London in state pageants.

Main'tenon, FRANÇOISE D'AUBIGNÉ, MARCHIONESS DE, who rose to share the throne of France, was B. 1635, in the prison of Niort, where her father, Constant d'Aubigné, was confined for having killed his first wife and her lover, whom he had taken in adultery. On his release, he went with his family to Martinique, and died there in 1646, leaving his widow so poor that she returned to Europe without this child, who was sent after her to France, and there taken under the protection of her aunt, Madame Villette, who brought her up in the Protestant persuasion, from which, owing to the interference of her mother, a strict Catholic, she was afterwards converted. Subsequently, being left in very reduced circumstances, she married the celebrated poet and novelist Scarron. On his death, in 1660, she obtained the continuance of his pension through the intercession of Madame de Montespan, who also appointed her governess of the children which she had by Louis XIV. This connection brought her under the notice of the monarch, who increased her pension, and in 1679 changed her name to *M.*, giving her an estate with that title. Becoming fond of her society, he gradually passed from intimacy to love; Montespan was supplanted, and La Chaise, his confessor, having advised him to sanction his wishes by a secret but formal marriage, it was solemnized in 1685. After her elevation, she lived in a sort of retirement from the world. Louis visited her several times a day, and transacted business with his ministers in her apartments, while she read or otherwise employed herself. The king, who sometimes teased her with his ill-humor, endeavored to atone for this by proofs of his esteem such as he had never shown to any other woman. But she feared to attract the notice of the nation, and would receive nothing more than the estate of *M.*, with a pension of 48,000 livres. Having founded the school of St. Cyr, for the education of poor girls of good family, she retired to it after the death of the king, and there passed the remainder of her life. She D., generally respected, in 1719. Her *Memoirs* and *Correspondence* have been printed, — the former in three volumes, the latter in nine.

Main'top, *n.* (*Naut.*) The top of a ship's mainmast.

"From their *maintop* joyful news they hear." — *Dryden.*

Main'ville, in *Ohio*, a post-village of Warren co.

Main'ville, in *Pennsylvania*, a post-vill. of Columbia co.

Main'yard, *n.* (*Naut.*) The yard which holds the mainsail, supported by the mainmast.

Mairwar'ra, a mountainous tract of Rajpootana, India, in Lat. bet. 25° 25′ and 26° 10′ N., Lon. bet. 73° 50′ and 74° 30′ E. *Ext.* About 100 m. long, with an average breadth of 15 miles. *Min.* Iron, antimony, copper, and lead. *Pop.* 40,000.

Mais'tre, JOSEPH, (COUNT DE.) a distinguishsd supporter of absolutism and the papacy, was B. at Chambery, in Savoy, 1755. Driven by the invasion of the French from his native country, he went to Turin, whence, after publishing his first work, he was sent by the king of Sardinia as minister plenipotentiary to St. Petersburg, where he remained until 1817, when he was recalled to Piedmont, where he became minister of state in 1818. His literary career began in 1796, with his work entitled, *Considérations sur la France*, in which he combated the revolutionary doctrines then in vogue. In 1810 appeared his *Essai sur le Principe Générateur des Institutions Politiques*, and ten years later he published his most celebrated work *Du Pape*, the best defence, perhaps, of papal infallibility that has appeared in modern times. Besides these, he wrote *Soirées de Saint Pétersbourg*, and *Examen Critique de la Philosophie de Bacon*, both posthumous publications. D. 1821. — His younger brother, XAVIER, who also went to St. Petersburg during the revolutionary period, gained great celebrity by his *Voyage autour de ma Chambre*, *Le Lépreux de la Cité d'Aoste*, *Le Prisonnier du Caucase*, and *Prascovie*, the last being an interesting narrative of filial devotion on the part of a young Siberian girl. D. 1852.

Maixent, (St.,) (*maix'a.*) a town of France, dept. of Deux-Sevres, on the Sevre-Niortaise, 36 m. from Poictiers. *Manuf.* Principally woollen goods. *Pop.* 5,000.

Maize, (*māz,*) *n.* [Sp. (from the Haytian) *maiz*; Ir. *maise*, food.] (*Bot.*) See ZEA.

Maize'na, *n.* A brand or trade-mark, given to a fine flour, prepared from Maize, or Indian Corn.

Majes'tic, *a.* Exhibiting majesty; possessing dignity of mien or person; of august, stately, or imposing presence or manner; regal; princely; of lofty port or carriage.

"And forth he moved, *majestic* as a god." — *Pope.*

—Splendid; grand; magnificent, pompous; stately.

"Get the start of this *majestic* world, and hear the palm." — *Shaks.*

—Sublime; devoted; lofty; dignified; stately.

"His face yet shone *majestic*, though in ruin." — *Milton.*

Majes'tical, *a.* Majestic; elevated. (a.)

Majes'tically, *adv.* With majesty, dignity, or grandeur; loftily; imposingly.

Majes'tlealness, *n.* State, quality, or manner of being majestic.

Maj'esty, *n.* [Fr. *majesté;* Lat. *majestas*, from *magnus*, great. See MAGISTRATE.] Greatness of appearance; grandeur; stateliness; imposing dignity of aspect, manner, or bearing; exalted loftiness of mien or demeanor; generally used in reference or application to regal or sovereign rank.

"The Lord reigneth; he is clothed with *majesty.*"—*Psalm* xciii. 1.

—Dignity of presence; elevation of manner; loftiness of style or action.

"The might — the *majesty* of loveliness." — *Byron.*

—A title of highest honor, derived from the Romans, by whom it was first used to designate the supreme power and dignity of the people collectively (*majestas populi Romani*). The majestas was also ascribed to the highest chosen representatives of the people; as dictators, consuls, and the senate. On the overthrow of the republic, this title and dignity was assumed by the Roman emperors, and after them it was adopted by the emperors of the West. The attribute of majesty was not given to kings till a much later period. The courtiers introduced the title in France under Henry II., and in England it was first adopted by Henry VIII. It is now generally borne by all emperors and kings of Europe, except the sultan of Turkey, who is styled highness. The official title of the emperor of Austria is imperial-royal Majesty (*kaiserlich-königliche Majestät*). On the continent of Europe, majesty is used also to denote the royal dignity and privileges derived therefrom, even in the case of princes who have not personally the title; and it has sometimes also been retained in the case of abdicated monarchs. The Pope conferred the title of Apostolic Majesty on Stephen, the first king of Hungary, and this is still borne by the emperor of Austria, as his representative. At a later period the papal see conferred the title of Catholic Majesty on the kings of Spain, of Most Christian Majesty on the kings of France, and of Most Faithful Majesty on the kings of Portugal.

Majol'ica, *n.* A name given by the Italians to FAIENCE, *q. v.*

Ma'jor, *a.* [Lat. comp. of *magnus*, from O. Lat. *majus*, great, from *mago*, Sansk. *manh*, to increase.] Greater in number, quantity, or extent; as, the *major* part of the audience, the *major* part of one's income, &c. — Of greater dignity, value, or importance.

"Full Greek, full fame . . . my *major* vow lies here." — *Shaks.*

(*Mus.*) A term noting that of the two modern modes in which the third is four semitones above the tonic or key-note. It is also employed to indicate those intervals which contain the greatest number of semitones under the same denomination; as, a third consisting of four semitones instead of only three, is called a *major third;* or a sixth, containing nine instead of eight semitones, is termed a *major sixth.*

(*Logic.*) It is applied to the first proposition of a regular syllogism, because it has a more extensive sense than the minor proposition. Thus, no unholy man is qualified for happiness in heaven (*major*); every man in his natural state is unholy (*minor*); therefore, no man in his natural state is qualified for happiness in heaven (conclusion or inference).

—*n.* One who is greater, particularly in years.

(*Mil.*) In the British army, the field officer next in rank above a captain, and immediately inferior to a lieutenant-colonel. This class of field officers was not known before the beginning of the 17th century, and even at the present time the grade does not exist in the artillery or engineers. In the United States army the grade of major is co-ordinate with that of lieutenant-commander in the navy.

Brigade Major is a staff-officer who performs for a brigade, or in garrison, duties equivalent to those of a major in a regiment or battalion.

Major-General. See GENERAL.

(*Log.*) The first proposition of a regular syllogism.

Majora'na, *n.* [Probably a corruption of the Ar. *maryamych*] (*Bot.*) A genus of plants, order *Lamiaceæ.* The species *M. hortensis* (*Origanum Majorana* of Linnæus) is the sweet marjoram of the gardens, so much used as a flavoring herb by the cook. It is retained in the materia medica as a stimulant and carminative, but is scarcely ever used medicinally. The common marjoram belongs to the genus *Origanum.*

Majorat, (*ma-zho-ra',*) *n.* [Fr., from Lat. *major.*] A term applied in some of the states of continental Europe to the right of succession to an estate according to age.

Ma'jorate, *n.* Rank or office of a major.

Major'ca, (Sp. MALLORCA, *mol-yor'ka,*) the largest of the Balearic Islands in the Mediterranean Sea, belonging to Spain, from the E. coast of which it is 110 m. distant. Its greatest length is 48 m., breadth 42 m. *Area*, 1,340 sq. m. The surface is extremely uneven, and is divided by a range of mountains, the highest of which, the Silla de Forillos, rises 5 114 ft. above the sea. The rivers, or rather torrents, of *M.* are short, rapid, and very numerous, and afford great facilities for irrigation. The climate is very mild and salubrious, the thermometer in winter seldom falling below 48°, and generally averaging 65°; while in summer the temperature varies from 84° to 88° Fahr.; but the heat is not oppressive, owing to the constant sea-breezes. Agriculture is very backward; still large quantities of fruit and vegetables are raised, chiefly olives, oranges, &c.; also saffron. *Min.* Granite, sienite, porphyry, coal, and iron. There are also salt marshes. The trade of *M.*, relatively to its size, is very considerable, chiefly with Spain, France, and England. The principal towns are Palma, the cap. (sometimes also called Majorca), Llumayor, Compos, Santenay, Falaniche, and Soller. *Pop.* about 250,000.

Majorcan, (*mal-yôr'kan,*) *n.* (*Geog.*) A native or inhabitant of Majorca.

—*a.* (*Geog.*) Belonging or having reference to Majorca, or its people.

Ma'jor-Do'mo, *n.* [Lat. *major-domus*, greater officer of the house.] (*Hist.*) In the courts of those kingdoms which were formed out of the fragments of the Western Empire, three different offices seem to be designated by this title: 1. The maître d'hôtel, or chief officer of the prince's table, *præfectus mensæ, architriclinas, dapifer,* &c.; 2. The mayor of the palace (*œconomas*, steward); 3. The first minister, prefect of the palace, count of the palace, &c. Charles Martel is termed major-domus by some ancient historians. This title became in later times confounded with that of seneschal. In Germany, under the Othos and the house of Suabia, the dapifer was an officer of high rank, who bore, among other duties, the standard of his sovereign. The count-palatine was dapifer of the empire; the elector of Bavaria, arch-dapifer. In England he was a personage of less distinction, and his superscription generally appears last among the attesting witnesses to ancient charters.

Majoria'nus, JULIUS VALERIUS, a Roman emperor, was raised to the throne in 457. He made war against the Vandals with success, and drove Genseric from Italy. But the great fleet which he prepared for the invasion of Africa was burnt by the Vandals. He governed with equity and prudence, made excellent laws, and might probably have longer averted the fall of the Western Empire, had he not been deposed and murdered in 461, after a reign of less than 4 years.

Major'ity, *n.* [Fr. *majorité*, from Lat. *major*, greater.] The greater number of persons constituting any body or corporation, by the opinions of whom their acts are generally determined; as, a *majority* of votes. — The state of being of full age. — The office of a major; majorate.

Maj'oun, *n.* Same as MADJOUN, *q. v.*

Majus'cule, *n.* A capital letter employed in ancient Latin MSS.

Makallah, or **Macullah,** (*mak-al'la,*) a seaport-town on the S. coast of Arabia, 300 m. E.N.E. of the port of Aden; Lat. 14° 30′ N., Lon. 49° 6′ E. *M.* has a commodious and well protected harbor, and is much frequented by vessels for the purpose of obtaining supplies. It has a trade in gums, hides, senna, coffee, and other native produce. *Pop.* 4,500.

Make, *v. a.,* (*imp.* and *pp.* MADE.) [A. S. *macian*; Ger. *machen*; D. *maken*; Dan. *mage*; Swed.-Goth. *maka*. Perhaps from Sansk. *manh*, to grow, the origin of Lat. *magnus*, great, and Goth. *mag*, to be able, the idea of the form being suggested by growth.] To bring into being or existence; to cause to be or to exist; to create; to form; to fashion; to model; to frame; — hence, to fabricate; to construct; to mould; to give existence to in a certain form.

"God hath *made* of one blood all nations of men." — *Acts.*

—To form or devise that which is artificial or unnatural; as, *made* dishes, in cookery.

"T' excel the natural with *made* delights." — *Spenser.*

—To cause to have any quality; to bring into any state or condition; to do; to perform; to execute; to accomplish; to put into practice; — frequently employed with a noun to present a phrase equivalent to the simple verb agreeing with such noun; as, to *make* representation, for to represent, to *make* a note of, for to note.

"In hope to merit Heaven by *making* earth a hell." — *Byron.*

—To raise, as perfect; to gain or get, as the fruits of exertion; to collect; to gather acquisitively; to have accrue to one; as, he has *made* his fortune, to *make* a profit out of the transaction, &c.; — and infrequently, to suffer; to incur; to result in loss or distress.

"The loss was private that I *made*." — *Dryden.*

—To find the number or amount of by computation, measuring, weighing, &c.; to discover by enumeration; to determine by calculation; as, they *made* the sum-total above the estimate. — To travel over; to pass over the distance of; as, we *made* the land at nightfall, they *made* the journey in a short space of time.

—To render thriving or prosperous; to put in a safe, profitable, or favorable condition; to render auspicious; as, the business *makes* him rich.

"Who *makes* or ruins with a smile or frown." — *Dryden.*

—To bring into any state or condition which is denoted by a qualifying noun, verb, or adjective; to constitute; as, to *make* public, to *make* a fool of one's self, &c.

"Obedience . . . *makes* slaves of men."—*Shelley.*

—To cause to do, act, or assume to be; to compose or form subjectively; to represent; to show; to esteem.

"He is not that goose and ass that Valla would *make* him." *Baker.*

—To force; to compel; to constrain; to require; to demand; to cause; as, he was *made* to apologize. — To constitute, as parts united in a whole; to make up; to settle; to establish; to cause to conform or cohere; to form; to compose, as parts, materials, or ingredients.

"A Persian's Heaven is eas'ly *made*,
'Tis but black eyes and lemonade."—*Moore.*

—To reach; to arrive in sight of, as land; to attain; to approach, so as to come within observation.

"I've *made* the port, and laugh securely at the lazy storm." *Dryden.*

—To perform; to execute, as the functions of; to turn to use; to serve or answer for; to become; as, she *made* him an excellent wife.

"A fellow-feeling *makes* one wondrous kind."—*Garrick.*

To make away, to kill; to destroy; to remove from one's way.

"These were they that *made away* his brother."—*Shaks.*

To transfer; to alienate; to make over; to convert; as, to *make away* with an estate. — *To make a bed*, to prepare a bed for lying on. — *To make account of*, to esteem; to regard; to be favorably inclined to; to have a good opinion of. — *To make amends*, to afford redress, compensation, or satisfaction; to make good, as loss or detriment; to replace with an equivalent.

"Oh, doth not a moment like this *make amends?*"—*Moore.*

To make believe, to act as if; to assume; to pretend. — *To make choice of*, to select; to choose; to take, by way of preference or election; as, he *made choice of* a woman who proved a vixen. — *To make default.* (*Law.*) To neglect to answer; to fail to put in appearance. — *To make free with*, to treat without ceremony; to take freedoms with; as, to *make free* with a person's reputation. — *To make good*, to maintain; to defend; to justify; to vindicate; to uphold.

"I'll either die, or I'll *make good* the place."—*Dryden.*

To fulfil; to execute; to accomplish; to redeem.

"This letter doth *make good* the friar's word."—*Shaks.*

To afford compensation for; to render by an equivalent; as, to *make good* any damage. — *To make light of*, to consider as of no consequence; to deem as immaterial; to esteem as of small moment or value; to regard with indifference or contempt.

"They *make light of* it, and went their ways."—*Matt.* xx. 5.

To make love to, to address in language of affection or tenderness; to court; to seek to gain the affections of; to play the gallant.

To make merry, to feast; to revel; to carouse; to be jovial; to partake of a festive entertainment.

"A hundred pound or two, to *make merry* withal." —*Shaks.*

To make much of, to cherish; to foster; to treat with esteem or high consideration; to consider as of great worth or value; to cocker. "It is good discretion not to *make* too *much of* any man at the first." (*Bacon.*) — *To make no difference*, to possess no weight, influence, or efficacy; to be a matter of unimportance or indifference. — *To make no doubt*, to be confident; to entertain no doubt. — *To make no matter*, to make no difference; to be productive of no weight or importance. — *To make nothing for*, to be of no value or efficacy for; to have no cogent or operative effect; as, his denial *makes nothing for* his case. — *To make oath.* (*Law.*) To swear according to judicial form. — *To make of*, to understand; to comprehend.

"I could not *make* anything *of* his book."—*Addison.*

To effect; to produce from; to obtain, as a result; as, to *make* the most *of* one's opportunity. — To consider; to account; to esteem; to view.

"*Makes* she no more of me than a slave?"—*Dryden.*

To make out, to learn; to elucidate; to obtain a lucid explanation or understanding of; as, I cannot *make out* your meaning.

To prove; to evince; to establish by testimony or argument; as, to *make out* a clear case.

"I dare engage to *make* it *out*, that they will have their full principal and interest at six per cent."—*Swift.*

To afford; to furnish; to supply; to find; as, he had a difficulty to *make out* the money. — To fare; as, he *made out* a capital dinner. — *To make over*, to convey; to transfer the title of; to alienate; as, to *make over* a property by deed of gift.

"Age and youth cannot be *made over*." —*Collier.*

To make sail. (*Naut.*) To set an additional quantity of sail. — *To make sternway*, to move with the stern foremost.

To make strange, to scruple; to cavil; to raise objection to. — *To make suit to*, to court; to curry favor with. — *To make sure of*, to consider as certain.

"They *made* as *sure of* health and life, as if both of them were at their disposal."—*Dryden.*

To secure to one's possession.

"*Make sure of* this day, and hang to-morrow." —*Dryden.*

To make up, to collect or bring together into a sum, mass, or volume; as, to *make up* a package, to *make up* a betting-book.

"How will the farmer be able to *make up* his rent to-day?"*Locke.*

To reconcile; to compose.

"I knew when seven justices could not *make up* a quarrel." *Shaks.*

—To supply a deficiency or want; as, we required ten dollars to *make up* the difference. — To repair; to reconstruct; as, to *make up* a hedge. — To compose, as ingredients, parts, or quantities.

"Harlequin's part is *made up* of blunders and absurdities." *Addison.*

To shape, mould, or fabricate; as, "a medicine commonly *made up* in pills." (*Arbuthnot.*) — To adjust; to settle; to arrange with a view to establishment or settlement; as, to *make up* accounts. — To bring to completion; to determine conclusively; to accomplish; as, to *make up* a match, to *make up* one's mind. — To *make water*, to urinate; to piss. — (*Naut.*) To leak; as, the ship *made water*. — *To make way*, to advance; to get ahead; to progress. — To clear the way; to open a path or passage. — *To make words*, to add or multiply words.

(NOTE. *Make* is a word used with so much latitude, that its complete extent is not easily comprehended, nor are all its attenuated and fugitive meanings easily caught and retained. The original sense, involving either *formation* or *production*, may be traced through all its various modes of application.)

Make, *v. n.* To tend; to move; to proceed; to go; — preceding *at* or *toward*; as, he *made toward* home.

"The bull . . . *making at* him with a furious bound." —*Dryden.*

—To contribute; to have effect; to operate as a cause, proof, or argument; as, this testimony *makes* no material change.

—To augment; to increase; to accrue; to add to.

To make against, to tend to harm or disadvantage; to produce a bad effect; as, this proceeding *makes against* my plans. — *To make as if*, to pretend that; to assume that; to make appear that.

"It is the unanimous opinion of your friends, that you *make as if* you hanged yourself." — *Arbuthnot.*

To make away with, to destroy; to kill; to remove out of the way. — *To make bold*, to venture; to dare; to risk; to take liberty; to presume; as, to *make bold* to question a man's veracity. — *To make for*, to favor; to incline to profit or advantage; as, competition between rival tradesmen *makes for* the benefit of the public. To tend or move toward; to direct a course or way toward; as, the ship being in distress *made for* a port. — *To make out*, to accomplish; to be finally successful; as, he *makes out* to live somehow. — *To make up*, to compose; to combine for a purpose; as, let us *make up* a rubber at whist. — To draw nigh; to approach; as, he impudently *made up* to the lady. — To become amicable; to cause to be reconciled; as, *making up* a disagreement. — *To make up for*, to compensate; to atone; to set instead of; to furnish by an equivalent; as, nothing can *make up* his loss to her. — *To make up with*, to adjust differences or dissensions with; to become friendly to; as, he has *made up with* his wife. — *To make with*, to concur, agree, or coincide with; to join issue with.

"Antiquity . . . *making with* that which law doth establish." *Hooker.*

Make, *n.* Constitution of bodily parts; form; shape; structure; build; construction; texture.

"Delights of a nobler *make* and nature, which antedate immortality." —*Glanville.*

Make'-bate, *n.* A breeder of quarrels or dissensions; a mischief-maker.

"*Make-bates* inflame small quarrels by a thousand stories."— *Swift.*

Make'-believe, *n.* A sham; a mere pretext or pretence; an act of simulation.

Mak'ee, in *Iowa*, a township of Allamakee co.

Make'less, *a.* Without a make. — *Shaks.*

Make'peace, *n.* A peacemaker; one who reconciles antagonists, opponents, or persons at loggerheads.

"To become a *make-peace* shall become my age." — *Shaks.*

Mak'er, *n.* One who makes, forms, constructs, shapes, moulds, or builds; a manufacturer; a fabricator; and frequently, the Creator of all things.

(*Law.*) He who makes or signs a promissory note.

Make'shift, *n.* That which serves a turn; an expedient adopted to serve a present purpose or object; a temporary substitute.

Make'-up, *n.* Effective appearance; costume; paraphernalia; as, an actor's *make-up.*

Make'-weight, (*-wāt.*) *n.* That which is thrown into a scale to make weight; that which contributes to something not sufficient of itself; anything added to supply a deficiency.

"The glimmering light of *make-weight* candle." — *Philips.*

Maki, *n.* (*Zoöl.*) Same as LEMUR, *q. v.*

Mak'ing, *n.* Act of forming, causing, or constituting; fabrication; construction; workmanship; as, a trouble of one's own *making.* — Composition; structure; arrangement.

Mak'ing-iron, *n.* (*Ship-building.*) A caulker's finishing-tool.

Mak'ing-up, *n.* Act of becoming reconciled; act of adjusting differences or dissensions; as, a *making-up* of an old quarrel.

—Act or operation of causing distilled liquors to become of that degree of strength called *proof.*

(*Print.*) The operation of forming columns of type into pages.

Ma'ko, a town of Hungary, on the Maros, 16 m. E.S.E. of Szegedin; *pop.* 25,595.

Makoqueta (*ma-ko-ke'ta*), now MAQUOKETA, in *Iowa*, a river rising in Fayette co., and flowing S.E. enters the Mississippi river from Jackson co.

—A city, the cap. of Jackson co., about 60 m. N.E. by E. of Iowa City. *Pop.* (1895) 3,448.

Mal, Male. [Fr., from Lat. *malus*, ill.] A prefix employed in composition, indicative of *ill* or *evil*; as, *malformation, malevolent.*

Mala, (*ma'la,*) a river of Peru, flowing into the Pacific Ocean at Porto-Mala, abt. 50 m. S.S.E. of Lima.

Ma'la, a decayed town of Peru, on the above river, abt. 4 m. from its mouth, and 48 S.E. of Lima.

Ma'la, (Pun'ta,) in S. America. See PUNTA MALA.

Mal'abar, a province of Hindostan, province of Madras, extending between Lat. 10° 11′ and 12° 15′ N., Lon. 75° 10′ and 76° 50′ E. It is bounded N. by the province of Canara, S. by Cochin, E. by a chain of lofty mountains denominated the W. Ghauts, and W. by the N. Indian Ocean. *Area*, 6,262 sq. m. *Desc.* The country consists mostly of undulating hills, except on the W., which is flat. Nearly all of the rivers have a W. course. The chief are, the Cochin, the Beypoor, Baliatam, and Ponany. The soil on the coast is sandy, but well adapted for the culture of cocoanuts, plantain, pepper, coffee, the sweet potato, and other farinaceous roots and vegetables. In the interior the soil is of the red kind common in S. India, favorable for the production of rice. The rest of the surface, especially in the uplands, is chiefly covered with forests, among which the teak-tree is very prevalent, and an important source of wealth to the province, the teak of *M.* being considered superior to every other variety. *Prod.* Teak-timber, sandal-wood, cocoa-nuts, black-pepper, tobacco, cotton, rice, ginger, coffee, and sugar. *Min.* Iron, and gold is also found in small quantities. *Manuf.* Coarse cotton cloth, coir, and oil from the cocoa-nut. The chief exports consist of the products of the cocoa-palm, also pepper, betel-nuts, and cloth. *Chief towns.* Calicut, Tellicherry, Cananore, and Ponany. *Pop.* 1,140,916.

Mal'abar, *a.* (*Geog.*) Belonging or relating to the W. coast of Hindostan, or to its people.

Malacatune', *n.* (*Bot.*) Same as MELOCOTON.

Malac'ca, a British settlement on the W coast of the Malay Peninsula, between Lat. 2° and 3° N., Lon. 102° and 103° E., having N.W. the territory of Sangalore, N.E. Rumbowe and Johole, S.E. Johore, S W the Straits of Malacca: *area*, 875 sq. m. The surface is mostly undulating; the hills are covered with jungle, and the valleys are rendered swampy by the rain. *Chief town.* Malacca. *Pop.* 55,000.

MALACCA, the cap. of the above prov., at the mouth of the river of the same name, 100 m. N.W of Singapore; Lat. 2° 14′ N., Lon. 102° 12′ E. *M* was formerly a place of considerable trade, but owing to the superior advantages of Penang and Singapore, its commerce has rapidly decreased, and is now very limited. *Pop.* 12,000

Malacca, (Straits of,) a channel of the E Seas, extending from Lat. 1° to 6° N., Lon. 98° to 104° E., between the Malay Peninsula on the N.E. and the island of Sumatra on the S.W. Its length, N.W. to S.E., may be estimated at about 520 m.; its breadth varies from 25 m opposite the Naning territory, to nearly 200 m. at its N. extremity.

Malac'ca Cane, *n.* A clouded or mottled cane, obtained from a species of cane growing in Sumatra.

Malachi, (Book of,) (*măl'a-kī.*) (*Script.*) The last of the canonical books of the Old Testament. The name denotes "my angel," or rather, "angel of Jehovah:" and hence some have been led to the opinion that the author of the book was an angel: others hold that the word is not a proper name, but only an appellative, and ascribe its authorship to Ezra, Nehemiah, and others. At all events, nothing is known definitely concerning the author. That Malachi flourished after the time of Zechariah is evident from the fact that he is not mentioned along with him in the book of Ezra; and, from the contents of the book itself, he is judged to have been contemporary with Nehemiah, and therefore to have lived from about B. C. 420. The book is a connected prophetic discourse respecting the relation of Jehovah to his people, and may be divided into three parts: — 1. Setting forth the loving, fatherly, and merciful providence of God toward his covenant people, reproving them for not honoring him as a father, and denouncing the priests for not teaching the people their duty (i. 1i. 9); 2. censuring intermarriages of Jews with women of another country (ii. 10–16); 3. announcing the approach of the Messiah, "the messenger of the covenant," and of his forerunner, John the Baptist, under the name of Elijah, to purify the priests, and smite the land with a curse, unless there be repentance; declaring, also, the distinction that shall be finally made between the righteous and the wicked, and concluding with an impressive assurance of approaching salvation to those that feared God, and a solemn injunction to the people to observe the law of Moses while expecting the promised Messiah (ii. 17–iv. 6). The language of this book wants the fire and force of the earlier prophets, indicating clearly the decay of the prophetic spirit. The authenticity of it is established by various allusions to it in the New Testament.

Malachite, (*măl'a-kīt,*) *n.* [Fr., from Gr. *malachē*, a mallow.] (*Min.*) A mineral chiefly found in the Ural Mountains, in concretionary masses, consisting of carbonate of copper. When cut and polished, it shows its structure in series of concentric circular markings of different shades of green, corresponding to the concretions. It is much admired as an ornamental stone for inlaying purposes, the fitting together of the circular markings affording much scope for artistic treatment. The amorphous and less regular masses form an important ore of copper. *M.* is also called *velvet copper-ore.*

Malac'oderus, *n. pl.* [Gr. *malakos*, and *derma*, cuticle.] (*Zoöl.*) The name of a tribe of Serricorn beetles, including those with a soft and flexible body.

Malac'olite, *a.* (*Min.*) A variety of PYROXENE, *q. v.*

Malacol'ogist, *n.* One versed in malacology.

Malacol'ogy, *n.* [Fr. *malacologie*, from Gr. *malakos*, and *logos*, treatise.] The science which treats of the structure and characteristics of molluscs. See MOLLUSCA.

Malacopteryg'ians, *n. pl.* [Gr. *malakos*, soft, and *pteryx*, wing.] (*Zoöl.*) An order of fishes, including those in which the ventrals are suspended to the under part of the abdomen, and behind the pectorals, without being attached to the bones of the shoulder. It contains the greatest part of the fresh-water fishes.

Malacopterygious, (*-kŏp-ter-ĭj'ŭ-us,*) *a.* [Gr *malakos*, and *pteryx*, wing.] (*Zoöl.*) Pertaining to, or partaking of the nature of, the malacopterygians.

Malacos'teon, *n.* [Gr. *malakos*, and *osteon*, bone.] (*Med.*) A softness of the bones (*Mollities ossium*). A disease of the bones, wherein they can be bent without fracturing them, in consequence either of the inordinate absorption of the phosphate of lime, from which their natural solidity is derived, or else of this matter not being duly secreted and deposited in their fabric. In rickets, the bones only yield and become distorted by slow degrees; but in the present disease they may be at once bent in any direction. The mollities ossium is rare, and its causes not well understood. All the cases of mollities ossium yet on record have proved fatal, and no means of cure are yet known.

Malacos'tomous, *a.* [Gr. *malakos*, and *stoma*, mouth.] Possessing soft, toothless jaws, as certain fishes.

Malacos'traeans, *n. pl.* [Gr. *malakos*, and *ostrakon*, a hard shell.] (*Zoöl.*) An order of Crustaceans, including those which are covered with a crust softer than the shell of the Mollusca, but firmer than the covering of the *Entomostracans*; as the crab, the lobster, &c.

Malacostracol'ogy, *n.* (*Zoöl.*) The science which relates to the Malacostracans.

Malacos'tracous, *a.* (*Zoöl.*) Pertaining to the Malacostracans.

Mal'ade City, in *Idaho*, a post-village, cap. of Oneida co., about 345 m. E. of Boise City.

Maladjust'ment, *n.* [Lat. *male*, badly, ill, wrongly, from *malus*, evil.] An evil or wrong adjustment.

Maladminista'tion, MALEADMINISTRA'TION, *n.* Bad or faulty administration; bad management of public affairs; vicious or defective conduct in administration.

Maladroit', *a.* [Fr.] Clumsy; inexpert; awkward; unskilful; unready; of a quality or character the opposite of adroitness; as, a *maladroit* proceeding.

Maladroit'ly, *adv.* In a maladroit or unskilful manner.

Maladroit'ness, *n.* State or quality of being maladroit; want of skill, expertness, or readiness; awkwardness; clumsiness.

Mal'ady, *n.* [Fr. *maladie;* It. *malattia*, from Lat. *malum*, anything bad.] Any sickness or disease of the human body; a lingering or deep-seated disorder; indisposition, or distemper. — Moral disorder or corruption, or defect of the mind of understanding; depravity of the heart.

Mala fides, (*mā'lā fi'deez.*) [Lat., bad faith.] (*Law.*) The opposite of *bona fides*, or good faith.—Questions of bad faith must be referred to a jury.

Mal'aga, a seaport-town of Spain, cap. of a prov. of same name, on the Mediterranean, 68 m. N E. of Gibraltar, and 254 S.W. of Madrid; Lat. 36° 43′ 5″ N., Lon. 4° 26′ E The town is commanded by an old Moorish fortress, called the Gibralfaro, and is of circular form, surrounded by a double wall, with a number of stately towers. The city is of Moorish construction, and combines a number of contrivances for mitigating the extremes of heat, and for enjoying the tranquillity of retirement. The streets are narrow, the houses are large, and, in general, each has a court into which the windows open. The public buildings are obscured by private houses, and the city does not even contain a good square. The harbor of Malaga is capable of containing about 450 merchant-vessels. A fine mole, of 700 yards in length, runs out into the sea, and two smaller ones have been subsequently built. The rivers Guadalmedina and Guadaljorce discharge their waters at this place into the ocean. The chief exports are fruit and wine. *Manuf.* Linens, woollens, sailcloth, paper, rope, hats, leather, and soap. Malaga was founded by the Phœnicians. It fell into the hands of the Moors in 714, and was not wrested from them until 1487, when Ferdinand the Catholic took it. In 1810 it was taken by the French, and remained in their possession till the year 1812. *Pop.* (1897) 523,400.

Mal'aga, in *Ohio*, a post-village and township of Monroe co., about 110 m E. by S. of Columbus. *Pop.* (1897) 1,442.

Malaga, in *New Jersey*, a post-village of Gloucester co., about 20 m. S.S.E. of Woodbury.

Mala'gasy, *n.* A native of Madagascar.

Mal'aga Wine. A well-known, sweet Muscatel wine, grown on the heights in the vicinity of the town of Malaga, and the richest of which are called *Mountain* and *Lacrimas.*

Malagri'da, GABRIEL, an Italian Jesuit and missionary to Brazil, born 1581. He was accused of conspiring against the king of Portugal, and finally condemned by the Inquisition as a heretic, and burnt alive in 1761. *M.* had claim to visions, and published *The Life of St. Anne, composed with the assistance of the Blessed Virgin and her Most Holy Son.*

Ma'la in se. [Lat., evils in themselves.] (*Law.*) Murder, perjury, robbery, &c., are wrongs of themselves; while treason, forgery, &c., are *mala prohibita*, i. e., not wrongs of themselves, but prohibited by human laws.

Malam'bo Bark. See CROTON.

Mal'anders, Mal'lenders, *n. pl.* [From It. *malandare*, to go badly.] (*Farriery.*) A dry scab or scurfy eruption found on the pastern of a horse. See SALLENDERS.

Mal'apert, *a.* [Lat. *mal*, and Eng. *pert*, q. v.] Pert or quick to an evil excess; saucy; quick, with impudence; sprightly, without respect, decency, or decorum; bold; forward; impudent.

> "I must have an ounce or two of this *malapert* blood from you."—*Shaks*

—*n.* A pert, saucy, ill-tongued person.

Mal'apertly, *adv.* In a pert, saucy, or malapert manner; with cool impudence.

Mal'apertness, *n.* Condition or quality of being malapert; impudent pertness or forwardness; sauciness; sprightliness of reply, without decency; cool, lively impudence.

Mala praxis, (*prăk'sis.*) [Lat.] (*Law.*) Bad or unskilful practice. If the health of an individual be injured by the unskilful or negligent conduct of a physician, surgeon, or apothecary, an action for compensation may be sustained.

Malapropos, (*măl-ăp-ro-pō',*) *a.* [Fr. See APROPOS.] Unseasonably; unfitly; unsuitably; unhappily.

Malapteru'rus, *a.* [Gr. *malakos*, soft, *pteron*, wing, and *oura*, tail.] (*Zoöl.*) A genus of fishes, family SILURIDÆ, *q. v.*

Mal'ar, *n.* (*Anat.*) The bone which in man forms the prominence of the cheek.

—*a.* [Fr. *malaire*, from Lat. *mala*, cheek.] Relating, or belonging to the cheek, or to the malar bone.

Malaria, (*mă-lā'rē-ă.*) *n.* [It. *mala aria*, bad air.] (*Med.*) A term now generally used to designate a certain effluvium or emanation from marshy ground — the word *miasm* being used in the same sense, but with the adjunct of *marsh*, miasma, or miasm, by itself, denoting simply contagion. This poison is not cognizable by the senses, nor can it be detected by chemical tests. It is known only by its effects upon the system. The observation of centuries, however, has rendered us well acquainted with the effects of this subtle poison. Marshes, whether salt or fresh, are prolific sources of malaria, especially in a certain stage of the drying process, under a hot sun. But this poison is the product also of various sorts of soil, as wet meadows, grounds alternately flooded and drained, the mud left by the retiring tide in seaports and æstuaries, parts covered with low and dense brushwood, or with reeds and grass, a country nearly cleared of its wood, — all these, particularly in warm climates, are fertile sources of malaria. The concurrence of vegetable matter susceptible of decay, of moisture, either on the surface or a short distance below it, and of a certain elevation of temperature, is necessary for its evolution; and of these, long-continued heat has the greatest influence in increasing the intensity of the poison. Comparatively harmless in the northern parts of the temperate zone, it becomes malignant and deadly in places equally favorable to its production just in proportion to the increase in the mean annual temperature. It is not necessary that the amount of vegetable matter be great, or its growth recent, since malarious diseases are often caused by the drainage of ponds and lakes; neither is the quantity of water required to be large for the generation of malaria. In tropical countries, it is remarked that the evolution of malaria commences immediately on the falling of the rain; and the sickness abates as the ground gets thoroughly wetted. A marsh completely covered with water is innocuous. It is only when the moisture is being dried up under a hot sun that it becomes pestilential. In the case of inundations, it is at their subsidence that sickness prevails. It of seems to be a rule without exception, that in climates high temperature the only condition indispensable to the production of the marsh-poison on all surfaces capable of absorption is the paucity of water where it had previously recently abounded. Heat is the agent most active in the production of malaria, in all soils and situations capable of engendering it; hence, in this country, even the milder forms of malarious diseases are rarely seen before the vernal or after the autumnal equinox; and wherever they exist, their prevalence is terminated by the cold of winter. It has often been observed that a summer of unusual warmth, especially if occurring after a wet spring, causes intermittent and remittent fevers to reappear in districts whence they had long been banished by the improvement of agriculture. As a general rule, malaria is more pernicious in proportion to the proximity to its source; but to this rule there are various exceptions. Places at some distance, especially if situated upon an eminence, are sometimes affected with the same, if not greater intensity, than places in the vicinity. The distance to which many emanations may extend by gradual diffusion has been calculated to be 1,400 to 1,600 feet in elevation, and from 600 to 1,000 feet in an horizontal direction; and these limits, it is said, cannot be exceeded in Europe; but in equatorial regions the activity of the poison is greater, and in the West Indies, vessels 9,000 feet from the marshy coast have felt the effects of its baneful influence. But when winds are in operation, the extent to which the poison may be transported is unknown; but instances are recorded of its being conveyed three or four miles. Though malaria is principally owing to heat, it is not in the hottest part of the day that its influence is most pernicious, but in the evening or night. Besides the more familiar effects of malaria, intermittent and remittent fevers, there are a number of organic affections of the spleen, liver, stomach, intestines, and mesenteric glands, also dropsy, palsy, apoplexy, and idiocy, that are traced to its long-continued application; while cholera, dysentery, and diarrhœa are referred to its more brief agency. Natives of marshy districts, who constantly reside in them, have their whole bodily and mental constitution contaminated by the poison which they inhale. Their aspect is sallow and prematurely senile, their muscles flaccid, hair lank, stature stunted, and their intellectual and moral character low and degraded. The progress of civilization and of agriculture is the principal means in diminishing the domain of malaria. See MOSQUITO.

Mala'rial, Mala'rious, *a.* Relating or pertaining to, or infected by, malaria.

Ma'late, *n.* [From Lat. *malum*, apple.] (*Chem.*) A salt formed of malic acid and a base.

Malatesta, Malatesti, Lords of Rimini, (*mat-a-tais'ta,*) a great Italian family during the Middle Ages, and the head of the Guelph party at Rimini. The tragedy which occurred in the household of one of this family forms one of the finest episodes in Dante's "Inferno." After being despoiled of their possessions by Pope Clement VII., in 1528, the family retired to Venice, and their names were afterwards recorded in the annals of that republic.

Malaxa'tion, *n.* [Lat. *malaxatio.*] Act of kneading, or moistening and softening. — Operation of kneading ingredients into a paste for pills or plasters.

Malay Archipelago. See ARCHIPELAGO (EASTERN).

Malay Peninsula, (*ma-lā',*) a long, narrow territory, forming the most S. portion of Continental Asia, and the S.E portion of Further India; Lat. bet. 1° and 13° N., Lon. between 98° and 104° E. The isthmus of Kraw connects it on the N. with Siam; on the E. it has the Gulf of Siam, and on the S. and W. the Straits of Malacca. *Area*, 45,000 sq. m. It is traversed through its centre by a chain of mountains rising between 3,000 and 6,000 feet above the sea. Numerous rivers descend to either coast, forming in their course marshes and lakes, some of which are of considerable size

Between the mountains and the coast, the surface is undulating, covered by dense forests, or fertile plains, the latter being more frequent towards the N. The climate is remarkable for its continual moisture, to which the perpetual verdure of the peninsula is mainly owing. *Prod.* Fine timber, areca, bamboos, sago, coffee, sugar, cloves, indigo, &c. It is the largest tin-yielding country in the world, gold and silver accompanying the tin. Iron exists abundantly, and coal is found, but neither is worked. The trade is principally with the British and Dutch settlements in the East, Siam, China, and the adjacent parts of the E. Archipelago. The articles of export are tin, gold-dust, spices, timber, and an immense variety of fruits; the imports are opium, salt, cotton cloth, and some European manufactures. Geographically, Malacca extends to the head of the Gulf of Siam, and includes part of Siam and the British province of Tenasserim in Burma, but it is usually limited to the region south of the river Paksham. The northern portions of the peninsula belong or are tributary to Siam, the southern portions are under British control. *Pop.* 1,200,000, of which 800,000 are in British territory and protectorates.

Malay'an, *a.* (*Geog.*) Belonging to Malacca, or to the Malay Archipelago and people.

Malays, *n. pl.* A people inhabiting the Malay Peninsula and the Eastern or Malay Archipelago, or collectively Malaysia. They are of Mongolian affinity, and may be looked upon as an oceanic branch of that division of mankind being modified physically by mingling with the Papuan element in the eastern and the Caucasian element in the central and western parts of the archipelago. This enterprising race has made its way widely over the Pacific islands, reaching as far south as Madagascar, where they exist as the dominant Hova element of the population. This widespread dominion is due to their bold, enterprising, and roving disposition, their place of residence on the peninsula and the larger islands being the coast region, whence they have driven the natives into the interior, and where they long pursued a piratical career, darting from hidden streams in their well-manned *proas* on

Fig. 1688.—MALAYS OF BORNEO.

any vessel that approached too near the coast, or more boldly lying in wait in fleets in the open sea, for any expected rich prize. Physically considered, the Malays are of low stature, slight in figure, and with very small wrists and ankles. The face is round, the eyes black and somewhat almond-shaped, the nose short and small, cheek-bones prominent, features flat, the hair straight and black, the complexion yellowish. In various respects they bear a close resemblance to the Mongolians of eastern Asia, but differ from them radically in language, all their dialects belonging to a distinct Malayo-Polynesian family which is widely distributed throughout the Indian and Pacific oceans. Of late years the lessons taught them by European naval vessels have forced the Malays to desist from piracy, their old lawless, roving habits being largely abandoned for the more settled occupations of trade and agriculture, though the old spirit occasionally shows itself in outbreaks of murderous frenzy, known as "running amuck." Intellectually they seem at a low level, and have never developed a native literature, such civilization as they possess being due to Arab and and Hindu influence. Under these incitements they have developed considerable poetic and dramatic literature, and historical and other prose writings.

Malay'sia. (*Geog.*) A name given to the Malay or Eastern Archipelago.

Mal'chin, a town of North Germany, in Mecklenburg-Schwerin. 24 m. E.S.E. of Gustrow. *Manuf.* Chiefly weaving and tanning, with some other comparatively unimportant industries. *Pop.* (1897) 4,450.

Mal'colm, the name of four kings of Scotland, the *first* of which succeeded in 943, and was killed in an insurrection, 958. — The *second* reigned about 1003–1033. — The *third*, called St. Malcolm, son of Duncan, who was murdered by Macbeth, recovered his throne 1057, and was killed in battle with the English, 1093.— The *fourth* reigned 1153–1165.

Mal'colm, Sir John, a British military officer, diplomatist and author, b. near Langholm, Scotland, 1769. He was governor of Bombay from 1827 to 1831; and is author of a *History of Persia*, *A Sketch of the Sikhs*, and other works relating to Indian affairs. D. 1833.

Malcolm, in *Mississippi*, a post-village of Jefferson co., abt. 26 m. E.N.E. of Natchez.

Malcolm, in *Iowa*, a post-township of Poweshiek county.

Malconforma'tion, Malconformation, *n.* Badness or imperfection of conformation or form; disproportion, and want of symmetry of parts.

Mal'content, Male'content, *n.* One who feels or expresses discontent; specifically, one who murmurs at or opposes the laws and administration; a discontented subject of a state or government.

Mal'content, Malcontent'ed, *a.* Discontented with the laws or the administration of government; dissatisfied with executive or legislative rule; uneasy; unquiet; as, "mutinous and *malcontented* subjects." *Bacon.*

Malcontent'edly, *adv.* In a malcontented spirit or manner; with dissatisfaction and uneasiness.

Malcontent'edness, *n.* Discontentedness; want of affection to, or confidence in, the laws or government; dissatisfaction.

"They would ascribe the laying down my paper to a spirit of *malcontentedness*." — *Spectator.*

Mal'dah, a dist. of Hindostan, presidency of Bengal, between Lat. 24° 30′ and 25° 25′ N., Lon. between 87° 50′ and 88° 30′ E.; *area*, 1,000 sq. m. It is fertile and well-watered, and produces wheat, barley, rice, and oil seeds. *Pop.* 435,000.

Maldeghem, (*mald'gem,*) a town and parish of Belgium, in E. Flanders, 17 m. N.W. of Ghent. *Manuf.* Tobacco, cotton-printing, beer, and oil. *Pop.* 7,000.

Mal'den, in *Illinois*, a post-village of Bureau co., abt. 16 m. S.W. of Mendota.

Malden, in *Massachusetts*, a thriving city and township of Middlesex co., about 5 m. N. of Boston. It contains extensive manufactories of boots and shoes, tinware, &c. *Pop.* (1895) 29,708.

Malden, in *New York*, a post-village of Ulster co., on the Hudson River, abt. 42 m. below Albany.

Malden Bridge, in *New York*, a post-village of Columbia co., abt. 16 m. S.S.E. of Albany.

Mal'dive Islands, a chain of islands in the Indian Ocean, between Lat. 0° 45′ and 7° 6′ N., Lon. 72° 48′ and 73° 48′ E., abt. 300 m. from the S.E. coast of Hindostan. They are of coral formation, and divided into groups, separated by narrow channels, which form safe harbors for small vessels. They are seldom visited by Europeans, the climate being intensely hot and unhealthy. *Prod.* Millet, fruit, and poultry. The islands carry on a considerable trade with each other, and also with Hindostan and Sumatra. *Pop.* estimated at 200,000. — The principal island is Male, or Mohl, abt. 5 m. in circumference. It is the residence of the sultan, who pays an annual tribute to the British government at Ceylon. *Pop.* 2,000.

Mal'don, a town of England, co. Essex, on the Chelmer, 14½ m. S.W. of Colchester, and 37 E.N.E. of London. It carries on a considerable trade in coal, iron, chalk, and timber. *Pop.* 5,000.

Maldonado, (*mal-do-na'do,*) a seaport-town of Uruguay, on the N.E. shore of the Plata æstuary, abt. 60 m. E. of Montevideo.

Male, *prefix.* See Mal.

Male, *n.* [O. Fr. *masle*; Fr. *mâle*, from Lat. *masculus*, male, from *mas, maris*, a male.] Pertaining to the sex that begets young, and applied to animals of all kinds, as contradistinguished from the female, which conceives and gives birth; masculine; as, a *male* child, a *male beast*.—Characterized by, or pertaining to, qualities applicable and appropriate to a masculine animal, as strength, courage, hardiness; — hence, best; superior; exalted; preëminent; as, "*male* incense."—*Herrick.* (R.)

(*Bot.*) Pertaining to flowers which bear stamens, or organs of fecundation, but not pistils; staminate.

Male screw. (*Mech.*) That screw which is inserted into the grooves of the corresponding or female screw.

Male-system. (*Bot.*) That division of a flower which is staminate.

—*n.* A he-animal; one of the sex which procreates young; — opposed to *female*.

Maleadministra'tion, *n.* Same as Maladministration, *q. v.*

Male'branche, Nicolas, a celebrated French philosopher, was b. at Paris, 1638; and at the age of 22, being determined to embrace the monastic life, was admitted into the congregation of the Oratory. His attention was first directed to metaphysics by perusing Descartes' *Treatise on Man*, and he immediately became a devoted partisan of the Cartesian philosophy. His famous treatise *On the Search after Truth*, was first printed in 1673, and is principally distinguished by the maintenance of a mysterious union between God and the soul of man, and the doctrine that the human mind immediately perceives God, and sees all things in him. *M.* also wrote several other works, among which are a *Treatise on Nature and Grace*, *Christian Conversations*, and *Dialogues on Metaphysics and Religion*. He was highly venerated for his elevated genius, and nothing could be more amiable and simple than his conversation and manners. D. 1715.

Maleconforma'tion, *n.* See Malconformation.

Male'content, Malecontent'ed, *a.* Same as Malcontent, Malcontented.

Malecontent'edly, *adv.* See Malcontentedly.

Malediction, (*-dick'shun,*) *n.* [Lat. *maledictio — male*, badly, ill, and *dictio*, a speaking, from *dico, dictum*, to speak.] Denunciation of evil; execration; imprecation; a curse or cursing; anathema.

"My lifelong time, the last, worst *malediction*."—*Sir P. Sidney.*

Malefac'tion, *n.* [From Lat. *male*, and *facere*, to make.] A criminal act or offence; a crime; a heinous misdeed. (R.)

"Guilty creatures have proclaim'd their *malefactions*." — *Shake.*

Malefac'tor, *n.* [Lat. *male.* and *factor*, a maker, a doer, from *facio*, to make, do, perpetrate.] One who commits a crime; a culprit; a felon; a criminal; a heinous offender against the law.

"Th' unmanner'd *malefactor* is arraign'd." — *Dryden.*

Malefea'sance, *n.* (*Law.*) Same as Malfeasance, *q. v.*

Male'-fern, *n.* (*Bot.*) The *Aspidium Felix-mas*, a fern used in medicine as an anthelmintic.

Maleficence, *n.* [Fr. *malfaisance*, from Lat. *maleficentia.*] State or quality of being maleficent; maleficence; evil-doing.

Maleficent, *a.* [Lat. *maleficus.*] Mischievous; committing harm or evil.

Malefi'cience, (*-fish'ens,*) *n.* The doing of wrong, evil, or mischief.

Maleforma'tion, *n.* See Malformation.

Male'ic, *a.* [Fr. *maléique.* See Malic.] (*Chem.*) An acid resulting from the decomposition of malic acid by heat.

Male'-odor, Male'-odour, *n.* See Mal-odor.

Male'practice, *n.* Same as Malpractice, *q. v.*

Male'sherbes, Chretien Guillaume de Lamoignon de, an eminent French statesman, b. at Paris, 1721. He succeeded his father as president of the Court of Aids; besides which he had the superintendence of the press, in which office he acted with great lenity and justice. In 1771, on the abolition of the parliaments, *M.* was banished to his country-seat; but he was recalled three years afterwards, reinstated as president, and made minister of state, which post he soon resigned, and then went to Switzerland. In 1787 he was again called to the councils of his sovereign, Louis XVI., when he drew up two memoirs, *On the Calamities of France*, and the *Means of Repairing Them*; but his advice was rejected, and he retired to his country-house, where he employed himself in agricultural pursuits. He, however, hastened, of his own accord, to plead the cause of his sovereign, in 1792; and he was one of the last who took leave of him before his execution. This generous attachment to a fallen master excited the jealousy of the French rulers, and caused his destruction. Shortly after his return home, his daughter, Madame de Rosambo, and her husband were arrested, and conducted to Paris; and his own arrest, with that of his grandchildren, soon followed. Almost his whole family were extirpated by the merciless proscription of his persecutors. *M.* was beheaded, April 22, 1792, and bore his sufferings with a spirit worthy of his virtuous and honorable life. He was admitted to the Academy of Sciences in 1750, later to the Academy of Inscription, and in 1775 to the French Academy. He left several works on topics of the time, and on agriculture and natural history.

Malesherbia'ceæ, *n. pl.* [In honor of *Malesherbes* q. v.] The Crownwort family, a small order of plants alliance *Violales*. Diag. Polypetalous coronetted flowers, perygynous imbricated petals, stamens on the stalk of the ovary, single dorsal styles, seeds without arils, and leaves without stipules. They consist of herbaceous or somewhat shrubby plants, much resembling *Passifloraceæ*. There are but two genera, *Malesherbia*, and *Gynopleura*, which include four species, all natives of Chili and Peru.

Male'treat, *v. a.* Same as Maltreat, *q. v.*

Malev'olence, *n.* [Lat. *malevolentia.*] State or quality of being malevolent; active personal hatred; evil disposition toward another; proneness of inclination to inflict injury; enmity of heart; malignity; malicious cruelty.

Malev'olent, *a.* [Lat. *malevolens — male*, ill, and *volens*, willing, from *volo*, to will, to be willing.] Ill-disposed; having an evil disposition toward another or others; wishing evil to others, or disposed to injure others; evil-minded; malicious; spiteful; malignant; malicious; hostile; unpropitious; bringing calamity.

Malev'olently, *adv.* Malignantly; with ill-will or enmity; in a malevolent spirit or manner; with the wish or intention to injure or afflict.

Malexecu'tion, *n.* Bad or imperfect execution; evil or wrong administration.

Malfeasance, Malefeasance, (*-fē'sans,*) *n.* [Fr. *malfaisance.*] (*Law.*) The unjust performance of some act which the party had no right, or which he had contracted not to do.

Malforma'tion, (seldom written *maleformation,*) *n.* [Lat. *mal.* and Eng. *formation.* See Form.] Any deviation from the natural formation of the body, which may either consist in a deficiency or a redundancy of parts. The deficiencies are sometimes very extraordinary, children being occasionally born without hands or feet, and even arms and legs; cases have occurred where the heart itself has been found to be absent; the head, also, is very frequently found malformed in a singular manner, and sometimes of such an immense size as to prevent its delivery, unless reduced by surgical means. It would take up too much space to give even a list of the malformations occasionally met with in practice, and would be of little or no use

to the reader if given; it will be sufficient if we refer to a few of the most general disfigurements. Those connected with the spine arise from a deficiency in some part of the column, caused by the absorption of the cartilages or the spinous process of one or more of the vertebral bones, or the entire absence of one of the vertebræ. Such a malformation may occur in the bones of the neck (cervical vertebræ); between the shoulders (dorsal vertebræ); at the loins (the lumbar), or at the bottom of the spinal colum (the sacrum), a soft tumor filling up the cavity left; this tumor, on whatever part of the spine formed, is called a *spina bifida*, a disease that may result in a distorted spine, and the elevating of one shoulder higher than the other. A by no means unfrequent malformation is an imperforated anus, while in both male and female infants the urinary passage may be equally closed; on this account the surgeon should always satisfy himself that both passages are open before yielding up the infant to the nurse, or at least before taking his leave. The malformations resulting from a redundancy or superfluity of parts are most frequently met with in the form of six fingers or toes on either of the hands or feet, a second cartilage to the ear, or a rudimentary hand. Such malformations should be removed as early as possible. The disfigurements arising from moles, warts, and excrescences, will be referred to under MOTHER'S MARKS. For the malformations of the feet met with under so many forms of club-foot, modern science has in many instances found a remedy in the orthopædic treatment. See ORTHOPÆDY.

Malgoo'zaree, *n.* In Hindostan, land liable to assessment.

Malherbe, FRANÇOIS DE, a French poet, b. at Caen, abt. 1555: bore arms in the troops of the League, was pensioned by Henry IV., and d. in 1628. His works consist of paraphrases on the Psalms, sonnets, odes, and epigrams. He also translated some of Seneca's letters; and may be considered as one of the first who gave to French poetry its polish and regularity.

Malheur, (*mal-oor'*,) in *Oregon*, a river rising in Lake Syllanilles, in the S.E. part of the State, and flowing N.E. into Snake River.

Mal'ibran, MARIA FELICIA, one of the most highly gifted vocal performers of modern times, was the eldest daughter of Manuel Garcia, a Spanish tenor singer, and was born in Paris, 1808. She made her *début* in 1825 at the opera in London, and the following year went to New York, where she married M. Malibran, a French banker, from whom she was divorced by the French courts in 1836, and shortly after married the celebrated violinist, M. de Beriot. She died the same year, during her engagement at the Musical Festival in Manchester, regretted by all classes both for her fine endowments and her generous disposition.

Malic Acid, (*mal'lik,*) *n.* [Lat. *malum*, an apple.] (*Chem.*) A vegetable acid found abundantly in most acidulous fruits, especially in unripe apples, gooseberries, and currants. The footstalks of the ordinary garden rhubarb also furnish large quantities of it; but it is most usually obtained from the berries of the mountain-ash. To prepare it, the juice of berries of the ash, or the footstalks of the garden rhubarb, are neutralized with milk of lime, a quantity of chloride of calcium being also added, to decompose the malate of potash that is always present. The liquid, which contains bimalato of lime, is filtered and boiled for several hours, until neutral malate of lime separates as an insoluble powder. The malate of lime is washed with water, and added to dilute nitric acid until it ceases to be dissolved. The liquid thus obtained is filtered and set aside to crystallize; well-defined crystals of bimalate of lime being formed. The solution of the bimalate is then decomposed with acetate of lead, and the resulting malate of lead with sulphuric acid. The syrupy solution of malic acid being set aside, deposits radiated masses of crystals, composed of four- and six-sided prisms, deliquescent in moist air. Malic acid is dibasic, exhibiting a strong tendency to form acid salts. The bimalate of ammonia and bimalate of lime may be obtained in large well-defined crystals. The only use to which malic acid has yet been applied is in the manufacture of succinic acid by the fermentation of neutral malate of lime. Impure malate of iron has also been used in medicine. Malic acid appears to exist under two modifications, one of which exercises an influence on a ray of polarized light, the other being destitute of any such action.

Ma'lic, *a.* [Fr. *malique*, from Lat. *malum*, apple.] (*Chem.*) Expressed from the juice of apples; belonging to apples; as, *malic* acid.

Malice, (*mal'is,*) *n.* [Fr.; It. *malizia*; Lat. *malitia*, from *malus*, evil.] Ill-will; grudge; spleen; spite; rancor; pique; extreme enmity of heart; depraved disposition to injure, afflict, or annoy others without cause; unprovoked malignity.

(*Criminal Law.*) In its common acceptation, *M.* implies a desire of revenge, a settled anger against a particular person; but in its legal sense, it implies little, if anything, more than merely without just cause or excuse. In murder, it is malice which makes the crime, and the words *ex malitia præcognitata* (of malice aforethought, or malice prepense) are necessary to an indictment of murder. *M.* prepense is either express or implied: express, when the design is evidenced by external circumstances, or even if, upon a sudden provocation, one beats another in a cruel and unusual manner, so that he dies, even though he did not intend his death; implied, as where a man wilfully poisons another, or a man kills another suddenly without any, or without a considerable provocation. In general, all homicide is malicious, and thus murder; unless justified by command or permission of the law, excused on account of accident or self-preservation, or alleviated into manslaughter by extenuating circumstances, the burden of proving any of these to the satisfaction of the court and jury being incumbent upon the prisoner.

Mal'icho, *n.* [Sp. *malhecho.*] Mischief. (R.)

Malicious, (*-lish'us,*) *a.* [Fr. *malicieux*; Lat. *maliciosus*, from *malitia.*] Full of malice; exercising or exhibiting malice; rancorous; malignant; spiteful; harboring ill-will or enmity without provocation malevolent; as, a *malicious* foe, a *malicious* lie. — Proceeding from, or actuated by, ill-will, rancor, or spleen; dictated by malice or malignity; as, a *malicious* proceeding, a *malicious* story.

Mali'ciously, *adv.* In a malicious or malign manner; with extreme rancor, enmity, or ill-will; with deliberate intention to annoy or injure.

Mali'ciousness, *n.* Quality of being malicious; extreme rancor, enmity, or ill-will; active disposition to annoy or injure; malignity; spleen.

Malign, (*-lin',*) *a.* [Fr. *malin*, fem. *maligne*; Lat. *malignus*, for *maligenus* — *malus*, evil, and *genus*, nature, kind.] Having an evil or malicious disposition toward others; harboring violent ill-will, rancor, or enmity; malignant; — opposed to *benign*; as, "the *malign* spirits." (*Bacon.*) — Unfavorable; unpropitious; inauspicious; having a tendency to harm or injure; as, *malign* aspect of the planets. — Malignant; infectious; as, a *malign* ulcer.

—*v. a.* [L. Lat. *maligno*, from *malignus*. See the adjective.] To traduce; to vilify; to asperse; to libel; to defame; to utter great evil of.

"To be *maligned* standing, and to be despised falling." — *South.*

Malig'nance, Malig'nancy, *n.* State or quality of being malignant; extreme malevolence; rancor; enmity; bitter malice.

— Unfavorableness; unpropitiousness.

"The *malignancy* of my fate might distemper yours." — *Shaks.*

(*Med.*) Virulence; tendency to a fatal issue; the *malignancy* of a fever.

Malig'nant, *a.* [Lat. *malignans*, from *maligno* — *malignus.*] Malicious; having extreme malevolence, rancor, or enmity; bent on evil; intending or effecting malignancy.

"To good *malignant*, to bad men benign." — *Milton.*

— Unpropitious; exerting pernicious influence; inimical to life.

"O *malignant* and ill-boding stars!" — *Shaks.*

(*Med.*) Applied to certain diseases when they assume a grave and dangerous character, such as the worst form of typhus, or *typhus gravior*, or *malignant* typhus; *cynanche maligna*, malignant sore-throat; and some other diseases.

—*a.* A man of extreme enmity, or malevolent intentions. (*Eng. Hist.*) A term of reproach applied by the Puritans to the Royalists during the Civil War; a cavalier.

Malig'nantly, *adv.* Maliciously; rancorously; with bitter spleen, or extreme malevolence. — With pernicious influence; mischievously.

Maligner, (*ma-lin'er,*) *n.* One who maligns, traduces, vilifies, or defames.

Malig'nity, *n.* [Fr. *malignité*; Lat. *malignitas*, from *malignus.* See MALIGN.] Quality of being malign; extreme enmity, or evil disposition of heart toward another without provocation, or with baseness of heart; active malevolence; bitter rancor; maliciousness. — Destructive toudency; virulence; pernicious quality.

"There is an invincible *malignity* in his disease." — *Hayward.*

— Extreme sinfulness; heinousness; as, "the high *malignity* of fraud." — *South.*

Mal'in, a village of Ireland, co. Donegal, abt. 10 m. N. by E. of Londonderry.

Malines, a town of Belgium. See MECHLIN.

Mal'in Head, a promontory and signal tower of Ireland, co. Donegal; Lat. 55° 22′ N., Lon. 7° 24′ W.

Malinger, (*-lin'jer,*) *v. n.* [Fr. *malingre*, weakly.] (*Mil.*) To feign sickness, or to prolong disease, in order to avoid duty; to sham illness.

Malin'gerer, *n.* (*Mil.*) A soldier who makes a pretence of being sick to shirk duty.

Malin'gery, *n.* (*Mil.*) A feigning of sickness, or prolongation of disease, in order to avoid duty.

Malison, (*mäl'i-zn,*) *n.* [O. *Y* See MALEDICTION.] Malediction; execration; imprecation; curse; ban.

"God's *malison* on his head who this gainsays."—*Sir W. Scott.*

Mal'kin, Man'kin, (*maw'kin,*) *n.* [For *Mal*, from *Mary*, and term. *kin.*] A mop for sweeping ovens; hence, a dirty wench; a drab.

Mall, (*mawl,*) *n.* [Fr. *mail*; It. and Sp. *maglio*; Lat. *malleus*, hammer; probably akin to Heb. *halam*, Sansk. *mi*, to strike, to beat.] A large, heavy, wooden beetle; a maul; an instrument for driving anything with force.

—*v. a.* To beat with a mall, or with something heavy; to pound; to bruise; to batter; to maul.

Mall, *n.* [See PALL MALL.] A public walk; a boulevard; a level shaded with trees; as, the *Mall*, St. James' Park, London. — A court; a place for pleading; as, "diets and *malls*." — *Dean Milman.*

Mal'lard, *n.* [Fr. *malart.*] A drake.

(*Zoöl.*) The common wild duck. See ANAS.

Malleabil'ity, *n.* [Fr. *malléabilité*: from Lat. *malleus*, a hammer.] (*Physics.*) A property possessed by some bodies, especially metals, which renders them capable of being beaten out with the hammer or converted into plates between rollers. Gold is extremely malleable; it can be beaten 1,200 times thinner than ordinary writing-paper. Iron has been rolled into sheets the 2-500th of an inch in thickness, and a square inch of the leaf only weighed three-quarters of a grain.

Mal'leable, *a.* [Fr *malleable*, from Lat. *malleus*, a hammer.] (*Metall.*) Capable of being spread by heating or by rolling; reducible to a laminated form by hammering; — said of certain metals.

Mal'leableness, *n.* Same as MALLEABILITY.

Mallea'ceæ, *n. pl.* [From MALLEUS, *q. v.*] (*Zoöl.*) A family of lamellibranchiate molluscs, regarded by many as a sub-family of *Aviculidæ*, and of which the typical genus, *Malleus*, is remarkable — in an adult state — for the elongation of the ears of the shell, the other part of which at the same time assumes a curiously elongated, wavy, or crumpled form. The shell thus acquires the name of *Hammer Shell*. The species are natives of the East and West Indies, and of the South Seas.

Mal'leate, *v. a.* [From L. Lat. *malleare.*] To hammer; to flatten or spread by beating.

Mallea'tion, *n.* [L. Lat. *malleatio.*] The act of hammering into a plate or leaf, or metal; expansion by beating.

Mal'lemock, Mal'lemoke, *n.* (*Zoöl.*) Same as MOLLEMOKE.

Mal'lenders, *n. pl.* (*Farriery.*) See MALANDERS.

Malleo'lar, *a.* [Lat. *malleolus.*] (*Anat.*) Belonging, or having reference, to the ankle.

Mal'let, *n.* [Fr. *maillet*, dim. of *mail*; Lat. *malleus*, hammer.] A wooden hammer, club, or instrument for beating, or for driving chisels, pins, &c.

Mal'lett Creek, in *Ohio*, a post-village of Medina co., abt. 115 m. N.N.E. of Columbus.

Mal'leus, *n.* [Lat., hammer.] (*Anat.*) One of the small bones of the internal ear, attached to the *membrana tympani*, somewhat in shape resembling a hammer.

(*Zoöl.*) See MALLEACÆ.

Mallicol'lo, an island of the New Hebrides group, in the S. Pacific Ocean, in Lat. 16° 25′ 20″ N., Lon. 167° 57′ 23″ E. *Area*, 600 sq. m.

Mallor'ca, an island of the Mediterranean. See MAJORCA.

Mallorquine, (*măl-lor-keen,*) *n.* and *a.* (*Geog.*) See MAJORCAN, *q. v.*

Mal'lory, in *Iowa*, a township of Clayton co.

Mal'lorysville, in *Georgia*, a post-village of Wilkes co., abt 76 m. N.N.E. of Milledgeville.

Mal'lotus, *n.* [Gr. *mallotos*, fleecy.] (*Zoöl.*) See COPELAN.

Mal'low, *n.* [Lat. *malva.*] (*Bot.*) See MALVA.

Mal'low, a town of Ireland, co. Cork, prov. of Munster, on the Blackwater, 37 m. S. of Limerick. It is a great place of resort in summer, on account of its mineral springs. *Pop.* 4,841.

Malm, Malm-brick, (*măm,*) *n.* A kind of light, yellow brick.

Malmai'son. (*French Hist.*) A castle near Versailles, which was the retreat of the Empress Josephine after her divorce from Napoleon I., and the scene of her death, May 29, 1814.

Malmedy, (*mam'de,*) a town of Rhenish Prussia, dist. of Aix-la-Chapelle, on the Warge, 20 m. S. of Aix-la-Chapelle. *Manuf.* Woollens, lace, muslins, and leather. It also contains mineral springs. *Pop.* 4,400.

Mal'mo, a seaport-town of Sweden, cap. of dist. of same name, on the Sound, nearly opposite Copenhagen, and 110 m. S.W. of Christianstadt. It is strongly fortified, and carries on a brisk trade in corn. *Manuf.* Woollen cloth, carpets, skins, gloves, stockings, &c. *Pop.* 25,526.

Malm-rock, (*măm'-,*) *n.* (*Min.*) A kind of freestone.

Malmsey, (*măm'zy,*) *n.* [Fr. *malvoisie*, from *Malvasie*, a town in Greece.] See MADEIRA WINE.

Mal-o'dor, Mal-o'dour, *n.* [Lat. *mal*, and Eng. *odor.*] A rank or offensive odor.

Mal'o-Jaros'lawitz, a town of Russia, govt. of Kaluga. It is noted as the scene of a most sanguinary battle in 1812, between the French army under the command of Napoleon I. and the Russians, in which the latter were defeated.

Mal'o, (St.,) a seaport-town of France, dept. of Ille-et-Vilaine, on the British Channel, 40 m. N.N.W. of Rennes, and 200 S.W. of Paris. It is built on the peninsula of Aron, connected by a causeway with the mainland, and strongly fortified. The port on the S. side is commodious and secure, but rather difficult of entrance. *Manuf.* Rope, fishing-nets, blocks, and other marine fittings. It has a considerable trade in provisions with the French colonies, a brisk coasting-trade, and numerous vessels engaged in the mackerel, cod, and whale fisheries. *Pop.* 12,000.

Malone', in *Illinois*, a township of Tazewell county.

Malone, in *New York*, a post-village, cap. of Franklin co., abt. 60 m. E. of Ogdensburg.

Malone, in *Wisconsin*, a post-office of Fond du Lac co., on the C. & H. W. R.R.

Malpighi, MARCELLO, (*măl-pig'e,*) an eminent Italian physician and anatomist; born 1628. He was professor of medicine at Bologna and Pisa, and became first physician to Pope Innocent XII. in 1691. His discoveries in anatomy were considerable, particularly respecting the structure of the skin and the secreting glands; and his merit was very high as a vegetable physiologist. D. 1694.

Malpigh'ian, *a.* Having reference or pertaining to Malpighi.

Malpighia'ceæ, *n. pl.* [In honor of MALPIGHI, *q. v.*] An order of plants, alliance SAPINDALES. DIAG. Complete, partially symmetrical flowers, an imbricated calyx, naked stalked petals, ovules hanging by coriis, single stigmas, and usually a convolute embryo. They are trees or shrubs with simple, stipulate leaves. Flowers perfect or polygamous. Calyx and corolla with five parts; the sepals have usually large glands at the base, and imbricated or very rarely valvate; the petals unguiculate, without appendages, hypogynous, and convolute. Stamens usually 10, sometimes 15, with a fleshy prolonged connective. Ovary usually composed of 3 carpels (rarely

2 or 4) partially or wholly combined; ovules solitary, pendulous from long stalks. The plants of this order are confined to tropical climates. Some have edible fruits, as the species *Malpighia glabra* and *punicifolia*, which yield the Barbadoes cherries; others are chiefly remarkable for their large and showy flowers; while some are interesting to the botanist on account of their anomalous stems, the peculiarity of which consists in the presence of several woody axes without annual zones. The order, including 43 genera and 556 species, is generally characterized by astringency.

Malpigh'ian, *a.* (*Anat.*) A term applied to certain parts, especially of the kidney, in allusion to the anatomist Malpighi, *q. v.*, by whom they were discovered or first definitely described. Thus the numerous secreting tubes (*tubuli uriniferi*), where they are collected into conical bundles, form the *Malpighian* cones or pyramids; the more tortuous parts of the tubes, which pass towards the surface of the kidney, terminate in, or bear on small pedicels appended to their walls, flask-shaped sacculi, named *Malpighian capsules*. The arteries of the kidney, before dividing into capillaries, form, by tortuous convolutions, little balls, called *Malpighian corpuscles* or *glomerules*.

Malplaquet, (*mal'pla-kā'*) a village of France, dept. Nord, 9 m. from Mons, in the plain of which, near the river Sart, the Duke of Marlborough and Prince Eugène, at the head of an allied English and German army, defeated the French under Marshal Villars, Sept. 11, 1709. The allies lost 18,000, and the French 15,000, in killed and wounded.

Malposition, (*-zĭsh'un,*) *n.* A bad or wrong position.

Malprac'tice, Maleprac'tice, *n.* Practice contrary to established rules; illegal or immoral behavior; particularly, professional misconduct of a medical man.

Mal'strom, Mos'koestrom, (*mail'strom,*) a violent whirlpool on the coast of Norway; Lat. 68° 8′ N., Lon. 10° 40′ E.

Malt, (*mawlt,*) *n.* [A. S. *mealt*, malt; D. *mout*; Dan., Swed. and Icel. *malt*; Ger. *malz*; probably akin to A. S. *miltan*, to be fluid or liquid. See MELT.] Barley or other grain steeped in water till it germinates, and then dried in a kiln and ground. It is used in brewing ale, beer, and porter, and also in the distillation of whisky.

—*a* Containing, consisting of, made with, or pertaining to malt; as, *malt* liquors.

Malt drink, or *liquor*, a beverage prepared by infusion of malt, as ale, beer, porter, &c. — *Malt-dust*, sweepings or refuse of malt — *Malt-floor*, a floor on which malt is placed to dry. — *Malt-house*, a building for the preparation of malt. — *Malt-kiln*, a kiln for drying malt. — *Malt-mill*, a mill for grinding malt. — *Malt-whisky*, whisky distilled from malt; as, Scotch *malt-whisky*.

—*v. a.* To make into malt; as, to *malt* barley or rye.

—*v. n.* To be converted into malt.

Mal'ta, (anc *Melita,*) an island in the Mediterranean, belonging to Great Britain, 62 m. S.W. of Cape Passaro in Sicily, and 198 m. N. of Tripoli in Africa; Valetta, its port and cap., being in Lat. 35° 54′ 6″ N., Lon. 14° 31′ 10″ E. Extreme length 17 m., breadth 9 m. *Area*, 95 sq. m. The island is of an irregular oval shape, rising precipitously from the water's edge on the S. and S.W. The surface presents the appearance of an inclined plane, sloping gradually from its highest elevation in the S.W. to the more level land on the N.E. The 2 small islands, Gozo and Comino, are separated from it only by a narrow channel. Every spot is cultivated with the greatest care, and the soil, when deficient, is supplied in shiploads from Sicily. The climate is healthy, though, from being exposed to the winds blowing from the African and Syrian deserts, it is unusually hot during the summer months, when the heat almost equals that of the tropics. Frost and snow are unknown. *Prod.* Are chiefly wheat and cotton, though most of the productions, both of Europe and the tropical climates which have been tried

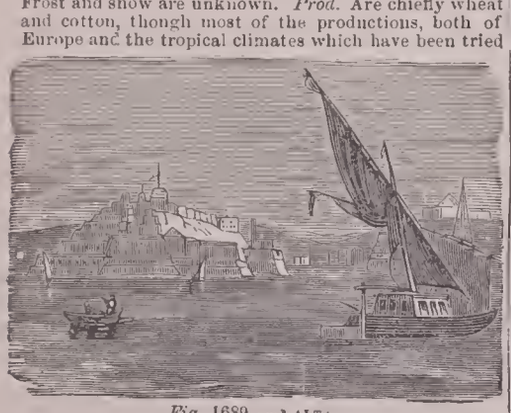

Fig. 1689. — MALTA.

here, have succeeded. The honey and fruit of *M.* is in great repute. *Manuf.* Coarse cottons, jewelry, and cabinet-work. The central position, excellent harbor, and great strength of *M.* make it an admirable naval station, both for war-vessels and merchant-ships, and renders it of material importance to Great Britain. It carries on an extensive commerce with the various towns on the Mediterranean. *Chief towns.* La Valetta, the cap., and Citta Vecchia. *Hist.* This island, the anc. *Melita*, was first colonized by the Phœnicians, and afterwards by the Carthaginians. The Romans laid it waste B. C. 257. The Apostle Paul was wrecked here on his voyage from Palestine to Rome, in 59. It fell under the power of the Vandals, and was wrested from them by Belisarius in 533. It was conquered in 870 by the Arabs, who were expelled by the Normans, under Count Roger, in 1090, and they held the island till 1189, when it passed under the sway of the German emperors. It was in the possession of France from 1258 till 1282, when it passed to the house of Aragon. The emperor Charles V., who inherited it as king of Aragon, made a grant of it to the Hospitallers, or Knights of St. John of Jerusalem, in 1530. Soliman I. assailed Malta with a fleet of 159 vessels carrying 30,000 troops, in 1565; but the knights, under their Grand-Master, John de Lavalette, succeeded in repelling all their attacks, and compelled them in the end to retreat with immense loss. The city, called La Valetta, after the Grand-Master, who had distinguished himself in that memorable siege, was commenced in 1566, and completed in 1571. The Turks failed in another attack upon the island in 1601. The French expedition to Egypt arrived off the island in 1798, and the Graud-Master, Ferdinand Hompesch, surrendered without striking a blow. After Napoleon pursued his course to Egypt, the same year, the inhabitants revolted and waged war against the French, in which they were assisted by an English squadron, until 1800, when the French commander surrendered the whole island to the English. By the 10th art. of the treaty of Amiens, in 1802, England engaged to restore *M.* to the Hospitallers, and its independence was to be placed under the guaranty and protection of Great Britain, France, Austria, Spain, Prussia, and Russia; but, when in possession, the English government refused to give up the island, and hostilities were renewed. *M.* was formally ceded to England by the treaty of Paris in 1815. *Pop.* 146,852. In no fortress in Europe are the defences more imposing.

Malta, (*mawl'ta,*) in *Illinois*, a post-village and township of De Kalb co., about 64 miles W. of the city of Chicago.

Mal'ta, in *New York*, a post-township of Saratoga co.

Mal'ta, in *Ohio*, a post-village and township of Morgan county, about 75 miles E.S.E. of the city of Columbus.

Mal'taville, in *New York*, a post-village of Saratoga co., abt. 30 m. N. of Albany.

Maltese', *n. sing.* and *pl.* (*Geog.*) A native or inhabitant of the island of Malta; — plurally, the people of Malta.

—*a.* Belonging or having reference to Malta, or to its people.

Maltese' Dog, *n.* A small kind of Spaniel (Fig. 1690) with roundish muzzle, and long, silky, generally white hair. It is altogether useless, and fit only for a lap-dog.

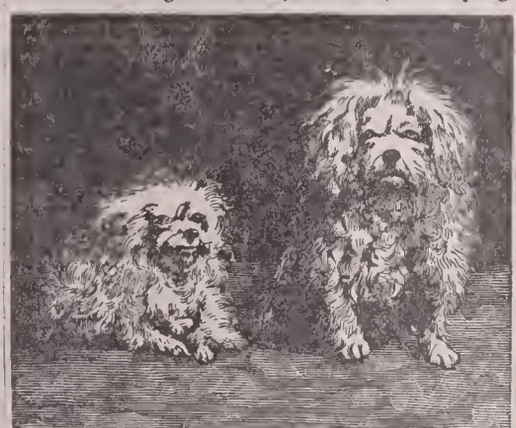

Fig. 1690. — MALTESE DOGS.

Mal'te-Brun, CONRAD, one of the most celebrated geographers of modern times, was B. in 1775, in Jutland, Denmark. After studying theology a short time at the university of Copenhagen, he devoted himself to literature and politics. Having given offence by his writings in favor of the liberty of the press and the enfranchisement of the peasants, he was banished to Sweden in 1796. After having resided for a time at Stockholm, he went to Paris, where he soon acquired great reputation, particularly as a geographer. He edited the foreign political department of the *Journal des Debats*, was a contributor to the *Biographie Universelle*, and produced various works. Among these the greatest is the well-known *Précis de la Géographie Universelle* (8 vols. 8vo.), the first volume of which appeared in 1810, and the last after his death, in 1829. The first six volumes only were completed by *M.* Among his other works are *Tableau de la Pologne Ancienne et Moderne; Annales des Voyages*; and the valuable treatise, published in conjunction with Mentelle, *Géographie Mathématique, Physique, et Politique* (16 vols. 8vo.) D. 1826.

Mal'tha, *n.* [Lat.] A kind of bitumen.

Malt'-horse, *n.* A horse for working a malt-mill; — hence, a dull or stupid fellow.

Malthus, THOMAS ROBERT, F. R. S., a celebrated English political economist, B. at Albury, Surrey, 1766, and educated at Cambridge. He was appointed, about 1805, professor of history and political economy in the college of the East India Company at Haileybury, and continued to hold that situation till his death, which occurred in his 70th year. His best-known work, the *Essay on the Principle of Population*, which gave rise to so much discussion, and excited so much ignorant indignation against its author, first appeared in 1798. It was subsequently enlarged, and passed through many editions. The Malthusian system is founded on the hypothesis that population increases in a geometrical, while provisions only increase in an arithmetical ratio. It proposes to remedy or alleviate the consequent evils and miseries of poverty by a *preventive check* — the moral restraint on marriage, dictated by reason and reflection, and adhered to by deliberate and benevolent choice. *M.* was author also of an important *Inquiry into the Nature and Progress of Rent*, and numerous other works. D. 1835.

Malthusian, (*-thū'zhan,*) *a.* Belonging or having reference to Prof. Malthus, or to his doctrine of economics. — See MALTHUS.

—*n.* A disciple of Malthus; one who is opposed to early and hasty marriages.

Malt'man, *n.*; *pl.* MALTMEN. A maker of malt; a maltster.

Mal'ton, (New,) a town of England, co. York, on the Derwent, 16 m. N.E. of York, and 181 N.W. of London. New Malton Bridge is made available for the shipment of large quantities of corn, hams, bacon, and other produce. Malting and tanning are carried on to a considerable extent. *Pop.* 8,900.

Maltreat', MALETREAT', *v. a.* To abuse; to treat roughly, rudely, or with ill-usage.

Maltreat'ment, *n.* Ill-usage; abuse; rough treatment.

Malt'ster, *n.* A maltman.

Ma'lum, *n.* [Lat.] An evil.

Malum in se, and *malum prohibitum.* [Lat.] (*Law.*) See MALA IN SE.

Mal'va, *n.* [Lat., the mallow] (*Bot.*) The typical genus of the order *Malvaceæ*. The species *M. sylvestris* is the common Mallow, a handsome plant, with large, purplish flowers, growing at roadsides and in waste

Fig. 1691. — THE COMMON MALLOW, (*Malva sylvestris.*)

places. The French name for the plant, *Mauve*, has of late been applied to a delicate shade of purple. The bark of the Mallow yields strong fibres. The root and leaves have similar properties to those parts of the Marsh-mallow. (See ALTHÆA.) The petals of the species *M. alcea* have astringent properties, and yield a black dye.

Malva'ceæ, *n. pl.* [From *Malva*, the typical genus.] (*Bot.*) An order of mucilaginous plants, alliance *Malvales*. — DIAG. Columnar stamens all perfect, and 1-celled anthers turned inwards. They are herbaceous plants, trees, or shrubs, with polypetalous flowers and monadelphous stamens. The species are found all over the temperate and tropical parts of the world, especially the latter. Their flowers are in many cases large and handsome; but the order is chiefly interesting from containing the *Gossypium* or Cotton-plant. Another species is the Marsh-Mallow, *Althæa officinalis*. Some yield a fibre fit for manufacture into cordage, and *Hibiscus cannabinus* yields Indian Hemp. The order includes 39 genera and 1,000 species.

Malvaceous, (*-vā'shus,*) *a.* (*Bot.*) Pertaining, or having reference to plants of the order *Malvaceæ*.

Mal'væ, *n. pl.* (*Bot.*) A tribe of plants, order *Malvaceæ*.

Mal'vales, *n. pl.* (*Bot.*) An alliance of plants, subclass *Hypogynous Exogens*. — DIAG. Monodichlamydeous flowers, axile placentæ, valvate calyx, an imbricated or twisted corolla, definite or indefinite stamens, and embryo with little or no albumen. The alliance is divided into 6 orders, viz.: STERCULIACEÆ, BYTTNERIACEÆ, VIVIANIACEÆ, TROPÆOLACEÆ, MALVACEÆ, and TILIACEÆ, (*q. v.*).

Mal'vern, (Great,) a town of England, co. of Worcester, 8 m. S.W. of the city of Worcester. It is noted for its mineral springs, and is a great resort for invalids and others. *Pop.* 4,900. — LITTLE MALVERN, a village of 100 inhabitants, lies 3 m. to the S. of the above.

Malvern, (*mawl'vern.*) in *Ohio*, a post-village of Carroll co., abt. 137 m. E.N.E. of Columbus.

Mal'vern Hills, an elevated range in England, in the cos. of Worcester and Hereford. From N. to S. they extend about 9 m. Near the centre is an ancient British fortress, called the *Herefordshire Beacon*, 1,444 feet above sea-level.

Mal'vern Hills, in *Virginia*, a locality in Henrico co., near the James River, abt. 12 m. S.S.E. of Richmond. It was the scene of a severe engagement, July 1, 1862, between the Union and Confederate forces, in which the latter were the attacking party, and were repulsed with heavy loss.

Malversa'tion, *n.* [Lat. *male*, and *versatio* — *verso*, to turn, wind, twist, or whirl about often or violently. See VERSION.] Evil conduct or behavior; improper or wicked acts; mean artifices, or fraudulent tricks; malfeasance in office.

Malvoisie, (*mal-vwah-zē'*,) *n.* Malmsey wine. See MADEIRA WINE.

Mal wah, or **Malwa,** an anc. kingdom of Hindostan, chiefly between Lat. 22° and 26° N., Lon. 74° and 80° E., having N. Rajpootana and Agra, E. Allahabad, S. Gundwana and Candeish, W. Gujerat. It is now divided into a number of states under British protection, except Scindia's dom., which is now the only independent country in Hindostan.

Mal wan, or **Soonderoog,** an island and fortified town of Hindostan, presidency of Bombay, on the Malabar coast, 50 m. N.W. of Goa; Lat. 15° 52′ N., Lon. 73° 47′ E. It was formerly a great resort of pirates.

Mam, *n.* [Abbreviation of *mamma*.] Mamma; mother; — opposed to *dad*. See MAMMA.

Mamaka'ting, in *New York*, a township of Sullivan

Mamanguape, (*ma-man-gwa'pa*,) a river of Brazil, enters the Atlantic abt. 25 m. N. of Parahiba.

Mamangua'pe, or MONTEMAR, a town of Brazil, abt. 35 m. N.N.W. of Parahiba; *pop.* abt. 5,000.

Mamaroneck, in *New York*, a post-village and township of Westchester county, about 23 miles N.E. of New York.

Mambuca'ba, a town or Brazil, abt. 78 m. W. of Rio de Janeiro; *pop.* abt. 5,000.

Mam'elon, *n.* A knob or hillock of land; an elevated piece of ground in the form of a hemisphere.

Mamelukes, MAMLOUKS, MAMELUCS, or MEMLOOKS, *mam'a-looks.*) [Ar. *memalik*, a slave.] (*Hist.*) A body of soldiery who ruled Egypt for several centuries. They were introduced into that country by the Sultan Malek Salech, about the middle of the 13th century, being Asiatic youths, chiefly from the Circassian region, purchased as slaves from Genghis Khan, whose captives they were. These were trained to military exercises, and formed into a corps of 12,000 men, called *Memlooks*. They soon exhibited a spirit of insubordination, and, in 1254, assassinated the sultan, Tuvan Shah, successor of Malek Salech, and raised Eybek, one of their own number, to the throne. A line of sultans, known as the *Bahree*, or Turkish dynasty, now followed, all of whom were raised to power by the *M.*, and many of them deposed and slain. This dynasty conquered Syria, took Damascus, and put an end to the domination of the Abassides caliphs. In 1382 the Bahree dynasty was overthrown by a new band of *M.*, called *Borghee*. The Caucasian element predominated in the first dynasty, the Tartar element in the second. In general they formed able and energetic rulers, and Egypt under their sway arrived at a degree of prosperity and power to which she had been a stranger from the days of Sesostris. Selim I., who overthrew the *M.* kingdom in 1517, was compelled to permit the continuance of the twenty-four *M.* beys as governors of the provinces. This arrangement subsisted till the middle of the 18th century, when the number and wealth of the *M.* gave them such a preponderance of power in Egypt, that the pasha named by the Porte was reduced to a merely nominal ruler. The number of them scattered throughout all Egypt was between 10,000 and 12,000 men. They were all massacred at Cairo by Mehemet Ali, March 1, 1811.

Mamers, (*ma'mair*,) a town of France, dept. of Sarthe, on the Dive, 24 m. N.N.E. of Le Mans. *Manuf.* Woollens, cottons, and hempen goods. *Pop.* 6,500.

Mamiña, (*ma-mēēn'ya*,) a large Indian town of Peru, in alt. Lat. 20° 4′ 48″ S.

Mamma', (sometimes written MAMA,) *n.* [Lat. *mamma*, a mother's breast or pap; W. *mam*; Arm. *manrun*; Gr. *mammē*; formed from the sound.] A child's attempt to articulate mother; a familiar word to express *mother*, used by children and young persons; — correlative of *papa*.

Mam'ma, *n.*; *pl.* MAMMÆ. [Lat., the heart; *pl.* the breasts.] (*Anat.*) The two secreting glands which, situated on the front of the thorax, constitute the female bosom, and the organs which supply the infant with nutrition.

Mam'mal, *n.*; *pl.* MAMMALS. [Lat. *mammalis*, pertaining to the breasts, from *mamma*, the female breast or pap.] (*Zoöl.*) An animal that suckles its young; a female animal having breasts or paps; one of the mammalia.

Mammalia, (*măm-mā'lē-ă*,) *n.* [From Lat. *mammæ*, the breasts.] (*Zoöl.*) This important class, which has been placed by Linnæus at the head of the vertebrated series in the animal kingdom, includes all such animals as are provided with organs for suckling their young. Even excluding man, who necessarily belongs to the class, we find among the *mammalia* the greatest number of faculties, the most delicate sensations, the most varied action, and an extraordinary aggregate of properties for the production of intelligence; there is every reason, therefore, for Linnæus having classed the mammalia as first among animals. They are most fruitful in resources, least subject to mere instinct, and, finally, most susceptible of progressive improvement. With but a moderate amount of respiration, they are generally intended for locomotion by walking with strength and continuity; and hence all the articulations of their skeletons have the forms very exact; thereby determining, with unvaried precision, the nature of their movements. Some fly through the air by means of membranes affixed to their limbs, although typically adapted for walking on the earth; while others have the extremities so short that they move with ease only in the water; both of these exceptions retain, however, in all other respects, as a rule, the general characteristics of their class. It may be here stated that all mammalia are endowed with warm blood, which results from the great development of their respiratory apparatus, the heart being double, and containing four cavities; that is to say, an auricle and ventricle on the right side, and the same on the left. The circulation is carried on in the following manner. The venous blood passes through the cavities on the right side, and is distributed through the lungs, where it combines with the oxygen or vivifying portion of the air; it is then conveyed by the pulmonary veins to the left auricle, from whence it flows into the ventricle, and is propelled through the arterial system. (See HEART.) The females suckle their young with milk secreted in breasts or *mammæ*, and are viviparous, or ovo-viviparous; they are consequently placental or implacental; the placental including the higher order of mammals, from man to the last true rodent, and the implacental composing the marsupialia and monotremata. Both of these divisions have the upper jaw fixed to the skull, and the lower is formed of but two pieces only, and is articulated to the temporal bone. The neck (to pursue our investigation) is composed of seven vertebræ; but in different descriptions of animals some of these bones are either more or less in number; the anterior ribs are affixed to the sternum, or breast-bone, by cartilaginous processes. The anterior extremities of these commence with a shoulder-blade which is not articulated, but rests between the muscles, and often, indeed, leans on the sternum by means of the clavicle on each side. This is continued by an arm, forearm, and hand. The latter is formed of two rows of bones, called the *carpus*, a third row, called the *metacarpus*, and fingers, each consisting of two or three joints. With the exception of the cetacea, or whale family, all mammalia have the pelvis attached to the spine; the pubes forming the anterior, and the ilia, ischia, sacrum, and coccyx, the lateral or posterior parts. At the point where the first three mentioned bones unite, on each side, is the articulation of the femur, or thigh-bone, to which are attached the leg-bones, tibia and fibula, which are in most cases distinct; and

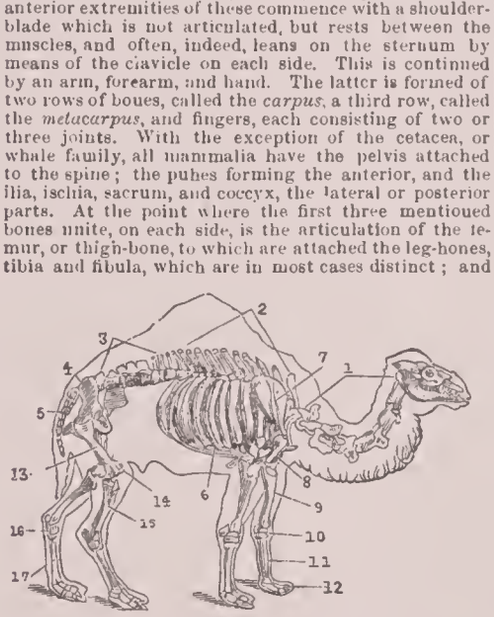

Fig. 1692. — SKELETON OF THE CAMEL.

1, cervical vertebræ; 2, dorsal vertebræ; 3, lumbar vertebræ; 4, sacral vertebræ; 5, caudal vertebræ; 6, ribs; 7, scapula; 8, humerus; 9, bone of forearm (radius and ulna fused together); 10, carpus, or wrist-bone; 11, metacarpus; 12, phalanges; 13, femur; 14, patella; 16, tarsus; 17, metatarsus.

are succeeded by those composing the foot, which correspond to the bones of the hand; namely, a tarsus, metatarsus, and toes. In different orders and genera of animals, the extremities vary considerably: in some, those of the fore parts are considerably lengthened, so as to form the supporters of a wing, — as in bats; in others, they are shortened, as is evinced in the jerboa and kangaroo; while in both of these last-mentioned varieties the posterior extremities are enlarged in the apparently greatest disproportion. The cetacea and similar animals, which have been briefly alluded to, have no pelvis whatever; their hinder extremities are likewise wanting; they are, however, supplied, instead of these, at the end of the spine or vertebral column, with cartilaginous bodies forming a kind of feet, or the flukes of a tail, which, in this species, is always horizontally placed. The fore-foot (*metatarsus*) usually counts as many bones as there are toes present. The metatarsus in the ruminant and solid ungulate animals is conformable to the metacarpus. In the genus Dipus (the jerboa), among the rodents, the three middle metatarsal bones unite, so as to form a single bone, which terminates below in three processes, to which the three large toes are connected, and which thus resembles the principal bone at the root of the foot in birds. The digits of the foot in the ruminants, the solid ungulates, and commonly, also, in the pachydermis, correspond in number and form to those of the hand. Such, also, is the case in most of the carnivorous animals, although in the genera *Felis* and *Canis* the thumb (pollex) of the hind foot is not developed, of which a trace is only observed in the fore-foot. In the monkeys the thumb is shorter; but the other digits are longer than in the human foot. The head is, in all mammalia, articulated by two condyles upon their atlas or first vertebra; as the seat of intelligence, it has excited the greatest interest in all ages; and it has been remarked, that the approach to reason observed in animals bears some relation to the size and configuration of the head. The brain is the centre or origin of the nervous system, and will be found fully described under an article bearing that name. (See EAR and EYE.) The tongue of the mammals is always fleshy, and is attached to a bone termed the *os hyoides*, which is composed of several pieces, and suspended to the cranium by ligaments. The lungs are two in number, and are divided into lobes, which are composed of an immense quantity of small cells; they are suspended without adhesion in a cavity formed by the ribs and diaphragm, and lined by the pleura. The skin of mammalia is, as a rule, usually covered with hair. Some exceptions, however, have horny plates, as the tribe *Manis*, or bony plates, as the armadilloes (the genus *Dasypus*); and, indeed, some have spines. The sense of touch is variously developed in the extremities of the limbs in the different species, according as the feet move only for progression, for standing, or for seizing alone. In the apes, which appear to be in this respect one of the most privileged, the hand is much less adapted for feeling than in man, who, in his erect position, can move and apply his fore limbs for the sense of touch more easily. The whiskers which are attached to the lips serve also, like the fleshy appendages attached to the jaws of some fishes, to give warning of external obstacles, on account of branches from the fifth pair of nerves being attached to their roots. The motions of mammals consist principally in progressing. Some are able to spring to great heights; others, again, are formed for swimming. In the cetaceans, or whales, swimming is the sole means of motion. Other mammals are able to fly, as was stated before, by means of a membranous substance below the elongated fingers of the four limbs; like the bats, for instance. With regard to the physical distribution of this class of animals much might be said. Some reside entirely in the sea, as the cetaceans and most of the seals. (See SEAL FAMILY.) Although some species, especially of the animals last named, live in fresh water, many varieties of the genus *Sorex*, the otters, beavers, and the duck-mole, reside in lakes and rivers. Others, again, live under-ground, as the family *Talpa* and *Bathyergus*. The greater part, however, live on land, — some on high mountain-tops, as the antelope, ibex, &c.; others on trees, as the apes, squirrels, and monkeys; and some resort, by flying and flapping in part, even to the air (the *Galeopithecus* and *Cheiroptera*). This difference of resort is naturally in relation with the general bodily form of the animal, and the constitution of its various parts, especially of the organs of motion and sense. In the geographic distribution of the mammalia, it may be as well stated that the numbers of its various classes increase from the pole to the equator, — as well the various classes as the sub-genera; although the cetaceans and seals must be excepted from the rule. There are species in the north polar regions common to the Old and New World; as *Canis lagopus*, *Ursus maritimus*, and *Cervus tarandus*; without the polar circle, also, some species are found in the northern countries of both hemispheres, as *Mustela Martis*, *Mustela erminea*, and *Castor Fiber* (some writers, indeed, maintain that the beaver of America is specifically different from that of the Old World). In the temperate parts of North America, almost all the species are such as do not appear in the eastern hemisphere; while in South America no single species is found which also lives in the Old World, — nay, even the genera differ for the most part from those of the Old World. South American genera, of which no species in the Old World are hitherto known, are the following, — *Dictoyles*, *Auchenia*, *Dasypus*, *Myrmecophega Bradypus Cavia*, *Loncheres*, *Nasua*, the genera of the Bat tribe; *Glossophaga*, *Phyllostoma*, *Molossus*, *Noctilio*, and many genera of Quadrumanes; namely, *Callithrix*, *Ateles*, *Mycetes*, *Pithecia*, and *Hapale*. *Procyon* is peculiar to the New World in the northern and southern hemispheres. *Fiber* is an animal form of North America. Other genera are peculiar to the eastern hemisphere; as *Sus*, *Equus*, *Camelus*, *Rhinoceros*, *Manis*, *Myoxus*, *Spalax*, *Cricetus*, *Viverra*, *Herpestes*, *Erinaceus*, the genera of bats; *Megaderma*, *Nycteris*, *Rhinolophus*, *Pteropus*, the family of the *Lemurids*, the genera of the apes; *Cercopithecus*, *Semnopithecus*, *Inuus*, *Cynocephalus*, *Hylobates*, *Simia*. To Africa, in particular, are peculiar the genera *Camelopardalis*, *Hippopotamus*, *Orycteropus*, *Cercopithecus*; while in a similar manner to the island of Madagascar are peculiar the *Centetes*, *Lemur*, *Lichanotus*, and the genus *Cheiromys*, a sciurean rodent which approaches the *Lemurids* in form. Most of the species of antelopes are also exclusively African. Most of the *Marsupiat* species are found in Australia and the adjoining islands; while the genus *Didelphys* alone is American, — Africa, as well as Europe, not possessing a single species of this division. If we take into consideration the entire class of mammals, exclusive of the *Cetaceans* and *Phocæ*, then the *Rodents* will be found to form one-third of the entire number of species, the *Carnivores* and *Cheiropters* together about one-third also, while the remaining third is formed, for the greater part, of the Quadrumanes and Ruminants; and especially of the Marsupials and Insectivorous *feræ*. With the exception of some species of bats and of the true whales, Mammals are not tied, like birds of passage, to make strictly limited migrations; but inhabit the same districts in winter and summer both. On the other hand, different species hibernate, and pass a greater or less portion of the year without food in caves and hiding-places. Among such in Europe are, for example, the Bat, the Hedgehog, the Hamster, the Marmot, and various other species of Rodents forming the gen-

Myoxus; and in the N., the bears. With reference to the classification and division of animals of the section *M.* that proposed by Cuvier, though subsequent research has led to other systems of classification, possesses many advantages over that adopted by Linnæus. In the present article Cuvier's system has been followed; and the great naturalist himself gives an outline of his object and reasons in the last edition of his *Animal Kingdom*. The following are his words: "The characters by which Mammalia differ most essentially, one from another, are derived from the organs of touch, from which results their degree of dexterity, and from the organs of mastication, which determine the nature of their food; and upon these very closely depends not only everything which is connected with the digestive functions, but a variety of other circumstances relative even to their degree of intelligence. The perfection of the organs of touch is estimated by the number and mobility of the digits, and the extent to which they are inclosed in a claw or hoof. A hoof which completely incloses that part of the digit which touches the ground, precludes the exercise of it as an organ of touch or prehension. The opposite extreme is where the nail, in the form of a single lamina, covers only one side of the end of the digit, leaving the other side in possession of all its delicacy of touch. The kind of food is indicated by the molar teeth, to the form of which the articulation of the jaws invariably corresponds. For cutting flesh, the molar teeth must be trenchant and serrated, and the jaws fitted together so as to move like the blades of a pair of scissors, simply opening and closing in the vertical direction. For bruising grains and roots, the molar teeth must have flattened crowns, and the jaws a horizontal motion; and further, that the grinding-face may be always unequal, like a mill-stone, the teeth must be composed of substances of different degrees of density, and consequently wearing down in different proportions. (With regard to this last-mentioned peculiarity, see art. Hoase.) Cuvier's arrangement is as follows:

Class.—Mammiferes.

Order I. *Bimana.*—Man.

Order II. *Quadrumana.*—Two families. 1. Apes and Monkeys; and 2. *Macaucus* (*Lemur*, according to Linnæns).

Order III. *Carnassiers.*—Family 1. *Cheiroptera* (Bats). 2. *Insectivora* (Hedgehogs, &c.). 3. *Carnivora.* Tribe 1. *Plantigrades:* Bears, Raccoons, &c. Tribe 2. *Digitigrades:* Martens, Otters, Dogs, Hyenas, Cats, &c. Tribe 3. *Amphibia:* Seals, Walruses, &c.

Order IV. *Marsupialia.* Subdivision 1. Opossums, Dasyurus. Subdivision 2. *Phalangista.* Subdivision 3. Kangaroos, Koalas, &c.

Order V. *Rodentia.* The Squirrels, Rats, Lemmings, Beavers, Porcupines, Hares, Guinea-pigs, &c.

Order VI. *Edentata.*—Tribe 1. *Tardigrades:* The Sloths. Tribe 2. Ordinary *Edentata:* the Armadilloes, Ant-eaters, Pangolins, &c. Tribe 3. The Monotremes, the Echidna, and the Ornithorhynchus.

Order VII. *Pachydermata.* Family 1. *Proboscidians:* Elephants and Mastodons. Family 2. Ordinary *Pachydermata:* The Hippopotami, Hogs, Rhinoceroses, and Tapirs. Family 3. *Solipeda:* The Horses.

Order VIII. *Ruminantia.*—1. No Horns: The Camels, including the Llamas, and the Musks. 2. True Horns, shed periodically: The Stags, or Deer. 3. Persistent Horns: The Giraffe. 4. Hollow Horns: The Antelopes, Goats, Sheep, and Oxen.

Order IX. *Cetaceæ.*—Family 1. Herbivorous *Cetaceæ:* the Manatees, &c. Family 2. Ordinary *Cetaceæ:* The Dolphins, Porpoises, Narwhals, Whales, &c.

The classification above given is in considerable measure antiquated, as, for instance, in classing the Monotremes under the Edentata. De Blainville, in 1816, divided the mammalia into 3 sub-classes. The two orders of Monotremes (Ornithorynchus and Echidna, he entitled Ornithodelphia (bird-wombed), the Marsupials he named Didelphia (double-wombed), and all other mammals Monodelphia (single-wombed). This division has been sustained by subsequent investigation, though under the more suitable titles proposed by Huxley, Prototheria, Metatheria, and Eutheria. The orders of mammals, as they are now ordinarily classed, are as follows: Leaving the Monotremata and Marsupiala as sub-classes, we begin the placental series with two orders of specially primitive characteristics, the Edentata (sloths, ant-eaters, armadillos, &c.), and the Sirenia (the dugong and manatee). The higher mammals seem to fall into three lines: the Carnivora (cats, dogs, bears, and seals), to which are allied the Insectivora (hedgehogs, moles, and shrews), the Chiroptera (bats), and the flying lemur or Galeopithecus, which some set aside as the type of a separate order. The second line is characterized by the great order Ungulata, including the Perrisodactyle or Odd-toed (horse, rhinoceros, tapir, &c.), the Artiodactylo or Even-toed (sheep, cattle, camels, swine, &c.), the Proboscidians or elephants, and the unique genus Hyrax. With the Ungulates there are certain reasons for connecting the Cetacea (whales and dolphins), and the Rodentia (squirrels, hares, rats, mice, &c.). The third line, which probably had a common origin with the two others, but has widely diverged, includes two orders, the Lemuroidea (lemurs), and the Primates (the monkeys, anthropoid apes, and man). In this classification man is no longer set aside as a separate order, as by Cuvier, but is found to have so many and such close links of connection physically with the anthropoids, that he is not even given generic distinction, but is looked upon as a species. Mentally, of course, he stands above the lower mammalia with the distinction of a separate class.—*Extinct Mammals.* The oldest relics of the mammalia come from the Upper Trias, near the beginning of the secondary system of the geological series. This oldest fossil form suggests a type that may have been ancestral to the Monotremes. In the Jurassic strata have been found somewhat numerous remains of small animals marsupial in character. The great width of the Cretaceous strata has yielded little trace of the mammalia, these strata being mostly of marine origin. Recently, however, some evidence of mammalian life has been found. With the beginning of the Tertiary strata mammalia fossils grow abundant, starting out with primitive forms of the placental type, but expanding rapidly into all the existing orders, and gradually developing into existing species as the recent age is approached.—*Evolution of the Mammalia.* It is in doubt whether the mammals developed from the reptiles or the amphibians, they resembling the former in some characters, and the latter in others. Of existing mammals the lines of descent of several forms have been traced, especially of the horse, which is linked by an unbroken series of fossil forms with the five-fingered, three-toed Eohippus, of the Eocene formation.

Mamma'lian, *a.* Pertaining to the mammalia.

Mammalif'erous, *a.* [Lat. *mammalia*, and *ferre*, to bear.] (*Geol.*) Containing mammalian remains, as certain strata.

Mammal'ogy, *n.* [Lat. *mamma*, and Gr. *logos*, discourse.] (*Zoöl*) The science of mammals; the doctrine of their organization, habits, properties, and classification. — See Mammalia.

Mam'mary, *a.* [Fr. *mammaire.*] (*Anat.*) Belonging to the breasts or paps; as, the *mammary* arteries.

Mam'met, *n.* [From *mam*, mother.] A puppet; a figure dressed up.

"Kate, this is no world to play with *mammets.*"—*Shaks.*

Mam'mifers, *n. pl.* [Lat. *mamma*, and *fero*, I bear.] (*Zoöl.*) A term synonymous with mammals or Mammalia, *q. v.*

Mammif'erous, *a.* Having breasts or paps, and suckling young therewith.

Mam'miform, *a.* [Lat. *mamma*, and *forma*, form.] Having the form or shape of paps or teats.

Mam'millary, *a.* [From Lat. *mamilla*, a breast, pap, or teat; dim. of *mamma.*] Pertaining or having reference to the breasts or paps; resembling a teat or dug.

(*Anat.*) Applied to a small protuberance on the vermiform process of the *cerebellum*, or little brain.

Mam'millated, *a.* Having small nipples, or little globe-like processes.

(*Conch.*) Formed like a nipple, as the apex of certain shells.

Mam'milloid, *a.* [Lat. *mamilla*, and Gr. *eidos*, form.] Presenting the form or shape of a teat or nipple.

Mam'mock, *n.* A large shapeless mass or piece.

"The ice was broken into large *mammocks.*"—*James' Voyage.*

—*v. a.* To tear; to break; to pull to pieces.

"I saw him run after a gilded butterfly; and oh, I warrant, how he *mammock'd* it."—*Shaks.*

Mam'modis, *n.* [From Hind. *mahmûdi.*] Plain India muslin of coarse texture.

Mam'mola, a town of Italy, prov. of Calabria, Ulteriore I., 8 m. N. of Gerace; *pop.* 8,300.

Mam'mon, *n.* [Syr. *mamuna.*] The Syrian God of riches, mentioned in the teachings of Christ as a personification of worldliness.

Mam'monish, *a.* Bent on the acquisition of wealth; mercenary; characterized by devotion to the spirit of mammon.

Mam'monism, *n.* Devotion to the acquisition of riches.

Mam'monist, *n.* A worldling; a person devoted to the pursuit of money-getting.

Mam'monite, *n.* A mammonist; a seeker after riches.

Mammoniza'tion, *n.* Act, process, or operation of mammonism.

Mammose', *a.* [From Lat. *mamma*, breast.] (*Bot.*) Breast-shaped.

Mam'moth, *n.* [A word of Samoiede origin, applied in Siberia to burrowing animals.] (*Pal.*) An extinct species of elephant, the bones of which resemble those of the existing Asiatic species, but whose grinders have the ribands of enamel narrower and straighter, the alveoli of the tusks longer in proportion, and the lower jaw

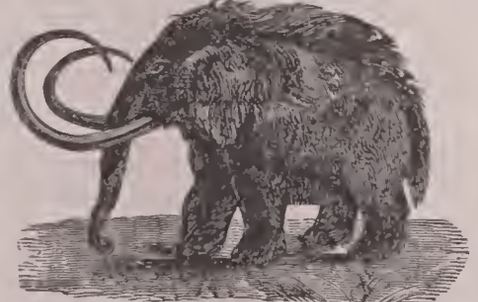

Fig. 1693.—THE MAMMOTH RESTORED.

(*Elephas primigenius.*)

more obtuse. The *M.* was thickly covered with hair of three different kinds: one consisting of stiff black bristles a foot in length; another of coarse, flexible hair; and the third, of a kind of wool. The bones and tusks of the *M.* are found throughout Russia, and more particularly in Eastern Siberia and the Arctic marshes, &c. The tusks form an article of commerce, and are much used in making the inferior kinds of ivory goods. The *M.* is more completely known than most other extinct animals by reason of the discovery of an entire specimen, preserved in the frozen soil of a cliff at the mouth of the river Lena, in Siberia. The skin was clothed with a reddish wool, and with long black hairs. It is now preserved at St. Petersburg, together with the skeleton, to which parts of the skin of the head, the eyehall, the strong ligament of the nape, which helped to sustain the heavy head and teeth, and the hoofs, remain attached. Others have since been found—one so well preserved that the stomach still contained remains of its food, such as young shoots and cones of fir and pine. Remains of the *M.* have been found in the British Isles, France, the Mediterranean, Siberia, and in many parts of the United States and Canada. So, while in Europe the remains of the *M.* occur chiefly, if not exclusively, in post-pliocene deposits, the North American fossil elephant is imbedded in strata above the drift of a distinctly more recent age, and was contemporary of the *mastodon giganteus*, their bones being found together in the marshy alluvium of Big Bone Lick.

Mam'moth, *a.* Resembling the mammoth in size; colossal; huge; gigantic as, a *mammoth* ox, a *mammoth* fraud.

Mam'moth Cave. See Cave.

Mam'moth Ledge, in *Nevada*, a village of Douglas co., abt. 20 m. S.E. of Genoa.

Mam'my, *n.* [Corruption of *mamma.*] Mother; mamma; — a child's familiar colloquialism.

Mamore, Marmore, or Rio Grande, (*ma-mo-ra'*,) a river of Bolivia, formed by the Guasey and Chaparé, or Chapari, rivers, and flowing N. abt. 500 m., joins the Beni to form the Madeira.

Man, *n.*; *pl.* Men. [A. S. *man, mann, mon;* D. and Swed. *man;* Ger. *mensch, mann;* Goth. *man, manna;* Icel. *mannr.* Derived by Müller, after Graff, from Sansk. *man*, to think; by Bopp from *mânava*, sprung from *manu.*] An individual of the human species; a human being; a person. — A male individual of the human race, of adult growth or years; a grown male, as distinguished from a woman or boy. — The species of living beings distinguished by the power of abstract thought; mankind; the human race; the whole species of human beings; sometimes, the male sex collectively, in contradistinction from *woman.* — A male adult possessing the distinctive qualifications and attributes of manhood; a male, according to a standard of superior virtues and properties demonstrative of manliness. —A servant or an attendant of the male sex; a dependant; — invariably with a possessive pronoun; as, go call *my man.* — A husband; a married man.

"Every wife ought to answer for her *man.*"—*Addison.*

—Sir; — used as a familiar word of address, frequently with impatience or petulance, and in a contemptuous or depreciatory sense.

"We speak no treason, *man.*"—*Shaks.*

—A piece, with which a game, as chess, draughts, or backgammon, is played.

(Note. *Man* is frequently used in composition as a compound term, having meanings generally obvious and self-explanatory, as *man*-eating, *man*-servant, &c.)

Man of straw, a puppet; an insolvent, moneyless person; one who is controlled by another; a nominee.

Man-of-war, a ship of war of the larger size.

To be one's own man, to have entire control of one's self.

(*Zoöl.*) Linnæus was the first who ventured to class Man in a scientific system with the rest of animated nature; nor did he wholly escape censure for degrading the dignity of the human race by such an approximation; but whether considered as the head of the animal creation, and a part of it; or as a sole genus and sole species, distinct from others, and lord of all; it is not merely correct, but absolutely necessary, to define Man — if viewed solely in a physical light, and setting aside his divine reason, and his immortal nature — as a being provided with two hands, designed for prehension, and having fingers protected by flat nails; with two feet, destined for walking; with a single stomach; and with three kinds of teeth, — incisive, canine, and molar. His position is upright, his food both vegetable and animal, his body naked. Man is the only animal truly *bimanous* and *bipæd.* His whole body is modified for the vertical position. His feet furnish him with a larger base than those of other mammalians; the muscles which retain the foot and thigh in the state of extension are more vigorous, whence results the swelling of the calf and buttock; the flexors of the leg are attached higher up, which permits of complete extension of the knee, and renders the calf more apparent. The pelvis is larger, which separates the thighs and feet, and gives to the trunk that pyramidal form favorable to equilibrium; the necks of the thigh-bones form an angle with the body of the bone, which increases still more the separation of the feet, and augments the basis of the body. And the head, in this vertical position, is in equilibrium with the trunk, because its articulation is exactly under the middle of its mass. Man thus preserves the entire use of his hands for the arts, while his organs of sense are most favorably situated for observation. His two eyes are directed forwards; which produces more unity in the result of his vision, and concentrates his attention more closely on objects of this kind. He has a particular preëminence in his organ of voice: of all mammalians, he can alone articulate sounds. Hence results his most invaluable mode of communication, for of all the signs which can be conveniently employed for the trans-

RACES OF

MONGOLIAN.

1. Tunguse Woman. 2. Kirghis. 3. Chinese Woman.
4. Corean. 5. Japanese Woman. 6. Tchuktchi.

CAUCASIAN.

7. Cossack. 8. Georgian Woman. 9. Cashmerian. 10. Persian.
11. Arab. 12. Swede. 13 Scotchman. 14. Italian (Sicily).

MAL

15. Diak Woman. 16. Malay Wo
18. Samoan Woman. 19.

MANKIND

17. Andaman Islander.
20. Maori.

AMERICAN.

21. Eskimo (Labrador). 22. Sioux (No. Amer.) 23. Apache (No. Amer.)
24. Mexican Squaw (Yucatan). 25. Bororo (Brazil).
26. Araucanian (Chile). 27. Fuegian Woman.

ETHIOPIAN.

28. Massai. 29. Zulu. 30. Loango Woman.
31. Abyssinian Woman. 32. Nubian. 33. Bushman.

mission of ideas, variations of sound are those which can be perceived at the greatest distance, and in the most various directions simultaneously. The ordinary produce of the human species is but one child at a birth; the period of gestation, nine months. The fœtus grows more rapidly as it approaches the time of birth. The infant, on the contrary, increases always more and more slowly. It has reached upwards of a fourth of its height when born; attains the half of it at two years and a half; and the three-fourths at nine or ten years. By the eighteenth year the growth almost entirely ceases. Man rarely exceeds six feet, and seldom remains under five. Woman is ordinarily some inches shorter. Scarcely has the body attained its full growth in height, before it commences to increase in bulk; fat accumulates in

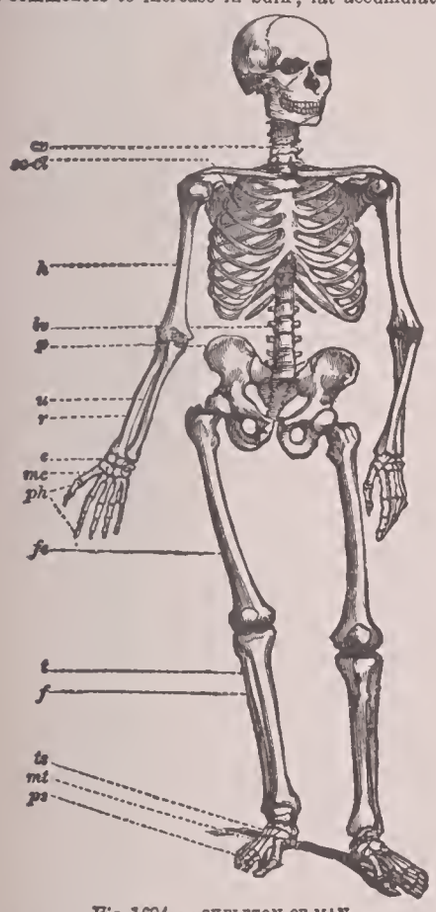

Fig. 1694. — SKELETON OF MAN.

cv, cervical vertebræ; *sc.cl*, scapula and clavicle; *h*, humerus; *lu*, lumbar vertebræ; *p*, pelvis; *u*, ulna; *r*, radius; *c*, carpus; *mc*, meta-carpus; *ph*, phalanges; *fe*, femur; *t*, tibia; *f*, fibula; *ts*, tarsus; *mt*, metatarsus; *ps*, phalanges.

the cellular tissue. The different vessels become gradually obstructed; the solids become rigid: decrepitude and decay follow in their turn; and most of the species, either from disease, accidents, or merely old age, perish ere they are "threescore years and ten." Occasionally one lives upwards of a hundred years; but long before that patriarchal age is reached, the survivor needs no monitor to tell him that "all is labor and sorrow." It has been made a subject of dispute, whether there is more than one species in the human race; but it is merely a dispute of words; and if the term *species* is used in its common scientific sense, it cannot be denied that there is but one species. There are, however, certain and constant differences of stature, physiognomy, color, nature of the hair, or form of the skull, which have given rise to subdivisions of this species. Blumenbach reduces these varieties to five: The first variety, usually called the *Caucasian*, occupies the central parts of the old continent, namely, W. Asia, E. and N. Africa, Hindostan, Europe, and a great part of America. Its characters (already given, but this we must repeat here, as a term of comparison) are the color of the skin, more or less white or brown; the cheeks tinged with red; long hair, either brown or light; the head almost spherical; the face oval and narrow; the features moderately marked, the nose slightly arched; the mouth small; the front teeth placed perpendicularly in the jaws; the chin full and round. The regularity of the features of such a countenance, which is that of the European, causes it to be generally considered (by them at least) as the most agreeable. 2. The second variety has been called the *Eastern* variety. The color in this race is yellow; the hair black, stiff, straight, and rather thin; the head almost square; the face large, flat, and depressed; the features indistinctly marked; the nose small and flat; the cheeks round and prominent; the chin pointed; the eyes small. This variety comprises the Asiatics to the E. of the Ganges and of Mount Bsloor, except the Malays. 3. The *American* variety resembles that last described in several points. Its principal characters are the coppery color; stiff, thin, straight black hair; low forehead; eyes sunk; the nose somewhat projecting; cheek-bones prominent; the face large. This variety comprises all the Americans, excepting the Esquimaux. There are several branches, however, which differ considerably. 4. The fourth variety is called by Blumenbach the *Malay*, and described as of a tawny color; the hair black, soft, thick, and curled; the forehead a little projecting; the nose thick, wide, and flattened; the mouth large; the upper jaw projecting. This variety comprehends the islanders of the Pacific Ocean. 5. The remaining variety is the *Negro*. Its characters are: color black; hair black, and woolly; head narrow; forehead convex and arched; cheek-bones projecting; nose large, and almost confounded with the upper jaw; the upper front teeth obliquely placed; the lips thick; the chin drawn in; the legs crooked. This race is found in W. and S. Africa, and the great islands of the Pacific, generally in the interior. There are very great differences in the tribes included in this variety; the Negro, with the complexion of jet, and wool; the Caffre, with a copper complexion, and long hair; the sooty Papuans, or New Guinea-men; the natives of Van Diemen's Land, &c. Within each of these varieties are included numerous smaller divisions, which are certainly, though less prominently, distinct in their features. The varieties of national appearance between the English, French, and Germans, for example, are, in general, distinguishable, though it would be difficult to define their differences. Similar subdivisions of character exist among all the varieties, and so fill up the intervals between the extreme specimens of each as to form a regular and nearly perfect series, of which the Esquimaux and Negro might occupy the extremities, and the European the middle place, between the broad and high features of the one, and the narrow, elongated, and depressed skull and face of the other. Those writers who have gone deeply into the subject, and attempted to account for *all* the causes which have contributed to the diversity of the human species, have generally been led into a more discursive field than they had anticipated; while the result, perhaps, has been both inconclusive and unsatisfactory. In such a work as this, where brevity is scarcely less essential than precision, we are constantly warned not to exceed our limits. We shall, therefore, not pretend to describe here minutely the anatomical structure of Man (each part of the human body being the object of a special article), neither shall we attempt to follow him from his entrance into life to his mortal exit; but shall endeavor to lay before the reader such of our "gleanings" as we conceive will best illustrate the subject, without extending the art. to an unwarrantable length. In the economy of the human body there are peculiarities not less marked than those in its structure. Perhaps the most characteristic is the ability which Man enjoys of living on almost any part of the globe, and of thriving alike in either extreme of natural temperature. Thus the Greenlanders and Esquimaux have reached between 70° and 80° of north latitude, while the negro of Africa and the red men of America live under the equator. But even Europeans, accustomed to a temperate climate, can bear either of these extremes of cold and heat, as has been sufficiently proved by the numerous instances in which those who have gone on the Arctic expeditions have been obliged to winter in high northern latitudes; and, on the other hand, by the slight degree in which European settlers in the hottest parts of Africa are influenced by the temperature. "In adaptation with his ability to inhabit almost every climate, Man can subsist on the most varied food. In the northern regions, where the earth is covered through the greater part of the year with snow, and vegetables of any kind can be procured only in the smallest quantity, the Esquimau and Samoiede subsist as well on animal food alone as the European does on the most carefully mixed diet; and on the other hand, the inhabitant of the torrid zone is not more inconvenienced by his daily subsistence on the cocoa-nut, banana, yam, rice, and other farinaceous and acid vegetables. In the temperate climates, where animal and vegetable food can be procured with equal facility, Man is truly omnivorous; towards the poles animal food or fish becomes more exclusively his diet; and towards the equator his food is chiefly composed of vegetables: and there is no doubt that in each case that food which is most universally adopted is that which is best adapted for the health of the inhabitants. There is not a proof in the whole history of animals that any species or individual has ever made an advance towards an improvement, or an alteration in its condition: whether solitary or living in herds, the habits of all remain the same; all of the same species appear endowed with the same faculties and dispositions, and each is in mental power the same throughout his life. Contrast with these the progress of Man. In his origin weak, naked, and defenceless, he has not only obtained dominion over all the animate creation, but the very elements are made to serve his purpose. Of the earth he has built his houses, and constructed weapons and the implements of art; he uses the wind to carry him in ships, and to prepare his food; and when the wind will not suit him, he employs fire and water to replace or to resist it. By artificial light he has prevented the inconvenience of darkness; he has stopped and made rivers, and has forced deserts, marshes, and forests alike to bear his food; he has marked out and measured the course of the celestial bodies, till he has discovered from them the size and form of the earth that he himself inhabits." A comparison between the strength of Men and other animals may be estimated by various modes. First, by the weight they are able to carry. It is affirmed that the porters of Constantinople carry burdens of nine hundred pounds weight: and Desgnliers tells us that, by means of a certain harness, by which every part of a Man's body was proportionably loaded, the person he employed in this experiment was able to support in an erect posture, a weight not less than two thousand pounds. A horse, about seven times our bulk, would be thus able to raise a weight of fourteen thousand pounds, if his strength were in the same proportion. But the fact is, a horse cannot carry on his back above two or three hundred weight; while a Man can support two thousand pounds. But if we reflect for a moment, the reason of this will be apparent: a load on a Man's shoulders is placed to the greatest advantage; while, on the contrary, on the back of a horse it is placed to the greatest disadvantage. Suppose a Man to be standing as upright as possible under this before-mentioned enormous weight; then all the bones may be compared to pillars supporting a building, and his muscles will have very little employment in this dangerous duty; however, they are not absolutely inactive, as Man, let him stand ever so upright, will have some bending in different parts of his body. The muscles, therefore, give the bones a partial assistance, and that with the greatest possible advantage. The greatest force of a horse, and of other quadrupeds, is exerted when the load is placed in such a position that the column of the bones can be properly applied, which is lengthwise. When, therefore, we estimate the comparative strength of a horse, we must not regard what he can carry, but what he can draw: and in this case his amazing superiority over Man is easily discovered; for one horse can draw a load which ten men would be unable to move. — Every object in nature has its improvement and decay. The human form no sooner arrives at maturity, than it instantly begins to decline. The waste is at first insensible, and frequently several years revolve before we perceive any considerable alteration: but we ought to feel the weight of our years better than their number can be estimated by strangers; and as those are seldom deceived who judge of our age by external signs, we might be more sensible of the truth, were we more attentive to our feelings, and did not suffer ourselves to be deceived by vanity and fallacious hopes. When the body has acquired its full stature, and is extended to its just dimensions, it begins to increase in thickness; and this augmentation is the first step towards a decay, being merely an addition of superfluous matter, which inflates the body, and loads it with a useless weight: this matter, which is denominated *fat*, about the age of thirty-five or forty, begins to cover the muscles and interrupt their activity: every action then requires a greater exertion to perform it; and the increase of size is at the expense of ease, activity, and strength. The bones also become every day more solid. In the embryo they are almost as soft as the muscles and the flesh; by degrees they harden and acquire their natural vigor; but the circulation is still carried on through them; and how hard soever the bones may seem, the blood holds its current through them, as through all other parts of the body. Like the softer parts, they are furnished, through all their substance, with their proper canals, although in the different stages of existence they are of very different capacities. In infancy they are capacious, and the blood flows through the bones with almost the same facility as through the other channels. In manhood their size is greatly diminished; the vessels are almost imperceptible, and the circulation through them is proportionably slow. But in the decline of life, the blood which meanders through the bones no longer contributing to their growth, of necessity tends to increase their rigidity. In proportion as we advance in years, the bones, the cartilages, the membranes, the flesh, the skin, and every fibre of the body, becomes more solid, hard, and dry: every part shrinks, every motion becomes more slow; the circulation of the fluids is performed with less freedom; perspiration diminishes; the secretions alter; the digestion becomes slow and laborious; and the juices no longer serving to convey their accustomed nutriment, those parts may be said to live no longer when the circulation ceases. Thus the body dies by little and little; all its functions are weakened by degrees; life is driven from one part of the frame to another; universal rigidity prevails; and death at last closes the scene. When the natural stamina are good, life may perhaps be prolonged for a few years, by moderating the passions, by temperance, and by abstemiousness: but no human art can prolong the period of life to any considerable extent. It is apparent, indeed, that the duration of life has no absolute dependence either on manners, customs, or the qualities of particular food: much, it is true, is to be ascribed to the quality of the air; but we may rely upon it that, if luxury and temperance be excepted, nothing can alter those laws of mechanism which regulate the number of our years. Well may it be said, that Man is a compound being — the link between spiritual and animal existence; partaking of both their natures, but having also something peculiar to himself. His intellectual faculties prove his alliance to a superior class of beings: his sensual appetites and passions show his affinity to the brute creation. — A question involving both great interest and difficulty of solution, is that of the history of Primeval Man. Investigations have, of late years, been pushed far beyond the limits of the written data of the ancients, and yielded a great variety of evidence indicative of a much more remote origin for man than that previously ascribed to him. The following lines, on this topic, are borrowed from the *Sketches of Creation*, by Dr. Alex. Winchell, late professor of geology, zoölogy, and botany in the University of Michigan; they clearly sum up the evidence of man's early origin: "The history of our race, traced back a few thousand years, loses itself in traditions and myths. We come

down out of a cloud of obscurity, in which we can just discern the rude forms of men clad in skins, frequentiug the caves of wild beasts, fashioning rude pottery, and practising in the chase with the primeval bow and arrow. Out of the haze which hangs over the verge of antiquity come sounds of conflict in arms, pæans of peace, hymns to religion, and the hum of barbaric industry. Our written history does not extend back to the origin of man. The Mosaic records, which are undoubtedly the oldest of our authentic documents, represent the western portion of Asia as swarming with a population tolerably advanced in the arts at a period 2,000 or 3,000 years antecedent to our æra. There was, consequently, a long interval of human history still anterior to this date. What destinies befell our race — how did they live, whither did they wander, during that prolonged infancy of which — Revelation aside — we have no information than such as we have gleaned of the Mastodon, the Megatherium, or the Zeuglodon? The quickened intellectual activity of the modern age has started new and interesting inquiries in this direction. The chief sources of our information respecting the earliest periods of human history are: 1st. The remains of man himself, which have been found in cavos or buried in deposits of gravel or peat. 2d. Human works, of which we have the so-called Druidical remains of Great Britain and other countries, known as dolmens or cromlechs — rude megalithic monuments of unhewn stone, which we now know to be ancient tombs. Other human works more nbundant and more universally distributed are implements of war, of the chase, of industry, or of ornament. These are found in gravel-beds along the valleys of rivers, or at their months; in peat-beds; in caves, and among the refuse piles contiguous to the camping or dwelling-places of tribes which have subsisted partly upon molluscs. As in the history of organic life in general, so in the geological history of man, we find him mounting from lower to higher manifestations in the progress of the ages. There seems, however, to be a fundamental difference in the two kinds of progress. With the lower animals it is a structural advance; with man, an education. With the former the steps of the advance are marked by successive species; with man, by successively higher attainments of the intelligence. With the other vertebrates the highest is structurally different: with the succession of human races, the highest and lowest are structurally identical. Archæologists distinguished three ages in the history of man — the Age of Stone, the Age of Bronze, and the Age of Iron. In the Age of Stone, the uses of the metals had not been discovered, and human implements were constructed of flint, serpentine, diorite, argillite, and other suitable rocks. In the Age of Bronze, implements of bronze began to be introduced, and we descend to the verge of historic times. The Age of Iron is characterized by the use of that metal, and the arts and industries of the most advanced civilization. Most anthropologists are inclined to subdivide the Age of Stone into 2 or 3 epochs. Vogt, Lartet, and Christy, divide it into 2. 1st, the Cave-bear Epoch, or epoch of hewn stone implements; 2d, the Reindeer Epoch, or epoch of polished stone implements, carved and artfully decorated bones, and other evidences of 'a very intelligent, art-endowed race of men.' It is not by any means certain, however, that these two epochs were successive. The more skilled workmen of the Reindeer Epoch may have lived contemporaneously with the Cave-bear men, as natives of all degrees of civilization have co-existed upon the earth in all ages. Neither is it supposed that the 3 ages represent 3 stages of human civilization, each of which, in turn, has been world-wide. We find simply that in the history of every race there is a Stone Age; and if the race advances, this is followed by an Age of Bronze, and this by an Age of Iron. Some Eastern nations passed out of their Stone Age 3,000 years or more before the Christian æra. Some of the peoples of Central and Northern Europe were in their Stone Age when Cæsar subjugated Gaul. The Sandwich Islanders were in their Stone Age when first visited by Captain Cook, while the Esquimaux, and the N. American Indians generally are still in their Stone Age. The Age of Stone is simply the stage of infancy. Different peoples have emerged at different epochs from the state of normal infancy. When man first made his advent in Europe, that continent was still the abode of quadrupeds now long extinct. The contemporaries of man in the hewn-stone epoch were the Cave-Bear, *Ursus spelæus*, followed by the Cave-Hyena, *Hyena spelæa*, and the Cave-Lion. These gradually gave place to gigantic herbivores — the Hairy Mammoth, *Elephas primigenius*, the Hairy Rhinoceros, *Rhinoceros tichorinus*, and the Reindeer. The mammoth roamed in herds over the whole of Europe, N. Asia, and N. America. The hairy, or two-horned rhinoceros, in company with another two-horned species, thundered through the forests, or wallowed in their jungles and swamps. The rivers and lakes of S. Europe were tenanted by hippopotami and beavers — the former as huge and unwieldy, and with tusks as large, as any which terrify the African bushman. Three kinds of wild oxen, two of which were of colossal strength, and one of these 'maned and villous like the Bonassus,' grazed with the marmot and wild goat, and chamois, upon the plains which skirt the Mediterranean. The musk-ox and the reindeer browsed in the meadows of Perigord, in the S. of France, while a gigantic elk, *Megaceros Hibernicus*, ranged from Ireland to the borders of Italy. That these animals lived as the contemporaries of Man is proven by two classes of evidence. In the first place the bones of Man and the relics of his industry are found preserved in the same situations as the bones of these extinct quadrupeds. Examples conclusive of this have been found at different times in various portions of Europe. In the United States we detect also some evidences of the coexistence of man and extinct species of quadrupeds. Dr. Koch, the reconstructor of the Tertiary Zeuglodon, insisted long ago that he had found in Missouri such an association of mastodon and Indian remains as to prove that the two had lived contemporaneously. More recently Professor Holmes, of Charleston, has informed the Academy of Sciences of Philadelphia that he finds upon the banks of the Ashley River a remarkable conglomeration of fossil remains in deposits of post-tertiary age. Remains of the hog, the horse, and other animals of recent date, together with human bones, stone arrow-heads, hatchets, and fragments of pottery, are there lying mingled with the bones of the mastodon and extinct gigantic lizards. Contemporary with these American animals, but not yet found associated in their remains with the relics of the human species, lived, in N. America, horses much larger than the existing species, grazing in company with wild oxen, and herds of bisons (*Bison latifrons*), and shrub-loving tapirs (*Tapirus Americanus*). The streams were dammed by the labors of gigantic beavers (*Castoroides Ohiensis*), while the forests afforded a range for species of hog (*Dicotyles*), and a grateful dwelling-place for numerous edentate quadrupeds related to the Sloth, but of gigantic proportions. Of the animals thus shown to have lived contemporaneously with primeval man upon the continent of Europe, the cave-bear, cave-hyena, tiger, mammoth, mastodon, and others of less importance, became extinct before the date of written history; but these extinct quadrupeds had lived contemporaneously with others which have come down to historic times. The reindeer, referred to by Cæsar in his "Commentaries," is thought to have survived in North Scotland as late as the 12th cent.; the Irish elk existed up to the 14th cent.; the reindeer continued in Denmark till the 16th cent.; the urus lingered in Switzerland up to the 16th cent.; the bison still survives in Lithuania, and the wild boar is abundant in Central Europe. The geological status of the continents on Man's first appearance was unique. They had just emerged from the reign of ice. The glaciers had begun to retreat, but, except in South Europe and Middle Asia, the climate was still rigorous. The hairy elephant and rhinoceros, clad in winter furs, as well as the fur-clad bear and hyena, found a fitting abode upon the shores of the Atlantic and Mediterranean. The marmot, the wild goat, and the chamois, now confining themselves to the cold peaks of the Alps and the Apennines, lived then upon the lowlands of France and Spain. The musk-ox, in our day restricted to the regions beyond the 60th parallel of latitude, grazed in the cold marshes of Dordogne. On the American continent, the subsidence which terminated the reign of frost was not arrested till a large portion of the United States had been again submerged; and on the Oriental continent the indications of northern depression are equally unmistakable and equally extensive. The moment that the last revolutionary visitation had come to an end — while yet the lands had become scarcely stable in their places — Man seems to have suddenly made his appearance among the beasts of the earth, and to have moved among them and controlled them with a conscious and uncontested superiority. Primeval man, it must be admitted, was a barbarian, but he was by no means the stepping-stone between the apes and modern man. There is not a particle of evidence that he was not possessed of the faculty of speech, and did not exercise the same intellectual and moral powers as the citizen of the United States. Few human crania or other bones have ever been discovered, upon which the judgment of the comparative anatomist could be brought to bear. Considerable diversity appears; but the skulls belong to the brachycephalic (or round-head) type, which, according to respectable ethnologists, was the type of the ancient Ligurian head. Primeval man used the spear and the bow in his conflicts with the tiger, the bear, and the hyena, and in the wars which he waged with his fellow-man; he chased the elephant, the goat, and the musk-ox over the plains of S. Europe, and fished with single- and double-pointed barbed hooks in the cool streams of Scandinavia. That he dwelt in caves we know. These were Nature's provision for the houseless. But there is no reason for supposing that he did not soon devise more comfortable dwellings. He seems to have resided at times upon the banks of rivers and by the ocean's shore. Whole villages, it would seem, must have cast into one common pile the refuse of their tables. These accumulations are sometimes several hundred yards in length, and from 3 to 9 feet in height. The flint folk, whose household-ware is mingled with the kitchen-rubbish, must have dwelt in huts above the ground. At a somewhat later epoch, we know that they drove piles in the lakes of Central Europe, and constructed platforms on which their dwellings were built. From these habitations they cast into the lake the refuse of their houses. By dredging we recover stores of broken pottery, and implements of stone, for cutting and for skinning, together with the bones of quadrupeds known to have inhabited Europe in the Age of Stone. The dolmens of the same epoch prove also that primeval man understood the art of rough masonry. The man of the Stone Age was not, therefore, as some have asserted, a sort of perfected monkey. He had the structure of a man; without doubt, he was capable of speech; he supplied his wants with a kind of skill which became improved and educated by experience — a characteristic only of intelligence; he admired beauty; he manifested a perception of the ideal; his thoughts strayed forward into another world; and, with his other religious sentiments, he undoubtedly felt a vague, strange sense of a superintending Intelligence and a moral Governor." The statement above quoted, although written more than a quarter of a century ago, presents an excellent synopsis of what is known concerning primitive man, though in the interval that has since elapsed much new and interesting information has been gained. The length of time which man has existed upon the earth is still a matter of controversy, some estimating it at a few thousand years, some at 100,000 or more, and others dating man's first appearance far back in Tertiary time, in the Pliocene, if not in the Miocene formations. It must be said, however, that this last estimate is based on very slight and questionable grounds, while, on the other hand, the estimates which would restrict the human period to 8,000 or 10,000 years are founded much more on pre-conceived opinions than on ascertained facts. It seems established that man existed during the glacial epoch, and there are some reasons for believing that he antedated this epoch, so that a knowledge of the remoteness of this period would yield us a minimum chronological epoch for man. Many efforts, astronomical and other, have been made to calculate how long ago it was when the ice of the north came down to overwhelm the temperate zone, but the results are problematical, varying from 8,000 to 10,000 years ago to a much more remote date. We have, however, historical evidence that civilized nations existed in Babylonia and Egypt at least 6,000, and perhaps 10,000, years ago, a fact which indicates a very remote ancestry for man, when we consider with what exceeding slowness the savage and barbarous races of man progress toward civilization when left to themselves.—*Descent of Man.* As regards the origin of man, equally diverse opinions exist. Many ardently maintain the conception of his direct creation, while many others, including biological scientists in general, argue that he has descended from the lower mammalia, and is nearly related anatomically and physically to the existing anthropoid apes. Others still, among them Alfred Russel Wallace, one of the originators of the development theory, occupy intermediate ground, rejecting the idea of "special creation" for man as in the highest degree improbable and entirely unsupported by facts, yet believing that his great intellectual progress has been due to a "spiritual influx," virtually a special creation of man in his mental and spiritual characteristics. This doctrine is rejected by the majority of recent naturalists, who hold it to be inconsistent with the continuity of the evolutionary process, which they regard as completly "natural" and self-sufficient, and reject all theories of divine interposition as absolutely lacking facts or probability in their support. Research into the relics of primeval man has yielded a number of skeletons of considerable significance as aids to the settlement of this question. Some of the skulls found indicate individuals of well-developed brain power. Others, like the celebrated Neanderthal skull, approach those of apes in their characteristics. Many have maintained that this skull was abnormal, but the discovery of others of the same type goes far to invalidate this explanation, while very recently a skull of still lower type has been found in Java, which it is difficult to decide whether it belonged to a very high ape or very low man, though certain associated bones favor the latter conclusion. In fact, the principal distinction in organization between man and the higher apes lies in the greatly superior development of his brain, which is more than twice as heavy as that of the nearest apes. This great cerebral development is an index to the great intellectual and emotional development of man. In his physical characteristics, on the contrary, he closely approaches the anthropoid apes, differing from them in degree rather than kind. No evolutionist maintains that man is an outgrowth from any of the existing anthropoids—the gorilla, ourang, or chimpanzee. To these he is held to sustain the relation of a more highly developed cousin, his line of descent being from another type of anthropoid ape, of which—somewhat unhappily for the advocates of this theory—no fossil remains have yet been found. This supposed ancestor of man differed from the existing apes in having shorter arms, to which perhaps was due his erect posture, he being very poorly adapted for quadrupedal motion. The question of man's origin is still an open one, many rejecting the dictum of science, and the still more vital question of his destiny is equally open, there being a very wide diversity of opinion concerning this highly important problem, upon which much entertaining discussion is now going on.

Man, *v. a.* To furnish with men, or with a number competent to any service; to guard with men.

> 'They had *manned* out a fleet of two hundred men-of-war.'' *Arbuthnot.*

—To strengthen; to fortify; as, to *man* one's drooping energies. — To tame, as a hawk. (R.)

Ma'na, a town of British India, in the district Kumaon, N.W. provinces. It is nearly 10,500 feet above the sea, and is deserted by its inhabitants in winter, when it is buried by the snow. Its trade is principally with Chinese Tartary, through the Mana Pass, which has an elevation of 18,000 feet.

Mana', a river of S. America, in French Guiana, enters the Atlantic Ocean about 125 m. N.W. of Cayenne.

Manaar. (*man-ar'.*) an island off the N.W. coast of Ceylon; Lat. 9° 6′ N., Lon. 79° 58′ E. *Ext.* 18 m. long, by 2½ broad.

Manaar', (Gulf of,) an inlet of the Indian Ocean, dividing Ceylon from the S. extremity of Hindostan, extending between Lat. 7° 30′ and 9° N., and Lon. 78° and 80° E. It is about 120 m. wide at its entrance, but

in general too shallow to be navigated by vessels larger than a sloop.

Manacle, (*măn'a-kl,*) *n.* (Generally used in the plural.) [Fr. *manicles* · Lat. *manicæ,* from *manus,* the hand.] An iron instrument for confining the hands; a shackle; a handcuff; a fetter.

—*v. a.* To put manacles, handcuffs, or other fastening, upon, for confining the hands; — hence, to shackle; to confine; to restrain the action of the limbs or natural powers.

Man'acor, a town in the island of Majorca, in a fertile plain, 30 m. E. of Palma. *Manuf.* Brandy, wine, oil, and verdigris.

Manage, (*măn'aj.*) *v. a.* [Fr. *ménager;* It. *maneggiare,* from Lat *manus,* Fr. *main,* the hand.] To handle; to conduct; to carry on; to direct or superintend the concerns of; to administer; to treat.

"What wars I *manage,* and what wreaths I gain."—*Pope.*

—To treat with caution or judgment; to govern with address or adroitness; to have under command; to make subservient

"It was his interest to *manage* his Protestant subjects." *Addison.*

—To husband; to conduct with frugality or economy; to treat with caution, or sparingly. — To govern gracefully in riding: to train a horse, as in the manege.

"He rode up and down, gallantly *managing* his horse." *Knolles.*

—*v. n.* To direct or conduct affairs; to carry on concerns or business.

—(*măn'ăzh.*) *n.* Same as MANEGE, *q. v.*

Manageabil'ity, *n.* State or quality of being manageable.

Man'ageable, *a.* That may be managed, directed, or controlled: easy to be used or applied to its proper purpose; not difficult to be moved or wielded; governable; tractable; as, a *manageable* horse. — That may be made subservient to one's views or designs; as, a *manageable* voter.

Man'ageableness, *n.* State or quality of being manageable; manageability; quality of being susceptible of government and control; tractableuess; easiuess to be governed.

Man'ageably, *adv.* In a manageable or tractable manner.

Man'ageless, *a.* Unmanageable; intractable.

Man'agement, *n.* Act of managing; conduct; administration; manner of treating, directing, or carrying on; as, the *management* of an estate, the *management* of an impeachment. — Cunning or artful practice; some course directed by art, design, or adroitness; skilful treatment; — generally in a bad sense. — Modulation; variation, as of the compass of the voice. — A body of managers; collective number of persons engaged in any enterprise.

Man'ager, *n.* One who manages, or who has the conduct or direction of anything; a controller; as, the *manager* of a business or theatre. — A good economist; a person who conducts a business or household with prudence, economy, or frugality; as, his wife is an excellent *manager.*

Manage'rial, *a.* Pertaining or having reference to a manager or management; as, *managerial* talents.

Man'agery, *n.* Conduct; direction; administratiou; control.

"Conduct or discretion in the *managery* of that affair."—*Clarendon.*

—Husbandry; frugality; prudent economy. — Moral conduct — Manner of using.

"Teach them the ready *managery* of their weapons." *Decay of Piety.*

Manahoc'king, or MANAHAWKIN, in *New Jersey,* a post-village of Ocean co.

Man'akin, *n.* (*Zoöl.*) See PIPRA.

Manal'apan, in *New Jersey,* a post-village and township of Monmouth co., abt. 25 m. E.N.E. of Trenton; *pop.* of township abt. 2,374.

Manal apan Brook, in *New Jersey,* rises in Monmouth co., and flowing N. enters the Raritan River a few m. below New Brunswick. It is sometimes called SOUTH RIVER.

Man'an, in *Maine.* See MENAN.

Manan'ah, in *Minnesota,* a post-village of Meeker co., abt. 11 m. N.W. of Forest City.

Manan'tico Creek, in *New Jersey,* enters Maurice River from Cumberland co.

Manas'quan River, in *New Jersey,* enters the Atlantic Ocean from Monmouth co.

Manas'sas, (Battle of.) See BULL RUN.

Manas'sas Gap, in *Virginia,* a pass through the Blue Ridge, on the boundary line between Fauquier and Warren cos.

Manas'sas Junction, in *Virginia,* a railroad station in Prince William co., abt. 27 m. W. of Alexandria.

Manas'seh, (*Script.*) The eldest son of Joseph, born in Egypt. His descendants constituted a full tribe. This was divided in the promised land; one part having settled east of the Jordan, in the country of Bashan, from the river Jabbok northward; and the other west of the Jordan, between Ephraim and Issachar, extending from the Jordan to the Mediterranean.—A king of Judah, who succeeded his father, Hezekiah, at the age of 12 years. The commencement of his reign was disgraced by a series of crimes and idolatrous abominations, and "innocent blood filled Jerusalem from one end to the other." In 677 B. C. Esarhaddon, king of Assyria, invaded his dominions, and carried Manasseh captive to Babylon, where his misfortunes produced repentance. After a long captivity, the king of Babylon gave him his liberty, and restored him to his kingdom. On his return to Jerusalem, he established the worship of the true God. There is a fine prayer by him in the Apocrypha. D. 643 B. C.

Manatee'. Man'atin, *n.* (*Zoöl.*) See MANATUS.

Manatee, in *Florida.* See SECTION 11.

Mana'tus, *n.; pl.* MANATI. (*Zoöl.*) A genus of herbivorous marine animals, familiarly called Cow-whales or Sea-cows, order *Ruminantia.* The body of the Manatus is of an oblong shape, terminated by a lengthened oval fin; it generally measures six or seven feet in length, but sometimes grows to an enormous size; and its paddles or fins exhibit rudiments of nails, by the aid of which the unwieldy animal drags its body along on the shore, to browse on the herbage that grows on and near the banks of the great rivers to which it resorts. The skin of the Manatus is of a blackish color, very tough and hard, and full of inequalities, like the bark of an oak; and on it are sprinkled a few bristly hairs, about an inch in length. The eyes are exceedingly small in proportion to the size of the animal. It has no external ears, but only two orifices, scarcely large enough to admit a quill; the tongue is pointed, and extremely small; the mouth is destitute of teeth, but furnished with two solid white bones, extending the entire length of both jaws, which serve instead of grinders; the lips are double; and near the junction of the two jaws the mouth is full of white tubular bristles, answering the same purpose as the laminæ in whales, to prevent the food from issuing out with the water. The lips are also thick-set with bristles, serving, instead of teeth, to cut the strong roots of the marine plants, which, floating ashore, point out the vicinity of these animals. — The Manatus forms in some classifications the typical genus of a family, *Manatidæ,* including all the herbivorous whales, and especially the Dugong or Halicon, which much resembles the Manatus.

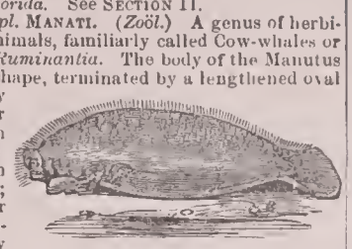

Fig. 1695.
THE MANATEE, (*Manatus Australis.*)

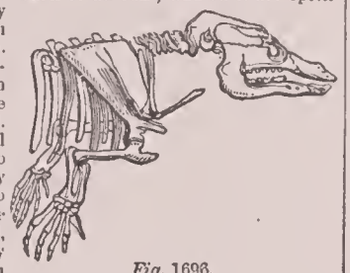

Fig. 1696.
SKULL AND PART OF SKELETON OF THE MANATEE.

Manawah', in *Wisconsin,* a village of Waupaca co., abt. 40 m. N.N.W. of Oshkosh.

Manayunk', in *Pennsylvania,* a town of Philadelphia co., now included within the chartered limits of the city of Philadelphia, on the Schuylkill River, abt. 7 m. N.N.W. of the State House. It is pleasantly located, has abundant water-power, and contains numerous and extensive manufacturing establishments.

Man'-bote, *n.* (*A. S. Law.*) The compensation to be paid for killing a man. In King Ina's laws, certain rates are fixed for the expiation of this crime, according to the quality of the person slain.

Man'cha, (La,) an old proviuce of Spain, now called Ciudad Real, in the S. part of New Castile, bounded S. by Granada, E. by Cueuca and Murcia, and W. by Estremadura. *Area,* 7,500 sq. m. It is almost entirely surrounded by mountains, and consists chiefly of lofty and barren plains, upwards of 2,000 feet above the sea. *Prod.* Corn, wine, olives, and saffron. The cap. is Ciudad Real, once a flourishing city, but now decayed. The description of Cervantes in his "Don Quixote," has given to La Mancha a worldly celebrity.

Fig. 1697.
COSTUME OF LA MANCHA.

Man'chac, in *Louisiana,* a village of East Baton Rouge parish, on the Mississippi River, abt. 14 m. below Baton Rouge.

Manchac Bayou, in *Louisiana,* a small stream connecting the Amite River with the Mississippi River, and forming the S. boundary of E. Baton Rouge parish. It is sometimes called IBERVILLE BAYOU.

Mancha Re'al, a town of Spain, in Andalusia, 8 m. E. of Jaen. *Manuf.* Woollens and linens. *Pop.* 4,000.

Manch'ang, in *Massachusetts,* a post-village of Worcester co., abt. 47 m. S.W. of Boston.

Manche, (La,) (*manzh,*) a marit. dept. of the N.W. of France, formerly included in the prov. of Normandy, Lat. between 48° 40′ and 49° 40′ N., Lon. between 0° 40′ and 2° W. It is bounded N. and W. by the English Channel, S.E. by the dept. of Calvados, and S. by Ille-et-Vilaine. *Area,* 2,617 sq. m. The surface is irregular, with marshes in parts of the interior; but it is nevertheless very fertile. The chief rivers are, the Vire, Taute Douve, Merderet, and Selune, all navigable. The coast is mostly abrupt and rocky, especially in the N., but it has several good roadsteads and commodious harbors, of which Cherbourg is the finest. *Prod.* Flax, hemp, and fruit are extensively cultivated; immense quantities of apples are grown, from which over 40,000,000 gals. of cider are made annually. The breed of horses reared in *M.* are considered the most superior in France; cattle and sheep are also numerous. *Min.* Iron, lead, copper, zinc, marble, coal, and granite. *Manuf.* Linens, cottons, cutlery, glass, paper, &c. The chief towns are St. Lô, the cap., Cherbourg, Coutance, Avranches, Valognes, and Mortain. *Pop* 573,899.

Man'chester, a city of England, co. of Lancaster, on the Irwell, an affluent of the Mersey, 31 m. E. of Liverpool, and 163 m. N.N.W. of London. *M.,* including Salford, a suburban town on the W. bank of the Irwell, stands in a large plain, covering over 3,000 acres, surrounded with hills except on the W., and is the centre of the cotton trade of Great Britain, and the principal manufacturing city in the world. The Irk and the Medlock join the Irwell near the town, and are of the greatest advantage to it. The streets are narrow and irregular, but of late years great improvements have been made, and many fine houses erected. Factories and warehouses are numerous and of gigantic proportions. The principal among its public buildings are, the Exchange, built in the Doric style, the Town Hall, an elegant building of Ionic architecture, formed on the model of the Temple of Erectheus at Athens, and the Corn Exchange. It has also several educational institutions, one of which, the college founded by Humphrey Chatham in 1665, contains a library of 30,000 vols. There are, besides, several public libraries, possessing collectively over 100,000 vols.; and a number of associations for promoting literature and science. But it is as a manufacturing city that *M.* derives its importance, being the grand centre of the cotton manufacture of England, which, next to agriculture, forms the principal occupation of the country, absorbing with its neighborhood for 10 m. round, fully three fourths of the trade, and comprising, besides spinning-mills, most extensive power-loom factories, and large dyeing and printing establishments. The manufacture of silk goods, which was introduced in 1816, has generally flourished since 1826, producing every description of fabrics from the rich brocade to the flimsy Persian, and employing 4,000 hand-looms, besides 3,000 persons in the throwing-mills, and 600 in dyeing and printing houses. In some cotton-factories the process of spinning only is carried on. Many of them are buildings of extraordinary size, comprising 7 or 8 stories. Several thousands of spindles are at work in each of the principal factories, and in many of them upwards of 600 power-looms are in action, each producing from 15 to 20 pieces of fabric, of 24 yds. each, per week. Besides the pop. connected with the factories, which almost absorb the plain goods' trade, upwards of 9,000 hand-loom weavers are employed in weaving cotton, silk, and mixed goods. The principal articles manufactured are velvets, fustians, dimities, calicoes, checks, tickings, jeans, shirtings, ginghams, quiltings, handkerchiefs, nankeens, diapers, muslinets, muslins, cambrics, and almost every kind of fancy cotton and silk goods. The spinning trade is extensive, and considerable quantities of yarn are annually exported. There are about 60,000 persons employed in the cotton mills, besides 7,000 skilled mechanics engaged in the production of steam-engines, looms, and other machinery. *M.* derives considerable advantages from the almost inexhaustible coal field in its neighborhood, and from the canals and railways which connect it with different parts of the country, and the E. and W. seaboard. The climate of *M.* is very healthy, despite the disadvantage of the prevalence of smoke, arising from the immense number of factories, &c. *Pop.* (1897) 562,450.

Man'chester, a post-village of Ontario co., prov. of Ontario, located about 14 m. N. of Whitby, on the Grand Trunk Railroad.

Man'chester, a seaport town of Guysboro co., Nova Scotia, about 120 m. E.N.E. of Halifax.

Man'chester, in *Connecticut,* a post-town of Hartford co., 5 m. E. of Hartford. It contains numerous and extensive manufactories of paper, woollens, print-works, dress-silks, sewing-silks, &c. *Pop.* (1897) 8,650.

Man'chester, in *Illinois,* a township of Boone co.

—A post-town of Scott co., about 45 m. S.W. by W. of Springfield. *Pop.* (1897) 510.

Man'chester, in *Indiana,* a post-township of Dearborn co., about 85 m. S.E. by E. of Indianapolis.

Man'chester, in *Iowa,* a city, the cap. of Delaware co., on the Ill. Central R.R., 47 m. W. of Dubuque; has water power and some manufactures; ships dairy products. *Pop.* (1895) 2,683.

Man'chester, in *Kentucky,* a post-village, cap. of Clay co., abt. 110 m. S.E. of Frankfort.

Man'chester, in *Maine,* a post-township of Kennebec co.

Man chester, in *Maryland,* a post-village of Carroll co., abt. 60 m. N.N.W. of Annapolis.

Man'chester, in *Massachusetts,* a post-village, seaport, and township of Essex county, about 9 miles N.E. of Beverly.

Man'chester, in *Michigan,* an incorporated village of Washtenaw co., on the river Raisin, 22 m. from Ann Arbor. It possesses one of the best water privileges in the State, has several churches of various denominations, some excellent schools, and is a thriving manufacturing centre.

Manchester, in *Maryland*, a post-village of Carroll co.
Man'chester, in *Minnesota*, a post-township of Freeborn co.
Man'chester, in *Missouri*, a village of Jackson co.
—A post-village of St. Louis co., abt. 20 m. W. of St. Louis.
—A former village of Scott co.
Man'chester, in *New Hampshire*, a city of Hillsborough co., on the Merrimac river, abt. 18 m. S.S.E. of Concord. The city is finely located upon an elevated plain nearly 100 feet above the river, and owes its growth and prosperity almost entirely to its manufacturing enterprise. It is regularly laid out, well built, and contains many handsome and substantial edifices. *Manuf.* Cotton and woollen goods, machinery, locomotives, paper, &c. *Pop.* (1897) about 46,900, about 12,500 of whom work in the factories.
Man'chester, in *New Jersey*, a post-township of Ocean co., about 58 m. E. by N. of Camden.
—A township of Passaic co.
Man'chester, in *New York*, a village of Dutchess co.
—A village of Oneida co.
—A post-town and township of Ontario co., about 8 m. N. N. E. of Canandaigua. *Pop.* (1897) 4,510.
Man'chester, in *Ohio*, a post-village of Adams co., on the Ohio river, 72 m. above Cincinnati.
—A village of Lorain co., abt. 22 m. E. by S. of Sandusky.
—A township of Morgan co.
—A village of Summit co.
Man'chester, in *Pennsylvania*, a former post-borough of Allegheny co., on the Ohio river, about 2 m. below Pittsburg. Now part of Allegheny City.
—A township of Wayne co.
—A post-borough of York co.
Man'chester, in *South Carolina*, a village of Sumter co., about 36 m. E.S.E. of Columbia.
Manchester, in *S. Dakota*, a p.-twp. of Kingsbury co.
Man'chester, in *Tennessee*, a post-village, cap. of Coffee co., about 62 m. S.E. of Nashville. *Pop.* (1897) 701.
Manchester, in *Texas*, a post-village of Red River co., 15 m. N.W of Clarksville.
Manchu'ria, Mantchoo'ria (Chin. *Kerin-oola*), an extensive region of N.E. Asia, the original seat of the present ruling dynasty (Tath-sing) of the Chinese Empire; lat. mainly between 40° and 53° N., lon. 118° and 135° E. It lies between the Yellow Sea and the Amur River, and between China proper and Mongolia on the west and Korea and the Maritime Province of Siberia on the east. *Area*, estimated at 363,610 square miles. It lies largely in the great valley formed by the rivers Amur and Sungari with their numerous tributaries, and is very mountainous. The population is estimated at 22,000,000, embracing about 1,000,000 Manchus, the rest Chinese. The soil is very fertile, and produces corn, millet, beans, rice, vegetables and ginseng. The hills are rich in timber and contain gold, silver, iron and coal. The principal towns are Mukden, the capital, Kirin, Newchwang, Tsitsihur, a Chinese convict settlement, and the Russian towns of Harbin and Dalny. *Hist.* A powerful sovereignty was founded here in the 17th century by Nurhachu, a Manchu chief, whose grandson conquered China and founded the present Chin dynasty. *M.* was invaded by Japan in the war with China in 1894, was subsequently crossed by the Transsiberian railway, and was occupied by Russia during the Boxer outbreak in China in 1900. The failure of Russia to observe her treaty obligation to evacuate *M.* in 1903 was the main cause of the Russo-Japan war of 1904, whose chief seat of operations was in Manchuria.

Mănda'mus, *n.* [Lat., from *mandare*, to command.] (*Law.*) A high prerogative writ, usually issuing out of the highest court of general jurisdiction in a state, in the name of the sovereignty, directed to any person, corporation, or inferior court of judicature within its jurisdiction, requiring them to do some particular thing therein specified, and which appertains to their office or duty. In the U. States, the writ is generally issued by the highest court of judicature having jurisdiction at law.
Manda'na, in *New York*, a post-village of Onondaga co., about 21 m. S.W. of Syracuse.
Man'dans, *n. pl.* A tribe of N. American Indians whose principal village was on the Missouri, in Lat. 47° 20′ N. (See Fig. 1376.) They are a branch of the Sioux, and had a fairer complexion than any other of the Indian tribes. In 1838 they were almost entirely destroyed by the small-pox; and since that time the few remaining are located near Fort Clarke.
Manda'ra, a state of central Africa, lying to the S. of Bornou. It is a monutainous country inhabited by Mohammedans.
Mandarin, (*măn-da-reen'*,) *n.* [Fr. and Sp., from Lat. *mandare*; Pg. *mandarim*; Chin. *kuan*.] A Chinese official or functionary, of the civil or military class; also implying a certain degree of nobility. They are all men of learning who have passed certain examinations and had their names inscribed on a register. When an office in the administration is vacant, a list of those that stand foremost on the register is presented to the emperor, who nominates one for the vacant office. The origin of the system of competitive examinations in the bestowment of government offices thus belongs to the Chinese.
Mandarin'ic, *a.* Befitting or peculiar to a maudarin.
Mandarin'ing, *n.* (*Dyeing.*) The process of giving an orange color to goods formed of animal tissues, as silk and wool, not by coloring matter, but by producing a certain change in the fibre by the action of dilute nitric acid.
Mandarin'ism, *n.* Characteristic peculiarities of the mandarins; executive power maintained by mandarins.
Man'datary, Man'datory, *n.* [Fr. *mandataire*, from L. Lat. *mandatarius*, from *mandator* — *mando*, to command.] One to whom a mandate, command, or charge is given; especially, a priest to whom the Pope has issued a beneficiary maudate.
(*Law.*) See MANDATE.
Man'date, *n.* [Fr. *mandat*; Lat. *mandatum*, from *mando* — *manus*, the hand, and *do*, to give.] An authoritative charge or command; an order, precept, or injunction; a judicial commission; as, "Juno's mighty *mandate*." — *Dryden*.
(*Law.*) Generally, a judicial command, charge, or commission. More particularly it denotes a bailment, (delivery) of goods to a person who is to do something with or about the things bailed, entirely without compensation. The person delivering the goods is called *mandator*, the person receiving them and undertaking the service is styled *mandatary*. The essential element in the contract lies in the service rendered not being to be paid for. Hence, as the act or service is wholly for the benefit of the mandator, it follows that a mandatary is only responsible for the loss of, or injury done to, a thing when it is caused by his gross negligence. The mandator may recall the thing delivered at any time; but if the mandatary has rendered the service in part, and will suffer damage if it be not completed, the mandator cannot rescind it without indemnity to the mandatary. The contract may also be dissolved either by the renunciation by the mandatary at any time before he has entered upon its execution, or by his death. A mandator contracts to reimburse a mandatary for all expenses and charges reasonably incurred in the execution of the mandate, and also to indemnify him for his liability on all contracts which arise incidentally in the proper discharge of his duty. In the canon law, a mandate is a rescript of the Pope, commanding an ordinary collator to put the person therein named in possession of the first vacant benefice in his collation.
Manda'tor, *n.* (*Law.*) See MANDATE.
Man'datory, *n.* Same as MANDATARY, *q. v.*

Man'der, *v. a.* and *n.* See MAUNDER.
Man'deville, in *Louisiana*, a post-village of St. Tammany parish, about 30 m. N. of New Orleans.
Man'deville, in *Missouri*, a post-village of Carroll co., about 20 m. N.N.E. of Lexington.
Man'dible, *n.* [Lat. *mandibulum*, from *mando*, *mandĕro*, to chew.] (*Zoöl.*) A jaw, more especially the jaw of a bird. In Fig. 1698, *a* is the upper, and *b* the lower mandible. In mammals it is only applied to the under jaw, and in insects to the upper or interior pair of jaws. The mandibles of insects are two strong corneous hooks, which move horizontally, and cut objects by crossing their edges like the blades of a pair of scissors.

Fig. 1698.

Mandib'ular, *a.* Belonging to the mandible or jaw; resembling a mandible.
Mandib'ulate, Mandib'ulated, *a.* Furnished with mandibles, as certain Insects.
Mandibu'liform, *a.* (*Zoöl.*) Exhibiting the form of a mandible, or mandibles; — said of the lower jaws of certain insects.
Mandin'go, or **Mand'ing,** a mountainous territory of W. Africa, between Lat. 10° and 14° N., Lon. 13° and 16° W.; bounded N. by Fooladoo, E. by Bambarra, S. and W. by Gadou and Jallonkadoo. *Desc.* Rocky and barren, and contains no towns of consequence, except Kamalia. The whole region is watered by the Niger in its early course. It is supposed to be the original seat of the Mandingoes now spread over a great part of Africa.
Mandilion, (*-dil'yun,*) *n.* A sleeveless jacket; a soldier's loose coat.
Mand'inent, *n.* Behest; commandment. (R.)
Man'dioc, *n.* (*Bot.*) Same as MANIOC. See MANGIFERA.
Man'dlestone, *n.* [Ger. *mandelstein*.] (*Min.*) Same as AMYGDALOID, *q. v.*
Mandolin, (*măn'do-leen',*) *n.* [Fr. *mandoline*; It. *mandola*.] (*Mus.*) An instrument of the lute species. The body of the *M* is shaped like a shell, formed of a number of narrow pieces of different kinds of wood, bent into shape, and glued together. On the open portion of the body is fixed the sounding-board, with a finger-board and neck like a guitar. The Neapolitan *M.*, which is the most perfect, has four double strings, which are tuned, beginning with the lowest, G, D, A, E. The Milanese *M.* has five double strings, tuned G, C, A, D, E. The sound of the *M.* is produced by a plectrum in the right hand, while the left hand produces the notes on the finger-board. The *M.* is chiefly used for accompaniment; in the beauty and quality of its sound, it is different from all other stringed instruments.
Man'dore, *n.* [See BANDORE.] (*Mus.*) A kind of mandolin.
Man'drake, *n.* See MANDRAGORA, and BRYONA.
Man'drel, Man'deril, Man'dril, *n.* [Fr. *mandrin*, probably from Lat. *mandra*, a stall.] (*Mach.*) The spindle which carries the centre-chuck of a lathe, and communicates motion to the metal to be turned. In small lathes it is driven by a pulley.
Man'drel-frame, *n.* (*Mech.*) The head-stocks or frame bolted to the end of a lathe-bed, for the purpose of supporting the mandrel.
Mandrago'ra, *n.* [Lat. *mandragorus*.] (*Bot.*) A genus of plants, order *Atropaceæ*. *M. officinalis* is the true Mandrake, the Devil's-apple of the Arabs, and probably the *dudaim* of Scripture. Its root has a fancied resemblance to the human form, and is connected with many absurd superstitions. It must not be confounded with the root of *Bryonia dioica*, which is often called Mandrake. The Mandrake is an acro-narcotic poison, and was used by the ancients as an anæsthetic.

Fig. 1699. — MANDRAKE.
(*Mandragora officinalis.*)

Man'drill, *n.* [Sp. *mandril*; Fr. *mandrille*.] (*Zoöl.*) See BABOON.
Man'dueable, *a.* Masticable; that may be chewed; hence, fit to be eaten. (R.)
Man'ducate, *v. a.* [Lat. *mandūco, manducatum*, from *mando*, to chew.] To masticate; — to chew; hence, by implication, to eat. (R.)
Manduca'tion, *n.* [L. Lat. *manducatio*.] Act of chewing, masticating, or eating. (R.)
"*Manducation* is the action of the lower jaw in chewing the food."—*Quincy.*
Man'ducatory, *a.* Pertaining, or having reference to chewing, or employed in mastication. (R.)
Mandu'cus, *n.* [From Lat. *manducare*, to chew.] (*Antiq.*) A comical mask representing a person chewing, used by the ancients as a provocative to laughter, in their histrionic performances
Mandu'ria, *n.* a town of S. Italy, province of Terra-di-Otranto, 22 m. E.S.E of Taranto. During the Middle Ages, and until 1790, it was called Casalnuovo, when it resumed the ancient name of the city upon the site of which it was supposed to be built. *Pop.* 8,568.
Mane, *n.* [D. *mean*; Ger. *mähne*: Dan. *man*; Icel. *mön*; W. *mwng*, from *mwn*, a neck; Gr. *maunos*, a necklace.] The hair growing on the upper side of the neck of a horse or other animal, usually hanging down on one side.
"A lion shakes his dreadful *mane*."— *Waller.*
Maned, *a.* Possessing a mane
Manege, (*ma'năzh.*) *n.* [Fr.; It. *maneggio*, from *mano*; Lat. *manus*, the hand. See MANUAL.] The art or practice of managing horses with the hand; act or art of horsemanship, or of training horses; equitation. — A riding-school; a school for teaching horsemanship, and for training horses.
Ma'neh, *n.* [Heb.] A Hebrew weight of 60 shekels. *Ezek.* xiv. 12.
Mane'rial, *a.* Same as MANORIAL, *q. v.*
Manes, (*ma'nēz,*) *n. pl.* [Lat., from O. Lat. *manus*, good.] (*Rom. Antiq.*) The general name given by the Romans to the spirits of the dead. They were commonly identified with the lares (see LAR), and to receive the name of *Dii Manes*. In the month of February, annually all the Manes were propitiated in the Feralia or Parentalia during twelve days. The stones in the Roman burial-places, and their funeral urns, were generally inscribed with the letters D.M.S. (*Dis Manibus Sacrum*).
Ma'nes. MANI, or MANICHÆUS. See MANICHÆANS.
Mane'-sheet, *n.* A covering for the upper part of a horse's head.
Manenvre, (*ma-nū'vĕr,*) *n.* and *v.* See MANŒUVRE.
Manen'vrer, *n.* See MANŒUVRER.
Man'fred, king of Naples and Sicily, was a natural son of the emperor Frederick II. After the death of his brother Conrad, he became regent of the kingdom, during the minority of Conradin, his nephew. Pope Innocent IV. exciting a revolt against him, he was driven from his kingdom; but he reconquered it a year afterwards, and caused himself to be crowned in 1258. Pope Urban IV. excommunicated him, and offered his kingdom to Charles of Anjou. Manfred perished in a desperate battle with the latter near Benevento, 1266.
Manfredonia, (*man-frai-do'ne-a,*) a town of S. Italy, prov. of Capitanata, on the bay of the Adriatic, 20 m. N.E. of Foggia. It has a safe harbor, but for small vessels only, owing to the shallowness of the water. *Pop.* 8,934.
Manfredonia, (Gulf of,) an inlet of the Adriatic, bordering on the provs. of Capitanata and Terra-di-Bari, and is 15 m. long, and 30 broad at its entrance.
Man'ful, *a.* Becoming or befitting a man, or one arrived at years of maturity and discretion; having the spirit of a man; bold courageous; manly; brave; daring; noble; honorable.
Man'fully, *adv.* Boldly; courageously; honorably; in a manful spirit.
Man'fulness, *n.* State or quality of being manful; courageousness; boldness; manly spirit, stoutness.

Man'gaby, *n.* (*Zoöl.*) A monkey of the W. coast of Africa, genus *Cercocebus.*

Mangalore, or COREAL BUNDER, (*man-ga-lor'*,) a seaport-town of Hindostan, prov. of Canara, on a sandy promontory between Salt Lake and the Indian Ocean, 440 m. S.E. of Bombay; Lat. 12° 53′ N., Lon. 74° 57′ E. *Prod.* Black pepper, sandal wood, cassia, and turmeric. The imports are principally raw silk, sugar, and oil. *Pop.* 12,000.

Man'ganate, *n.* (*Chem.*) A compound of manganic acid and a base.

Manganese', *n.* [Fr.; L. Lat., from *manganesium.*] (*Chem.*) One of the heavy metals of which iron may be taken as the representative. It is of a grayish-white color, presents a metallic brilliancy, is capable of a high degree of polish, is so hard as to scratch glass and steel, is non-magnetic, and is only fused at a white heat. As it oxidizes rapidly on exposure to the atmosphere, it should be preserved under naphtha. It occurs in small quantity in association with iron in meteoric stones; with this exception, it is not found native. The metal may be obtained by the reduction of its sesquioxide by carbon at an extreme heat. *M.* combines with carbon and silica, forming unimportant compounds. Its principal use is chemical, under the form of oxide. It is employed in this state for decomposing hydrochloric acid, in the manufacture of chlorine, as a cheap source of oxygen, and as a coloring material in the manufacture of glass and enamels. Mixed with iron, its hardness and elasticity are increased; *Equiv.* 55; *Sp. gr.* 8.01.; *Symbol,* Mn.—*M. Bronze,* owing to its toughness, is now largely used in the manufacture of steamship propellers.

Carbonate of M. The anhydrous carbonate occurs in nature as manganese spar, and frequently accompanies spathose iron ore. The famous Siegen ore, from which the celebrated German *spiegel-eisen* is made, contains a certain proportion of this mineral, which renders the iron made from it peculiarly hard and tough. The artificial carbonate may be obtained in a hydrated condition by precipitating the chloride by an alkaline carbonate.

Chlorides of M. Manganese forms three chlorides. The *protochloride,* $MnCl + 4aq$, occurs as a waste product in the manufacture of chlorine; by acting on the black oxide with hydrochloric acid, it crystallizes in delicate pink tables, which are slightly deliquescent. The *sesquichloride* is formed by acting on the sesquioxide with hydrochloric acid in the cold. It is of a dark-brown color, and can only be obtained in a solid form by evaporation in vacuo. The *perchloride,* Mn_2Cl_7, is a greenish-yellow gas, which condenses at 0° Fahr. into a greenish-brown fluid. It is obtained by dissolving permanganate of potash in sulphuric acid, and adding chloride of sodium in small portions at a time. It is supposed by some chemists that this compound is an oxychloride of the metal, corresponding to chloro-chromic acid.

Ores of M. The principal ores of manganese are *pyrolusite,* the anhydrous binoxide, and black wad, which is the hydrated binoxide. Both these ores are worked extensively in different parts of the world.

Oxides of M. The combinations of manganese and oxygen are principally five in number:—1. The *protoxide,* MnO; 2. the *sesquioxide,* Mn_2O_3; 3. the *binoxide, peroxide,* or *deutoxide,* as it is sometimes erroneously called, MnO_2; 4. *manganic acid,* MnO_3; and 5. *permanganic acid,* Mn_2O_7. The *protoxide* may be obtained as an olive-green powder, by igniting carbonate of *M.* in a current of hydrogen. It is also procured as a white hydrate by decomposing any salt of *M.* with an alkali. It is soluble in ammonia especially if any ammoniacal salt be present. It unites with acids, forming characteristic salts. The *sesquioxide* is found in nature as *braunite,* and in a hydrated condition as *manganite.* It is obtained as a brown hydrate by passing chlorine through the protocarbonate suspended in water, and afterwards removing the excess of carbonate by nitric acid. Sulphuric acid dissolves it slowly, forming a deep-red solution; and hydrochloric acid in the cold also forms with it a soluble compound, both of which are decomposed when the solutions are heated. The *binoxide* or *peroxide* is the most important of the oxides of manganese. It is the black oxide of manganese of commerce, and is found in nature as a *pyrolusite* or *psilomelane.* Black-wad is a hydrated form of this oxide. When ignited, it gives off one third of its oxygen, leaving the red oxide ($MnOMn_2O_3$) behind. It is used in commerce for the production of oxygen, and in the manufacture of chlorine, permanganic acid, and violet glass. *Manganic acid* is not known in an isolated condition. When peroxide of manganese and caustic potash are fused together, and the mass heated with a small portion of water, a green solution is obtained, from which crystals of manganate of potash may be procured by evaporation in vacuo over sulphuric acid. The manganates are very unstable, being decomposed by boiling, and even by remaining in dilute solution. The green solution of manganese of potash, when largely diluted, gradually changes to a deep claret color, and forms the well-known material called *mineral chameleon. Permanganic acid* is described under its proper heading.

M., (*Sulphate of.*) This salt, the formula of which is MnO,SO_3+5aq, is obtained by dissolving the binoxide in sulphuric acid. It forms large transparent crystals of a pinkish hue, varying in shape and composition, according to the temperature at which they are deposited and the number of equivalents of water which they contain. The salt is extensively used in dyeing and calico-printing, and occasionally in medicine. It forms double salts with potash and soda, and an alum with sulphate of alumina, which must not be confounded with the alums formed by the sesquisulphate of manganese with the sulphates of the alkalies. The formulæ of these alums will help to explain this matter:

$Al_2O_3 3SO_3, MnOSO_3+24aq$, manganese-alumina-alum.
$Mn_2O_3 3SO_3, KO,SO_3+24aq$, manganese-potash-alum.

It will be seen from this that in one case the protomanganic salt replaces the alkaline sulphate, while in the other the aluminous sesquisulphate is replaced by the corresponding sesquisulphate of manganese. The sulphate of the sesquioxide is formed by dissolving the sesquioxide in sulphuric acid at a gentle heat. It crystallizes with difficulty, the solution being instantly decomposed by heat.

M., (*Sulphides of.*) Protosulphide of manganese occurs native in black masses in manganese blende. The anhydrous sulphide may be obtained as a dark-green powder by treating together a mixture of sulphur and binoxide of manganese. The hydrated salt is obtained as a flesh-colored precipitate when a solution of a salt of manganese is decomposed by an alkaline sulphide. An oxysulphide of manganese has been formed by passing hydrogen over sulphate of manganese at a red heat. Sulphide of manganese forms compounds with the sulphides of potassium and sodium, containing three equivalents of the former to one of the latter.

Manganesian, (*nē'zhī-an,*) *a.* Pertaining to manganese; consisting of, or partaking of the qualities of, manganese.

Mangane'sic, Mangan'ic, *a.* [Fr. *manganesique, manganique.*] (*Chem.*) Extracted from manganese; as, *manganesic* acid.

Manganesium, *n.* (*Chem.*) See MANGANESE.

Manganesons, *a.* (*Chem.*) Having reference, or belonging to, or obtained from, manganese.

Mangan'ic Acid, *n.* (*Chem.*) See MANGANESE (OXIDES OF).

Man'ganite, *n.* (*Min.*) See MANGANESE (OXIDES OF).

Mangan'ja, a tribe of African negroes, inhabiting a country on the river Shire, a tributary of the Zambesi. They are an industrious race, being good workers in metal, growing cotton, making baskets, and cultivating the ground, in which occupation both sexes equally share. They are very hospitable, and live in good union, though every village is governed by an independent chief. The women are distinguished by the very singular ornament called the *pelele,* and fixed into the upper lip, which gives them the most repulsive appearance. It is a ring made of ivory, metal, or bamboo, nearly an inch in thickness, and variable in diameter, sometimes measuring two inches across. When the girl is very young the upper lip is pierced close to the nose, and a small pin inserted to prevent the orifice from closing.

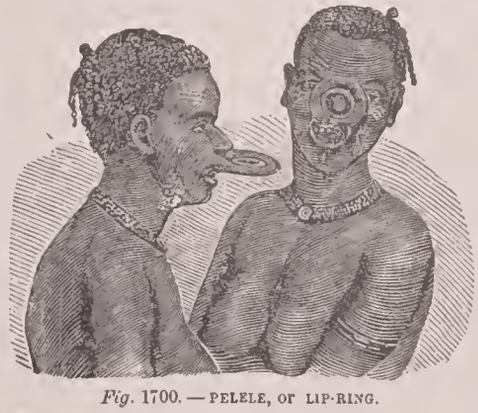

Fig. 1700.—PELELE, OR LIP-RING.

When the wound is healed, the small pin is withdrawn, and a larger one introduced; and the plan is carried on for years, until at last the full-size pelele can be worn. The commonest sort of pelele is made of bamboo, and is in consequence very light. When the wearer of the pelele smiles, or rather tries to smile, the contraction of the muscles turns the ring upwards, so that its upper edge comes in front of the eyes, the nose appearing through its middle. The whole front teeth are exposed by this motion, so as to exhibit the fashionable way in which they have been clipped, so that, as Livingstone says, they resemble the fangs of a cat or crocodile. An old lady had a pelele so heavy and wide that it hung below her chin. How this frightful ornament came to be first introduced is unknown. The reason which they give for wearing it is rather amusing. A man, say they, has whiskers and a beard, whereas a woman has none. "What a kind of creature would a woman be without whiskers and without the pelele? She would have a month like a man, and no beard!" As a natural result of wearing this instrument, the language has undergone a modification as well as the lips. The labial letters cannot be pronounced properly, the under lip having the whole duty thrown upon it.

Mangarat'iba, a seaport-town of Brazil, on the Bay of Angra dos Reis, abt. 53 m. W.S.W. of Rio de Janeiro.

Mange, (*mānj,*) *n.* [From Fr. *démanger,* the itch.] (*Farriery.*) An eruptive disease which attacks several domestic animals, especially the dog. It is said to resemble the itch, and, like that disease, to be produced by a minute species of acarus which burrows beneath the cuticle. It is stated that the fluid discharged from the eruption of mange in horses and dogs has produced the itch upon the human skin. It is produced by confinement, want of cleanliness, and bad food.

Man'gel-wurzel, or **Man'gold-wurzel,** *n.* (*Bot.*) See BETA.

Mang'corn, *n.* [A. S. *mencgan;* Du. *mengen,* to mingle.] Mixed grain, as wheat and rye. (An English provincialism.)

Manger, (*mān'jer,*) *n.* [Fr. *mangeoire,* from *manger;* Lat. *mando,* to eat.] A trough, case, or box, in which fodder, corn, &c., is placed for cattle or horses; or, the place in which such animals are fed.

(*Naut.*) The space near the bawse holes, bounded on the after side by a partition across the bows, called the *manger-board,* to receive any water which may enter the hawse-holes. This water, instead of being allowed to flood the deck, is forced to return through the scuppers.

Mangifera, *n.* [From *mango,* and Lat. *fero,* I bear.] (*Bot.*) A genus of plants, order *Anacardiaceæ. M. indica* produces the Mango, a fruit which is highly esteemed in tropical countries. This fruit (Fig. 1701) is a drupe, large, flattened like a lens, and kidney-shaped. When ripe, it is yellow or reddish, with soft and pulpy flesh, filled with juice. The *M. indica,* or common mango, is a spreading tree of rapid growth, 30–40 feet high, the stem only rising 8–10 feet before it divides into branches; the foliage so dense as to be impene-

Fig. 1701.—COMMON MANGO.
(*Mangifera Indica.*)

trable to the burning rays of the sun, affording a most grateful shade. Several varieties of the mango-tree are cultivated, which yield fruits differing greatly in size and flavor. Unripe mangoes are used for making the pickle called in India *chutney.*

Mangily, (*mān'jē-lī,*) *adv.* Meanly; paltrily; vilely. (R.)

"O, this sounds *mangily* . . . in a soldier's mouth." *Beau. and Fl.*

Man'giness, *n.* Scabbiness; state or condition of being mangy; infection with the mange.

Mangle, (*măng'gl,*) *v. a.* [L. Lat. *mangulare,* to mutilate, from Lat. *mancus,* maimed, mutilated.] To maim; to mutilate; to lacerate; to cut with a dull instrument, and tear, or to tear in cutting; to cut in a bungling manner, or in a way to cause jagged wounds; to hack; to butcher.

"Swords . . . *mangle* and disjoint this brittle frame."—*Prior.*

—To curtail; to dock; to take by piecemeal; to make a botch of.

"Most of the books we see nowadays, are full of those *manglings* and abbreviations."—*Swift.*

Man'gle, *n.* [Ger. *mange, mangel.*] (*Mach.*) A machine for smoothing linen and cotton articles. In its usual form it consists of an oblong rectangular wooden chest, filled with stones, which load it to the degree of pressure which it is required to exert upon two cylinders on which it rests, and which, by rolling backwards and forwards over the linen spread upon a smooth surface beneath, render it smooth and level. It is worked by the hand, the moving wheel being furnished with teeth upon both surfaces of its periphery; and, having a notch cut out at one part, allows a pinion, uniformly driven in the direction, to act alternately upon its outside and inside, so as to cause the reciprocating motion of the chest. There are several varieties of patent mangles; among which may be mentioned one in which the linen is rolled round a cylinder revolving in stationary bearings, and pressed downwards by heavy weights hung upon its axis, against a curved bed made to slide backwards and forwards, or alternately from side to side.

—*v. a.* To smooth, as linen, by means of a mangle; to calender.

Man'gler, *n.* One who tears in cutting; a hacker.

"Coarse *manglers* of the human face divine."—*Tickell.*

—One who works a mangle; a smoother of linen.

Mango, (*măng'go,*) *n.* [Malay, *mangga.*] (*Bot.*) See MANGIFERA.

—A pickled green musk-melon.

Mango-fish, *n.* See POLYNEMUS.

Man'gonel, *n.* [O. Fr.] (*Mil.*) An ancient engine of war, similar to the TREBUCHET, *q. v.*

Man'gosteen, *n.* (*Bot.*) See GARCINIA.

Man'go-tree, *n.* (*Bot.*) The *Mangifera Indica.* See MANGIFERA.

Mangrove, (*măng'grōv,*) *n.* [Probably an abbreviation of *mangle* grove, the former being the Malay name.] (*Bot.*) A tree inhabiting the shores of the tropical parts of the world in either hemisphere, and well known to

navigators on account of the dense groves which it forms, even down into the water itself. It belongs to the genus *Rhizophora* (its name being *Rhizophora Mangle*), and is principally remarkable for its seeds germinating before they leave the case in which they were generated on the branches. The young radicle grows downwards through the humid air, till it reaches the mud, in which it fixes itself, and then the leaves and new stem unfold at the opposite end. The White Mangrove is *Laguncularia racemosa*, and the Black Mangrove, *Avicennia tomentosa*.

(*Zoöl.*) The mango-fish. See POLYNEMUS.

Man'gouste, *n.* (*Zoöl.*) A name of the ICHNEUMON, *q.v.*

Mangueira, (*man-ga'e-ra,*) a lake of Brazil, in the prov. of Rio Grande, between Lake Mirim and the Atlantic Ocean.

Mangy, (*mān'ji,*) *a.* Infected with the mange; scabby; as, a *mangy* dog.

Manha'den, *n.* (*Zoöl.*) Same as MENHADEN, *q. v.*

Manhas'set, in *New York*, a post-village of Queen's co., abt. 20 m. E.N.E of New York city.

Manhat'tan, in *Illinois*, a township of Will county.

Manhattan, in *Indiana*, a post-village of Putnam co., abt. 45 m. W.S.W. of Indianapolis.

Manhattan, in *Kansas*, an important city, the cap. of Riley co., on the Kansas river and the Un. Pac., C., R. I. & P., and Atch., Top. & S. Fé R.Rs.; 52 m. W. of Topeka; has extensive quarries of fine building stone, and a good local trade in farm products. Seat of the Kansas State Agricultural College. *Pop.* (1895) 2,980.

Manhattan, in *Manitoba*, post-office of Gallatin co., located on the Nor. Pac. R.R.

Manhattan, in *Ohio*, a post-office of Laurence co.

Manhattan, in *Pennsylvania*, a post-office of Tioga co.

Manhat'tan Island, in *New York*. See NEW YORK CITY.

Manheigan Island, (*man-hee'gan,*) in *Maine*, an island and light-house, S. of the mouth of George River. It exhibits a revolving light, alternately red and white, at an elevation of 170 ft.; Lat 43° 44′ N., Lon. 69° 15′ W.

Man'heim, or **Mann'heim,** a town of the grand-duchy of Baden, circle of the Lower Rhine, of which it is the cap., at the confluence of the Neckar and the Rhine, 37 m. S.E. of Mayence. The principal public buildings are the palace, containing museums of antiquities, natural history, &c., and a library of 70,000 vols.; the observatory, a noble building, with a curious tower 108 feet in height, and the custom-house. *Manuf.* Tinsel-ware resembling gold, carpets, linen, and silk goods, tobacco, ribbons, shawls, &c. Its neighborhood produces hops and garden stuff in large quantities, and besides its traffic in cattle and agricultural products, it has a considerable transit trade by the Rhine and the Neckar.

Manheim, (*man'hime,*) in *New York*, a township of Herkimer co.

Man'heim, in *Pennsylvania*, a post-borough and township of Lancaster co., abt. 33 miles E.S.E. of the city of Harrisburg.

—A township of York co.

Man'heim Centre, in *New York*, a post-village of Herkimer co., abt. 68 m. W.N.W. of Albany.

Man'-hole, *n.* (*Mach.*) An opening in the top of a boiler, used as an entrance when the boiler requires cleaning; it is covered by a strong plate bolted to the boiler-plating, so as to be steam-tight.

Man'-hole Cover, *n.* (*Mach.*) A strong iron plate bolted over the man-hole, so as to be removable when required.

Man'hood, *n.* The state of being an adult male, or one who is advanced beyond puberty, boyhood, or childhood; virility; human nature, as distinguished from the animal creation.

"Thy pride of *manhood*, daring, bold, and venturous." — *Shaks.*

—Courage; bravery; resolution; fortitude; manliness.

Manhn-açu, (*man-hoo-a-soo',*) a river of Brazil, tributary of the Doce, from the S.W.

Ma'ni, Ma'nes or **Manichæ'us.** See MANICHEANS.

Mani, (*ma-nee',*) an Indian village of Yucatan, abt. 97 m. E.N.E. of Campeachy. It is surrounded by the ruins of a large ancient city.

Ma'nia, *n.* [Lat. and Gr.; from Gr. *mainomai*, to rage, to be furious, from *maō*, to strive after, to attempt eagerly; Fr. *manie.*] (*Med.*) Violent insanity; madness. Mania is defined to be delirium, unattended by fever. The emotions are especially disordered in the form of insanity. Violent expressions of passion attend the disease when acute. See INSANITY.

—Uncontrollable appetite or raging desire for anything; passion with dementia; as, a *mania* for collecting autographs.

Mania a potu. [Lat., madness from drinking.] (*Med.*) See DELIRIUM TREMENS.

Ma'niac, Mani'acal, *a.* [Lat. *maniacus.*] Affected with mania; mad; raving with dementia; raging with disordered intellect or violent desires; as "*maniacal* lunacy." — *Grew.*

Ma'niac, *n.* A madman; a lunatic; an insane person.

Mani'acal, *a.* Maniac; insane.

Maniago, a town of Austria, 25 m. W.N.W. of Udine. *Manuf.* Iron and steel. *Pop.* 4,000.

Man'icate, *a.* [From Lat. *manica*, sleeves.] (*Bot.*) Covered with hairs or a pubescent tissue, as certain plants.

Manichæ'an, *a.* Pertaining to the Manicheans.

Manicheans, MANICHÆANS, MANICHEES, or MANI, (*măn-i-ke'ănz,*) *n. pl.* (*Eccl. Hist.*) A religious sect founded towards the close of the 3d cent., by one Mani, or Manes. He was a Persian by birth, educated among the Magi, and his system was an attempt to blend Christianity and the religions of ancient Asia. The system is based upon dualism, there being supposed to be two distinct opposing principles from which all things proceed; the former being presided over by a good being — God; the latter by an evil being — Hyle. God, the father of light, is described as being all splendor, truth, holiness, goodness, and happiness, and surrounded by twelve sons, or worlds of light, which, as a heavenly zodiac, preside over the great year of the world. These, however, are not emanations from God, but God is one with the kingdom of light, the whole forming one substance. Opposed to the kingdom of light is that of darkness, which is divided into five regions, and in which the prince of darkness sustains the same relation to his inferiors as the God of light occupies in his kingdom. By an inroad made by the powers of darkness into the kingdom of light, the primitive man, the first-born of God, was overthrown and imprisoned. He was subsequently delivered; but a portion of the light remained imprisoned in the darkness. God then brought into existence the present universe, that it might be a receptacle for this lost light; and two new heavenly powers, Christ and the Holy Ghost, proceeded from God to redeem the detained light. The man Adam is then formed by the prince of darkness after the image of the primitive man, comprising, as in a microcosm, the clearest light with the grossest darkness. From him proceeded the human race, each member of which presents a mixture of the two elements — light and darkness; and in each succeeding generation the power of the light is weakened by the ascendancy of the darkness. To break this dominion, Christ himself appeared in order to reveal again the lost truth; but his life upon earth, his sufferings and death, were a mere semblance, for the essentially pure light of his being could not unite itself to gross matter. The statements of the New Testament were only partially true; the full truth regarding Christ was first revealed by the Paraclete (Manes). They denied the genuineness of the Gospels, and Acts of the Apostles; the Epistles were regarded as interpolated; while many apocryphal writings, especially the Acts of Thomas, were made use of by them. The work begun by Christ required for its completion Manes, the Paraclete promised by Christ, to lead men to a knowledge of the complete truth, by revealing the secret relations of the universe, and securing the means of human freedom. The redemption of man they held to consist in a knowledge of the revelations made by Christ and Manes, respecting the character of the two empires, the soul and its relation to the body, and a corresponding mode of life. Their system of ethics was thus of a severely ascetic nature, based on the convictions of the intrinsic evil of the body, from the fetters of which their great aim was to set the soul free. For their higher class of members, the *electi* or *perfecti*, a rigorous system of asceticism was prescribed. They were forbidden to eat any kind of food which might increase the power of the body over the spirit; in particular were they to abstain from flesh, which, as the product of Hyle, and as being entirely destitute of light, could only depress the soul. Every kind of work through which man cultivates this world, which is the kingdom of darkness, or makes it a pleasant home, was forbidden. Abstinence from sexual intercourse was regarded as a moral duty, as it was a continuing of the first sin and a preparing of new prisons for the soul. The *auditares*, or lower class of members, were permitted to eat meat, to marry, to occupy themselves with material and industrial pursuits, and to fill public offices; but were also bound to supply the elect with all the necessaries of life. Manes sent out twelve apostles, and these were afterwards represented in the church by twelve magistri, with a thirteenth invisible one, doubtless Manes himself, at their head. After these were seventy-two bishops, who had under them presbyters, deacons, evangelists, and the other electi. They had no temples, and their worship consisted chiefly in hymns and prayers. After the death of Manes, his adherents in Persia were subjected to a long persecution, and many of them are said to have fled to Hindostan. In Syria, Egypt, Palestine, and other countries, they early made their appearance, and the northern coast of Africa became one of their principal seats. Under Constantine they enjoyed toleration; but the succeeding Christian emperors issued severe decrees against them. Nevertheless, they continued to prosper for a long time. Their congregations were numerous, and had many able leaders. In Italy, and especially at Rome, they were very numerous, and maintained intimate relations with the congregations in other countries. Pope Leo I. took severe measures against them; Valentinian III. punished them with exile, and Justinian ordered them all to be put to death. By these persecutions the sect gradually became extinct, although traces of it are found in later centuries in Gaul and Spain; and its influence is to be traced in many of the new sects of the Middle Ages. Augustine was for nine years a member of this sect, but left them when he found not among them the thoroughness of learning nor the purity of character that he had expected; and he became afterwards their most zealous opponent.

Manichе'ism, *n.* [Fr. *manicheisme.*] The doctrinal system propounded by the Manicheans.

Manichе'ist, *n.* Same as MANICHEAN, *q. v.*

Man'ichord, Manichord'on, (*-kôrd,*) *n.* [Fr. *manichordion*, from Gr. *manos*, single, and *chordē*, string.] (*Mus.*) An instrument sounded by the hand, like a spinet.

Man'icon, *a.* [Lat., from Gr. *manikos.*] Pertaining to madness.

Manicouagan, (*man-e-kwa'gan,*) a river of Lower Canada, rising in a lake of the same name, and flowing S. into St. Lawrence River.

Manidowish', in *Wisconsin*, a small river flowing into Chippewa River, in Chippewa co.

Man'ifest, *a.* [Fr. *manifeste*; Lat. *manifestus* — *manus*, the hand, and Sansk. *pash*, to grasp, to hold.] Palpable; apparent; open; clear to the understanding; evident; obvious; conspicuous; plain; not obscure or difficult to be seen or comprehended; as, a *manifest* truth, a *manifest* lie, &c.

"Thus *manifest* to sight the god appeared." — *Dryden.*

—Detected; convicted; revealed; — with *of.*

"Calistho there stood *manifest of* shame." — *Dryden.*

—*n.* (*Com.*) A list of the goods forming the cargo of a ship, containing a particular description of each article or package, for inspection by the custom-house authorities.

—*v. a.* [Fr. *manifester*; Lat. *manifesto.*] To reveal; to make to appear; to render public; to show plainly and palpably; to disclose to the eye or to the understanding; to display, or exhibit more clearly to the view; as, to *manifest* esteem for a person.

"The glory of God's wisdom *manifested* in the creation." — *Ray.*

—To declare a ship's lading at the custom-house; to exhibit the list of particulars of a vessel's cargo.

Man'ifestable, Man'ifestible, *a.* That may be manifested; easy to be made evident; as, a *manifestable* method.

Manifesta'tion, *n.* [Fr., from L. Lat. *manifestatio.*] Act of manifesting or disclosing what is secret, unseen, vague, or obscure; discovery to the eye or to the understanding; exhibition of anything by evidence; palpable display or revelation.

"This public *manifestation* (of acts of mercy)." — *Atterbury.*

Man'ifestible, *a.* See MANIFESTABLE.

Man'ifestly, *adv.* Clearly; evidently; plainly; palpably; in a manner to be easily seen or understood.

Man'ifestness, *n.* State or quality of being manifest; clear evidence; obviousness; perspicuity.

Manifes'to, *n.*; *pl.* MANIFESTOS. [Fr. *manifesto*; It. *manifesto*, from Lat. *manifestus*, manifest.] A public declaration, generally proceeding from a ruler or sovereign, showing or setting forth his intentions, or proclaiming or explaining his opinions or motives.

Man'ifold, *a.* [*Many* and *fold.*] Of divers kinds; many in number; numerous; multiplied, as varieties.

"The productions of the mineral kingdom are various and *manifold*." — *Woodward.*

—Presented or appearing on divers occasions or in various ways, as goodness.

"The *manifold* in sin deserved to fall." — *Milton.*

—*v. a.* To fold in many convolutions or thicknesses. — To multiply by one process, as copies of a written letter or account.

Man'ifolded, *a.* Having many complications or doublings.

Man'ifoldly, *adv.* In a manifold manner; in many or various ways.

Man'ifoldness, *n.* State of multiplicity, or complicated numbers.

Man'ifolds, *n. pl.* The third stomach of a ruminant animal. (Local, U. S.)

Man'iform, *a.* [Lat. *manus*, hand, and *forma*, form.] Hand-shaped.

Maniglion, (*ma-nīl'yon,*) *n.* [From It. *maniglia*, handle.] (*Ordnance.*) Either one of two handles on the back of a heavy gun.

Man'ihot, MANIOC, *n.* (*Bot.*) The Cassava, a gen. of plants, ord. *Euphorbiaceæ*. The species *M. utilissima*, the bitter cassava, is an important food-producing plant. Cassava-meal, which is largely employed in the making of the cassava bread or cakes in common use among the inhabitants of tropical America, is obtained by grating the washed roots, and then subjecting the pulp to pressure and heat. The roots and expressed juice are virulent poisons, owing chiefly to the presence of hydrocyanic acid; but their poisonous qualities are removed by the washing and heating. Cassava-starch, tapioca-meal or Brazilian arrow-root, and tapioca, are likewise prepared from the roots. The starch is deposited from the expressed juice, and is purified by washing with water. Tapioca is prepared by heating this starch, while moist, on hot plates: it is largely employed as a dietetic substance. The sauce called *casareep* in the West Indies is the juice concentrated by heat and flavored with aromatics. The species *M. aipi*, the sweet cassava, has none of the poisonous properties of the former species. Its root is a common article of food in the West Indies and some parts of S. America. It is as mealy as the potato when boiled. Cassava-meal, bread, and starch, as well as tapioca, are prepared from the sweet root in small quantities.

Man'ikin, *n.* [*Man*, and term. *kin*, a dimin. of *man.*] A little man; a dwarf; a pigmy.

"This is a dear *manikin* to you, Sir Toby." — *Shaks.*

—An artificial preparation, made with pasteboard, plaster, &c., exhibiting the various aggregated parts of the human frame.

Man'il, *n.* See MANILIO.

Manil'la, or **Manil'la,** a seaport-town of the island of Luzon, cap. of the extensive archipelago of the Philippines, on the river Passig, near its mouth, in the bay of Manila; Lat. 14° 36′ 8″ N., Lon. 120° 53′ 30″ E. *M.* comprises the city proper and 10 suburbs, the principal of which is Binondoc, the seat of most of its trade, and connected by a bridge over the Passig. It has suffered severely from the frequency of earthquakes; the last in 1863 nearly destroyed the town, on which occasion over 2,000 lives were lost. The bay and harbor of *M.* are excellent, and the river Passig is navigable for 10 m. The

trade of *M.* is chiefly with the United States, Great Britain, Australia, and China. The principal exports are sugar, hemp, coffee, rice, tobacco, cotton, copper, and

Fig. 1702. — HARBOR OF MANILA.
(From Vaillant's *Travels round the World.*)

cochineal. The imports are chiefly woven goods, lead, ironware, silks, nankeen, vermilion, &c. The climate is generally healthy. *M.* was captured from Spain by the United States in 1898. *Pop.* (with suburbs) abt. 150,000.

Manil'a, Manil'la, *a.* (*Geog.*) Pertaining or having reference to Manila, one of the Philippine Islands.

Manila hemp, the fibrous integuments of the *Musa textilis*, a plant growing in the Philippine Islands, and of which superior cordage and ropes are made. — *Manila rope*, or *cordage*, rope or cordage made from Manila hemp, and extensively used on shipboard.

Manil'la, in *Indiana*, a post-village of Rush co., abt. 10 m. W.S.W. of Rushville.

Manil'io, Maw'il, Manil'la, Manille', *n.* [Sp. *manilla.*] A bangle, or arm- or leg-ornament worn by native Africans. — A copper coin of horse-shoe form, circulating among certain tribes on the Guinea coast, Africa.

Man'in, DANIELE, a distinguished Italian patriot, B. at Venice, 1804, was educated for the bar, and soon gained great distinction as a pleader. The ardor of his political sentiments had marked him out as one of the leaders of the national party. In 1847 he took an active part in promoting the national movement; for this he was, with his friend, Tommaseo, cast into prison, but while awaiting his trial the revolution of 1848, that burst out at Paris, Naples, and Vienna, found an echo at Venice, and the two prisoners were set at liberty by the people and borne in triumph. The expulsion of the Austrians and the proclamation of the republic immediately followed. During the siege which commenced in the autumn of the same year, and lasted twelve months, *M.* was at the head of the civil government, and to his counsels and patriotic spirit it was mainly owing that the Venetians maintained so long and brilliant a defence. After the capitulation, *M.* retired to Paris, where he maintained himself by giving lessons in Italian, and continued in various pamphlets, and through the press, to advocate the cause of Italian independence. D. 1857.

Man'ioc, Man'dioc, *n.* (*Bot.*) See MANIHOT.

Man'iple, *n.* [Lat. *manipulus*, a handful.] A handful. — A company of Roman soldiers. — A stole or fanon worn on the left arm of a Roman Catholic priest.

Manip'ular, *a.* [Lat. *manipularis.*] Relating or pertaining to a maniple.

Manip'ulate, *v. a.* [Fr. *manipular*, from Lat. *manipulus*, a handful — *manus*, the hand, and *ple*, root of *plenus*, full. See PLENARY.] To treat or operate upon with the hands.

—*v. a.* To employ the hand in; to perform handiwork.

Manipula'tion, *n.* [Fr.] Act of manipulating; work performed manually; labor by hand.

(*Chem.*) The term *M* embraces the manual and mechanical operations of the laboratory; and in the delicate details of analysis, as well as in the exhibition of class experiments, great skill and practice in *M.* are required. The processes of weighing, measuring, filtering, distilling, precipitating, dissolving, using the blowpipe, &c., all come within the meaning of *M.*

(*Mining.*) A peculiar manner of digging silver or other ores.

Manip'ulative, *a.* Relating to manipulation; performed by handiwork.

Manip'ulator, *n.* One who manipulates; one who practises handiwork.

Manip'ulatory, *a.* Belonging, or having reference to manipulation.

Ma'nis, *n.* [From Lat. *manes*, shades of the departed.] (*Zoöl.*) See PANGOLIN.

Man, (Isle of.) (anc. *Mona, Monapia*, or *Monœda.*) an island of Great Britain, in the Irish Sea, nearly equidistant from the coasts of England, Scotland, and Ireland; Lat. between 54° 4′ and 54° 27′ N., Lon. 4° 17′ and 4° 34′ W. *Ext.* About 30 m. long, and between 10 and 13 m. broad, terminating in a sharp point towards the N. *Area*, 280 sq. m. On the S. is a small island called the Calf of Man. The interior and central part is mountainous. The towns and villages (Castletown, the cap., and Douglas) are almost all situated along the coast. The soil is rather unproductive. Liverpool is the port of England in which nearly all the trade of the Isle of Man centres. The Isle of Man was formerly the property of the dukes of Athole. Though sold by them to the English government, the island still forms a separate territory, with its own legislature and laws. It is under the ecclesiastical jurisdiction of a bishop, who is styled bishop of Sodor and Man, is the sole baron of the isle, and possesses many privileges. This island was a great station of the Druids, of whose circles it conserves numerous remains. In the schools, the Manx, a branch of the Celtic, is taught. *Pop.* 53,000

Manis'tee, or MANISTIC, in *Michigan*, a river rising in Crawford co., and flowing S.W. through Kalcaska, Wexford, and Manistee cos., into Lake Michigan. *Length*, about 150 m.

—A N.W. co. of the lower peninsula, bordering on Lake Michigan. *Area*, about 650 sq. m. *Rivers.* Manistee River, and several smaller streams. The soil, generally fertile, and well adapted for grain and all kinds of produce, is especially favorable to fruit, which here is never killed by frost. *M.* is well timbered, and abounds in hard woods. *Cap.* Manistee. *Pop.* (1894) 26,112.

—A city, cap. of the above co., about 75 m. N. by W. of Muskegon. Finely situated on a river of same name, between Lake Manistee and Lake Michigan, and its harbor, which is never closed by ice, affords unrqualled facilities for commerce, reached by the F. & P. M. R. R. Lumber is here extensively manufactured. *Pop.* (1897) 14,500.

Man'ito, in *Illinois*, a post-village of Mason co., about 16 m. N.E. of Havana. *Pop.* (1897) 540.

Manito'ba. See SECTION II.

Manito'ba Lake, a lake of British N. America, a few m. S.W. of Winnipeg Lake, with which it is connected by the Dauphin river; Lat. 51° N., Lon. 99° W. It covers an area of about 2,000 sq. m.

Manitou (*măn'-i-too*), *n.* [Ind.] A name applied by certain N. American Indian tribes to any object of worship.

Manitou'lin, a group of islands of prov. of Ontario, in Lake Huron. The principal ones are, Great Manitoulin, or Sacred Isle, *area*, about 1,600 sq. m.; Little Manitoulin, or Cockburn, *area*, about 100 sq. m; and Drummond, *area*, about 168 sq. m. The surface of all is generally elevated and rugged, and the coasts, especially those of Great Manitoulin, are deeply indented with bays and inlets.

Manitoulin Lake, or GEORGIAN BAY, an arm of Lake Huron in prov. of Ontario, between Lat. 44° 30′ and 46° N., and Lon. 80° and 81° 30′ W., being about 120 m. long by 50 m. in width, and covers an area of about 6,000 sq. m. The shores are generally low and deeply indented by the mouths of the numerous rivers which flow into it. It is interspersed with many islands, some of which are quite large.

Manitowoc' [Indian, *River of Spirits*], in *Wisconsin*, a small river flowing into Lake Michigan from Manitowoc co.

—An E. co., bordering on Lake Michigan; *area*, about 587 sq. m. *Rivers.* Manitowoc, Sheboygan, East Twin, and West Twin rivers. *Surface*, diversified; *soil*, generally fertile. *Cap.* Manitowoc. *Pop.* (1895) 40,802.

—A city, cap. of the above co., on the Manitowoc river, where it enters Lake Michigan, and the Cb. & N.W. R. R., 77 m. N. of Milwaukee. It has an excellent harbor, extensive manufacturing interests, and a large distributing trade. *Pop.* (1895) 9,427.

Manitowoc Rapids, in *Wisconsin*, a post-village and township of Manitowoc co., on the Manitowoc river, about 4 m. above its mouth.

Man'iton River, in *Wisconsin*, enters the Fox river in Brown co.

Man'itrunk, *n.* (*Zoöl.*) In insects, the anterior segment of the trunk, in which the head inosculates, or on which it turns.

Manka'to (or BLUE EARTH) **River,** in *Minnesota*, rises near the S. border of the State, and flowing N., enters the Minnesota river from Blue Earth co.

—A city, cap. of Blue Earth co., on Minnesota river (at head of navigation), the C., M. & St. P., and 3 other R. Rs.; has extensive manufactures, beautiful surroundings, and a good local trade. *Pop.* (1895) 10,173.

Mankind', *n.* [*Man* and *kind.*] The race or species of human beings; the order of man taken collectively; man.

—A male, or the males of the human race, in contradistinction to *womankind.*

Manks, *n.* and *a.* (*Geog.*) See MANX, the more correct orthography.

Man'less, *a.* Not manned, as a ship; without men. (R.)

Man'like, *a.* Having the form, appearance, and natural characteristics of a man, as distinguished from a woman. — Possessing the distinguishing mental or moral qualities of a man; manly.

Man'liness, *n.* State or quality of being manly; characteristic quality of the male sex; dignity; moral courage; bravery; fortitude; magnanimity.

"In all the silent *manliness* of grief."—*Goldsmith.*

Man'lius. Four illustrious Romans of this name are mentioned: — 1. MARCUS MANLIUS CAPITOLINUS, a patrician general, who saved the capitol when surprised by the Gauls about 390 or 392 B. C., and was thrown from the Tarpeian Rock, 370 B. C. — 2. LUCIUS MANLIUS IMPERIOSUS, named dictator, and compelled to abdicate for his despotism, B. C. 363. — 3. TITUS MANLIUS TORQUATUS, son of the preceding, famous for his magnanimity and courage, was appointed military tribune B. C. 362, and dictator 352, and again 348, without passing through the intervening dignity of consul. The latter office, however, he filled in 347, 344, and 340, but finally lost his popularity by the rigor of his administration. — 4. A second TITUS MANLIUS TORQUATUS, who was appointed consul B. C. 235 and 224, and, in the latter period, closed the temple of Janus after subjugating Sardinia. He refused a third consulate, but in 212 was appointed censor.

Man'lius, in *Illinois*, a thriving township of Bureau co.

—A township of La Salle co.

Man'lius, in *Michigan*, a post-township of Allegan co.

Man'lius, in *Missouri*, a village of Carroll co., about 8 m. E. of Carrollton.

Man'lius, in *New York*, a post-village and township of Onondaga county, about 10 miles S.E. of the city of Syracuse.

Man'lius Centre, in *New York*, a post-village of Onondaga co., abt. 9 m. E. of Syracuse.

Manlius'kus, in *Maine*, a township of Aroostook co.

Man'ly, *a.* (*comp.* MANLIER; *super.* MANLIEST.) Manlike; possessing qualities befitting a man; firm; brave; undaunted; dignified; noble; stately; magnanimous; resolute; not boyish or womanish. — Also, pertaining to the adult age of man.

"He moves with *manly* grace."—*Shaks.*

—*adv.* With courage; like a man; as, "a *manly* foe." *Canning.*

Man-mid'wife, *n.* A male accoucheur.

Man'-mil'liner, *n.* A man who makes millinery; hence, one who busies himself with frivolous or finical occupations, or takes concern in matters of frippery.

Mann, HORACE, an American statesman and educationalist, B. at Franklin, Mass., 1796, graduated at Brown University at Providence. *M.* was elected in 1827 to the legislature of Massachusetts, and in 1836 to the State Senate, of which he became president. In 1837 he was elected Secretary of the Board of Education, and giving up business and politics, he devoted his whole time to the cause of education, and, in 1843, made a visit to educational establishments in Europe. His report was reprinted both in Europe and in the U. States. In 1848 he was elected to Congress; at the end of his term, he accepted the presidency of Antioch College, at Yellow Springs, Ohio. D. 1859. *M.* was a strong advocate of temperance, and an energetic opponent of the institution of slavery. His principal works are, *Slavery; Letters and Speeches*, and numerous educational reports.

Man'na, *n.* (*Script.*) The miraculous food given by God to the Israelites during their wanderings in the desert. It was a small grain, white like hoar-frost, round, and of the size of coriander-seed (*Exod.* xvi.; *Num.* 11.) It fell every morning with the dew, about the camp of the Israelites, and in such great quantities during the whole forty years of their journey in the wilderness, that it was sufficient to serve the entire multitude instead of bread (*Ex.* xvi. 35; *Deut.* xxix. 5, 6; *Josh.* v. 12). It is nowhere said that the Israelites had no other food; and that numerous flocks and herds accompanied the camp of Israel is clear from many passages. When manna was first sent, the Israelites "knew not what it was," and "said one to another, MAN-HU," which means, What is it? Most interpreters think that from the frequent repetition of this inquiry the name MAN, or manna, arose.

(*Med.* and *Bot.*) See FRAXINUS.

Man'na-croup, *n.* A granular preparation of wheat, deprived of bran, used as an article of food for children and invalids; semolina.

Man'ner, *n.* [Fr. *manière*, from *manier*, to handle, from *main*, Lat. *manus*, the hand.] Form; method; plan; way of performing or executing; style; fashion; mode of action.

"Find thou the *manner*, and the means prepare."—*Dryden.*

—Mien; characteristic mode, way, or service of acting, conducting, deporting one's self, &c.; peculiar carriage or cast of countenance; method of service or worship; particular artistic mode of managing colors, lights, and shades; peculiar style of authorship, &c.; deportment; general action of behavior, mien, conduct, or carriage; — in the *plural*, habitual course of ceremony, or method of acting; customary habit.

"Some men have a native dignity in their *manner.*" *Richardson.*

"*Manners* must adorn knowledge."—*Lord Chesterfield.*

—Sort; kind; style; species; description; as, all *manner* of benefits.

"What *manner* of man art thou?"—*Coleridge.*

—Certain degree or measure; as, he is after a *manner* imprudent.

"We have rul'd in a *manner* at our will, th' affairs of earth." *Milton.*

In a manner, in a certain sense; to a certain extent.

"It is *in a manner* done already."—*Shaks.*

To be taken in, or *with the manner*, to be taken in the act of commission.

"If I melt into melancholy while I write, I shall *be taken in the manner.*"—*Donne.*

To make one's manners, to present one's salutation, greeting, or expression of courtesy.

Mannered, (*măn'nerd,*) *a.* Possessing manners, deportment, or mien.

"He was the mildest *mannered* man
That ever scuttled ship or cut a throat."—*Byron.*

—Characterized by mannerism; distinguished by excess of some peculiar trait or feature.

"His style is in some degree *mannered* and confined." *Hazlitt.*

Man'nerism, *n.* Adherence to a uniform manner; a characteristic sameness of style or method; tasteless conformity to one settled mode, pattern, or standard; a

reducing everything to the same level of manner, without the freedom and variety of a natural treatment.

"His style, in spite of his *mannerism*, nay, partly by reason of its *mannerism*, is well suited for . . . desultory Ana."—*Macaulay.*

Man'nerist, *n.* [Fr. *maniériste.*] One who is addicted to mannerism; one who performs his work in a peculiar and unvaried manner; a copyist of peculiarities other than his own.

(*Painting.*) An artist whose pictures bear no resemblance to the beautiful varieties of nature, but discover an unpleasing and tasteless sameness.

Man'nerliness, *n.* Quality or condition of being mannerly, or civil and respectful in deportment; good breeding; civility; complaisance; ceremonious behavior.

Man'nerly, *a.* Exhibiting good manners; decent and civil in external behavior; civil; respectful; well-bred; complaisant; not rude, brusque, or vulgar.

—*adv.* Civilly; respectfully; complaisantly; without rudeness, vulgarity, or brusquerie; with becoming courtesy.

Man'ners-bit, *n.* A morsel left in a dish for the sake of good manners, and to avoid the imputation of greediness.

Mann'heim. See MANHEIM.

Manning, in *S. Carolina*, a post-town, cap. of Clarendon co., 70 m. N. by W. of Charleston. *Pop.* (1897) 1,120.

Man'ningham, a town of England, co. of York, 1 m. from Bradford. *Manuf.* Woollen goods. *Pop.* 10,000.

Man'ningham, in *Alabama*, a post-village of Butler co., about 130 m. S.E. of Tuscaloosa.

Man'ningsville, in *W. Virginia*, a vill. of Kanawha co., about 16 m. W.S.W. of Charleston.

Man'nington, in *New Jersey*, a township of Salem co.

Man'nington, in *W. Virginia*, a post-vill. of Marion co.

Man'nington Hill, in *New Jersey*, a village of Salem co., about 4 m. E.N.E. of Salem.

Man'nish, *a.* [A.S. *mennisc*; Ger. *männisch.*] Human; possessing the nature of man. — Presenting the aspect or appearance of a man; bold; masculine; — and, in a bad sense, not befitting a woman; impudent; tomboyish; not feminine.

"A woman, impudent and *mannish* grown." — *Shaks.*

Man'nishly, *adv.* In a mannish or masculine manner.

Man'nite, *n.* (*Chem.*) When manna is dissolved in boiling alcohol, the solution, as it cools, deposits it in flaky and acicular crystals, often arranged in concentric groups. Manna, thus purified, has been chemically designated by the term *mannite.* Mannite is found in variable quantities in a great variety of plants, and is a product of the vinous fermentation of sugar. *Form.* $C_6H_{14}O_6$.

Manns'borough, in *Virginia*, a post-village of Amelia co., about 30 m. S.W. of Richmond.

Mann's Choice, *Pennsylvania*, a post-borough of Bedford co., on Penna. R.R. *Pop.* 400.

Manns'ville, in *New York*, a post-village of Jefferson co., about 52 m. N. by W. of Rome.

Man'ny, or **Man'y,** in *Louisiana*, a post-village, cap. of Sabine parish, about 150 m. W.N.W. of Baton Rouge.

Manoel'-Al'ves, the name of two small rivers of Brazil, called GREAT and LITTLE, respectively, entering the Tocantins in the province of Goyaz.

Manoel'-Ilha, an island of Brazil, in the Atlantic Ocean, near the mouth of the Appodi.

Manœuvre, MANEUVRE, (*ma-nū'ver.*) *n.* [Fr. *manœuvre* — *main*, from Lat. *manus*, the hand, and *œuvre*, from Lat. *opera*, work; L. Lat. *manopera.* See OPERATION.] Anything done in a handy, adroit, or dexterous manner; management; specifically, a dexterous movement or evolution performed in naval or military operations. — Stratagem; artful method of proceeding; adroit manner of performance; skilful artifice; intrigue; management with dexterity and address

—*v. n.* [Fr. *manœuvrer.*] To do anything dexterously or adroitly; to manage with address or art. — To move or change positions among troops or ships, for the purpose of advantageous strategical attack or defence, or for the requirements of discipline; to perform warlike evolutions.

—*v. a.* To alter or change, as the positions of troops, or ships in a fleet or squadron.

Manœu'vrer, MANEUVERER, *n.* One who designs or practises manœuvres.

Man'-of-war', *n.* A ship of war; a vessel of war employed in government service.

Man-of-war bird. (*Zoöl.*) See FRIGATE-BIRD.

Mañó'la, *n.* [Sp.] A young Madrid-lenian girl, who is addicted to gallantry. This is the original sense; but in common parlance, the name is applied also indiscriminately to the laboring girls of Madrid, without implying necessarily bad conduct.

Fig. 1703. — A MAÑOLA.

Manom'eter, *n.* [From Gr. *manos*, thin, and *metron*, measure.] An instrument intended to measure the rarefaction and condensation of elastic fluids in confined circumstances, whether occasioned by variation of temperature, or by actual destruction, or generation of portions of elastic fluids. (Also called *manoscope.*)

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Manomet'rical, *a.* Relating or pertaining to, or acted upon by, the manometer.

Man'or, *n.* [Fr. *manoir*, from L. Lat. *manerium*, *maneo* = Gr. *ménō*, to abide.] A residence or dwelling with a certain portion of land annexed to it.

(*Eng. Law.*) A tract of land originally granted by the king to a person of rank, part of which (*terre tenementales*) was given by the grantee, or lord of the manor, to his followers; the rest he retained, under the name of his demesnes (*terra dominicales*). That which remained uncultivated was called the lord's waste, and served for public roads, and commons or pasturage for the lord and his tenants. The whole fee was called a lordship or barony, and the court appendant to the manor the court-baron. The tenants, in respect to their relation to this court and to each other, were called *pares curiæ*; in relation to the tenure of their lands, *copyholders*, as holding by a copy of the record in the lord's court. No new manors were created in England after the prohibition of subinfeudation in 1290.

(*Amer. Law.*) A tract held of a proprietor by a fee-farm rent, in money or in kind, and descending to the oldest son of proprietor, who, in New York State, is called a *patroon.*

Man'or, in *Pennsylvania*, a township of Armstrong co.

—A post-village and township of Lancaster co., about 6 m. S.W. of Lancaster.

Man'or-Ham'ilton, a market-town of Ireland, co. Leitrim, about 12 m. E. of Sligo; *pop.* 1,500.

Man'or-house, Man'or-seat, *n.* The house or residence belonging to a manor.

Mano'rial, Mane'rial, *a.* Pertaining to, or consisting of, a manor or manors; as, *manorial* rights, a *manorial* lord, *manorial* influence.

Man'orville, in *New York*, a post-village of Suffolk co., abt. 60 m. N.E. of New York city.

Manorville, in *Pennsylvania*, a post-village of Armstrong co., abt. 2 m. S. of Kittanning.

Man'oscope, *n.* Same as MANOMETER, *q. v.*

Manos'copy, *n.* [Gr. *manos*, thin, rare, and *skopein*, to view.] The science of determining the density of vapors and gaseous exhalations.

Man'-rope, *n.* (*Naut.*) One of the side-ropes aiding a person to ascend to the gangway of a ship.

Mans, (Le,) a town of France, dept. of Sarthe, on the river Sarthe, 50 m. N.E. of Angers, and 120 S.W. of Paris. *Manuf.* Linens, sail-cloth, flannels, serge, and druggets, leather, gloves, &c. Le Mans is famous for its poultry. *Pop.* 45,230. — In 1793 it was the scene of the destruction of the Vendean army, when upwards of 10,000 persons were slaughtered.

Man'sard, FRANÇOIS, a French architect, B. 1598; D. 1666. He built several churches, and other public edifices at Paris. — His nephew, Jules-Hardouin *M.*, B. 1645, was also an excellent architect, and the superintendent of the royal edifices. He built the palaces of Versailles, Marly, and the Great Trianon, the Hospital of the Invalides, &c. D. 1708.

Man'sard-roof, *n.* [From F. *Mansard*, a celebrated French architect.] (*Arch.*) Same as CURB-ROOF, *q. v.*

Manse, *n.* [Lat *mansio*, from *maneo*, *mansum*, to stay or abide anywhere.] A house or habitation; specifically, in Scotland, a Presbyterian minister's abode; a parsonage house. — A farm.

Capital manse, a manor-house.

Mans'feld, ERNST, COUNT VON, a celebrated soldier of fortune, B. at Mechlin, 1585. He greatly distinguished himself in the Thirty Years' War; but was defeated by Wallenstein in 1625; and D. 1626.

Mans'field, a town of England, Nottingham co., on the river Mann, 14 m. N.W. of Nottingham. *Manuf.* Cotton spinning, hosiery, and lace.

Mans'field, in *Connecticut*, a post-village and township of Tolland county, about 24 miles E. of the city of Hartford.

Mans'field, in *Indiana*, a post-village of Parke co., abt. 25 m. N.N.E. of Terre Haute.

Mans'field, in *Kansas*, a post-village of Linn co., abt. 30 m. N. by W. of Fort Scott.

Mans'field, in *Louisiana*, a post-village, cap. of De Soto parish, abt. 32 m. S. of Shreveport.

Mans'field, in *Massachusetts*, a post-village and township of Bristol county, about 28 miles S.S.W. of Boston.

Mans'field, in *Minnesota*, a township of Freeborn co.

Mans'field, in *New Jersey*, a village and township of Burlington county, about 7 miles north of Mount Holly.

—A township of Warren co.

Mans'field, in *New York*, a twp. of Cattaraugus co.

Mans'field, in *Ohio*, an important city, cap. of Richland co., 54 m. S. of Sandusky; it is reached by 3 R.Rs., viz.: Erie, Penna., and Balt. & Ohio; has very extensive manufacturing plants, making farming implements, stoves, carriages, brass goods, machinery, bent wood furniture, &c. Large quantities of grain are produced in the surrounding region and shipped from this point; there is also a large distributing trade in general merchandise. Here is located the Ohio Reformatory. *Pop.* (1897) about 16,500.

Mans'field, in *Pennsylvania*, a post-borough of Tioga co., about 28 S.S.W. of Elmira, N. Y. *Pop.* (1897) 1,960.

Mans'field, in *Vermont*, a township of Lamoille co.

Mans'field, in *Virginia*, a village of Louisa co., abt. 52 m. N.W. of Richmond.

Mans'field Centre, in *Connecticut*, a post-village of Tolland co., abt. 35 m. N. by W. of New London.

Mans'field Depot, in *Connecticut*, a post-village of Tolland co., abt. 38 m. N.W. of New London.

Mans'field (or **Mansell) Island,** an island of British N. America, in Hudson's Bay, S.E. of Southampton Island; *area*, abt. 2,100.

Mansion, (*măn'shon,*) *n.* [Lat. *mansio.* See MANSE.] Any place of abode; a residence; a house; an habitation; particularly, a house with pretensions to size or elegance of structure and appointments.

"In my Father's house are many *mansions.*"—*John* xiv. 2.

—The dwelling-place of a lord of a manor; a manor-house.

Man'sionary, *a.* Residentiary; abiding; as, a *mansionary* canon.

Man'sion-house, *n.* A house of habitation; specifically applied to the official city residence of the Lord Mayor of London, England.

Manslaughter, (*-slaw'ter,*) *n.* The killing of a man or men; murder; homicide.

"Bring home spoils with infinite *manslaughter.*"—*Milton.*

(*Law.*) The unlawful slaying of a man without malice or forethought, express or implied. See MURDER.

Man'son, in *N. Carolina*, a post-village of Warren co., abt. 54 m. N.N.W. of Raleigh.

Mansou'ra, a town of Lower Egypt, on the Nile, 34 m. S.W. of Damietta. It was built by the Saracens, as a bulwark against the Christians, but at present is almost in ruins. *Pop.* Unknown.

Mansu'ra, in *Louisiana*, a post-village of Avoyelles parish, abt. 66 m. N.W. of Baton Rouge.

Mantalagoose', a lake of Lower Canada, abt. Lat. 48° 15′ N., Lon. 74° 30′ W. It receives a river of the same name from the S.

Mantchoo', Manchoo', *n.*; *pl.* MANTCHOOS. (*Geog.*) A native or inhabitant of Mantchooria.

—*a.* (*Geog.*) Relating or pertaining to Mantchooria.

Mantchooria, (*man-choo're-a.*) [Chin. *Kerin-oola.*] An extensive region of N.E. Asia belonging to China, and the original seat of the present ruling dynasty (Tathsing) of the Chinese empire; Lat. between 41° and 57° N., Lon. 117° and 140° E. It is bounded N. by the Russian govt. of Yakutsk, E. by the Gulf of Tartary and Sea of Japan, S. China proper, and W. by the Russian govt. of Irkutsk, and Mongolia; *area*, estimated at

Fig. 1704. — MANTCHOO SOLDIERS.

700,000 sq. m., of which the interior part is in a great measure unknown. It lies chiefly in the great valley formed by the rivers Amour and Songari with their numerous tributaries, a mountain-chain running along the coast. The principal river is the Amour, several of whose tributaries afford pearls; but the principal pearl-fishery is on the east coast, in the Gulf of Tartary. The principal lakes are, the Hinkai-nor, the Hoorun, and Pir. *Prod.* Corn, peas, and ginseng, rhubarb, and timber. *Pop.* Unknown, being principally nomads.

Man'tel, (sometimes written MANTLE,) *n.* [See MANTLE.] (*Arch.*) The work, or shelf, over a fireplace in front of a chimney, serving as a lintel or breast-summer to support the masonry above, which is called the chimney-breast. (Also, called *mantel* (or *mantle*)-*piece*, *-shelf*, and *-tree.*)

Mantelet', Mant'let, *n.* [Dim. of *mantle.*] A small mantle or cloak worn by women; a mantilla.

(*Fort.*) A movable shield used as a protection to the sappers in carrying bags towards a besieged place, or to protect the gunners at an embrasure.

Man'telo, (Cape,) the S.E. extremity of the island of Eubœa, Greece; Lat. 37° 57′ N., Lon. 24° 34′ E.

Man'teno, in *Illinois*, a post-village and township of Kankakee county, about 47 m. S. by W. of the city of Chicago.

Man'teno, in *Iowa*, a post-village of Shelby co., abt. 17 m. N.W. of Harlan.

Mantes, (*mants,*) a town of France, dept. of the Seine-et-Oise, on the Seine, 29 m. N.W. of Paris; *pop.* 4,500.

Man'ti, in *Iowa*, a post-village of Fremont co., about 14 m. E. by S. of Sidney.

Man'ti, in *Utah*, a city, cap. of San Pete co., about 40 m. E.S.E. of Fillmore City. *Pop.* (1895) 2,328.

Man'tic, *a.* [Gr. *manticos*, making prophecy.] Prophetic; ominous; characterized by the occult spirit of divination. (R.)

Man'tichor, Man'ticor, *n.* (*Zoöl.*) See MANTIGER.

Man'tiger, *n.* [Lat. *mantichora*.] (*Zoöl.*) A large baboon or monkey.

"The man-mimicking *mantiger*."—*Arbuthnot.*

Mantil'la, *n.* [Sp.; Fr. *mantille*. See MANTLE.] A woman's silk or velvet cloak. — A veil worn by females, (especially in Spanish-speaking countries,) covering the head, and hanging down upon the shoulders.

Mantine'a, an ancient city of Greece, in Arcadia, 7 m. N. of Tripolizza, and 17 S.W. of Argos. Mention is made of *M.* about B. C. 540; and an indecisive battle was fought between Mantinea and Tegea, B. C. 423. The Spartans, under Agis II., defeated the combined army of Argives, Mantineans, and Athenians, near this place in June, 418, B. C. They were defeated by the Spartans, B. C. 385, and compelled to retire from their city, the walls of which were destroyed. They returned after the battle of Leuctra, July, 371 B.C., and began to rebuild their city. Epaminondas, the Theban general, defeated them at the second battle of Mantinea, June 27, B. C. 362. He was mortally wounded in the action, and died exclaiming, "I have lived long enough, for I die unconquered." The city was taken and pillaged, and the inhabitants were sold as slaves, by Antigonus Doson, king of Macedonia, B. C. 222. It was rebuilt, and called Antigonea, after Antigonus Doson, and did not resume its former name until the time of Hadrian. In addition to the afore-mentioned battles, the defeat of Archidamus and the Spartans by Demetrius Poliorcetes, B. C. 295; the defeat of the Spartans under Agis IV. by Aratus and the Achæans, B. C. 242; and the defeat of the Spartans by the Achæan forces under Philopæmen, B. C. 207, are all known as battles of Mantinea, because they were fought in a plain near that city. It is now called Palæopoli.

Mantiqueira, (*man-te-ka'ra,*) a mountain range of Brazil, extending along the S. part of the province of Minas-Geraes, and containing some of the highest summits in the interior of the empire.

Man'tis, *n.*; MANTIDÆ, *n. pl.* [Gr., a prophet; applied by Theocritus (*Idyl* x. 18) to the Cicada.] (*Zoöl.*) A genus and family of Orthopterous insects, whose singular appearance, and the grotesque forms they usually assume when lying in wait for their prey, have not only attracted great attention, but have given rise to the most superstitious notions among the vulgar. The *Mantidæ* are characterized by having a narrow and elongated body; the anterior legs of enormous length; short palpi, terminating in a point; the tarsi five-jointed, and the wings plaited longitudinally. These insects frequent trees and plants; and the forms and colors of their wings and bodies are so like the leaves and twigs which surround them, as to give them remarkable power to elude observation. The Praying Mantis (*Mantis religiosa*) is of a beautiful green color, nearly three inches in length, of a slender shape, and in its general sitting posture holds up the two fore-legs, slightly bent, in an attitude resembling that of a person when at prayer, in which position it will sometimes remain motionless for several hours. It is termed by the French *Prie-Dieu*. Its food consists of flies and other insects, which it is exceedingly dexterous in catching and retaining. The American variety, (*Fig.* 1705) is common throughout the United States.

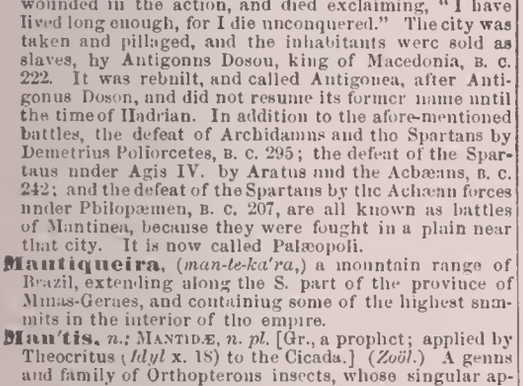


Fig. 1705. — MANTIS RELIGIOSA OR CAROLINA.

Mantis'sa, *n.* [Lat., a make-weight.] (*Math.*) The decimal parts of a logarithm, in contradistinction to the integral part, or *characteristic*.

Mantle, (*man'tl,*) *n.* [A. S. *mentel, mæntel*; Fr. *manteau*; It. *mantello*; Lat. *mantellum*.] A covering; that which conceals; — hence, a kind of cloak, or loose garment, to be worn over other garments; — also, by implication, anything which serves to envelop. The spume, or frothy scum upon a liquid.

"The green *mantle* of the standing pool.' — *Shaks.*

(*Her.*) See MANTEL.

(*Arch.*) Same as MANTEL, *q. v.*

(*Zoöl.*) The external fold of the skin of mulluscs.

—*v. a.* To cloak; to cover or envelop, as with a mantle; to overspread; to hide or disguise.

—*v. n.* To unfold and spread the wings like a mantle; to expand; to be spread, expanded, or extended. — To joy; to revel in pleasure or luxury. — To gather over and form a cover or coating; to collect on the surface as a covering; to become frothy or spumous. — To rush to the face and cover it with a crimson color, as blood; to ferment visibly.

"When *mantling* blood flow'd in his lovely cheeks."— *Smith.*

Man'tle-piece, MANTLE-SHELF, MANTLE-TREE, *n.* See MANTEL.

Mant'let, *n.* Same as MANTELET, *q. v.*

Mant'ling, or **Lam'brequin,** *n.* (*Her.*) An ornament depicted as hanging down from the helmet, and behind the escutcheon. It is considered to represent either the cointise, an ornamental scarf which passed around the body, and over the shoulder; or the military mantle, or robe of estate. When intended for the coin-

Fig. 1706. — MANTLING.

tise, it is cut into irregular strips and curls of the most capricious forms, whose contortions are supposed to indicate that it has been torn into that ragged condition in the field of battle. When the mantling is treated as a robe of estate, the bearings of the shield are sometimes embroidered on it. A mantling adjusted so as to form a background for the shield and its accessories, constitutes an *Achievement of Arms*.

Man'torville, in *Minnesota*, a post-village and township, cap. of Dodge co., abt. 16 m. W. by N. of Rochester.

Man'-trap, *n.* A trap, snare, or gin for catching trespassers or interlopers; — hence, by implication, a husband-seeking female.

Mantua, (*măn'tu-a.*) [It. *Mantova.*] A town of N. Italy, cap. of a province of same name, on the Mincio, 21 m. S.W. of Verona, and 37 N.E. of Cremona; Lat. 45° 9′ 34″ N., Lon. 10° 48′ 1″ E.; is situate partly on two islands formed by the waters of the Mincio, and partly on the mainland. *M.* is both by nature and art one of the strongest places in Europe. It is entered by bridges, flanked with redoubts, and is built on a plain of tolerable regularity, divided by a canal into two nearly equal parts. Most of the streets are broad, regular, and well paved; the houses are of stone, and in general well built; and the public squares both spacious and elegant. Of the latter, the most noted is the Piazza di Virgilio, used as a promenade. In its centre stands Virgil's monument, a column of marble. The principal public edifices at Mantua are the cathedral; the Corte, with its hall; the Palazzo della Giustizia; the palace of the Gonzaga family, and the one which, from its shape, bears the singular name of the Palazzo di T; the University buildings, the arsenal, the Jewish synagogue, and the public library, containing over 80,000 volumes. *M.* contains likewise several valuable collections of paintings, and a gallery of antiquities belonging to the Academy of Arts and Sciences. *Manuf.* Silk, woollen and linen fabrics, &c. *M.* claims an antiquity equal to that of Rome. It passed under the Roman power B. C. 197, and was the birthplace of Virgil, B. C. 70. After numerous reverses of fortune, *M.* passed into the hands of Louis I., duke of Gonzaga, in 1328, and under his rule attained great importance. It continued in the Gonzaga family until 1708, when it was taken by the Austrians. It was taken by Napoleon I. in 1796, and erected into the chief town of the department of the Mincio, but was restored to Austria in 1814. By the treaty of Zurich, in 1859, *M.* and Peschiera were the only towns of Lombardy left to the house of Austria, and these were surrendered in October, 1866. *Pop.* 28,197.

Man'tua, in *Iowa*, a township of Monroe co.

Man'tua, in *New Jersey*, a post-township of Gloucester co.

Man'tua, in *Ohio*, a post-village and township of Portage county, about 30 m. E.S.E. of the city of Cleveland.

Man'tua, in *Tennessee*, a village of McMinn co., about 165 m. E.S.E. of Nashville.

Man'tua, in *Texas*, a village of Collin co., about 30 m. S.W. of Bonham.

Man'tua, *n.* [Fr. *manteau*, a cloak, a mantle — perhaps from *Mantua*, in Italy.] A lady's gown or upper garment.

"A new *mantua* of genuine French silk."—*Sir W. Scott.*

Man'tua Cen'tre, in *Ohio*, a post-village of Portage co., abt. 30 m. S E. of Cleveland.

Man'tua Creek, in *New Jersey*, enters the Delaware River from Gloucester co.

Mantua-maker, (*măn'tu-māk'ŭr,*) *n.* A dressmaker; a woman's tailor.

Man'ual, *a.* [Fr. *manuel*; Lat. *manualis*, from *manus*, hand.] Relating or belonging to the hand; executed by the hand, as labor; as, *manual* operations. — Used or made by the hand.

"A declaration under his majesty's sign-*manual*."—*Clarendon.*

—*n.* A small, portable book; a compendium; a vademecum; a handy-book; as, a *manual* of etiquette. — The service-book of the Roman Catholic Church.

(*Mus.*) In church-organs, a row of keys for the hand, as distinguished from the *pedal*.

(*Mil.*) An exercise with the musket or rifle, through which recruits are drilled, to give them a free use of their limbs, and of the weapon regarded merely as a pike. It comprises the first course of instruction after the rifle has been placed in the learner's hands.

Man'ually, *adv.* With the hand.

Manuel Comne'nus, (*măn'u-el,*) emperor of Constantinople, *a.* 1120, was the younger son of the Emperor John Comnenus, whom he succeeded, to the prejudice of his brother Isaac, in 1143. His long reign was almost a continual succession of wars. He obtained several victories over the sultan of Iconium in the year of his accession; the next year carried on war with Raymond, prince of Antioch; and, in 1147, on the arrival of the crusaders at Constantinople, under the Emperor Conrad and Louis VII. of France, he is charged with having flattered the Germans with promises, and by treacherous guides led them on to destruction. The French were received with great honors. Roger II., king of Sicily, having invaded Greece and carried off immense spoil, *M.* made war on him, and took Corfu. Revolts of the Servians and Hungarians afterwards occupied him, and in 1168 he made an unsuccessful expedition to Egypt. In 1175, he was again at war with the Turks, with alternate defeat and victory. D. 1180. Like his predecessors, *M.* assumed to be arbiter in theological controversies, and deposition or exile was the common penalty of resistance to his will.

Man'uel Palæol'ogus, emperor of Constantinople, B. 1348, was the son and successor of John Palæologus. The Turks having invaded his dominions, he applied to the Latins for succor, but without effect, on which he resigned his sceptre to John Palæologus II., his son, and took a religious habit. D. 1425.

Man'uel, JEAN ANTOINE, a famous leader of the opposition in the French Chamber after the restoration, was born in Provence, 1755, and after serving with distinction in the republican armies raised by levy *en masse*, adopted the profession of the bar. He was a member of the Chamber convoked by Napoleon during the Hundred Days, 1815, and with all his eloquence and power resisted the reëstablishment of the Bourbons by the allied armies. Returning to the Chamber in 1818, his patriotic fervor in the tribune, his high spirit, and his brilliant oratory, marked him out as the champion of French liberty, and kept the party of the ministers in continual terror. D. 1827.

Manutius, or MANUZIO, (*ma-nu'she-us,*) the name of an Italian family, famous in the history of printing for their beautiful editions of learned works, and the invention of the *Italic* or *Aldine* letter, said to have been formed in imitation of the handwriting of Petrarch. — ALDO PIO MANUZIO, the elder, flourished at Venice, 1447–1515. — PAOLO, his son, distinguished like his father both as a classical scholar and printer, 1512–1574. — ALDO, the younger, son of Paolo, distinguished like his progenitors, and greatly favored by the Pope, Sextus Quintus, who gave him apartments in the Vatican, was born at Venice, 1547, and died childless, 1597.

Manufac'tory, *n.* A factory; a house or place where goods are manufactured.

—*a.* Employed in manufacture.

Manufactural, (*-fakt'yŭr-al,*) *a.* Relating or belonging to manufactures; as, *manufactural* interests.

Manufact'ure, *n.* [Fr., from Lat. *manus*, the hand, and *facio*, to make.] The act or process of making or forming anything by the hand; operation of reducing raw materials, of whatsoever kind, into a form suitable for use; fabrication. — Anything made from raw materials, by the hand, by machinery, or by art; as, the cotton *manufacture*.

—*v. a.* To make, found, or fabricate from raw materials, by the hand, by art, or machinery, and work into forms suitable and adapted for use; as, to *manufacture* pottery. — To work or work up, as raw materials, into utilizable form; as, to *manufacture* iron.

—*v. n.* To be engaged in manufactures; as, a *manufacturing* people or district.

Manufact'urer, *n.* One who manufactures; one who works raw materials into wares suitable for use; one who employs workmen for fabricating goods; the owner or worker of a manufactory.

Manumission, (*măn-u-mish'un,*) *n.* [Lat. *manumissio*. See MANUMIT.] (*Rom. Antiq.*) The form by which slaves were released from their condition; so called because they were sent, as it were, out of the hand or power of their master. There were three ways in which slaves were manumitted, — by *vindicta*, census, or will. The first of these was the most ancient, and in it the slave was brought before the magistrate, who laid his wand, *vindicta*, on his head, and declared him to be free. The manumission by census was effected by the name of the slave, with his master's consent, being inserted in the census or public register of the citizens. By will, a slave could be made free conditionally or unconditionally, or free and an heir of the testator. By *M.* the relationship of patron and freedman was established between the parties.

Manumit', *v. a.* [Lat. *manumitto* — *manus*, the hand, and *mitto*, to send. See MISSION.] To liberate from personal bondage or servitude; to set free, as a slave; to redeem from slavery or serfdom.

Manumo'tive, *a.* [Lat. *manus*, and *movere*, *motum*, to move.] Movable by hand; portable.

Manumo'tor, *n.* [Lat. *manus*, and *motor*, mover.] A small wheel-carriage, worked by hand.

Manur'able, *a.* Susceptible of benefit from manure; capable of cultivation; as, *manurable* land.

Manure', *v. a.* [Fr. *manœuvrer*. See MANŒUVRE.] (*Agric.*) To apply to land, as any fertilizing matter; to enrich with compost or any nutritive substance; to dung.

—*n.* (*Agric.*) Any vegetable, animal, or mineral matter introduced into the soil, either for the purpose of improving its texture, or for directly nourishing the plants which grow in it. Thus, if the soil be too stiff with clay, sand is used; if, on the contrary, it be too loose with excess of sand, it will be benefited by the addition of clay. *Marl*, a natural mixture of clay and lime, sometimes containing a little silica and bitumen, is very useful as a *M.* in the improvement of soils. Its great advantage is, that it dilates, cracks, and is reduced to powder by exposure to moisture and the atmosphere, and it operates by subdividing the soil and hastening decomposition. *Quick-lime*, especially that derived from fossil or living shells, is a very excellent manure. In cold, marshy soils, abounding in organic matter, it is particularly efficacious in converting animal and vegetable matters into nourishment for plants. In consequence of the alkali which *ashes* contain, they attract moisture from the atmosphere, and thus accelerate vegetation. The most universal mineral *M.* known is *gypsum*, or sulphate of lime; but chemists are not agreed as to the way in which it acts upon vegetation. Ordinary *M.* consists of organized bodies, either animal or vegetable, in a state of decomposition. Decomposing animal matter of every description forms one of the most active *M.*, and in many cases accelerates the decomposition of inert vegetable matters mixed with it, as in the mixture of dung and straw, which forms the ordinary refuse of the stable. Those bodies which are subject to the most rapid decomposition are most generally employed as *M.* All animal excrements are powerful *M.*, and when properly applied to the soil, soon show their action by the improved appearance of the crops. Esculent vegetables, however, soon acquire a coarse and rank flavor if they are over-manured. In the use of animal *M.*, it is very important that they should be applied as soon as they begin to decompose, or as soon as possible afterwards, and not suffered to rot and exhale their best constituent parts while lying in the farm-yard. The drainings and evaporations of a dung-heap contain its most valuable component parts. Animal *M.*, which decompose slowly, generally operate most effectually. Of these the best is ground bones, the effects of which are long-continued; the earthy matter contained in bones is frequently beneficial to many crops. Among excrementitious solid substances, one of the most powerful is the dung of birds which feed on animal food, especially the dung of sea-birds. Guano is a *M.* of this kind. (See GUANO.) Vegetable manures are often effective, especially in the case of ploughing in a green crop. Sea-weeds, consisting of various species of *fuci*, *algæ*, and *confervæ*, are considerably used in Europe, in the countries near the coast. The effect of sea-weed *M.* is transient, and does not last for more than a single crop. *Soot* is also a powerful *M.*; it requires no preparation, but is thrown into the ground with the seed. The most ordinary *M.* used consists of a mixture of animal, vegetable, and mineral substances. It is better to manure land in the spring than in the autumn, lest the winter rains should dissolve it too much, and endanger its sinking below the roots of the crop. As the stock of *M.* is generally limited, it is the study of agriculturists to discover some means of compensation for a deficiency. In a judiciously arranged rotation of crops, this compensation is obtained.

Manure'-distrib'utor, *n.* (*Agric.*) An implement used for distributing manure easily and at regular distances. It is usually combined with the ordinary corn-drill, so that the corn and manure are delivered together. The machine is generally so arranged that the manure can, at the pleasure of the cultivator, be deposited, not only from 2 to 3 in. deeper in the ground than the seed, but from 10 to 12 in advance of it, so as to give the soil time to cover the manure before the next coulters deposit the seed. The progress of the manure-drill has been very slow, although the advantages arising from its use are many and palpable. By placing the seed in direct contact with manure in the process of germination, it is well nourished at that period of its growth when it most needs assistance, in order to develop its fibres and to extend its roots.

Manur'er, *n.* One who applies manure to land.

Manu'rial, *a.* Belonging or having reference to manures. (R.)

Manur'ing, *n.* A dressing or spread of manure on land; art or operation of applying fertilizing substances to land.

Manu'script, (abbreviated MS.; plural MSS.,) *a.* [Lat. *manuscriptum* — *manus*, the hand, and *scribo*, *scriptum*, to write. See SCRIBE.] Written with the hand; calligraphic; not printed; as, a *manuscript* book, a *manuscript* copy.

—*n.* A book or paper written with the hand; a written, in contradistinction to a printed, document. See PALÆOGRAPHY.

Manu'ville, in *Rhode Island*, a post-village of Providence co., abt. 12 m. N. of Providence.

Man'-worthy, *a.* Befitting, or beseeming a man.

Manx, *n.* The language of the natives of the Isle of Man, Great Britain; — a dialect of the Celtic. (Often incorrectly written *Manks*.)

—*a.* Belonging or having reference to the Isle of Man, or to its inhabitants.

Manx Cat. (*Zoöl.*) One of a species of the cat kind born without tails, and peculiar to the Isle of Man.

Manx'man, *n.* A native of the Isle of Man.

Many, (*měn'y,*) *a.* [A. S. *manig*, *mani*; Dan. *mange*: Flem. *manig*; Russ. *mnogii*; Sansk. *mannju*, a man — the idea of many being probably suggested by a company of men.] Pertaining to, or comprising a number of persons or things; consisting of a great number of individuals; numerous; multitudinous; manifold; multiplied; frequent; various; divers; — correlative of *few*.

"For *many* are called, but few are chosen." — *Matt.* xxii. 14.

(NOTE. *Many* forms the prefix of a great number of compound words which are self-explaining, and too numerous for specification. It is also frequently used by way of comparison.)

"So *many* laws argue so *many* sins." — *Milton.*

Many a. Each one of many, or of a collective number.

"There 's *many a* slip 'tween the cup and the lip." —*Proverb.*

—*n.* A multitude; a great number of individuals; the people; — used chiefly in the phrases *a great many*, *a good many*, denoting a repetitive sense.

"The vulgar and the *many* are only fit to be led or driven."—*South.*

Man'y-colored, (*-kŭl'erd,*) *a.* Parti-colored; exhibiting various colors or hues.

Man'y-cornered, (*-kor'nerd,*) *a.* Polygonal; having many corners.

Man'y-headed, *a.* Having many heads; hydra-like.

Man'ytch, a river of Russia, rising in the S. of Astrakan, and after a course of 300 m. joining the Don near Tcherkask.

Man'y-times. [An adverbial phrase.] Often; frequently.

"The device and legend are both *many-times* taken out of the Scriptures." — *Addison.*

Man'y-ways, Man'y-wise, *adv.* In various ways.

Manzanares, (*man'tha-na'raiz,*) in Spain, a river of New Castile. After a course of 40 m. it joins the Henares, 8 m. below Madrid.

—A town, prov. of La Mancha, 24 m. N.E. of Ciudad Real, and 100 m. S. of Madrid. It stands in the loftiest and bleakest portion of the prov. The neighborhood is celebrated for the production of saffron, and Val de Penas wine, which is highly esteemed. *Pop.* 11,275.

Manzana'res, a river of Venezuela, entering the Caribbean Sea near Cumana.

Manzanilla, (*man-tha-neel'ya,*) the name of 3 promontories: 1, on the Isthmus of Panama, extending into the Caribbean Sea; Lat. 9° 39′ N., Lon. 79° 32′ W.; — 2, in Venezuela, extending in the Caribbean Sea; Lat. 11° 31′ N., Lon. 69° 22′ W..; — 3, on the E. coast of the island of Trinidad; Lat. 10° 31′ N., Lon. 61° 4′ W.

Manzanil'la Bay, an inlet of the Gulf of Mexico, on the N.W. coast of the island of Hayti; Lat. 19° 45′ N., Lon. 72° W. — An arm of the Pacific Ocean, on the S.W. coast of Mexico, abt. 130 m. S.S.E. of Cape Corrientes; Lat. 19° 3′ 5″ N., Lon. 104° 16′ W.

Manzanilla Limon, (*lee-mon',*) a bay of the United States of Colombia, on the Isthmus of Panama, E. of the mouth of the Chagres River. It has a spacious and secure roadstead, and from being the favorite resort of ships of war and steamers visiting that part of the coast is often called NAVY BAY.

Manzanil'lo, a seaport-town on the S.E. coast of the island of Cuba, abt. 85 m. W.N.W. of Santiago de Cuba; Lat. 20° 22′ N., Lon. 77° 15′ W. It has an excellent harbor, and commands an active trade. *Pop.* abt. 22,000.

Manzo'ni, ALESSANDRO, Conte, an Italian poet and novelist, b. at Milan, 1784, studied at Milan and Pavia with great distinction, and adopted at an early age Voltairian doctrines. When he repaired with his mother, the daughter of the celebrated Beccaria, to Paris, in 1805, her name being sufficient introduction to the best literary society. His first production, a poem in blank verse, entitled *In Morte di Carlo Imbonati*, Paris, 1806, was inspired by the sudden death of a friend, and he soon afterwards became a devoted and sincere Roman Catholic, to which faith his wife had been converted. *M.* may be said to be the founder of a new school in Italy. His first tragedy, *Il Conte di Carmagnola*, produced in 1820, made him celebrated in Europe. The work, however, on which rests his fame is his historical novel, *I Promessi Sposi* — a Milanese story of the 17th cent., translated into German, English, French, and other tongues — (3 vols. Milan, 1827), by which a new æra may be said to have been created in the fictitious literature of his country. The tale abounds in interesting sketches of national and local Italian customs and modes of life, portrayed with unflagging spirit and humor, while various grave historical events are narrated with force and grandeur of style, especially the episode of the plague in Milan. *M.*, who lost his first wife in 1838, has married again. He was named Senator of the Italian kingdom in 1860, and his birthday was celebrated with much enthusiasm by his countrymen in 1864. He was decorated with the Legion of Honor in 1840. D. 1873.

Maouna, or MASSACRE ISLAND, (*ma-oo'na,*) one of the Navigator's Islands, in the S. Pacific Ocean; Lat. 14° 22′ S., Lon. 171° W. This island takes its name from the massacre of 11 of the companions of La Perouse, the French navigator, by the savages.

Maoris. [A New Zealand word, signifying *native*, or *indigenous*.] The name given to themselves by the inhabitants of New Zealand, and that by which they are often designated by ethnologists. See NEW ZEALAND.

Map, *n.* [Sp. *mapa*; Lat. *mappa* (a Punic word), a table-cloth or towel; probably the material on which maps were originally drawn.] A representation of the earth's surface, or of any part of it, drawn on paper, or other material; exhibiting the lines of latitude and the relative positions of countries, mountains, seas, rivers, &c. For the construction of maps different mathematical hypotheses have been adopted. *Projection* is one method of construction, in which the boundaries of countries and their more remarkable features are represented accordiug to the rules of perspective, on the supposition of the eye being placed on some point of the sphere, or at some given distance from it, which may be increased indefinitely. This method answers very well when the surface to be represented is of small extent and the point of view nearly over the centre; but when the surface is of great extent, places near the border of the *projection* are much distorted. *Development-maps* are constructed on the supposition that the spherical surface of the earth to be represented is a portion of a cone, the vertex of which is situated somewhere in the polar axis produced, and the conical surface is supposed either to touch the sphere in the middle parallel of the map, or to fall within the sphere at the middle parallel, and without it at the extreme parallels. The surface of the cone is then supposed to be spread out into a plane. Another method of constructing maps depends upon the development of a cylindrical surface, by which means they have the parallels of latitude and circles of longitude respectively represented by parallel straight lines. Terrestrial maps of this description are usually called *Mercator's Charts*. *Celestial maps* are representations of the positions of the stars on a plane surface, constructed on similar principles.

—*v. a.* To draw or delineate, as the figure of any portion of land; hence, to sketch or represent with vividness.

"*Map* me no maps." — *Fielding.*

Mapilca, (*ma-peel'ka,*) a village of Mexico, in the State of Vera Cruz. In the vicinity are the ruins of an ancient city.

Mapini, (*ma-pee'nee,*) in Mexico, a lake on the boundary between the States of Durango and Cohahuila. It is also called *Cayman Lake*, from the immense number of alligators which inhabit it.

—A town, abt. 130 m. N.N.E. of Durango; *pop.* 2,400.

Mapiri, (*ma-pee-ree',*) a river of Bolivia, uniting with the Chuquenpo to form the Beni.

Ma'ple, Ma'ple-tree, *n.* [A. S. *mapulder*. Etymol. uncertain.] See ACER.

Ma'ple, in *Iowa*, a township of Monona co.

Ma'ple Creek, in *Penna.*, a vill. of Washington co.

Ma'ple Grove, in *Michigan*, a post-township of Barry co.

—A township of Saginaw co.

Ma'ple Grove, in *Minnesota*, a post-township of Hennepin co.

Ma'ple Grove, in *Wisconsin*, a post-township of Manitoowoc co.

Ma'ple Lake, in *Minnesota*, a post-village and township of Wright county, about 40 m. W.N.W. of St. Anthony.

Ma'ple River, in *Michigan*, rises in Shiawassee co., and enters Grand River from Ionia co.

Ma'ples, in *Indiana*, a post-village of Allen co., abt. 10 m. S.E. of Fort Wayne.

Ma'ples, or MARPLES, in *Minnesota*, a former township of Faribault co.

Ma'plesville, in *Alabama*, a post-village of Chilton co., on Sou. R. R., 50 m. S. of Birmingham.

Ma'pleton, in *Iowa*, a post-town of Monona co.; about 40 m. S.E. of Sioux City. *Pop.* (1895) 1,118.

Ma'pleton, in *Kansas*, a post-village of Bourbon co., about 17 m. N.W. of Fort Scott.

Ma'pleton, in *Minnesota*, a post-village and township in Blue Earth co., about 19 m. S. by W. of Mankato. *Pop.* (1895) 823.

Ma'pleton, in *New Jersey*, a village of Middlesex co.

Ma'pleton, in *Ohio*, a post-village of Stark co., about 125 m. N.E. of Columbus.

Ma'pleton, in *South Carolina*, a village of Abbeville co., about 100 m. W. of Columbia.

Ma'pleton Depot, or **Mapleton,** in *Pennsylvania*, a post-borough of Huntingdon co., about 43 m. E.S.E. of Altoona. *Pop.* (1897) 1,008.

Ma'pletown, in *Pennsylvania*, a post-vill. of Greene co.

Ma'ple Valley, in *Michigan*, a township of Sanilac co.

Ma'pleville, in *Rhode Island*, a post-village of Providence co., abt. 20 m. N.W. by W. of Providence.

Map'-mounter, *n.* One who mounts maps on canvas, &c.

Mapo'cha, or MAPO'CHO, a river of Chili, enters the Maypu abt. 35 m. S.W. of Santiago.

Maquon', in *Illinois*, a post-village and township of Knox county, about 16 miles south-east of Galesburg.

Mar, *v. a.* [A. S. *myrran*, *amyrran*, to spoil, defile; Sansk. *mri*, to grind, bruise, pound; probably allied to Gr. *maraino*; Lat. *marceo*, to wither, to waste, to decay.] To spoil or injure by cutting off a part, or by wounding or making defective; to damage; to hurt; to harm.

"Striving to do better, oft we *mar* what's well." — *Shaks.*

—To disfigure, as the countenance; to deform.

"Ire, envy, and despair *marr'd* all his borrowed visage." *Milton.*

—*n.* A mark, bruise, or blemish.

Mar'abou, *n.* (*Zoöl.*) The proper name of several birds of the genus *Leptoptilus*, natives of Asia and Africa, whose delicate vent feathers were formerly highly esteemed as ornaments. See ADJUTANT.

Marabout, (*măr'a-boo.*) [Arab. *marbouth*, or *morabeth*, saint, or hermit.] A name given to a class of religious devotees among the Mohammedans of the Barbary states. They frequently affect to work miracles, and some of them are held in high estimation; but most of them are little better than vagabonds.

Maracay, (*ma-ra-ke',*) a town of Venezuela, abt. 15 m. W.S.W. of Caracas; *pop.* 1,000.

Maracai'bo, or MARACAYBO, in Venezuela, a fortified seaport-city, cap. of a prov. of same name, on Lake Maracaibo, about 330 m. W. of Caracas; Lat. 10° 40′ N., Lon. 71° 45′ W..

—A gulf formed by the Caribbean Sea, between the peninsulas of Paraguana and Goajira. It is about 150 m. in length, by abt. 75 in breadth, and contains numerous islands.

—A large lake, or rather bay, connected with the above gulf by a strait abt. 20 m. in length, and from 5 to 10 in breadth. It covers an area of abt. 7,000 sq. m., and although of sufficient depth for the largest ships, the entrance is obstructed by a shifting bar. It receives the rivers Zulia, Chama, Perija, and several others.

Maræo'tis, (Lake,) a lagoon of Lower Egypt, lying to the S.E. of Alexandria. It communicates on the N. with Lake Madieh. *Ext.* 40 m. long, and 18 broad.

Mara'ga, or **Mara'gha,** a city of Persia, prov. Azerbijan, 50 m. S.W. of Tabreez, and 305 W.N.W. of Teherau; Lat. 37° 20′ N., Lon. 46° 25′ E.; *pop.* 17,000.

Maragogipe, (*mar-ra-go-zhee'pa,*), a town of Brazil, abt. 25 m. S.W. of Cachoeira; *pop.* about 4,000.

Marais, (*ma-rai',*) a natural division of the dept. Vendée, in France. It comprises all that part of the coast formerly covered by the sea, and has a fertile soil, but an unhealthy climate.

Marais, (*ma-ra',*) in *Missouri,* a creek flowing into the Osage River from Osage co.

—A village of Osage co., abt. 23 m. S.S.E. of Jefferson City.

Marajo, or JOANNES, (*mă-ră-ho',*) an island of Brazil, in the Atlantic Ocean, off the prov. of Para, and between the æstuaries of the Amazons and the Para rivers; Lat. 2° 20′ S., Lon. from 48° 30′ to 57° 30′ W. *Area,* about 9,000 sq. miles. It is intersected by several navigable rivers. *Pop.* 25,000.

Marambaya, (*ma-ram-bī'a,*) an island of Brazil, in the Bay of Angra dos Reis, abt. 27 m. W. of Rio de Janeiro; *area,* about 27 sq. m.

Mar'amec, or MEARIMAO, in *Missouri,* a river rising in Dent co., and flowing a general N.E. course through Phelps, Crawford, and Franklin cos., into St. Louis co., and then turning to the S.E., enters the Mississippi River on the border of Jefferson co. It is commonly pronounced and often written MER'AIMAC. *Length,* abt. 800 m.

—A post-vill. of Phelps co., abt. 70 m. S.E. of Jefferson City.

—A village of St. Louis co., abt. 19 m. W.S.W. of St. Louis.

Mar'amec Iron Works, in *Missouri,* a village of Phelps co., abt. 15 m. E. of Rolla.

Marana'tha, *n.* [Syriac.] A form of anathematizing among the Jews, which was viewed as a tremendous denunciation. (1 *Cor.* xvi. 22.) It signifies, "the Lord will come;" *i. e.,* to take vengeance.

Maranhão, or MARANHAM, a rich prov. of Brazil, including the island of that name, and part of the adjacent continent. It is bounded E. by the prov. of Seara, N. by the Atlantic, W. by the prov. of Para, S. by Goyaz; *area,* 72,921 sq. m. It is mountainous but fertile, although it is to a large extent covered with dense forests. *Prod.* Cotton, rice, gums, dye-woods, and fruit. *Pop.* 260,000.

MARANNÃO, or SÃO LUIS DO MARANHÃO, a city, cap. of the above prov., on an island of the same name, abt. 290 m. E. of Para; Lat. 2° 31′ 42″ N., Lon. 44° 18′ 42″ W. It is regularly laid out, and substantially built. *M.* is remarkably clean, gay, hospitable, and prosperous. There is an excellent harbor, and the trade is extensive; *M.* being the entrepôt for the provinces of Para, Ceara, Piauhy, Rio-Grande-do-Norte, and Goyaz. *Pop.* 35,000.

—The island of *M.* is 20 m. long, and is separated from the continent by a narrow channel called the Rio do Mosquito, while on either side of it are the bays of São José and São Marcos, the embouchures of the Maranhão and Itapicuru rivers.

Mara'no, a town of Italy, prov. of Naples, 6 m. N.W. of Naples; *pop.* 7,500.

Mar'añon. See AMAZONS.

Marans, (*ma'ra,*) a town of France, dept. of Charente Inférieure, 11 m. E. of La Rochelle; *pop.* 5,500.

Maran'ta. [After *Maranti,* a Venetian physician and botanist.] (*Bot.*) The typical gen. of the ord. *Marantaceæ.* The species *M. arundinaceæ* (Fig. 198) yields West-India arrowroot, one of the most pure and best-known of the amylaceous substances used as food. This is extracted from the rhizomes and tubers of the plant; it forms a very firm jelly, and is the most palatable and digestible starch known. The name arrowroot was originally applied to the rhizome of this plant from the fact of its being employed by the native Indians to form a sort of poultice for wounds inflicted by poisoned arrows. The species *M. ramosissima* also yields arrowroot, and is largely cultivated in the East Indies.

Maranta'ceæ, *n. pl.* (*Bot.*) An order of plants, alliance *Anomales.* DIAG. One stamen, half an anther, and no vitellus. — They consist of herbaceous plants having a close resemblance to *Zingiberaceæ.* There are 7 genera and 160 species, all natives of tropical regions. The rhizomes of some species contain starch, which, when extracted, is extensively used as food. See ARROWROOT, CANNA, and MORANTA.

Maraschi'no, MARASQUINO, (*măr-as-kē'no,*) *n.* [It.] An Italian liqueur, made of brandy, a peculiar kind of Damascus cherry, and liquorice, the whole being distilled, and then sweetened with lump-sugar.

Ma'rash, a pashalic of Asiatic Turkey, inclosed by the pashalics of Sivas, Adana, Karamania, Aleppo, and Diarbekr; Lat. between 36° 3′ and 38° 30′ N., Lon. 36° and 38° 40′ E. It is traversed by the principal chain of the Taurus Mountains. — *M.,* its cap., stands 60 m. from the Gulf of Scanderoon.

Maras'mus, *n.* [Lat., from Gr. *marasmos,* emaciation; Fr. *marasme.*] (*Med.*) A term often used by older writers to denote a wasting of the body for which no particular cause could be discovered. It is now rarely used, as the nature of these diseases has come to be better understood, and they are attributed to their proper causes.

Marat, JEAN PAUL, (*ma-ra',*) a French revolutionist, b. 1744, at Bandry, canton of Neufchâtel, Switzerland. In his youth he applied himself to the study of medicine and anatomy; and settling in Paris, attracted notice as an empiric and vender of medicines. But his ambition led him to desire a more extensive popularity, and he wrote a work, in 1775, which had for its title, *Man, or the Principles and Laws of the Influence of the Soul and the Body on each other.* When the revolution began, he savagely supported it, denouncing aristocrats and preaching massacre. He joined Danton's Club of the Cordeliers, and published a daily paper, called "L'Ami du Peuple," in which he disseminated his hatred towards royalty, and insulted the nobility and the most distinguished members of the National Assembly. He was chosen deputy to the National Convention, where his violence and extravagance led to his arrest, but he was acquitted. He was also president of the Jacobin Club, and first suggested the creation of the Committee of Public Safety and the passing of the law of the "suspects." He denounced the generals of the French army as traitors to their country, and put the members of the Convention under arrest. The fall of the Girondists was a triumph for him and his friends, but it led quickly to his own end. It was at this time that Charlotte Corday resolved to rid the world of this monster, and he was stabbed by her, July, 1793. — See CORDAY.

Mar'athon, a village of Greece, on the E coast of Attica, 20 m. N.E. of Athens. *M.,* mentioned as a place of importance in the Homeric poems, is famous for the

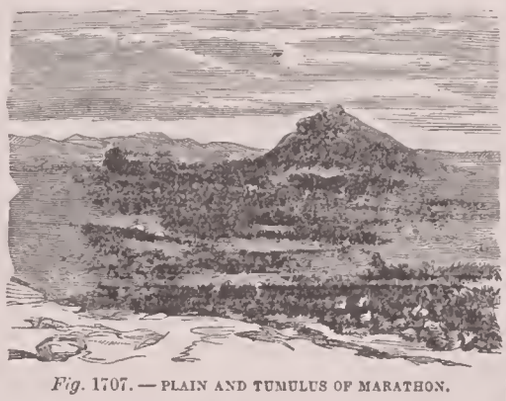


Fig. 1707. — PLAIN AND TUMULUS OF MARATHON.

victory of the Greeks, under Miltiades, over the Persian hordes of Xerxes, B. C. 490, which secured the independence of Greece. — The Greeks, during the war of independence, defeated 2,000 Turks at *M.,* July 18, 1824.

Marathon, in *Michigan,* a post-village and township of Lapeer county, about 7 miles N.N.W. of Lapeer.

Marathon, in *New York,* a post-village and township of Cortland county, about 50 miles S. by E. of Syracuse.

Marathon, in *Wisconsin,* a N. co. adjoining Michigan; *area,* about 1,584 sq. m. *Rivers.* Wisconsin river, and many smaller streams. *Surface,* diversified; *soil,* generally level. *Cap.* Wausau. *Pop.* (1895) 36,598.

—A township of Marathon co.

Maraud', *v. n.* [Fr. *marauder,* from *maraud,* a rogue, a scoundrel, a beggar, a vagabond; perhaps connected with Sansk. *mrag,* to search through, to examine.] To rove in search of plunder; to harry; to make an excursion for booty.

—*n.* An excursion in quest of plunder.

Maraud'er, *n.* A rover in quest of plunder or booty; one who plunders or harries; a depredator.

Maravaca, (Mount,) (*ma-ra-va'ka,*) a peak of the Parime Mountains, Venezuela, in Lat. 3° 40′ N., Lon. 65° 50′ W.; *height,* 10,000 or 11,000 ft.

Marave'di, *n.* [Ar.] (*Numis.*) A Spanish copper coin, of Moorish origin and now disused. Its value was less than a farthing, or half a cent.

Maravi, (*ma-ra'vee,*) a seaport on the N.E. coast of the island of Cuba, W. Indies, at the mouth of a river of the same name.

Mar'ble, *n.* [Fr. *marbre;* Lat. *marmor;* Gr. *marmaros,* from *marmairo,* to flash, to gleam, to sparkle, strengthened from obsol. *mairō,* to sparkle] (*Min.*) A term properly limited to the varieties of carbonate of lime, which have a granular and crystalline texture. In the ordinary parlance of the mason, it means almost any rock which may be polished; such as steatite, serpentine, breccia, &c. The use of *M.* for ornamental and artistic purposes dates from the remotest antiquity. Italy is the principal *M.*-producing country in the world; the far-famed quarries of Carrara having supplied statuaries with this beautiful material from time immemorial. The principal quarries of the district are at Carrara, Massa, and Seravezza, and produce between 40,000 and 50,000 tons per annum of white and colored *M.* La Spezzia, Moriti, Pisani, Campiglia, Elba, Sienna, and Cerfalco, also produce *M.* of great excellence and beauty, but in comparatively small quantities. The principal Italian *M* are *Carrara* (often miscalled Sicilian), pure white *Giallo antico,* yellow, more or less veined; *Rosso antico,* blood-red, and speckled with white; *Portoro,* black, with gold rings and veins; *Bardiglio,* dove-colored, and veined; *Lamachello,* dark brown, with iridescent particles; *Cipalin,* white, with green rings and veins; *Mandeluto,* red, with yellow spots; *Brocatello di Siena,* yellow, with purple spots; and *Verde antico,* clouded green. Parian *M.* occurs in the island of Paros, and is almost as celebrated as that from Carrara. The former has a more wavy look than the latter; for which reason it is preferred by many sculptors for nude statues. Of variegated *M.* there are many sorts found in this country and of singular beauty, but generally not fit for sculpture. The pure white *M.,* nevertheless, is not uncommon, and, in Vermont especially, the quarries of Rutland furnish *M.* of exceedingly delicate texture and purity of whiteness, the blocks being large and sound, and quite as beautiful as the statuary *M.* of Carrara. The objections to it are that it is harder and more brittle than the foreign. *M.* is largely used for public buildings and store fronts in the U. S., where are found almost all the best known varieties. The most extensive quarries are in Md., N. Y., Vt., Penna., and Mass., though marble of excellent quality is found abundantly in many other sections of the U. S. Among the most important structures of it are the Capitol of Washington, Girard College and City Hall in Philadelphia, the Custom-house at Charleston, S. C., that of New York, and the City Hall of N. Y.

—Anything made of, or resembling, marble; a stone remarkable for some inscription or sculpture; a little ball or marble or other stony substance, used by boys in play.—*pl.* A collection of antique works of art in marble; as the Elgin *Marbles.*—*a.* Made of marble; stained or veined like marble; variegated in color.

"Pygmalion's *marble* love took flesh and blood."—*Waller.*

—Having the characteristic properties of marble; cold; hard; insensible.

—*v. a.* To stain or vein like marble; to variegate in color; to cloud.

Mar'ble-edged, *a.* Having the edges variegated or mottled with different colors, as a book.

Mar'blehead, in *Massachusetts,* a seaport-town of Essex co., on a rocky peninsula of the same name, abt. 18 m. N.E. of Boston. It is well located upon one of the finest harbors along the coast, and has an extensive commerce. There are also many manufactories, and considerable cod-fishing is carried on by the inhabitants. There are two light-houses at the S.E. side of the E. entrance to the harbor known as the MARBLEHEAD LIGHTS; Lat. 42° 30′ 18″ N., Lon. 70° 50′ 30″ W. *Pop.* abt. 10,000. June, 1877, *M.* was visited by a disastrous fire, which laid in ashes a large part of this thriving place.

Mar'ble-hearted, *a.* Hard-hearted; cruel; pitiless.

Mar'ble Hill, in *Missouri,* a post-vill., cap. of Bollinger co., 132½ m. S. of St. Louis. *M. H.* is built on an eminence, the foundation of which is said to be a solid bed of marble, almost equal in quality to that of Vermont.

Mar'ble Island, an island of British N. America, in Hudson's Bay, Lat. 62° 30′ N., Lon. 92° W.

Mar'bleize, *v. a.* To stain after the manner of marble; to marble.

Mar'ble-paper, *n.* Paper having its surface variegated with colors in imitation of marble.

Mar'bler, *n.* A worker upon marble. (R.) — One who stains or mottles after the manner of marble.

Mar'bletown, in *New York,* a post-village and township of Ulster county, about 7 miles S.W. of Kingston.

Mar'bling, *n.* Art or practice of variegating in color, in imitation of marble. — A streaky intermixture of fat and lean in flesh-meat, presenting a marbled appearance.

Mar'bly, *adv.* After the manner of marble.

Mar'burg, a town of N. Germany, in Hesse-Cassel, on the Lahn, a tributary of the Rhine, 50 m. S.W. of Cassel, and 58 N.E. of Coblentz. Its university was founded in 1517, and contains a library of 70 000 vols. *Pop.* 8,723.

Mar'burg, a town of Austria, prov. of Styria, on the Drave, 36 m. S.E. of Gratz. *Manuf.* Leather and rosoglio. *Pop.* 9,000.

Marc, *n.* [Fr.] The refuse or debris of grapes after extraction of the pulp.

Marc, Mark, *n.* [A.S. *marc;* Ger. *mark.*] In Austria, a weight (for gold and silver) equal to 9 oz. troy. In N. Germany, a weight equivalent to 3,608 grains troy, or about 7½ oz.

—In Germany, a coin (generally called the *Mark Current*) worth about 32 cents.

Mar'casite, *n.* (*Min.*) A bisulphide of iron. The term *M.* includes several varieties of Iron Pyrites, which have been named after the form they present: viz., Cellular Pyrites, Cockscomb Pyrites, Hepatic Pyrites or Leberkies, &c. It is used in the manufacture of sulphur, sulphuric acid, and sulphate of iron; but not to so great an extent as the ordinary sulphide.

Marcasit'ic, Marcasit'ical, *a.* Pertaining to, containing, or resembling marcasite.

Marcas'sin, *n.* [Fr.] (*Her.*) A young wild boar.

Marceau, (*mar-sō',*) FRANÇOIS SEVERIN DESGRAVIERS, a celebrated French republican general, B. at Chartres, 1763, whose military talents were only equalled by his generosity and humanity in the Vendean war. He fell in action with the Austrians, 1796.

Mar'cel, ETIENNE, the patriotic defender of Paris after the battle of Poictiers, 1356. He was assassinated in 1358.

Marcel, (St.,) a bishop of Paris. D. 440.

Marcellene, (*mar-sel-leen',*) in *Illinois,* a post-village of Adams co., abt. 14 m. N. of Quincy.

Marcelli'nus, a pope and saint, succeeded Caius in 296. He signalized himself by his courage in a severe persecution. The Donatists charged him with having sacrificed to idols; from which accusation he was vindicated by Augustine. D. 304.

Marcel'lon, in *Wisconsin,* a post-village and township of Columbia co.

Marcel'lus I., Pope, succeeded Marcellinus, 304. The emperor Maxentius banished him from Rome for excommunicating an apostate. D. 310.

Marcellus II., succeeded Julius III. in 1555, but died a few weeks after his election.

Marcellus, the name of several noble Romans. — 1. Marcus Claudius Marcellus, famous for his victories over Hannibal and the Gauls, slain in battle against the former 208 B. C.—2. Marcus Claudius Marcellus, of the same family, an opponent of Cæsar in the senate, consul B. C. 51, assassinated 46. — 3. Marcus Claudius Marcellus, called the Younger, son of Caius Marcellus and Octavia, the sister of Augustus. He was adopted by the latter and married to his daughter, Julia, but died aged eighteen, 23 B. C.

Marcellus, in *Indiana,* a village of Rush co., abt. 5 m. E. of Rushville.

Marcellus, in *Iowa,* a village of Washington co.

Marcellus, in *Michigan,* a post-townsblp /of Cass co.

Marcellus, in *New York,* a post-village and township of Onondaga co., about 15 m. E. by N. of the city of Auburn.

Marcellus Falls, in *New York,* a post-village of Onondaga co., abt. 140 m. W. by N. of Albany.

Marces'cent, *a.* [Lat. *marcescens, marcesco,* to decay.] (*Bot.*) Withering; fading; decaying.

Marces'ible, *a.* [Fr.] Having a tendency to wither, fade, or decay.

Marcgravia'ceæ, *n. pl.* (*Bot.*) The *Marcgravia* family, a small order of plants, alliance *Guttiferales.* Diag. Oblique glandular petals, numerous naked seeds, and long distinct styles. — There are four genera and 26 species, generally natives of equinoctial America. Little is known of their properties. *Marcgravia umbellata* is said to be diuretic and antisyphilitic. Curious pitcher-like bracts occur in some of the genera.

March, (*martsh,*) *n.* [Lat. *Martius,* Mars.] (*Calendar.*) The name of the third month of our year, containing thirty-one days. It was so named, according to tradition, by Romulus, in honor of his father Mars, and was the first month of the Roman year; and, indeed, till the alteration of the style in 1752, the legal year in England commenced on the 25th of March.

March, *v. n.* [Fr. *marcher;* Sp. *marchar;* It. *marciare.* The Fr. is from *marche,* step, limit, confine; L. Lat. *marca,* short, limit, bound; Sansk. *mârg,* to go in quest of.] To move by regular or measured steps; to move by steps and in order, as soldiers; to move in a military style. — To walk or move in a grave, stately, or deliberate manner.

— *v. a.* To cause to move, as an army; to cause to move in order or regular procession.

"*March* them again in fair array." — *Prior.*

— *n.* [Fr. *marche.*] The walk or movement of soldiers in regular order from one place to another. It consists of three cadences: 1, slow time, in which 75 paces are taken in a minute; 2, quick time, in which 110 paces are taken in a minute; 3, double time, in which 150 steps are taken in a minute. In slow or quick time a pace is 30 inches, in double time 36 inches. — Also a signal for troops to move; a particular beat of drum.

— A grave, solemn, stately, or deliberate walk, gait, or movement; measured and regular advance; progression; as, the *march* of intellect. — Distance traversed; as, a *march* of six leagues.

(*Mus.*) A military air in double time, played by pulsatile and inflatile instruments, to regulate the steps and enliven the spirits of soldiers. A march ought always to be written in common time, beginning with a broken bar with an odd crotchet or quaver. On parade occasions, it is played in slow, but for ordinary marching in quick time. Although properly belonging to martial music, the march has long since obtained admission into all kinds of music, and is adapted to every kind of instrument. Thus, we find it in the compositions of the greatest masters; as, for instance, the march in "Wilhelm Tell;" the religious march in Mozart's "Zauberflöte," and in Gluck's "Alceste," the "Wedding March" of Mendelssohn; the "Dead March" in Handel's oratorio of "Saul," and the admirable "Funeral Marches" of Beethoven.

March, or **Mora'na,** a river of Austria, flowing through Moravia, and after a course of 180 m. joining the Danube 8 m. W. of Presburg. It is navigable 50 m. from the Danube to Presburg.

March, a town of England, co. of Cambridge, on the Nene, 25 m. N.W. of Cambridge; *pop.* 6,900.

Marchantia'ceæ, *n. pl.* (*Bot.*) The Liverwort fam., a small order of plants, alliance *Muscales.* Diag. Sporecases valveless, or bursting irregularly, without operculum, but with elaters. The order includes 15 genera and 20 species, natives of damp, shady places in all climates, and generally useless.

Marche, (*marsh,*) an old prov. of France, now forming the dept of Creuse.

Marchena, (*mar-chai'na,*) a town of Spain, prov. of Seville, 33 m. S.E. of Seville city. *Manuf.* Woollens. In the vicinity are sulphur baths much resorted to by invalids. *Pop.* 14,000.

March'er, *n.* One who marches. — The governor or officer defending the marches of a territory; as, "the lords *marchers* had royal liberties." —*Davies.*

March'es, *n. pl.* [Norm. *marches,* frontier. See Mark.] Marks by which boundaries, limits, &c. are indicated; borders, particularly the confines of England on the side of Scotland or Wales. — See Border (The).

March'field, in *Maine,* a townsbip of Washington co.

Marchiali, or Marchialy. (The Man in the Iron Mask.) (*French Hist.*) A mysterious state prisoner in France, who always wore a black velvet mask, which completely concealed his face. He was at first confined at Pignerol in 1679; thence removed to Exilles in 1681; to the island of St. Marguerite in 1687; and finally, Sept. 18, 1698, to the Bastile, where he died Nov. 19, 1703. He was everywhere attended by M. de St. Mars; and although the slightest attempt on his part to reveal his real name would have met with instant death, he was uniformly treated with the greatest courtesy and indulgence. Various attempts have been made to ascertain the identity of the Man with the Iron Mask. Some affirm that he was the Duke of Vermandois (who died in camp in 1683), a natural brother of the dauphin. Voltaire published an account of him in 1751. In 1759 it was announced that he was the Duke of Beaufort: and in 1768 St. Foix suggested that he was the Duke of Monmouth, who had been executed in England. He was also reported to be an illegitimate son of Anne of Austria, by Cardinal Mazarin, or the Duke of Buckingham. He is again said to have been an elder and also a twin brother of Louis XIV. The last theory on the subject appeared in 1837, and suggested that he was the statesman Fouquet, whose death was believed to have occurred just before the mysterious prisoner arrived at Pignerol. It is now generally admitted, though without very satisfactory evidence, that the mysterious prisoner was, as announced in a letter by a Baron d'Heiss in 1770, Count Matthioli, minister of the Duke of Mantua. Having broken faith with Louis XIV., Count Matthioli was lured to the French frontier, arrested, May 2, 1679, and imprisoned at Pignerol. This opinion is sustained by M. Marius Topin, in his book "The Man with the Iron Mask," published in 1870.

March'ing, *a.* Pertaining to a march; as, in *marching* order.

Marching Regiment. (*Mil.*) A regiment placed in active service.

Marchioness, (*mär'shun-es,*) *n.* [L. Lat. *marchionissa, marcionissa;* Fr. *marquise.* See Marquis.] The wife or widow of a marquis; a lady having the rank and dignity of a marquis.

March'-mad, *a.* Fool-hardy; excessively rash.

March'-pane, *n.* A kind of sweet bread or biscuit.

March'-ward, *n.* A marcher.

Marcianus, (*mar-shi-ai'nas.*) emperor of Rome after the death of Theodosius II., 450, was a Thracian of obscure origin. His reign, which lasted but 6 months, was marked by peaceful and energetic measures. D. 457.

Mar'cion, a Gnostic teacher of the 2d cent., B. at Sinope, in Pontus. His father, according to some reports, not, however, well authenticated, was a bishop of the Church in that place. His belief in Oriental and dualistic gnosticism, incrusted with other and similar speculations, was deemed by him compatible with belief in Christianity, and he attempted to form an heterogeneous theology out of both materials. He assumed as articles of his creed, the eternity of matter — the existence of a benign and holy Deity — and of a Demiurge little less than God in might, but dark and malignant, and having his appropriate sphere in an attempted dominion over matter, for he created man, was the actual God of the Jewish race, and was to be finally overcome by the Messiah. Jesus, according to Marcion, had not, and could not have a real humanity, for all matter is essentially sinful. These notions are the crude effects of an earnest mystic mind to resolve inscrutable mysteries by the creation of figments not only incomprehensible, but inconsistent and baseless. Marcion received as canonical only the writings of the apostle Paul, though he had a gospel which appears to have been an interpolated copy of that of Luke. To this heresy was joined an austere and vigorous asceticism, by which victory over appetite was to be finally secured.

Mar'cionists, *n. pl.* (*Eccl. Hist.*) A branch of the Euchites, or Massalians, and a distinct sect from the Marcionites, were thus named from Marcianus Trapezita, who, in the time of Justinian I., (527–565), observed the Sabbath as a fast.

Marcid, (*mär'sid,*) *a.* Pining; lean; withered; as, "*marcid,* dying herbs." — *Dryden.*

Marcid'ity, *n.* [L. Lat. *marciditas.*] Extreme attenuation; meagreness.

Mar'cionites, *n. pl.* (*Eccl. Hist.*) A sect of heretics founded by Marcion, (*q. v.*)

Marcomanni, *n. pl.* (*Anc. Hist.*) The name Marco-manni, *i. e.,* Men of the Marches or Frontier, or Borderers, was given by the Romans to various tribes on the confines of Germany. Some hordes under this name were driven out of Gaul by Julius Cæsar, B. C. 58. Marobodnus formed a league against these tribes, and concluded a treaty with Tiberius (afterwards emperor), in the year 6. The Cherusci defeated the Marcomanni in 17, and a peace was mediated between them by Drusus. Domitian made war upon them, and was defeated in 90. In alliance with other tribes they invaded the Roman empire in 166, when a war commenced which was not brought to a close until 180. They ravaged Italy in 270. The last notice of the Marcomanni is in 451, when they formed a contingent of the army with which Attila invaded Gaul and Italy.

Mar'co Po'lo. See Polo.

Marco'sians, *n. pl.* (*Eccl. Hist.*) The followers of Marcus and Calarbasus, who adopted the Valentinian system, and are said to have anointed their dead, arose in the 2d century.

Marcouf, (St.,) (*mar-koof',*) two small islands off the N. coast of France, dept. of Manche, defending the roadsteads off Cape La Hogue.

Marcus Aurelius Antoninus, a Roman emperor, celebrated for his wisdom, learning, and virtue, B. at Rome, A. D. 121, was the son of Annius Verus. He was adopted by Antoninus Pius in 138, and assumed the name of M. Ælius Aurelius Verus Cæsar. In 139, Antoninus becoming emperor, associated him in the administration. Marcus Aurelius married Faustina, a daughter of Antoninus, in 146, and succeeded his adopted father in 161. He associated with himself in the empire Lucius Commodus, who died in 169. His reign was disturbed by many insurrections, and by inroads of the German tribes of the Marcomanni and Quadi, and other northern barbarians. Though he preferred peace, he was almost continually involved in war, in which he was generally victorious. In 176, he visited Syria, Egypt, Athens, &c. D. 180. The Antonine column, which stands at Rome in the Piazza Colonna, was erected to his memory by Commodus. He was prejudiced against the Christians, and the cruel persecutions which they suffered in his reign is perhaps the only stain on his memory. In philosophy, he was a disciple of the Stoics, of which sect he became an illustrious ornament by his practice as well as by his writings. His thoughts and doctrines were recorded by himself in a Greek work, called *Meditations,* which is considered an excellent manual of moral discipline.

Mar'cus Hook, in *Pennsylvania,* a village of Delaware co., about 18 m. S.W. of Philadelphia.

Mar'cy, Randolph B., an American brigadier-general of volunteers, father-in-law to General McClellan, B. in Massachusetts about 1813, graduated at West Point, entered the U. S. Army, 1832, and rose by successive steps to the rank of major before the civil war broke out. He was appointed inspector-general of the Army of the Potomac, Aug. 9, 1861, and a brigadier-general of volunteers, Sept. 23. When General McClellan was removed from the command of the Army of the Potomac, General Marcy, who belonged to his personal staff, returned to his former position of inspector-general, with the rank of colonel, and has since lived in retirement with his family. D. 1887.

Mar'cy, in *Indiana,* a post-village of La Grange co., abt. 40 m. N. by W. of Fort Wayne.

Mar'cy, in *Iowa,* a village and township of Boone co., abt. 38 m. N.N.W. of Des Moines.

Mar'cy, in *New York,* a post-townsbip of Oneida county.

Mar'cy, in *Wisconsin,* a post-village of Waukesha co., abt. 15 m. W.N.W. of Milwaukee.

Mar'disville, in *Alabama,* a village of Talladega co., abt. 110 m. E. by N. of Tuscaloosa.

Mardo'nius, a celebrated Persian general, son of the satrap Gobryas, and cousin of Xerxes, commanded the first Persian armament sent against Greece, B. C. 492, when a storm at Mount Athos destroyed his fleet, and his army was beaten in Macedonia. He accompanied Xerxes in his invasion of Greece, of which he had been the chief promoter; and after the battle of Salamis, and the return of Xerxes to Asia, Mardonius was left in occupation at Athens, which he held for ten months. He was defeated by Pausanias, and killed at the battle of Platæa, B. C. 479.

Mare, *n.* [A. S. *myre, mere;* Ger. *mähre;* Swed. *märr;* Armor. *march,* a horse.] The female of the horse. — See Equidæ, and Horse.

Mare's nest. Anything exceedingly absurd or improbable; a hoax; as, to find a *mare's nest.*

Mare's tail. (*Meteor.*) A cloud resembling a horse's tail, and portending rain.

(*Bot.*) See Hippuris.

Mare, *n.* [A. S. *mara,* incubus.] (*Med.*) Same as Nightmare, *q. v.*

Ma're, an island of Brazil, in the Bay of Bahia (All Saints' Bay), at the mouth of the Pitnnga, about 15 m. N. by E. of Bahia.

Mare Island, in *California,* Solano co., in the Bay of San Pablo. See Section II.

Maremme (*ma-raim'meh,*) the name given in Italy to certain unhealthy strips of marshy and fenny land, where the exhalation so contaminates the surrounding air as to induce fever and many dangerous maladies. One of these, about 10 m. in breadth, runs along the coast from the north of Lucca, as far as the River Pescia; this is called the *Tuscan* Maremma. The *Roman* begins at the other bank of the Pescia, and runs for 120 miles south of Terracina on the Neapolitan frontier. Though much has of late years been done to drain these deadly marshes, they are still fraught with a fearful amount of sickness and death.

Maren'go, a village of N. Italy, prov. of Alexandria, near the Bormida, 3 m. S.E. of Alexandria. *M.* was the scene of a memorable battle, in which a French army, commanded by Bonaparte, and numbering somewhat more than 20,000 men, defeated and routed 32,000 Austrians under General Melas, on June 14, 1800.

Maren'go, in *Alabama,* a W. by S. co.; *area* about 960 sq. m. *Rivers.* Tombigbee and Black Warrior rivers, besides several creeks. *Surface,* undulating; *soil,* very fertile. *Cap.* Liudeu. *Pop.* (1890) 33,095.

Maren'go, in *Illinois,* a post-village and township of McHeury county, about 65 miles W.N.W. of Chicago.

Marengo, in *Iowa,* a city and township, cap. of Iowa co., on the C., R. I. & P. R. R., 27 m. S.W. of Cedar Rapids. *Pop.* (1895) 2,027.

Marengo, in *Michigan,* a post-village and township of Calhoun county about 6 miles east of Marshall.

Marengo, in *Minnesota,* a village of Faribault co., about 40 m. S. by E. of Mankato.

Marengo, in *Ohio,* a post-village of Morrow co., on the T. & O. Cent. R. R.

Marennes, *(ma-ren',)* a seaport-town of France, dept. of Charente Inférieure, 25 m. S. of La Rochelle; *pop.* 5,000.

Mareo'tis, a lake of Egypt. See MARÆOTIS.

Mareschal, *(mär'shal.) n.* [Fr.] A military officer of the highest rank; a marshal; as, a *mareschal* of France.

Margal'laway River, rises on the S. slope of the Green Mountains in Oxford co., Maine, and flowing S. by W. into New Hampshire, receives the Waters of Lake Umbagog, and then takes the name of *Androscoggin,* q. v.

Mar'garate, *n.* *(Chem.)* A salt formed of margaric acid and a base.

Mar'garet, queen of Norway, Denmark, and Sweden, who is often called "the Semiramis of the North," was the daughter of Waldemar III., king of Denmark, and was born at Copenhagen, 1353. In 1363 she was married to Haco, king of Norway, youngest son of Magnus Ericson, in whose person the governments of Sweden, Norway, and Scania had been invested many years before. The marriage of Haco with *M.* took place under circumstances of great political difficulty, and it occasioned the banishment of twenty-four of the most powerful of the Swedish barons, by whom Magnus and his son were afterwards deposed, and Albert of Mecklenburg placed on the throne. While the country was suffering from the oppression of this foreign government, Margaret lost, in 1375, her father, Waldemar; in 1380, her husband, Haco; and in 1387, her son, Olave — events which left her queen regnant in Norway, regent in Denmark, and in a situation to receive overtures from the Swedes. With a spirit and ambition natural to her, Margaret at once furnished her adherents with troops, and supplies of war, and the victory of Felkoiping, won by the high marshal of Sweden, Eric Kielson, Sept. 21, 1389, threw open the kingdom to her. The union of the three kingdoms was concluded by the treaty of Calmar, where the spiritual and temporal barons assembled for that purpose, on the 20th of July, 1397; Eric of Pomerania, the grand-nephew of Margaret, being elected her successor as the future sovereign of Sweden. She died in the port of Flensburg, on board a vessel in which she had embarked for Denmark, Oct. 28, 1412. Her memory has been execrated in Sweden, where the union was never popular, and in about the same measure that her political virtues have been extolled in Denmark.

Mar'garet of Anjou, daughter of Réné, king of Sicily, and wife of Henry VI. king of England, B. abt. 1425, and was married to Henry in 1445. In the civil wars between the houses of York and Lancaster, she displayed the character of a heroine. Her husband being taken prisoner, in 1455, by the Earl of Warwick, she levied forces, set Henry at liberty, and entered London in triumph. But, in 1460, her army was defeated at Northampton, and Henry again became a prisoner; the queen, however, escaped into Scotland, and collected another army, with which she marched against the Duke of York, who fell in the battle of Wakefield. She next defeated Warwick at the second battle of St. Albans; but being routed at Towton, she fled to France, to implore succor from Louis XI., who refused her any assistance. This intrepid woman then returned to England, where she was joined by several of her party, but was defeated at Hexam. In 1471 she was taken prisoner, and, in 1475, she purchased her liberty by a large ransom. She then returned to France, where she died, in 1482.

Mar'garet of Navarre, daughter of Henri II. of France, was B. in 1552, and ranked as one of the greatest beauties of her age, with talents and accomplishments corresponding to the charms of her person. She married, in 1572, Henry, then prince of Béarn, but afterwards Henri IV. of France. It was at the time of the celebration of this marriage at Paris that the massacre of St. Bartholomew was perpetrated, and *M.* narrowly escaped. It was a marriage of policy, and not of affection; *M.* was gay and fond of dissipation, and on Henri's accession to the throne, he proposed to dissolve their marriage, to which she consented, on condition of receiving a suitable pension; and, having returned to Paris, lived in great splendor and dissipation till her death, in 1615, at the age of 63. Some very agreeable poems by her are extant, and her *Mémoires* are extremely curious.

Mar'garet of Valois, Queen of Navarre, and sister to Francis I., king of France, B. 1492, was the daughter of Charles of Orleans, duke d'Angoulême. In 1509 she married Charles, duke d Alençon, two years after whose death she became the wife of Henri d'Albret, king of Navarre, by whom she had Jeanne d'Albret, mother of Henri IV. Margaret assisted her husband in improving his dominions, and she greatly encouraged the Protestants. Besides other works, she wrote the *Heptameron,* a collection of tales, after the manner, and with more than the license of Boccaccio. D. 1549.

Mar'garetsville, in *N. Carolina,* a post-village of Northampton co., about 150 m. N.E. by E. of Raleigh.

Margaret'ta, in *Illinois,* a village of Clarke co., about 110 m. E. by S. of Springfield.

Margaretta, in *Nebraska,* a village of Lancaster co., about 50 m. S.W. of Omaha City.

Margaretta, in *Ohio,* a township of Erie county.

Mar'garetville, or MARGARETTSVILLE, in *New York,* a post-village of Delaware co., about 11 m. E. of Delhi.

Margar'ic Acid, *n.* [From Gr. *margaron,* a pearl.] *(Chem.)* A fatty acid, supposed at one time to be distinct, but ascertained by Heintz to be a mixture of one part of stearic acid and nine or ten of palmitic acid. It is a singular fact, that, although the melting-point of stearic acid is 159° Fahr., and that of palmitic acid 143·6° Fahr., yet the mixture of the two melts at 140° Fahr.

Mar'garin, *n.* *(Chem.)* A neutral fat, at one time supposed to be distinct, but now ascertained to be a mixture of stearine and palmitin. It is so called on account of its crystallizing in pearly scales.

Margari'ta, a town of European Turkey, 5 m. N. of Parga; *pop.* 5,500.

Margari'ta, (Santa,) a town of Italy, in Sicily, 42 m. N.W. of Girgenti; *pop.* 7,000.

Margarita, *(mar-ga-ree'ta,)* an island of Venezuela, in the Caribbean Sea, about 30 m. N. of Cumana; Lat. 11° N., Lon. 64° W. It has an area of about 600 sq. m., and consists properly of two elevated portions of unequal size, connected by a long, low isthmus. The soil along the coasts is sandy and sterile, but the interior is very fertile, and, besides the usual tropical fruits, produces maize, sugar, coffee, and cotton in abundance. The chief towns are Assumption (the capital), in the interior, and Pampatar, on the S. coast. The latter has a good harbor, and the inhabitants have an active trade with the W. India Islands, as well as along the adjacent coast. The island receives its name from the pearls formerly procured there in large numbers. Discovered by Columbus in 1498.

Margari'ta, an island of Mexico, in the Pacific Ocean, off the coast of Lower California; Lat. 24° 15′ N., Lon. 111° 14′ W. *Area,* about 300 sq. m.

Margaritaceous, *(-tā'she-us,) a.* Resembling pearl; belonging to pearl; pearly.

Mar'garite, *n.* *(Min.)* A hydrated silicate of alumina, lime, and soda; — so named from its pearly lustre.

Margarit'ic, *a.* [Fr. *margaritique.*] Pertaining to, or partaking of the qualities of, pearl.

Margaritif'erous, *a.* Yielding pearls.

Margaro'dite, *n.* *(Min.)* A hydrated variety of mica, with a pearly lustre.

Mar'gate, a watering-place of England, co. of Kent, at the mouth of the Thames, 16 m. E.N.E. of Canterbury, and 65 m. E. of London; *pop.* 9,700.

Mar'gay, *n.* *(Zoöl.)* The *Felis tigrina,* a species of wildcat, native of S. America.

Marge, *(märj,)* **Mar'gent,** *n.* A margin, brink, edge, or verge.

Mar'gent, *v. n.* To margin, as the pages of a book. (R.)

Mar'gin, *(-jin,) n.* [Fr. *marge;* It. *margin ;* Lat. *margo, marginis,* akin to Ar. *marz,* a margin.] That which bounds or borders anything; the edge, border, brink, verge, brim, rim; as, the *margin* of a river. — The edge of the leaf or page of a book left blank, or filled with notes.

(Com.) The differential value of an article between cost-price and salable value; as, to leave a *margin* for profit.

(Arch.) The flat part of the stile and rail of framed work. (Sometimes called *lock-rail.*)

(Bot.) See LEAF.

(Printing.) The arrangement of the pages in a sheet at proper distances from each other, according to the size of the paper; so that when the sheet is printed and folded, the border of white paper round them shall be regular and uniform in every leaf of the book.

— *v. a.* To furnish with a margin; to border; to leave space to be filled up by anticipated profit.

— To enter in the margin of a page.

Mar'ginal, *a.* [Fr.] Relating or pertaining to a margin. — Written, printed, or entered in the margin; as, *marginal* notes.

Margina'lia, *n. pl.* Marginal notes or memoranda.

Mar'ginally, *adv.* In the margin of a page.

Mar'ginate, Mar'ginated, *a.* [Lat. *marginatus.*] Possessing a margin.

Mar'got, *n.* *(Zoöl.)* An American fish of the perch kind. — *Wright.*

Mar'gravate, Mar'graviate, *n.* [Ger. *markgrafschaft.*] The territorial jurisdiction of a margrave.

Mar'grave, *n.* [Ger. *markgraf,* count of the mark.] *(Her.)* A title originally bestowed on a commander intrusted with the protection of a *mark,* or country on the frontier. Marks and margraves begin to appear in history as early as the reign of Charlemagne. In rank, margraves stood next to the kings and emperors, and above the dukes in whose country the margraviate was established. In some cases, however, several margraves were dependent upon the dukes. In the 12th century margraviates became hereditary, and the rank of margrave was equal to that of the prince of the empire, standing between counts and dukes in the German empire.

Mar'gravine, *n.* [Ger. *markgräfin.*] The wife or consort of a margrave.

Mar'guerite, the French name correspondent to the English MARGARET.

Mari'a Christi'na, queen-dowager of Spain, daughter of Francis I., king of the Two Sicilies, B. at Naples, 1806, was married to Ferdinand VII. of Spain, 1829. Ferdinand D. 1833, and by his testament his widow was appointed guardian of her children — the young Queen Isabella and the Infanta Maria Louisa, now Duchess de Montpensier — and also regent, till the young queen should attain the age of eighteen years. A civil war broke out, the adherents of Don Carlos seeking to place him on the throne. The event of this war, which continued till 1840, was long doubtful, and Spain was fearfully desolated by contending armies; but the queen-mother seemed indifferent to everything except the company of Don Fernando Muñoz, one of the royal bodyguard, whom she made her chamberlain, and with whom she was united, in 1833, in a morganatic marriage, which, however, was kept hidden, while her connection with him was no secret. She has had ten children by him. A conspiracy, which broke out on the night of August 13, 1836, exposed Muñoz to great danger, and led the queen-mother to concede a constitution to Spain. Her practice as regent was to adopt the course agreeable to the minister of the day, and thus her government was despotic under one ministry and liberal under another. A popular commotion, caused by the law respecting the Ayuntamientos, obliged her to give to the prime minister Espartero, October 10, 1840, a renunciation of the regency, and then to retire to France; but she continued to interfere from her place of retirement in the affairs of Spain. After the fall of Espartero, she returned to Madrid, in 1843, and in October, 1844, her marriage with Muñoz, who was now made Duke of Rianzares, was publicly solemnized. In July, 1854, a new revolution expelled her from the country, and she again took refuge in France, but returned to Spain some time after, was again expelled, and died in exile, 1878.

Mari'a da Glo'ria, queen of Portugal, daughter of the emperor of Brazil, Dom Pedro I., by his first consort, the archduchess Leopoldine of Austria, was born at Rio de Janeiro, 1819. On the death of her grandfather, John VI., she was designated successor to the crown of Portugal, by virtue of the act of renunciation executed by Pedro, one of the provisions of which was, that, upon coming of age, she should marry her father's brother, Dom Miguel, whom it was desirable to satisfy by such arrangement. When Dom Miguel had accepted of this arrangement, and received the regency, the young queen left Brazil, in 1828, to sail for Europe. Miguel had, meanwhile (June 30, 1828), declared himself absolute king of Portugal, and forbade the queen to land. She was now compelled to retire to England, where she was received by the court as lawful queen of Portugal, but found no actual support, the ministry of the day secretly favoring the usurper. In 1829 she returned to Rio Janeiro, with Amelia of Leuchtenberg, her subsequent stepmother, and lived there until 1831, when her father found himself compelled to resign the crown of Brazil to his son Pedro II. She then resided in Paris, while her father waged war for her rights in Portugal; and after the taking of Lisbon, in September, 1833, she made her entry into that city. Pedro now administered the government as regent and guardian of his daughter. His power, however, was soon exhausted: and when, on September 18, 1834, he announced to the Cortes that he was no longer able to conduct the government, that assembly declared the queen of full age, by which means the intrigues of the competitors for the regency were defeated. In 1834 she was married to Duke Charles-Auguste-Eugène-Napoleon, of Leuchtenberg, who was made commander of the army, and was likely to become popular, when he died suddenly, March 28, 1835. On April 9, 1836, she was married a second time, to Duke Ferdinand, son of Ferdinand of Saxe-Coburg, who, upon the birth of a crown-prince, was named king. In the course of the next ten years the corruptions of the government, which had fallen into the hands of the Cabrals, the suppression of the liberty of the press, and the increase of taxes, irritated a large portion of the nation. In May, 1846, civil war broke out in the Upper Minho, and was only finally suppressed by the intervention of a British fleet. In 1851, when the Duke de Saldanha carried out a military revolution, Donna Maria yielded with a very bad grace to the necessities of her position. Though of the royal blood of Portugal, she never secured the affections of her people, and her troubled career was an unremitting scene of paltry intrigues at court, and of discontent rising into rebellion throughout the country. D. 1853.

Mari'a del Occiden'te, (MARIA BROOKS,) an American poetess, B. at Medford, Mass., abt. 1795. Her maiden name was Gowen, and she married Mr. Brooks, a Boston merchant; but she is chiefly known under the name of "Maria del Occidente," which she first received from Mr. Southey. Her best poem is *Zophiël, or the Bride of Seven.* D. in the island of Cuba, 1845.

Mari'a Loui'sa, Empress of the French, wife of Napoléon I., was the eldest daughter of Francis I., emperor of Austria, and of his second wife, Maria Theresa of Naples, and was B. 1791. In 1810 she was married to the emperor, then in the zenith of his power; in 1811 she presented her husband with a son — afterwards called King of Rome — to the great joy of the French nation; and, in 1813, on his departure to the army, she was nominated regent. In 1814 she refused coldly to accompany Napoleon to Elba, on the plea of ill-health; and having obtained, by treaty with the allied powers, the duchies of Parma and Placentia, &c., she repaired thither with her chamberlain, Count Neipperg, for whom she had conceived an attachment, and whom she subsequently married. D. 1847.

Mariam'ne, an unfortunate Jewish princess, granddaughter of Aristobulus, and of Hyrcanus the high-priest, and wife of Herod the Great. Her history is related by Josephus in his *Antiquities,* commencing at Book XV., from which it appears that Herod was excessively fond of her. She was condemned to death, by the machinations of Salome, her husband's sister, on a false charge of adultery, B. C. 28. She met her fate with an air of grandeur and intrepidity worthy of her noble ancestry, and was bitterly lamented by the king after her decease. — Another MARIAMNE, wife of Herod, was the daughter of Simon, the high-priest, and mother of Herod-Philip, who married Herodias.

Ma'rian, *a.* Belonging or having reference to the Virgin Mary, or to Mary, Queen of England; as, a *Marian* martyr.

Maria'na, JUAN, a celebrated Spanish historian, was a at Talavera, 1536, and, at the age of 17, entered the order of Jesuits. His best work is *The History of Spain,* the style of which, says Ticknor, is unrivalled among Spanish prose compositions. D. 1623.

Maria'na, or MARIAN'NA, a city of Brazil, abt. 45 m. N.E. of Oure Preto; *pop.* 6,500.

Mariana Islands. See LADRONES.

Marian'na, in *Florida*, a post-town, cap. of Jackson co., about 72 m. W.N.W. of Tallahassee.

Mari'a's, an island in the Southern Ocean, lying 3 m. off the coast of Van Diemen's Land; Lat. 42° 42′ S., Lon. 143° 29′ E.

Mari'as, Las Tres. [*The Three Marys*]. Three islands of Mexico, in the Pacific Ocean, off the coast of Jalisco, between Lat. 21° and 22° N., and Lon. 106° and 106° 30′ W. The largest has an area of about 120 sq. m. They were discovered by Diego de Mendoza in 1532.

Mari'a's River, in *Montana*, enters the Missouri river below Fort Benton, from the N.W.

Maria Theresa, queen of Hungary and Bohemia, archduchess of Austria, and empress of Germany, daughter of the Emperor Charles VI., was born at Vienna, 1717, and, in 1736, married Duke Francis Stephen of Lorraine, who, in 1737, became grand-duke of Tuscany. The day after her father's death, in 1740, she ascended the throne of Hungary, Bohemia, and Austria, and declared her husband joint ruler. The elector, Charles Albert of Bavaria, supported by France, laid claim to the Austrian hereditary territories, and the Elector of Cologne and the Elector-Palatine would likewise not acknowledge her succession. Her states were invaded at the same time by Frederick the Great and by the Elector of Bavaria; and being compelled to fly to Presburg, she convoked the diet, and there threw herself upon the sympathy of her Hungarian subjects; to whom, — according to the beautiful poetic story universally circulated for more than a century, but now, like so many others, believed to be a myth, — with her child in her arms, she made this pathetic address: "Abandoned by my friends, persecuted by my enemies, attacked by my nearest relations, I have no other resource than in your fidelity, your courage, and your constancy; I commit to your hands the child of your king." The youth, the beauty, and the misfortunes of the queen made a deep impression. The magnates drew their sabres, and exclaimed, "Moriamur pro rege nostro Maria Theresia." Till then she had preserved a calm, majestic demeanor; but their fidelity and courage overcame her feelings, and she gave way to them in tears. Such is the well-known tale; and though it may no longer pass, as it stands, for truth, yet the main statement is true, that the queen did meet the Hungarian Diet — that her babe was brought in — and that the uprising in her favor was voted with enthusiasm, and became a fact. The troops furnished by Hungary, by their mode of warfare and their ferocity, spread terror at first through the German and French armies. In the meantime the allies quarrelled among themselves, and the king of Prussia made a separate peace with the empress. The general opinion that the balance of power in Europe depended upon the continuance of the house of Austria, induced England to arm for *M. T.*; Holland paid her subsidies; and after the death of Cardinal Fleury, in 1743, the cause of Austria triumphed throughout Europe. Reverses, however, followed; and all the belligerents becoming desirous of peace, the treaty of Aix-la-Chapelle was concluded in 1748, by which Maria Theresa was secured in her rights. In 1756 this claim was disturbed by the king of Prussia, who, having discovered that secret plans were being formed for a combined attack on him, resolved to be beforehand with his foes, and marched into Saxony and Bohemia, and began the Seven Years' War. In 1765 the Emperor Francis died, which caused the empress deep and lasting distress. In 1772 she joined the king of Prussia and the Empress Catharine in the dismemberment of Poland. By the death of Maximilian Joseph, Elector of Bavaria, in 1777, war was rekindled between Austria and Prussia, but was terminated in 1779, by the peace of Teschen, which added to the former state a small portion of Bavaria. Maria Theresa founded and improved schools, universities, and academies, and granted prizes to the students. She rewarded, also, those who made any important improvements in the arts, and turned her attention particularly to agriculture. She also reformed many abuses in the Church; suppressed the Inquisition at Milan, abolished the order of Jesuits, and prohibited the admission of individuals of both sexes as members of convents before the age of 25 years. She also abolished the rack in all her states, and D. 1780, aged 63, with a just claim to the reputation of many royal and domestic virtues.

Maria Theresa, (Order of.) (*Her.*) A military order of Austria, founded in 1757.

Mari'atown, a village of Upper Canada, abt. 29 m. S.W. of Prescott.

Mari'aville, in *Maine*, a township of Hancock co.: *pop* abt. 600.

Mari'aville, in *New York*, a post-village of Schenectady co., abt. 27 m. W. by N. of Albany.

Mariazell, or **Zell.** (*ma-re-a-tsel'*,) a market-town of Styria, near the limits of Austria, 59 miles from Vienna. It is noted for a shrine containing an image of the Virgin, which attracts thither about 100,000 pilgrims annually. *Pop.* 1,000.

Marica, (*ma-ree'ka,*) a town of Brazil, abt. 20 m. E. of Rio de Janeiro.

Maric, ALÉXANDRE THOMAS, a celebrated French advocate, B. 1797, at Auxerre, Yonne. After the revolution of 1848, *M.*, who was a member of the Chamber of Deputies since 1842, was the first to declare, in the sitting of Feb. 24, the illegality of the proposed regency, and to suggest a provisional government, in which he took part, becoming Minister of Public Works, and organizing the national workshops. After the insurrection of June he was chosen President of the National Assembly. *M.*, who belonged to the more moderate section of the Republican party, supported the prosecution of Louis Blanc and Caussidière. After the election of Dec. 10 he united himself more closely with the Democratic party; but, not being re-elected to the Legislature in 1849, he resumed his place at the Bar, securing a largely increased amount of practice. In 1860 he was re-elected a member of the council of his order for the thirtieth time, and in 1863 was returned to the Corps Législatif as Opposition candidate by a large majority of votes. D. 1870.

MarieAntoinette', archduchess of Austria and queen of France, B. at Vienna, Nov. 2, 1755, was the daughter of the Emperor Francis I., and the celebrated Maria Theresa. To a beautiful person, and a cultivated mind, she added the charms of gentleness and feminine grace; not, however, without a large measure of courage and decisive energy, making her the worthy daughter of her imperial mother; and when she left Vienna for Versailles, in 1770, when only 15 years of age, to give her hand to the young duke of Berri, afterwards Louis XVI. of France, the capital of her native land was filled with sorrow. When her husband ascended the throne, in 1774, she gained the affections of the people by repeated acts of generosity. It was, however, soon observed that her natural liveliness and freedom of manner brought upon her the scandal of her enemies about the court.

Fig. 1708. — MARIE ANTOINETTE.

An extraordinary occurrence added fresh force to calumny, and tarnished the fair name of the queen. This was the affair of the "Diamond Necklace," in which the Cardinal Louis de Rohan, the great quack Cagliostro, and a certain Countess de Lamotte were the chief actors. The jewellers demanded the payment of an immense price for the necklace, which had been purchased in the name of the queen. In the examination which she demanded, it was proved that she had never ordered it. A lady of her size and complexion had passed herself off for the queen, and at midnight had a meeting with the cardinal in the park of Versailles. Notwithstanding this, the enemies of the queen succeeded in casting a stigma on her; and the credulous people laid every public disaster to her charge. It was certain that she had great influence over the king, and that she constantly opposed such measures of reform as had been proposed. Her unpopularity increased, and the general indignation was raised to the highest pitch by the enthusiastic reception given her at the Guard's ball, on the 1st Oct., 1789, where the white Bourbon cockades were worn, and the national cockade was trampled under foot. The insurrection of women, and the attack on Versailles followed in a few days. To put a stop to the scene of outrage, the king and queen showed themselves, with both their children, in the balcony. This spectacle made a momentary impression; but soon the cry resounded, *No children! the queen — the queen alone!* She instantly put her son and daughter into the arms of the king, and returned to the balcony alone. This unexpected courage pacified the mob; and their threats were followed by shouts of *Vive la Reine.* It was the queen who advised the flight of the royal family from Paris in June, 1791, which ended in their capture and return. At length came the fatal 10th of August, 1792. Prepared for the worst, the queen exerted all her power to induce the king to meet death sword in hand; but he thought resistance was in vain, and was led with his consort before the Legislative Assembly, where she heard his deposition announced, and then accompanied him to the prison of the Temple.

Fig. 1709. — THE CONCIERGERIE.
(The prison of Marie Antoinette.)

There, deprived of every semblance of royalty, and bereft of every comfort, she displayed the magnanimity of a heroine, and the patient endurance of a martyr. In Jan., 1793, she had a parting interview with her husband, on whom sentence of death had been passed by the Convention. In Aug. following she was removed to the Conciergerie, and in October she was brought before the revolutionary tribunal. She was charged with having dissipated the finances, exhausted the public treasury, corresponded with the foreign enemies of France, and favored its domestic foes. She replied with firmness and decision, and a just indignation; and she heard her sentence pronounced with perfect calmness. On the following morning, when she ascended the cart which conveyed her to the scaffold, it was observed that grief had distorted her features, and in the damp, unwholesome prison she had almost lost one of her eyes. Troops lined the road, a priest accompanied her, but she spoke little. There were shouts of *Vive la République*, and *A bas la tyrannie*, but she was unmoved. A glimpse of the Tuileries, however, keenly touched her. Her head was quickly severed by the guillotine, and shown to the people, who redoubled their diabolical shouts of exultation. Thus perished M. Antoinette in the 38th year of her age, Oct. 16, 1793. Collections of her letters have recently been published by the Comte de Humolstein, and M. Feuillet de Conches. But it is quite certain that many of the letters included in these collections are forgeries.

Marie-Aux-Mines, (*-o-meen'.*) a town of France dept. Haut-Rhine, 14 m from Colmar. *Manuf.* Cotton goods and hosiery. *Pop.* 12,000

Marie de Médicis. [It. *Maria de' Medici.*] (*me'dess'.*) Queen of France, B. at Florence, 1573, was daughter of Francis I., grand-duke of Tuscany, and married Henry IV of France, in 1600. The union was rendered unhappy in consequence of the jealous, obstinate, and violent character of the queen; but although she was constantly quarrelling with Henry, the most reliable historians acquit her of the odious charge with which some writers have sought to brand her — that of being privy to the king's murder. On the death of Henry IV., in 1610, she was named regent; but her administration was disgraced by the countenance she afforded to unworthy favorites. She even quarrelled with her son, afterwards Louis XIII., who was compelled to quit the court. A reconciliation was, however, effected between them by Richelieu. That minister subsequently forced her to leave France. The remainder of her life was spent in exile. In 1642 her death took place at Cologne, where she had resided almost without the common necessaries of life.

Marie Galante (*ga-lont'*), a French W. India island, between Guadaloupe and Dominica. *Area*, about 60 sq. m. *Chief products.* Coffee, sugar, cotton, and cocoa. *Chief town*, Basseterre. *Pop.* 14,000.

Mariel (*ma-re-el'*), a seaport town on the N.W. coast of the island of Cuba, about 20 m. W. of Havana; Lat. 23° 2′ N., Lon. 82° 47′ W. *Pop.* 1,600.

Mari'enberg, a town of N. Germany, in Saxony, 35 m. from Dresden. *Manuf.* Lace and linens. *Pop.* 5,000.

Mari'enburg, a town of Prussia, prov. of W. Prussia, on the Nogat, 27 m. S.E. of Dantzic. It was the seat of the grand masters of the Teutonic Order for nearly two centuries. *Pop.* 7,900.

Marienwerder (*en-vair'der*), a town of Prussia, prov. of W. Prussia, on the Nogat, 44 m. S.E. of Dantzic. *Manuf.* Woollens, &c. *Pop.* 10,500.

Maries, in *Missouri*, a central co., *area*, about 515 sq. m. *Rivers.* Gasconade river, and several large creeks. *Surface*, hilly; *soil*, fertile. *Min.* Copper, lead, and iron. *Cap.* Vienna. *Pop.* (1890) 8,600.

Marie (*ma're*), **St.,** a town of France, dept. of Basses-Pyrenees, near Oleron. *Pop.* 4,000.

Marietta (*ma-re-et'ta*), in *Georgia*, a city, cap. of Cobb co., about 20 m. N.W. of Atlanta. *Pop.* (1897) 3,750.

Mariet'ta, in *Illinois*, a post-village of Fulton co., about 13 m. N.W. of Lewistown.

Mariet'ta, in *Indiana*, a post-village of Shelby co., about 35 m. S.E. of Indianapolis.

Mariet'ta, in *Iowa*, a post-village and township of Marshall co., about 50 m. N.E. of Des Moines.

Mariet'ta, in *Kansas*, a village of Marshall co., on the Big Blue river, about 9 m. below Marysville.

Mariet'ta, in *Mississippi*, a post-village of Prentiss co., 15 m. S.E. of Boonville.

Mariet'ta, in *Missouri*, a village of Holt co., about 45 m. N.W. of St. Joseph.
—A village of Worth co., about 60 m. N.N.E. of St. Joseph.

Mariet'ta, in *Nebraska*, a village of Madison co., 6 m. S.W. of Norfolk.

Mariet'ta, in *New York*, a post-village of Onondaga co., about 145 m. W.N.W. of Albany.

Mariet'ta, in *Ohio*, a city, cap. of Washington co., on the Ohio and Muskingum rivers, about 115 m. S.E. of Columbus. It is the oldest town in the State, having been settled in 1788 by New Englanders, under Gen. R. Putnam, and named in honor of Marie Antoinette. It is the seat of Marietta College, and has important and varied manufactures. *Pop.* (1897) 9,250.

Mariet'ta, in *Pennsylvania*, a post-borough of Lancaster co., about 25 m. S.E. of Harrisburg.

Mariet'ta, in *Wisconsin*, a prosperous township of Crawford co.

Mariet'ta Junction, in *Pennsylvania*, a village of Lancaster co.

Marigenous (*mā-rij'e-nus*), *a.* [Lat. *mare*, the sea, and *genere*, to generate.] Produced by the sea.

Marignano (*ma-reen-ya'no,*) a town of N. Italy, in Lombardy, on the Lambro, 10 m. S.E. of Milan. *Pop.* 6,000. Francis I. defeated an allied German, Italian, and

Swiss army, under the command of Maximilian I., at this village, Sept. 13 and 14, 1515. After this victory, Bayard (*q. v.*) was knighted by the French king, on the field. It is sometimes called the battle of the Giants and of St. Donato.—A second encounter, near the same place, is better known as the battle of Pavia.—The French and Sardinians defeated the Austrians here, June 8, 1859.

Mar'igold, *n.* (*Bot.*) See CALENDULA.

M. Window. (*Arch.*) A rose-window.

Marigot, (Le,) (*leh-ma-ree-go'*,) a village on the N.E. coast of the Island of Martinique, W. Indies.

Marigot', (Le,) a village on the N. coast, and cap. of the French portion of the Island of St. Martin, W. Indies.

Marigot' des Roseaux, (*da-ro-zo'*,) a village on the W. coast of the Island of St. Lucia, W. Indies.

Marigua'na, an island of the Bahama group, W. Indies; Lat. 22° 23′ N., Lon. 72° 55′ W.; *area*, abt. 80 sq. m. The strait between this island and that of Acklin is known as *Mariguana Passage*.

Mari'la, in *New York*, a post-village and township of Erie county, about 18 miles east of the city of Buffalo.

Mar'igraph, *n.* [From Lat. *mare*, sea, and Gr. *graphein*, to write.] An apparatus for making permanent registry of the height of the tides.

Marimon'da, *n.* (*Zoöl.*) See ATELES.

Marin, (*ma-reen'*,) a town of the island of Martinique, 16 m. S.E. of Port Royal. *Pop.* 3,925.

Marin, in *California*, a W.N.W. co., bordering on the Pacific Ocean, San Pablo Bay, and San Francisco Bay. *Area*, about 590 sq. m. *Rivers.* Corta Madera, San Antonio, San Geronimo, and some other small streams. *Surface*, diversified; *soil*, in some parts fertile. *Cap.* San Rafael. *Pop.* (1890) 13,072.

Marin (Le) (*leh-ma-rang'*), an island on the S. coast of the island of Martinique, about 16 m. S.E. of Port Royal. *Pop.* 3,500.

Mari'na, in *Wisconsin*, a former township of Marathon co.

Marine (*ma-reen'*), *a.* [Fr.; Lat. *marinus*, from *mare*, the sea = Ger. and A.S. *meer;* Sansk. *vâri*, water.] Pertaining or having reference to the sea; transacted at sea; done on the ocean; naval; nautical; as, *marine* shells, the *marine* department, *marine* affairs, &c.

(*Geol.*) Formed by the action of currents, or tidal waves; as, *marine* deposits.

Marine Corps. See MARINE (the noun).

Marine Engine. (*Mach.*) A steam-engine to propel a ship. For a description of the later types, see MARINE ENGINE, in SECTION II.

Marine Soap. A kind of soap prepared for washing with sea-water.

—*n.* A soldier who serves on board a ship of war and fights naval engagements.—The collective shipping of a country; the sum of naval or nautical affairs or interests; as, the minister of *marine*, the mercantile *marine*, &c.

Marine (*ma-reen'*), in *Illinois*, a post-village of Madison co., about 22 m. E. by S. of Alton. *Pop.* (1897) 750.

Marine, in *Minnesota*, a post-village and township of Washington co., on the St. Croix river, about 11 m. above Stillwater. The name of the post-office is MARINE MILLS. *Pop.* (1897) 1,765.

Marine City, in *Michigan*, a post-town of St. Clair co. *Pop.* (1894) 3,485.

Marine Mills, in *Minnesota*. See MARINE.

Mar'iner, *n.* [Fr. *marinier*, from Lat. *mare*, the sea.] A seaman; a sailor; a voyager; one whose occupation is to assist in navigating ships.

Maringouin, (*ma-rang-gwang'*,) in *Louisiana*, a small bayou flowing into Grand River from Iberville parish.

Marinilla, (*ma-ra-neel'ya,*) a town of the United States of Colombia, abt. 50 m. S.E. of Antioquia; *pop.* abt. 4,915.

Mari'no, a town of Italy, in the States of the Church, near Lake Albano, 12 m. from Rome; *pop.* 5,000.

Mari'no Falie'ro. See FALIERO.

Marinora'ma, *n.* [Lat. *marinus*, and Gr. *orama*, view.] A sea-piece; a representation or view of the sea.

Mari'no, (San.) one of the smallest and most ancient states of Europe, situate in Central Italy, province of Urbino, 15 miles S.W. of Rimini, and 26 miles N.W. of Urbino; Lat. 43° 50′ N., Lon. 12° 21′ 24″ E. It consists of a capital and several villages, situated on a plateau 2,000 feet in height, while the small territory that surrounds it only covers an area of 27 square miles. The chief pursuit of the inhabitants is agriculture, but the manufacture of silk is carried on to some extent. The government is a republic, composed of 300 Anziani, or elders, who choose the members of the executive to the number of 12, the whole being elected by the people and they in turn choose their president, or Gonfaloniere, who continues in office for only three months. A foreigner is always chosen to administer justice, and continues in office for three years, never again being elected. This is the oldest and, next to Monaco, the smallest state in Europe.

Mar'io, GIUSEPPE, (MARQUIS DE CANDIA,) a singer, B. at Turin, 1808, received an excellent musical education, entered the Sardinian army as an officer in 1830, resigned his commission, and proceeded to Paris, where his admirable tenor voice gained him his first engagement at the opera, at 1,500 francs per month. The Marquis de Candia, on accepting it, changed his name to Mario, and after two years' study at the "Conservatoire," made his debût, Dec. 2, 1838, in the opera of "Robert le Diable." He was for 20 years extremely popular all over Europe. He married Giulia Grisi (*q. v.*) during an operatic tour in the U. States, 1854–'5. He visited the U. States again in 1872 on a concert tour, but his voice had quite failed him, and his reappearance was a detriment to his reputation. D. 1883.

Mariol'ater, *n.* A worshipper of the Virgin Mary.

Mariol'atry, *n.* [Gr. *Maria*, and *latreia*, adoration.] (*Theol.*) A name given by Protestant writers to the worship paid by Roman Catholics to the Virgin Mary. This name is intended to imply that the Catholic worship of the Virgin is the supreme worship of *latreia*, or adoration, which Catholics earnestly disclaim; although, from her relation to our Lord, they hold her worship, which they style *hyperdulia*, to be higher than that of all other saints.

Mar'ion, FRANCIS, an American Revolutionary general, B. near Georgetown, S. C., in 1732. His education was very limited, and he was brought up as a farmer. In 1759, he joined the militia of S. Carolina as a volunteer cavalry-man, in the war with the Cherokees, lasting 3 years, and in which he particularly distinguished himself. At the outbreak of the Revolutionary War, in 1775, *M.* was elected to Congress, but did not shine in that political arena. *M.* shortly afterwards obtained the command of a company in the regiment of Col. William Moultrie, taking a conspicuous part in the capture of Fort Johnson, and in the defence of the forts at Dorchester and Sullivan's Island. In 1777, he was dispatched with 600 men to the defence of Georgia, where he served until that State was overrun by the British. During the time that elapsed after the ill-advised attack of the American forces on Savanuah, and the subsequent capture of Charleston, S. Carolina, by the British, *M.*, now an invalid, owing to the accidental breaking of a leg, was conveyed from place to place to avoid capture. But when he grew able for service, he gathered a band of young patriots about him, and formed that brigade which afterwards became so famous for its partisan exploits. With these he offered his services to Gen. Gates, and assisted to rescue from the British the remnants of that general's force, as also the prisoners captured at the disastrous battle of Camden, in 1780. *M.* was now promoted to brigadiership; but his command varied, according to the emergencies of the times, from 20 to 1,200 men. From this period, and with such soldiers that wholly devoted themselves to the cause of their country, dates the long series of adventurous marches, forays, surprises, and sharp encounters which distinguished *M.*'s brigade during the continuance of the war. He succeeded in baffling the pursuit of the British general Tarleton, who was sent with an overwhelming force after him. In 1781, Gen. Greene superseding Gates, and appreciating the courage and services of *M.*, acted in coöperation with the latter, and permitted his brigade to join the main army or act separately, as occasion required, capturing convoys, cutting off detachments, and skirmishing with bodies too numerous to attack in a pitched battle. When General Greene was driven from the State by Cornwallis, *M.* still remained, carrying his predatory warfare even to the gates of Charleston. In this campaign, he defeated several detachments sent by Cornwallis in pursuit of him. He also rendered efficient service in the battle of Eutaw, and pursued the British in their retreat to Charleston; and by his untiring vigilance kept the latter's army in Charleston until the termination of hostilities. He disbanded his brigade after the evacuation of the British, in 1782, and taking a tender leave of his followers, by whom he was beloved, returned in almost a state of poverty to his original avocation of a farmer. He was subsequently elected to the State Senate, and in 1790 was a member of the convention for framing a new State constitution. D. in 1795.

Fig. 1710.—GEN. MARION.

Marion (*mar'e-on*), in *Alabama*, a N.W. co., adjoining Mississippi; *area*, about 796 sq. m. *Rivers.* Buttahatchie and Sipsey rivers. *Surface*, hilly; *soil*, generally fertile. *Cap.* Hamilton. *Pop.* (1890) 11,347.

Marion, in *Arkansas*, a N. co., adjoining Missouri; *area*, about 631 sq. m. *Rivers.* White river, and several of its tributaries. *Surface*, diversified; *soil*, fertile. *Min.* Lead in great quantity, and a very beautiful quality of yellow, variegated marble. *Cap.* Yellville. *Pop.* 10,390.

—A post-village, cap. of Crittenden co., about 10 m. W. N.W. of Memphis. *Pop.* (1897) 890.

—A township of White co.

Marion, in *Florida*, a N. central co. of the peninsula; *area*, about 1,600 sq. m. *Rivers.* Ocklawha and Withlacoochee rivers. *Surface*, mostly level; *soil*, fertile, producing more sugar than any other county in the State. *Cap.* Ocala. *Pop.* (1895) 21,875.

Marion, in *Georgia*, a W. by S. co.; *area*, about 330 sq. m. *Rivers.* Buck, Cedar, Kinchafoonee, Juniper and Whitewater creeks. *Surface*, nearly level; *soil*, generally fertile. *Cap.* Buena Vista. *Pop.* (1890) 7,728.

—A village, former cap. of Twiggs co., about 35 m. S. S.W. of Milledgeville.

Marion, in *Illinois*, a S. central co.; *area*, about 580 sq. m. *Rivers.* Skillett Fork of Little Wabash river, and other small streams. *Surface*, mostly level prairie; *soil*, fertile. *Cap.* Salem. *Pop.* (1890) 24,341.

—A village of Edwards co.

—A township of Lee co.

—A township of Ogle co. *Pop.* about 1,800.

—A city, cap. of Williamson co., about 172 m. S. by E. of Springfield. *Pop.* (1897) 1,550.

Marion, in *Indiana*, a central co.; *area*, about 400 sq. m. *Rivers.* West Fork of White river, and several large creeks. *Surface*, level; *soil*, fertile. *Cap.* Indianapolis (which is also the seat of the State government). *Pop.* (1890) 141,156.

—A township of Allen co.

—A thriving city, cap. of Grant co., on the C., C., C. & St. L., Tol., St. L. & Kan. City, and Penna. R. Rs., 40 m. E.S.E. of Logansport. Has glass and iron works, and other industries. *Pop.* (1897) 10,000.

—A township of Hendricks co.

—A township of Jasper co.

—A township of Jennings co.

—A township of Lawrence co.

—A township of Monroe co.

—A township of Owen co.

—A township of Pike co.

—A township of Putnam co.

—A village and township of Shelby co.

Marion, in *Iowa*, a S. S.E. central co.; *area*, about 576 sq. m. *Rivers.* Des Moines and Whitebreast rivers, and Cedar and English creeks. *Surface*, generally level; *soil*, fertile. *Cap.* Knoxville. *Pop.* (1895) 23,191.

—A township of Clayton co.

—A township of Davis co.

—A township of Hamilton co.

—A township of Henry co.

—A township of Lee co.

—A city, cap. of Linn co., on the C., M. & St. P. R.R., 6 m. N.E. of Cedar Rapids. *Pop.* (1895) 3,678.

Marion, in *Kansas*, an E. central co.; *area*, about 954 sq. m. *Rivers.* Cottonwood river, and numerous less important streams. *Surface*, undulating; *soil*, fertile. *Cap.* Marion. *Pop.* (1895) 20,374.

—A thriving city, cap. of above co., on the A., T. & S. Fé and Chic., R. I. & Pac. R. Rs., 10 m. N. of Florence. Has some manufactures and a fine trade with the surrounding rich agricultural region. *Pop.* (1897) about 2,950.

—A township of Doniphan co.

—A village and township of Douglas co.

Marion, in *Kentucky*, a central co.; *area*, about 336 sq. m. *Rivers.* Rolling Fork of Salt river, besides many smaller streams. *Surface*, undulating; *soil*, generally fertile. *Cap.* Lebanon. *Pop.* (1890) 15,648.

—A post-village, cap. of Crittenden co., about 230 m. W. S.W. of Frankfort. *Pop.* (1897) 920.

Marion, in *Louisiana*, a post-village of Union parish, about 18 m. N.E. of Farmersville.

Marion, in *Maine*, a post-town and township of Washington co.

Marion, in *Massachusetts*, a post-town of Plymouth co.

Marion, in *Michigan*, a flourishing post-township of Osceola co.

—A township of Sanilac co.

Marion, in *Minnesota*, a post-village and township of Olmstead co., about 9 m. S.E. of the city of Rochester.

Marion, in *Mississippi*, a S. co., adjoining Louisiana; *area*, about 1,055 sq. m. *Rivers.* Pearl river, and numerous smaller streams. *Surface*, undulating; *soil*, not very fertile. *Cap.* Columbia. *Pop.* (1890) 9,532.

—A village of Carroll co., about 80 m. N. of Jackson.

—Or MARION STATION, a post-village, cap. of Landerdale co., about 110 m. E. of Jackson.

Marion, in *Missouri*, a N.E. co., adjoining Illinois; *area*, about 420 sq. m. *Rivers.* Mississippi, North Fabius, South Fabius, North Two, South Two, and Salt rivers. *Surface*, level or gently undulating; *soil*, very fertile. *Min.* Coal and saltpetre. *Cap.* Palmyra. *Pop.* (1890) 26,233.

—A township of Buchanan co.

—A post-village of Cole co., about 15 m. N.W. of Jefferson City.

Marion, in *North Carolina*, a post-village, capital of McDowell co., about 220 m. W. of Raleigh. *Pop.* (1897) 850.

Marion, in *New York*, a post-town and township of Wayne co., about 12 m. N.W. of Lyons. *Pop.* (1897) 2,210.

Marion, in *Ohio*, a N.W. central co.; *area*, about 416 sq. m. *Rivers.* Scioto and Olentangy rivers. *Surface*, level; *soil*, fertile. *Cap.* Marion. *Pop.* (1890) 24,727.

—A township of Allen co.

—A township of Clinton co.

—A township of Fayette co.

—A township of Hancock co.

—A township of Hardin co.

—A township of Henry co.

—A township of Hocking co.

—A city, cap. of Marion co., on the Erie, the Col., H.V. & Tol., the C., C., C. & St. L., and the C., S. & H. R. Rs., 85 m. N.E. of Dayton. Has extensive flour mills, iron works and lumber mills; fine grades of sheep and cattle are reared in the vicinity. *Pop.* (1897) about 10,000

—A township of Mercer co.

—A township of Morgan co.

—A township of Noble co.

—A township of Pike co.

Marion, in *Oregon*, a N.W. co.; *area*, about 830 sq. m. *Rivers.* Willamette river, and numerous less important streams. *Surface*, much diversified, the Cascade Range forming the E. boundary of the co.; *soil*, in the valleys fertile. *Min.* Gold, silver, copper, and iron. *Cap.* Salem. *Pop.* (1897) 25,000.

Marion, in *Pennsylvania*, a township of Beaver co.

—A township of Berks co.

—A township of Butler co.

Mar'ion, in *Pennsylvania*, a prosperous township of Centre co.
—A post-village, former cap. of Forest co., about 80 m. S.E. of Erie. It is sometimes called MARIONVILLE, from the name of the post-office.
—A post-village of Franklin co., about 51 m. S.W. of Harrisburg.
—A former township of Greene co.
—A borough of Indiana co., about 167 m. W. by N. of Harrisburg.

Marion, in *South Carolina*, an E. co., adjoining North Carolina; *area*, about 1,024 sq. m. *Rivers.* Great Pedee and Little Pedee or Lumber rivers, besides several smaller streams. *Surface*, nearly level; *soil*, in some parts fertile. *Products*, corn, cotton, &c. *Cap.* Marion. *Pop.* (1890) 29,976.
—A post-village, the cap. of the above co., about 110 m. E. by N. of Columbia.

Marion, in *Tennessee*, a S. co., adjoining Georgia and Alabama; *area*, about 500 sq. m. *Rivers.* Tennessee and Sequatchie rivers. *Surface*, uneven, and in the E. mountainous; *soil*, generally fertile. *Products*, corn, cotton, fruits, &c. *Min.* Coal. *Cap.* Jasper. *Pop.* (1890) 15,411.

Marion, in *Texas*, a N.E. co., adjoining Louisiana; *area*, about 420 sq. m. *Rivers.* Big Cypress Bayou and Caddo, or Soda Lake. *Surface*, nearly level; *soil*, fertile. *Cap.* Jefferson. *Pop.* (1890) 10,862.
—A village, former cap. of Augelina co., about 160 m. N. by E. of Galveston.

Marion, in *Virginia*, a post-town, cap. of Smythe co., about 160 m. W.S.W. of Lynchburg. *Pop.* 1,600.

Marion, in *Wisconsin*, a township of Grant co. *Pop.* (1897) 620.
—A township of Juneau co.
—A township of Waushara co.

Marion, in *West Virginia*, a N. by E. co.; *area*, about 314 sq. m. *Rivers.* Monongahela, West Fork, and Tygart's Valley rivers. *Surface*, diversified; *soil*, fertile. *Min.* Coal and iron ore in abundance. *Cap.* Fairmount. *Pop.* (1890) 20,721.
—A post-village of Wetzel co., 7 m. N.E. of New Martinsville.

Marionette', *n.* [Fr.] A puppet; one of the figures in a mechanical puppet-performance.

Mariotte, (*mar'e-ot,*) EDME, a French natural philosopher, B. in Burgundy during the first half of the 17th century, who was admitted a member of the Academy of Sciences at Paris, in 1666, and enriched hydraulics and pneumatics with a multitude of discoveries. His principal works are, *A Treatise on Philosophy; On the Motion of Waters; On the Movement of Pendulums; Experiments on Colors; Treatise on Levels.* The whole were published in a collected form at Leyden, in 1717. D. 1684.

Mariotte's Law, *n.* (*Pneumatics.*) A general property of elastic fluids, namely, that the elasticity or pressure is directly proportional to the density; or, which is the same thing, inversely proportional to the space which the fluid occupies. This law may be held to be substantially correct within a considerable range of pressure. But the labors of Regnault have made it evident that atmospheric air and most other gases, especially under very high pressures, are really more compressed than if they followed the law. The discovery of Mariotte's law is claimed by the English, of course, in the name of Boyle.

Mariposa, in *California*, a river rising on the W. slope of the Sierra Nevada, and flowing S.W. into the San Joaquin River.
—A central co.; *area*, abt. 2,000 sq. m. *Rivers.* San Joaquin, Mercedes, Mariposa, and Fresno rivers. *Surface*, much diversified, the Sierra Nevada forming the E. boundary. *Soil*, fertile. *Min.* Gold and a variety of other metals abound, besides a superior quality of marble. *Cap.* Mariposa.
—A post-town, cap. of Mariposa co., abt. 50 m. S.S.E. of Sonora. In this vicinity is the well-known Fremont grant, said to be one of the richest mineral regions in the State.

Mariposa, in *Iowa*, a township of Jasper co.

Maripoen, (*ma-re-po-koo',*) a village of Brazil, abt. 35 m. W.N.W. of Rio de Janeiro; *pop.* 2,000.

Marippi, (*ma-rip'pee,*) a town of Brazil, on the Japura, abt. 40 m. above its entrance into the Amazons.

Mar'iput, *n.* (*Zoöl.*) A kind of weasel, *Viderra zorilla.*

Mariquita, (*mar-e-kee'ta,*) a town of the U. States of Colombia, abt. 10 m. W. of Honda.

Mar'ish, *n.* [A.S. *merse.*] A marsh; a bog; a fen; a swamp; a morass; a piece of low, wet ground. (R.)
—*a.* Fenny; boggy; marshy; swampy; as, a *marish* tract of country.

Maris'sa, in *Illinois*, a post-village of St. Clair co., abt. 40 m. S.E. of St. Louis.

Mar'ital, *a.* [Fr.; Lat. *maritalis*, from *maritus*, a husband, from *mas, maris*, a male.] Pertaining or having reference to a husband; as, *marital* rights, *marital* authority.

Mar'itated, *a.* Having a husband; wedded; — said of females. (R.)

Mar'itime, *a.* [Lat. *maritimus*, from *mare*, the sea.] Marine; relating or pertaining to the sea or ocean; as, *maritime* law, *maritime* affairs, &c. — Performed on the sea or ocean; naval; as, *maritime* exploits. — Bordering on, or situated near the sea; having a naval or commercial prestige; connected with the sea; as, a *maritime* nation or power, a *maritime* town.

Maritime Law, as a branch of international law, is that collection of principles and usages that pertains to the rights, duties, and obligations of nations with respect to the sea. (See LAW OF NATIONS.) It forms also an important branch of the commercial law of all maritime countries, relating more especially to individuals, to the property of ships, the rights and duties of masters and seamen, contracts of affreightment, average, salvage, &c. Besides the general maritime law, every commercial state has certain admiralty regulations of a municipal character peculiar to itself; as navigation acts, laws with respect to harbors, obstructions in rivers, wrecks, &c. To Rhodes belongs the honor of having framed the first authoritative code of maritime jurisprudence of the Romans. Fragments of this code are preserved in the Digest of Justinian, under the title *De Lege Rhodia de jactu;* and these fragments, together with a few brief rules of the Roman law, embraced in the works of Justinian, are all that remain to us of the maritime law of the ancients. These, nevertheless, constitute the basis of modern maritime law in some of its most important principles. The earliest code of modern sea laws was compiled for the republic of Amalfi towards the end of the 11th century, and is known as the Amalfian Table. Though mentioned by authors as being in existence as late as the 16th century, it has since been entirely lost. The next work of this nature is the *Consolato del Mare*, a collection of the maritime laws and usages observed by the commercial cities of the Mediterranean at the time of its compilation. Its origin is involved in some obscurity, the Spaniards claiming the honor of its paternity for Barcelona, where it appeared about the middle of the 13th century; while others contend that it was the production of the Pisans about two centuries earlier. The earliest maritime code of Western Europe is known as the *Laws of Oleron*, the origin of which, like that of the Consolato, is involved in obscurity. Earlier English writers contend that these laws were compiled by Richard I. at the Isle of Oleron, on the coast of France; while French writers maintain that they were prepared by order of Queen Eleonora, duchess of Guienne, and mother of Richard I. Recent authors reject both stories, and now the general opinion seems to be that they were compiled in France in the reign of Louis IX. They were the established regulations of the early commercial states of Western Europe, and are still respected in England, France, and the United States. *The Laws of Wisbuy*, or *Wisby*, once an important city of trade in the island of Gothland, were promulgated about the year 1288. They are still observed in their fundamental principles by the nations of the Baltic. The Hanse towns compiled and adopted a system of their own, based principally upon the laws of Oleron and Wisbuy, in 1591. It was afterwards corrected and enlarged at a general assembly of the deputies at Lübeck in 1614, and became the rule of decision in every contested point. In France, under the reign of Louis XIV., and at the instigation of his minister Colbert, the marine ordinances of 1673 and 1681 were issued, enlarging the foundations of maritime law, arranging its parts, and out of various materials constructing an harmonious system. The former of these ordinances treats largely of bills of exchange and negotiable paper; the latter embodies, in systematic order, the subjects of navigation, shipping, insurance, and bottomry. The present commercial code of France, adopted in 1807, is substantially but a republication of the ordinances of 1673 and 1681. In this country, as in England, no system or code of maritime law has ever been issued by authority. The laws and practices that guide us in reference to maritime affairs are founded principally on the practices of merchants, the principles laid down in the civil law, the laws of Oleron and Wisbuy, the judicial decisions of our own and foreign countries, &c.

Mariti'mo, (anc. HIERA,) an island of the Mediterranean Sea, situated off the W. coast of Sicily. *Extent.* 4 m. long and 2 broad.

Mariupol', a town of European Russia, on the Sea of Azof, 140 m. from Ekaterinoslav; *pop.* 5,000.

Ma'rius, CAIUS, one of the greatest soldiers and dictators of the Roman republic, was born of parents in humble circumstances, probably at Cerretinum, about 157 B. C. Having entered the army, he became known to Scipio Africanus, and acquired so much repute that he was elected tribune B. C. 119 or 120, prætor 116, and governor of Spain, 115. In 109 he joined Metellus as one of his lieutenants in the Jugurthine war, and two years afterwards supplanted him in the command of the army. He brought the war to a close in 106, when Jugurtha, the king of Numidia, was treacherously delivered into his hands by his ally, Bocchus. *M.* remained in Africa a year longer, and was then recalled to take the field against the Cimbri and Teutones, at that time menacing the Roman empire. These barbarians numbered 300,000 men in arms, and had defeated the consul Manilius, and the proconsul Cæpio, at a cost to the Romans of 80,000 soldiers and 40,000 camp-followers. *M.* had been appointed consul in 107, when the conduct of the Jugurthine war was intrusted to him, and in sight of this new danger was not only re-elected, but continued in the consulate four successive years, though contrary to law, B. C. 104–100. In 102 he defeated the combined forces of the Ambrones and Teutones, near Aix; and in 101, having joined his forces with those of Catulus, he obtained an equally decisive victory over the Cimbri, in the neighborhood of Vercellæ. He was now hailed "The Third Founder of Rome," and rewarded with a fifth consulate, — followed by a sixth, which, it is said, was gained by corrupt practices, as the possession of power had become too sweet to be easily laid down. Perhaps another and more patriotic reason also influenced him. *M.* was the avowed chief of the plebeians — the natural successor of the Gracchi, who had shed their blood that the rights of Roman citizens might be extended to the rest of Italy. In B. C. 90, this social war broke out afresh, provoked by the murder of Drusus, which renewed the contest, and *M.* and Sylla became the respective chiefs of the plebeians and patricians. The latter, flushed with his recent success against the army of Mithridates, refused to yield the command to Marius, but marched against his party in the capital, and disputed the city street by street. Marius was defeated, and finally lodged in prison, where a Cimbrian soldier was sent to behead him, but let the sword fall from his hand on meeting the stern glance of the captive, who demanded of him *how he dared to kill Caius Marius!* The magistrates of Minturnæ, where this occurred, impressed by the strange circumstance, favored the flight of Marius, and he sought refuge in Africa, from whence, in 87 B. C., he was recalled by Cinna, at that time consul, to take arms against his old adversary. The combined forces of Marius, Cinna, Sertorius, and Carbo soon entered Rome, and the bloody proscriptions which have consigned the name of Marius to infamy, now took place, exceeding all that was previously recorded in Roman history. Caius Marius now served as consul for the seventh time, with his new ally; and the same year, B. C. 86, on hearing that Sylla was approaching, he endeavored to drown care in wine, and is supposed to have killed himself with excess. His character marks him out as the type of the class for whom he acted as the armed chief in the social war, as that of Sylla places him in the foremost rank of the patricians. They were equally relentless and guilty of bloodshed.

Mariz'za, or **Maritz'a,** (anc. *Hebrus,*) a river of European Turkey, prov. of Roumelia, rising in the N.E. of the Balkan, in Lat. 42° N., Lon. 24° E., and after a course of 260 m. falling into the Gulf of Enos, in the Ægean Sea.

Mar'joram, *n.* [Fr. *marjoraine.*] (*Bot.*) See MAJORANA, and ORIGANUM.

Mark, St., (Gospel of.) (*Script.*) The second in order of the four gospels of the New Testament. St. Mark was not an apostle or companion of Jesus Christ, during his ministry; but he is said, by tradition, to have been secretary of Peter, and to have written his gospel according to the discourses of that apostle. Some assert that a number of those who had publicly listened to Peter's preachings at Rome had entreated Mark — as he had been a long time the apostle's companion, and had a clear understanding of what he had delivered — that he would commit the particulars to writing. The minuteness with which the various circumstances are recorded shows that the person who dictated them must have been an eye-witness of what has been recorded, while the great humility with which Peter is always introduced, his weakness and fall being fully exposed, give color to the tradition that it proceeded principally from him. Some critics have maintained that this gospel is merely an abridgment of that of Matthew; and there certainly occur many striking coincidences between them, both in style and words; but the frequent deviations of Mark from the order, in time and arrangement of facts observed by Matthew, as well as the introduction of many things not noticed by the latter, are opposed to this view. This gospel was originally written in Greek; but from the number of Hebraisms discoverable in it, there can be little doubt that its author was, by birth and education, a Jew; while, on the other hand, its numerous Latinisms show that it was composed by a person who had lived among the Latins. The authenticity of this gospel is proved by the unanimous testimony of the early fathers. Some critics have thought that the last twelve verses of the 16th chapter were not written by the evangelist, as they are not to be found in some of the ancient manuscripts; but there is nothing to oppose the view that they may have been written by him at a later period, and thus some copies have been in circulation without them. Considerable difference of opinion exists as to the time when this gospel was written; some placing it as early as 56, others after Peter's death, as late as 65. The probability seems to be that it was written about 63 or 64. It consists of sixteen chapters, and may be divided into three parts, viz.: — 1. Containing an account of the transactions from the baptism of Christ to his entering on the more public part of his ministry (i. 1–13). 2. The discourses and actions of Christ from his going up to Jerusalem to the fourth and last passover (i. 14 to x). 3. The passion, death, and resurrection of Christ (ix.–xiv). From the style and character of the book, there can be little doubt that it was written for Gentile Christians. The explanations that are introduced would have been unnecessary if it had been written exclusively for Hebrew Christians, as, where he uses the word *corban*, he adds, "that is, a gift." This gospel is characterized by clearness, exactness, and conciseness, combined with an almost picturesqueness of narration. Indeed, it has been said that, considering the copiousness and majesty of the subject, the variety of great actions which it relates, the surprising circumstances that attended them, and the numerous and important doctrines which it contains, it is "the shortest and clearest, the most marvellous, and at the same time the most satisfactory, history in the whole world."

Mark, a pope and saint, succeeded Sylvester I. in 336, and died the same year. There passed under his name an epistle addressed to St. Athanasius.

Mark, *n.* [A.S. *mearc*; Ger. and Dan. *mark*; It. *marca*; Fr. *marche*, a limit.] An impress or impression; a stamp; a trace; a track; a spot; a print; a vestige; a visible sign or line made by drawing one substance on another; a point or figure to attract the attention and convey information.
—A line, groove, or depression made by stamping or cutting; an incision; a channel. — Any visible object of

force or agency; any apparent or intelligible result; proof; evidence; notice taken; tokeu; indlcation; as, to make one's *mark*. — Anything to which a missile or weapon may be pointed; any object used as a guide, or to which the mind may be directed; anything visible, by which knowledge of something may be obtained.

"Be made the *mark* for all the people's hate." — *Dryden.*

—A license of reprisals. See MARQUE. — Superiority of personal distinction; preëminence of social position; as, a man of *mark*. — A character made by a persou who is unable to write his name, and intended as a substitute for it. — A certain note which a merchant or manufacturer puts upon his goods, or upon that which contains them, in order to distinguish them from others; as, a trade-*mark*. — Badge or sign of distinction; characteristic notice or token of honor, rank, or official station.

(*Logic.*) A differential or essential attribute.

(*Numis.*) See MARC.

Mark, *v. a.* [A.S. *mearcian*; Ger. *marken*; Fr. *marquer*.] To note; to spot; to set a print or stamp upon; to imprint or impress; to brand; to draw or make a visible liue or character; to make a palpable impression, figure, or indenture upon; to make an incision in; to lop off a part from; to form, as a name, or the initials of a name, for distinction.

—To notice; to take particular observation of; to have regard to; to observe; to heed; to show; to indicate; to point out; as, to *mark* a boundary.

To mark out, to designate; to specify; to point out; to notify, as by a mark; as, he was *marked out* as the ringleader. — *To mark time.* (*Mil.*) To denote by the foot, the rate of step at which a body of troops march; as, to *mark* double-quick *time*.

—*v. n.* To note; to observe critically; to remark; to take especial notice.

"Men *mark* when they hit, and never *mark* when they miss." *Bacon.*

Mark, In *Ohio*, a township of Defiance co.

Markau'da, in *Illinois*, a post-village of Jackson co., abt. 48 m. N. of Cairo.

Mark An'tony. See MARCUS ANTONIUS.

Markesan', in *Wisconsin*, a post-village of Green Lake co., abt. 20 m. S. of Berlin.

Mar'kee, *n.* Sce MARQUEE, the more cnstomary orthography.

Mark'er, *n.* One who puts a mark, sign, or brand on anything. — One who notes, or takes notice; tho person or thing which serves to indicate; as, a billiard-*marker*. — A counter used in card-playing; as, ivory *markers*.

(*Mil.*) The soldier who forms the pivot of a wheeling column.

Mar'ket, *n.* [D. and Ger. *markt*; Lat. *mercatus*, from *mercor*, to traffic, from *merx*, *mercis*, goods, wares, merchandise; Heb. *mākar*, to sell.] A public place in a town or city where provisions are exposed for sale; a public place instituted for private purchase and vendition, — in contradistinction to au auction or public vendno; a mart. — A public building in which provisions, &c., are exposed for sale; a market-house; a place of sale. — A place, region, or country in which a demand exists for trading in a commodity by sale or barter; — hence, sale; exchange of goods and provisions for money or wares; disposal of money or commodities: as, a foreign *market*, to seek a *market*. — Marketable price or value; worth of vendible articles; rate; priee.

"Blood and life at a low *market* sold." — *Dryden.*

(*Eng. Law.*) Tne privilege of holding a public market.

(MARKET assists in the formation of vsrious compound phrases, all of which explain themselves; as, *market*-basket, *market*-woman, &c.)

—*v. a.* To deal in a market; to buy or sell; to bargain for provisions or wares.

—*v. n.* To make a market for; to exhibit for sale in a market. (R.)

"Industrious merchants . . . *market* there
The world's collected wealth." — *Southey.*

Mar'ketable, *a.* Suitablo to be offered for sale; that may be sold; salable; as, *marketable* goods.

—Current in market; as, *marketable* rates.

Mar'ketableness, *n.* State or quality of being marketable.

Mar'ket-Drayton, a town of England, co. of Salop on the Tern, 18 m. N.E. of Shrewsbury; *pop.* 5,000.

Mar'keter, *n.* One who exposes goods or wares for sale in a market; one who attends a market.

Mar'ket-gar'den, *n.* A garden devoted to the cultivation of fruits and vegetables for market.

Mar'ket Hill, a town of Ireland, in Ulster, abt. 6 m. S E. of Armagh; *pop.* 1,400.

Mar'keting, *n.* Supply of a market. — Attendance at market; as, to go *marketing*.

Mar'ket-town, *n.* A town possessing the privilege of holding a stated public market.

Mark'ham, a village of York co., Upper Canada, abt. 20 m. S. of Toronto; *pop.* 650.

Mark'ing, *n.* A stamp or mark madc upon anything.

Marking-ink, *n.* See INK.

Marking-nut, *n.* See SEMECARPUS.

Mark'leeville, in *California*, a post-village of Alpine co., abt. 60 m. E.N.E. of Jackson.

Mark'lesburg, in *Pennsylvania*, a village of Huntingdon co., abt. 100 m. W. of Harrisburg.

Mark'leville, in *Indiana*, a post-villago of Madison co., abt. 35 m. E N.E. of Indianapolis.

Marks'borough, in *New Jersey*, a post-village of Warren co., abt. 14 m. N.N.E. of Belvidere. It is sometimes called MARKSVILLE.

Marks's Creek, in *North Carolina*, enters the Yadkin river from Richmond co.

Marks'man, *n.*; *pl.* MARKSMEN. One who is expert in hitting a mark; a good shot; one who is handy at shooting.

"This is the *marksman*, safe and sure." — *Herbert.*

—A person who, nnable to write his uame, makes his mark iu lieu thereof.

Marks'manship, *n.* Skilful practice of a marksman.

Mark's Mills, in *Arkansas*, a locality of Washita co., near Camdeu, where, on April 23, 1864, Lieut.-Colonel Drake, iu command of a brigade of infantry, four guns, and a small number of cavalry, was attacked and defeated by a Confederate force under General Fagan. Lieut.-Col. Drake was wounded, and 250 of his men killed. The Confederate loss was estimated at 600.

Marks'ville, in *New Jersey*. Sce MARKSBOROUGH.

Marks'ville, in *Louisiana*, a post-village, cap. of Avoyelles parish, abt. 255 m. W.N.W. of New Orleans.

Marks'ville, in *Va.*, a post-village of Page co.

Marl, *n.* [W.; Lat. *marga*, from the same root as A. S. *merg*; D. *marg*, marrow. See MARROW.] (*Geol.*) *M.* is a mixture of carbonate of lime and clay in various proportions, and of different degrees of compactness and friability. In some marls the proportion of clay is small, in which case it acts on soils much in the same manner as chalk; but where clay is the predominant ingredient, it acts principally by altering the texture of the soil. Hence sandy soils are improved by *M.*, in consequence of its increasing tbeir compactness and capacity for retaining molsture; while argillaceous marls applied to clays are of little or no use. From these long-established facts has arisen the old adage:

"Who *marls* sand shall buy the land,
Who *marls* clay throws all away."

M. is found in almost every country; not like limestone, in protruding rocks, but (from its friable nature, which causes it to moulder down into a comparatively earthy mass) under or near the surface of the soil, wbence it is dug out and spread on the surface. Hence, while limestone is quarried, chalk and marl are dug out of pits. *M.* has been in use in Europe since the time of the Romans. It is very generally used as a manure in France and Germany.—*M.* is found in many geological formations, but everywhere seems to have had its origin in deposition from water. It occurs very extensively in the eastern U. S. A belt of it extends through New Jersey for a distance of 90 miles and a width of 8 miles. Separate beds of it occur in Delaware and Maryland, and from S.E. Virginia a vast deposit extends, though not in continual occurrence, southward as far as Mississippi. In North Carolina *M.* is found throughout 12,000 square miles. These marls contain many fossils, such as sea shells, fish and shark bones, and remains of aquatic and land animals. The great reptile known as the Hadrosaurus was exhumed from the New Jersey marl. In that State *M.* is used largely as a fertilizer.

—*v. a.* To overspread or manure with marl.

(*Naut.*) To weave or wind a small line around another; as, to *marl* a bolt-rope.

Marlaceous, (*-ā'shus*,) *a.* Resembling or containing marl; possessing the characteristic properties of marl, as certain soils.

Marl'borough, JOHN CHURCHILL, (DUKE OF,) one of the greatest generals and diplomatists of England, born at Ashe, in Devonshire, in 1650. He was the son of Sir Winston Churchill, a devoted adherent of Charles I. After receiving a defective education he was placed, at the age of 12, as page in the household of the Duke of York. His passion for the life of a soldier was not long in showing itself, and in the defence of Tangier against the Moors, he had the first opportunity of distinguishing himself. The Duchess of Cleveland is said to have conceived a passion for him, and to have presented him

Fig. 1711. — THE DUKE OF MARLBOROUGH.

with £5,000. During the five years, from 1672–77, Churchill served in the auxiliary force sent by Charles II. to Louis XIV., and so greatly distinguished himself, especially at the sieges of Nimeguen and Maestricht, that Turenne predicted his future eminence, and Louis XIV., after the latter siege, gave him the highest praise at the head of the army. He was at once raised to the rank of lieutenant-colonel. Continuing in the service of the Duke of York, Churchill married, about 1680, the beautiful and accomplished Sarah Jennings, favorite of the Princess (afterwards Queen) Anne. He was created a baron by Charles II. in 1682, and three years later was made brigadier-general, and sent to France to announce the accession of James II. On his return he was raised to the English peerage by the title of *Baron Churchill of Sandridge*. He contributed greatly by his vigilance and skill to the suppression of the insurrection in favor of Monmouth. At the revolution, Churchill, with a duplicity and treachery deserving the severest condemnation, abandoned his master, while professing still to serve him, and entered the service of the Prince of Orange. He was created *Earl of Marlborough* and privy councillor, and assisted at the coronation of William III. In 1689 he received the command of the English forces in the Netherlands, and after a brief service in Ireland, was recalled to Flanders in 1691. Suspected of a traitorous correspondence with James II., he was deprived of his command, and imprisoned in the Tower; and though shortly released, was not restored to the favor of the king till 1697. On the breaking out of the war of the Spanish succession, in 1700, he received the chief command of the forces in the United Provinces, and was named ambassador to France. *M.* was now to enter upon that career of military achievement which established his reputation as a general. As commander-in-chief of the allied forces he took several places in the Netherlands in 1702; with the Imperialists, under Prince Eugene, gained the victory of Blenheim (or Hochstädt) in 1704, for which he was made a duke, and a sum voted to build the palace of Blenheim (Fig. 1712), on the demesne of Woodstock, which had been bestowed on him by Queen Anne. *M.* afterwards defeated Marshal Villeroi at Ramilies in 1706, and closed the brilliant series of his victories by those of Oudenarde in 1708, and Malplaquet in 1709. A national thanksgiving was appointed for the latter victory. But a reverse of fortune was at hand. The popular discontent occasioned by heavy taxation, the belief that the war was prolonged chiefly by *M.*'s influence, and for selfish ends, and the increasing power of the Tory party, led to his dismissal from all his offices at the beginning of

Fig. 1712. — BLENHEIM PALACE.

1712. An unfavorable report had been given by the commission appointed to examine the charge of peculation brought against him, and to escape the disquietude of a life at home, he went abroad with his duchess, who had also been displaced at court. Returning in 1714, George I. restored him to his offices, but he was soon after compelled by an attack of apoplexy to withdraw from public life, and he died at Windsor Lodge in 1722. The character of *M.* presents a perplexing combination of noble and base qualities, which have served as the groundwork of extravagant eulogy and fierce invective. His rare ability as a general, his skill and success as a diplomatist, are unquestionable. Not less so are his vast ambition, his avarice, and his treachery.

Marl'borough, a town of England, co. of Wilts, on the Kennet, 27 m. E. of Bath, and 70 m. W. of Loudon; *pop.* 5,700.

Marlborough, in *Connecticut*, a post-township or Hartford co.

Marlborough, in *Massachusetts*, a post-township of Middlesex co.

Marlborough, in *New Hampshire*, a post-village and township of Cheshire county, 43 m. W.S.W. of Concord.

Marlborough, in *New Jersey*, a post-township of Monmouth co.

Marlborough, in *New York*, a post-village and township of Ulster county, about 80 miles south of Albany.

Marlborough, in *Ohio*, a township of Delaware co.

—A post-township of Stark co.

Marlborough, in *Pennsylvania*, a township of Montgomery co.

Marlborough, in *S. Carolina*, a N.E. district bordering on N. Carolina; *area*, abt. 504 sq. m. *Rivers*. Great Pedee and Little Pedee rivers, and several creeks. *Surface*, somewhat diversified; *soil*, fertile. *Cap.* Bennetsville.

Marlborough, in *Vermont*, a post-village and township of Windham county, about 28 miles S.S.W. of Bellow's Falls.

Marlborough Depot, in *New Hampshire*, a post-village of Cheshire co., abt. 45 m. W.S.W. of Boston

Marled, (*märld*,) *a.* [Scot.] Variegated; dotted; mottled.

Marl'field, or ABBEY, a village of Ireland, co. Tipperary, abt. 2 m. W.S.W. of Clonmel; *pop.* abt. 900.

Mar'lin, in *Texas*, a post-town, cap. of Falls co., about 95 m. N.N.E. of Austin. *Pop.* (1897) 2,560.

Marline, (*mär'lin,*) *n.* (*Naut.*) A small line used for winding round ropes or cables, to prevent abrasion by blocks, &c.

—*v. a.* [Fr. *merliner.*] (*Naut.*) To marl; to twine marline around; as, to *marline* a stay.

Mar'line-spike, *n.* (*Naut.*) An iron instrument, tapering to a point, used on shipboard for opening the strands of rope in splicing.

Mar'low, (Great,) a town of England, co. of Buckingham, on the Thames, 29 m. W. of London. *Manuf.* Paper, lace, and silk. It has a trade in coal, timber, meal, and malt. *Pop.* 7,000.

Marlow, in *New Hampshire*, a post-village and township of Cheshire county, about 38 m. W. by S. of Concord.

Marl'-pit, *n.* A pit from which marl is dug.

Marl'stone, *n.* (*Geol.*) A sandy, calcareous, and irony stratum, which divides the upper from the lower bias clays.

Marl'ton, in *New Jersey*, a post-village of Burlington co., abt. 9 m. S.S.W. of Mount Holly.

Marl'y, *a.* Consisting in, or partaking of the qualities of, marl; resembling marl; abounding with marl.

Mar'malade, *n.* [Fr. *marmelade.*] The pulp of quinces boiled into a consistence with sugar; also, a confection of oranges, apricots, quinces, &c., boiled with sugar.

Marmande, (*mar'mand,*) a town of France, department Lot-et-Garonne, on the Garonne, 30 m. from Agen; *pop.* 9,000.

Marma'ta, in *Minnesota*, a village of Lake co., abt. 32 m. N.E. of Superior City.

Mar'matite, *n.* (*Min.*) A variety of blende in which iron, and sometimes cadmium, takes the place of a part of the zinc. It is found at Marmato, in South America.

Mar'miton, a river rising in the S.E. part of Kansas, and flowing E. into Missouri, joins the Little Osage abt. the centre of Vernon co.

Marmiton, in *Kansas*, a post-village of Bourbon co., abt. 10 m. W. of Fort Scott.

Mar'molite, *n.* (*Min.*) [Gr. *marmairo,* to shine.] A foliated variety of serpentine, from Hoboken, in New Jersey.

Mar'mont, (MARSHAL.) See RAGUSA (DUKE OF).

Mar'mora, or MARMARA, (anc. *Propontis,*) a small sea between European and Asiatic Turkey, communicating with the Ægean Sea by the Strait of the Dardanelles (anciently *Hellespont*), and with the Black Sea by the Strait of Constantinople (anciently *Bosporus*). It is of an oval form, and about 135 miles in length, by 45 in breadth, but has, besides, a large gulf, the Gulf of Isnikmid, or Ismid, which extends about 30 miles eastward into Asia. Its depth is great. There is a current from the Bosphorus through it and the Hellespont to the archipelago; but its navigation is by no means difficult. It contains many islands, of which the largest is Marmora, or Marmara, famous for its quarries of marble and alabaster, and which gives its name to the sea. The scenery around the Sea of *M.* is soft and beautiful.

Mar'mora, a village of Upper Canada, about 32 m. S.S.W. of Belleville.

Marmoraceous, (*-ā'shus,*) *a.* Relating or pertaining to, or resembling, marble.

Mar'morate, Mar'morated, *a.* [From Lat. *marmor,* marble.] Variegated or speckled like marble; incrusted with marble.

Marmora'tion, *n.* [Lat. *marmoratio.*] Act of incrusting or surfacing with marble.

Marmora'tum, *n.* [Lat.] (*Arch.*) A cement composed of powdered marble and lime, thoroughly mixed and incorporated.

Marmo'real, Marmo'reau, *a.* [Lat *marmoreus,* from *marmor*] Made of marble; belonging to, or resembling marble.

Marmorice, (*mar'mo-reece,*) a seaport-town of European Turkey, in Anatolia, 28 m. N. of Rhodes, Lat. 36° 52′ N., Lon. 28° 31′ E.

Mar'mose, *n.* (*Zoöl.*) A species of Opossum, *Didelphis murina* of Linnæus, inhabiting S. America.

Mar'mot, *n.* (*Zoöl.*) The common name of the genus *Arctomys*, order *Rodentia.* There are several species, characterized by a large, thick, depressed body, rudimentary cheek-pouches, rudimentary thumb armed with a small, flat nail, and naked soles. They pass the winter in a state of torpor, concealed in deep holes, the entrance of which they close with a heap of dried grass.

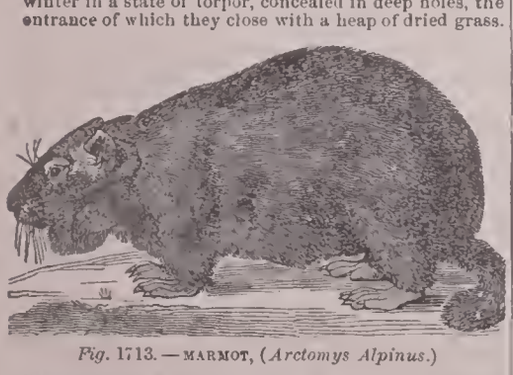


Fig. 1713. — MARMOT, (*Arctomys Alpinus.*)

They are natives of Europe and North America, live in societies, and are easily tamed. — To this genus belongs also the Woodchuck, or Ground-hog (*A. monax*), of the Northern States and southward, which is 15 to 18 inches long to the tail, which again, is about half as long as the head and body. Color varying from black all over to grizzled above, and bright chestnut-red beneath; the feet always black or dark-brown. They often commit great havoc in fields of clover, upon which they like to feed. — The Prairie-dog (*Cynomis ludivicianus*) is often, but wrongly, confounded with the marmots. It forms the type of a distinct genus, which will be noticed under PRAIRIE-DOG, (*q. v.*)

Marmozet', Marmoset', *n.* [Fr. *marmouzet,* dim. of *marmote.*] (*Zoöl.*) A name often applied to the monkeys of the genera *Hapale* and *Midas*, also called *Jacchus*, (q. v.) The name Marmozet is also sometimes restricted to the fine little Striated Monkey or Striated Ouistite (*Hapale Jacchus*, or *Jacchus vulgaris*) (Fig. 1714), a native of Guiana and Brazil, a species often brought to Europe, and a favorite pet whenever it can be obtained. It is about 7 or 8 inches long, exclusive of the tail, which measures a foot. Its fur is long and soft, of a fine dark-gray or reddish-yellow color, banded with black; a long tuft of white hairs on each side of the black head.

Fig. 1714. — THE MARMOZET.

Marne, a river of France, rising in the dept. of Haute-Marne, and after a N.W. course of 200 miles, joining the Seine at Charenton, 4 m. above Paris. It is navigable for 140 miles.

Marne, a dept. of the N.E. of France, formerly included in the prov. of Champagne, between Lat. 48° 30′ and 49° 20′ N., Lon. 3° 30′ and 5° E., having N. Ardennes and Aisne, E. Haute-Marne and Meuse, S. Aube, and W. Aisne and Seine-et-Marne. *Area*, 3,214 sq. m. About two thirds of the dept. has an arid and barren soil; but on the borders of this sterile tract are the vineyards which produce the celebrated Champagne wine, and surrounding it is a country with a deep and rich alluvial soil. The principal rivers are the Seine and Marne. *Prod.* The usual cereals, but principally wine. *Min.* Stones for making millstones, potters' clay, and iron. *Manuf.* Woollen and silk goods, paper, glass, earthenware, cordage, leather, &c. The chief towns are Chalons-sur-Marne, the capital Epernay, Rheims, St. Menehould, and Vitry-le-Francais. *Pop.* 390,809.

Marne, (Haute,) a dept. of the N.E. of France, bet. Lat. 47° 35′ and 48° 40′ N., Lon. 4° 40′ and 6° E., having N. the depts. of Marne and Meuse, E. Vosges and Haute-Saone, S. Haute-Saone and Cote-d'Or, W. Cote-d'Or and Aube. *Area*, 2,460 sq. m. The surface is elevated and mountainous. More than one half is under cultivation, and it has a considerable amount of forest. The principal rivers are the Marne, Meuse, and the Aube. *Prod.* Grain, wine, and timber. *Min.* Iron, the mines of which are among the most important in France. *Manuf.* Cutlery, linen and cotton thread, leather, brandy, &c. The chief towns are Chamont (the cap.), Langres, and Vassy. *Pop.* 259,096.

Maro'a, in *Illinois*, a city and township of Macon co., about 13 m. N. of Decatur. *Pop.* (1897) 1,350.

Maroc'co. See MOROCCO.

Marochetti, (*măr-ro-ket'te,*) CHARLES, BARON, a celebrated sculptor, b. of French parents, 1805, at Turin, where stands his first work, the *Equestrian Statue of Emanuel Philibert*, was educated in the Lycée Napoléon, and afterwards entered the studio of Bosio. He returned to France in 1827, and exhibited a *Young Girl Playing with a Dog*, and gained a medal; and in 1831 exhibited his *Fallen Angel*, for the Academy of Arts of Turin. Soon after the revolution of Feb., 1848, he took up his residence in England. His best works, besides those already named, are *The Tomb of Bellini*, in Père la Chaise, and the *Altar*, in the Church of the Madeleine, at Paris. D. 1867.

Marone', *n.* [See MAROON.] (*Painting.*) One of a class of impure colors composed of black and red, black and purple, or black and russet pigments, or with black and any other denomination of pigments in which red predominates.

Marone lake, a preparation of madder of great depth, transparency, and durability of color; it works well in water, glazes and dries in oil, and is in all respects a good pigment; its hues are easily given with other pigments, but it is not much used.

Maro'ni, or **Mar'owyne,** a river of S. America, flowing into the Caribbean Sea, between French and Dutch Guiana; *length*, abt. 400 m.

Mar'onites, *n. pl.* (*Eccl. Hist.*) A sect of Christians in Asiatic Turkey, dwelling principally about Mount Lebanon. Their origin, and the derivation of their name, are matters of some uncertainty; but the prevailing opinion is, that they were called either after a hermit Maro, who lived in the 5th century, or after their first patriarch, John Maro, who flourished two centuries later. The general opinion is, that the Maronites are sprung from the Monothelites, who arose in the 7th century, and held the opinion that Christ, though he united in himself the divine and human nature, had but one will. They were supported by several emperors, particularly Heraclius; but they were condemned and banished by Anastasius. In the country of Lebanon they became a warlike mountain people, and defended their freedom first against the Greeks, and subsequently against the Saracens. At length, in 1182, they renounced Monothelitism, and recognized the authority of the Roman Church. Nevertheless, although united with Rome, they are permitted to retain their distinctive national rites and usages. They administer communion in both kinds; they use the ancient Syriac language in their liturgy; their clergy, if married before ordination, are permitted to retain their wives; and they have many festivals and saints not recognized in the Roman calendar. In 1584, Pope Gregory XIII. founded at Rome a Maronite college, from which they have since received most of their priests. Their head is the patriarch of Antioch, whose residence, however, is the convent of Dair-al-Shafee, on Mount Lebanon. Every tenth year he has to give an account of the condition of the Church to the Pope at Rome. Subordinate to the patriarchs are bishops and several other orders of clergymen. In the district of Lebanon there were upwards of 200 religious houses under the rule of St. Anthony; but in consequence of the recent war with the Druses, many of these have been destroyed. Their political constitution is that of a military commonwealth; the supreme government being in the hands of four chief sheiks, who are also their leaders in time of war. Their dependence on the Ottoman empire is little more than nominal, consisting merely in the payment of an annual tribute. In 1841, a fierce war raged between the Maronites and the neighboring Druses, in which the former suffered greatly. In May, 1860, the war again broke out with unprecedented fierceness, the Druses being aided and excited by the Mohammedan population, and even by Turkish troops. The Maronites were soon overpowered; about 160 towns and villages were destroyed, and nearly their entire territory laid waste. Many of the people were cruelly massacred. At length peace was concluded; and to prevent the return of similar atrocities, the European powers, at a conference held at Paris, agreed upon an intervention in Syria for the protection of the Christians. The number of the Maronites is about 20,000.

Maroon', (sometimes improperly written *marroon,*) *n.* [Fr., from Sp. *cimarron*, headstrong, unruly.] The name that was formerly given to a runaway slave.

—*v. a.* To set ashore and leave on a desolate island, as a seaman, by way of punishment for some presumed flagitious crime.

Marooning party. A kind of picnic party in the Southern States, who make an excursion of some days to the shore, or to some retired spot or islet.

Maroon', *a.* [From Fr. *marron*, a large chestnut.] Claret colored; brownish-crimson. See MARONE.

Mar'os, a river of Austria, in Transylvania, rising near the frontier of Moldavia, and after a W. course of nearly 400 m., joining the Theiss opposite Szegedin.

Marozia, (*mā'rozh'ya,*) a patrician lady of Rome, who married, about 906, Alberic, count of Tusculum and marquis of Camerino. Becoming a widow while still young, she exercised, by her beauty and intriguing spirit, great influence over the most powerful nobles of Rome, and during many years set up or deposed popes almost at her mere whim. She made herself mistress of the city, and caused, in succession, the election of Sergius III. in 904, Anastasius III. in 911, and Lando in 913. In 928 she deposed John X., who had been elected through the influence of Theodora, her sister and rival, and put him to death, with the assistance of Guido, duke of Tuscany, her second husband. In 931 she seated in the pontifical chair her son, under the title of John XI. In the following year she married her third husband, Hugh of Provence, who became king of Italy; but that monarch having struck Alberic, eldest son of Marozia, he, out of revenge, roused the Roman youths and massacred the guards of his father-in-law, who sought safety in flight. Marozia was imprisoned in the castle of St. Angelo, where she died.

Mar'ple, in *Pennsylvania*, a post-township of Delaware co.

Mar'plot, *n.* [*Mar* and *plot.*] One who, by officious meddling, interferes with the carrying out of a plot or design; a mischief-maker.

Marque, (*märk,*) *n.* [Fr., from the same root as *march, marches*, borders, frontiers.] A ship commissioned to make reprisals on an enemy's commerce and marine. (Sometimes written *mark.*)

(*Law.*) A license, or extraordinary commission by a sovereign or ruler to his subjects or fellow-citizens, to pass the frontiers of another state for the object of making reprisals.

Letters of Marque. Letters of reprisal granted by a sovereign, or head of a state, for the purpose of making reprisals on the shipping or commerce of another state, under pretence of indemnification for presumed injuries received. By the law of nations they are grantable whenever subjects of one state are oppressed and injured by those of another, and justice is denied by that state to which the oppressor belongs.

Marquesas Isles, (*mar-kā'sas,*) a name which, properly speaking, designates the southern group of the Mendaña Archipelago, in Polynesia, the northern group bearing the name of the Washington Islands; but the name is also applied to the whole archipelago. The

M. I., in Lat. 7° 30′—10° 30′ S., Lon. 138°—140° 20′ W., were discovered by Mendaña de Neyra, a Spanish navigator, in 1596; the Washington Isles were discovered in 1791 by Ingraham, an American. Area of the group, as under the French protectorate, 500 sq. m. The *M. I.* were named after the viceroy of Peru, Marquesas de Mendoza. The islands are of volcanic origin, and are in general covered with mountains, rising in some cases to about 3,500 feet above sea-level; the soil is rich and fertile, and the climate hot, but healthy. The coasts are

Fig. 1715.—TATTOOED CHIEFS OF THE MARQUESAS ISLES.

difficult of access, on accouut of the surrounding reefs and the sudden changes of the wind. Cocoa-nut, bread-fruit, and pawpaw trees are indigenous, and bananas, plantains, and sugar-cane are cultivated. The inhabitants are of the same race as those of the Society and Sandwich Islands. They are well-proportioned and handsomo (*Fig.* 1715), but degraded iu their religion, and in many of their customs. On some of the islands there are missionary stations; but although cannibalism has been abolished, the efforts of the missionaries have not otherwise met with much success. In 1842, the *M. I.* were taken possession of by Admiral Du Petit-Thouars, by authority of the French government. They were formally annexed to France in 1881, and now form a French colonial government.

Marquee, (*mar-kē′*,) *n.* (Sometimes written MARKEE.) [From Fr. *marquisa.*] A large field-tent.

Mar'quess, *n.* Same as MAAQUIS, *q. v.*

Marquetry, (*mar'ket-ry,*) *n.* [Fr. *marquéterie*, from *marque*, sign.] A peculiar kind of inlaid cabinet-work, in which thin slices of different colored woods, and sometimes of gold, silver, copper, tortoise-shell, mother-of-pearl, ivory, horn, &c., are inlaid and put on a ground. These substances, after being reduced to laminæ of proper thinness, are cut out into the required form by punches, which produce at onco the full pattern, or mould, and the empty ones which inclosed it; and both serve their separate purposes in marquetry. This species of inlaid work, when executed in glass, precious stones, or marble, is more commonly called *mosaic.*

Marquette (*mar-kett′*), in *Illinois*, a post-office of Bureau co.

Marquette, in *Michigan*, a N.W. co., partly washed on the N.E. by Lake Superior; *area*, about 1,847 sq. m. *Rivers.* Michigamig, Esconawba, Maquacumecum, and Sturgeou rivers. *Surface*, uneven; *soil*, not very fertile. *Min.* Iron in immeuso deposits, with grauite, slate, and marble. *Cap.* Marquette. *Pop.* (1894) 38,004.

—A city, cap. of the above co., on Lake Superior, 170 m. W. of Sault Ste. Marie; Lat. 46° 30′ N., Lon. 87° 40′ W. Here are immense iron docks for the shipment of the vast quantities of iron ore mined in the co. There are also extensive iron works and various other industrial establishments, brownstone quarries, &c. *Pop.* (1894) 9,724.

Marquette, in *Wisconsin*, a S. ceutral co.; *area*, about 481 sq. m. *Rivers.* Fox and several smaller streams, and many lakes. *Surface*, mostly level; *soil*, fertile. *Cap.* Montello.

—A post-village, former cap. of Green Lake co.

Marquis, Marquess, (*mar'kwis,*) *n.* [Fr. *marquis*; Sp. *marqués*; Pg. *marquez*; It. *marchése*; L. Lat. *marchio, marchisus*, the prefect of a frontier province. (See MAACUES.) Originally, one who possessed land on the borders of an enemy's country, and was bound to defend the frontiers.] (*Her.*) A title of nobility next below that of duke, and above that of earl or count.

Mar'quisate, Mar'quessate, *n.* [Fr. *marquisat*; Sp. *marquesado.*] Rank, dignity, or seigniory of a marquis.

Marquise, (*mär-kēz′*,) *n.* [Fr.] In France, the title borne by the wife of a marquis, corresponding with the English *marchioness.*

Mar'rer, *n.* One who spoils, mars, or obstructs.

"Makers or *marrers* of all men's manners."—*Ascham.*

Mar'riable, *a.* [Fr. *mariable.*] That may he wedded; marriageable. (R.)

Marriage, (*măr'rĭj,*) *n.* [Fr. *mariage*, from Lat. *marito, maritatus*, to marry, to give in marriage, from *maritus*, a husband. See MARITAL.] The act of marrying or uniting a man and woman for life; the legal union of a man and woman for life; matrimony; marital bond of union; wedlock.

"The reason why so few *marriages* are happy, is because ladies spend their time in making nets, not in making cages."—*Swift.*

—A feast held on the occasion of a wedding.

Marriage-favors, wedding-knots of white ribbon, or bouquets of flowers, worn on the occasion of a marriage.

(NOTE. *M.* is frequently employed in the construction of various self-explanatory compound words.)

(*Hist.* and *Law.*) *M.* is a solemn contract, dictated by nature, and instituted by Providence, between two persons of differeut sexes, with a view to their mutual comfort and support, and for the procreation of children. The importance of regulating the nuptial alliance has been recognized in all civilized countries. In Old Testament history, we find intermixed marriages of the worshippers of God with the heathen nations around them, strictly forbidden by Divine authority. The ancient Greek legislators considered the *M.*-relation as not merely of private, but also of public or general interest. By the laws of Lycurgus, criminal proceedings might be taken against those who married too late or unsuitably, as well as against those who did not marry at all. The great object of *M.* they regarded as being the rearing of healthy progeny for the state. Among the Romans, *M.* proper, *connubium*, by which the children became Roman citizens, could only take place between a Roman citizen and the daughter of a Roman citizen. Between a Roman citizen and a female slave there was no *connubium;* and, in consequence, the children were not Roman citizens. Children were in the power of the father only when the fruit of a legal marriage. The Roman notion of *M.* was that of a completo personal unity of husband and wife; for the dissent of either party, when formally expressed, could dissolve the relation. The Roman matron was in a much more favorable position, socially, than the Greek wife; for she shared in the honors and respect shown to her husband, presided over her household, and watched over the education of her children. In all Christian communities, the *M.* relationship is regarded as the most solemn of contracts, and in the Roman Catholic Church it is regarded as a sacrament.—In this country, all persons are able to contract *M.*, unless they are under the legal age, or unless there be other disability. The age of consent at common law is 14 in males, and 12 in females. When a person under this age marries, such person can, when he or she arrives at the age above specified, avoid the marriage; or such persou, or both, may, if the other is of legal age, confirm it. If either of the parties is under 7, the marriage is void. If either party has a husband or wife living, the *M.* is void. Consanguinity and affinity within the rules prescribed by law in this couutry render a marriage void. The parties must each be willing to marry the other. If either party acts under coupulsion, or is under duress, the marriage is voidable. Where one of the parties is mistaken in the person of the other, this requisite is wanting. But a mistake in the qualities or character of the other party will not void the *M.* If the apparent willingness is produced by fraud, the *M.* will be valid till set aside by a court of chancery or by a decree of divorce. Fraud is sometimes said to render a *M.* void; but this is incorrect, as it is competent for the party injured to waive the tort and affirm the *M.* Impotency in one of the parties is sometimes laid down as rendering the *M.* void, as being a species of fraud on the other party; but it is only a ground for annulling the contract by a court, or for a divorce. The parties must actually make a contract of *M.*; the form and requisites of it will depend on the law of the place. At common law, no particular form of words or ceremony was necessary. Mutual assent to the relation of husband and wife was sufficient. Any words importing a present assent to being married to each other were sufficient evidence of the contract. If the words imported an assent to a future marriage, if followed by cousummation, this established a valid marriage by the canon law, but not by the common law. At common law, the consent might be given in presence of a magistrate, or of any other person as a witness, or it might be found by a court or jury from the subsequent acknowledgment of the parties, or from the proof of cohabitation, or of general reputation resulting from the conduct of the parties. In the original U. States the common-law rule prevails, except where it has been changed by legislation. In civil cases, the *M.* can generally be proved by showing that the parties have held themselves out as husband and wife, and by general reputation founded on their conduct. There is an exception, however, in the case of such civil suits as are founded on the marriage relation, such as actions for the seduction of the wife, where general reputation and cohabitation will not be sufficient. In most of the States, the degree of relationship within which marriages may not be contracted are prescribed by statute. This limit in cases of consanguinity is generally, though not always, that of first cousins. In some of the States, a violation of the rule renders, by statute, the marriage absolutely void. In others, no provision of this kind is made. Various statutes have been passed to guard against abuse of the marriage ceremony. Such of them as require license, or the publication of banns, or the consent of parents or guardians, are regarded as directory, and, unless explicitly declaring the marriage to be void, if not complied with, do not render it void.—See HUSBAND AND WIFE; WIFE.

Validity of marriages contracted in foreign countries. The question of the validity in one country of marriages good according to the laws of another, is one of the most complicated, and it may be added, one of the most unsettled, which remains in interuational jurisprudence. If married citizens of one country transfer their domicil to another, their marriages are, of course, valid in the country of their adoption, whether in accordance or not with the law thereof. But when the citizens of one country marry in another country, questions of great difficulty, and which, as has been said, no general agreement of jurisprudence has settled, are apt to arise; and these are still further complicated when the parties contracting *M.* are of different nationalities. As a general rule, *M.*, like other contracts, is to be judged of by the *lex loci.* Consequently, two American citizens marrying in France, according to the formalities of the French law, contract a *M.* valid in this country. In that respect the English law is the same as ours; and, on this principle, the so-called *Gretna Green marriages* by English persons in Scotland were valid until abolished by Act of Parliament in 1856. French jurisprudence appears to be more jealous of the maintenance of its own special marriage-law in the case of marriages contracted by Frenchmen in foreign countries, than is our own.

M. ceremonies.—In almost every country, *M.* is regarded as a season of rejoicing among the friends and relatives, and is celebrated with certain ceremonies. Respecting the customs of the ancient Persians, Babylonians, Indians, and other inhabitants of Asia, ancient writers have left us little or no information. A curious custom is said to have existed in Assyria of disposing of the marriageable girls by public auction; the money received for the best favored of them being given as portions with those whose charms were not sufficient to attract purchasers. Usually with the ancient inhabitants of the East, the bride was obtained by presents made or services rendered to her parents,—a practice which still prevails in some parts of that region. With the ancient Hebrews, an interval of ten or twelve months usually intervened between the betrothment and the celebration of the marriage. On the day of the wedding, the bridegroom proceeded, anointed and ornamented, accompanied by a friend (*paranymph*), and followed by several companions, into the house of the bride, and conducted her, veiled and followed by her companions, with songs and music (at a later period also with torches), into his or her father's house, where the wedding feast was celebrated at his expense. It generally lasted for seven days; but if a widow was married, only for three. The bride and bridegroom were each adorned with crowns, and the conversation was enlivened by songs and enigmas. The duty of the paranymph was to play the part of the host at the feast. The men and women indulged themselves in feasting and conviviality in separate apartments. At length the nuptial blessing, viz., a numerous offspring, was implored upon the parties concerned (which appears to have been anciently the only ceremony performed in constituting the marriage), and the bride and bridegroom were led, the former still veiled, into the bridal chamber, where the bridesmaids accompanied them with torches and song. The wedding ceremonies of the modern Jews deviate considerably from those of their forefathers, though the rabbis maintain that they strictly follow the ceremonies observed at the wedding of Tobias. The Jews marry very young, and hold it to be a direct sin against the commandment given to our first parents if they are not married by their eighteenth or nineteenth year. Marriage is permitted to males at the age of thirteen years and a day,—to females at twelve years and a day. Barrenness is esteemed a great misfortune among them. After the suitor has obtained the consent of the girl and her guardians, the betrothment takes place with certain ceremonies, the bridegroom paying, or at least was formerly wont to pay, a so-called "morning gift," a remnant of the custom of buying the daughter from her father. The ceremony of the wedding generally takes place in the open air, seldom in a room, and usually on Wednesday. The couple sit under a canopy generally carried by four boys. A large black veil covers both, besides which, each of them has a black cloth (*taled*) with tassels at the four corners, upon the head. The rabbi, precentor of the synagogue, or nearest relative of the bridegroom, offers the couple a cup of wine, saying, "Praised be thou, O God, that thou hast created man and woman, and hast ordained matrimony." Both then drink. The bridegroom puts a gold ring, without a stone, on the finger of the bride and says, "With this ring I take thee as my wedded wife, according to the custom of Moses and the Israelites." The matrimonial contract is then read, and the bridegroom shakes hands with the parents of the bride. Wine is again brought, prayers are spoken, the couple drink, and the cup is then broken. The company then proceed to the house of the bridegroom, where the marriage-feast is held.—Among the ancient Greeks marriage was accompanied by numerous ceremonies. It was usually preceded by a formal betrothment, when the bridegroom bestowed a present on the bride as a pledge of his honor. A dowry was usually given with the bride. At the nuptials, the betrothed pair, as well as the place of festivity, were adorned with flowers and garlands.—The Romans had three different ways of concluding a marriage,—*confarreatio, usus*, and *coemtio.* The first of these was the most solemn, and was always preceded by a ceremonial betrothment, which often took place

many years before the marriage of the parties. In fixing the day of marriage, care was taken to select what was esteemed a lucky day; the month of May, the calends, nones, and Ides, and the days following them, the feast of the Salarians, &c., were estesmed *atri dies* (black, or unlucky days). The *confarreatio* was when a man and woman were joined together in marriage by the *pontifex maximus*, or *flamen dialis*, in presence of at least ten witnesses, by a set form of words, and by partaking of a cake called *far* or *farreus panis*. There were certain offices in the priesthood that could only be held by the sons of parents who had been married in this way. *Usus*, or usage, was when a woman, with consent of her parents or guardians, lived with a man for a whole year without interruption, when she became his lawful wife by prescription. If the wife wished to avoid the legal consequences of a marriage, absence for three nights during the year from her husband was regarded as a sufficient legal interruption. *Coemtio* was a kind of mutual purchase, the marriage being effected by one delivering to the other a small piece of money, and repeating certain words.

M. articles. (*Law.*) Articles of agreement between parties contemplating marriage, in accordance with which the *M.* settlement is afterwards to be drawn up. They are to be binding in case of *M.* They must be in writing.

M., (*Promise of.*) See PROMISE OF MARRIAGE.

M. settlement. (*Law.*) A conventional arrangement, usually made before marriage, whereby a jointure is secured to the wife, and portions to the children, in the event of the husband's death. It is based on what is called the "marriage consideration," which is the highest consideration known to the law, and may be made good against the husband's estate, and satisfied before any other debts. If made after marriage, it will, as a general rule, be fraudulent and void against all persons who are creditors of the husband at the time of the settlement, unless such settlement contain a provision for debts, or be made in pursuance of articles entered into before marriage.

M. portion. (*Law.*) The dower, dot, or portion given with a woman upon her marriage, in contradistinction to *marriage-settlement*, or money settled upon a wife by her husband.

Marriageable, (*măr'rij-a-bl,*) *a.* Of an age suitable for marriage; fit for wedlock; arrived at years of puberty; as, a *marriageable* girl. — Capable of union.

"The vine . . . about him twines her *marriageable* arms." *Milton.*

Mar'riageableness, *n.* State or condition of being marriageable.

Mar'riage-bed, *n.* The nuptial couch of a husband and wife; — hence, lawful sexual commerce.

Mar'riage-bell, *n.* A bell, or peal of bells, rung in honor of a marriage.

"And all went merry as a *marriage-bell*." — *Byron.*

Mar'riage-certificate, *n.* The legal voucher or written testimony validating and authenticating a marriage. (Often called *marriage-lines.*)

Mar'riage-con'tract, *n.* Contract of affiance; preliminary instrument of marriage.

Mar'ried, *a.* Resulting from marriage; wedded; conjugal; connubial; as, the pains and pleasures of *married* life.

Mar'rier, *n.* One who weds or marries.

Mars, (*Myth.*) The god of war, was son of Jupiter and Juno, or, according to Ovid, of Juno alone. The amours of Mars and Venus are greatly celebrated. In the wars of Jupiter and the Titans, Mars was seized by Otus and Ephialtes, and confined for 15 months, till Mercury procured him his liberty. During the Trojan war, he took the side of the Trojans and defended the favorites of Venus with uncommon activity. His temples were not numerous in Greece; but in Rome he received unbounded honors, and the warlike Romans were proud of paying homage to a deity whom they esteemed as the patron of their city, and the father of the first of their monarchs. Mars was generally represented in the naked figure of an old man, armed with a helmet, a pike, and a shield. He generally rode in a chariot drawn by furious horses, which the poets called Flight and Terror. The Greeks called him *Ares*, and he was the *Enyalius* of the Sabines, the *Camulus* of the Gauls, and the *Mavors* of Carthage. Mars was the father of Cupid, Anteros, and Harmonia, by the goddess Venus. He was also the reputed father of Romulus. He presided over gladiators, and was the god of hunting, and of every manly and warlike exercise.

Mars. [God of War; sign: ♂—shield and spear.] (*Astron.*) Mars is the outermost member of the inner family of four planets, his orbit being exterior to that of the earth. The next planet is Jupiter, the first of the outer family of four; the group of over four hundred known small planets lying between are called asteroids, planetoids, and minor planets. (See ASTEROIDS, &c.) He is, except Mercury, the smallest of all the major planets. Measures of his diameter are strangely discordant. Chambers gives it 4,920 miles, while Newcomb and Flammarion give 4,211 and 4,200 miles respectively. (Chambers' 9 is no doubt a misprint for 2.) His volume, therefore, is seven times less than the earth's. To the naked eye he appears of a decided red color, resembling in this respect the stars Antares and Aldebaran, near which in his journey around the sky he often passes. In his progress through the zodiacal constellations, his apparent motion is sometimes direct (west to east), as often retrograde (east to west), and then, again, he appears to stand still, like a fixed star; while the truth is that he is all the time moving direct. These discrepant appearances arise from the more rapid orbital motion of the earth, which causes us to sometimes move toward him, when he appears for a certain time to stand still; then afterward, when we pass him, he seems to go backward; and then again, while moving from him in the line of sight, he seems to be stationary; while, as above said, his real motion has not changed. His mean daily motion through the zodiac is 31′ 26″. As the circle of the sky—like every circle, great or small—contains 1,296,000″, this, if divided by the above number, gives the length of his year = 687 days, nearly. His distance from the sun, owing to the great eccentricity of his orbit, varies considerably, averaging about 142,000,000 miles, making the diameter of his orbit 284,000,000 miles and its circumference 893,000,000 miles, over which he moves in nearly 687 days. His daily orbital motion is therefore found by dividing 893,000,000 by 687 = 1,300,000 miles, and his hourly velocity 54,000 miles—900 miles a minute, and 15 miles a second. Vain is the effort to comprehend, in a body so massive, such a rate of speed continued unceasingly for ages without end. The question is often asked: Where lies the power to propel such immense bodies as the planets at such appalling rates? The answer is: It lies nowhere. They were started "in the beginning" by the Creator, and there being nothing to stop them, they still move at their initial velocity, and always will.

Mars can, at certain times, approach nearer to the earth than any planet except Venus and the moon.

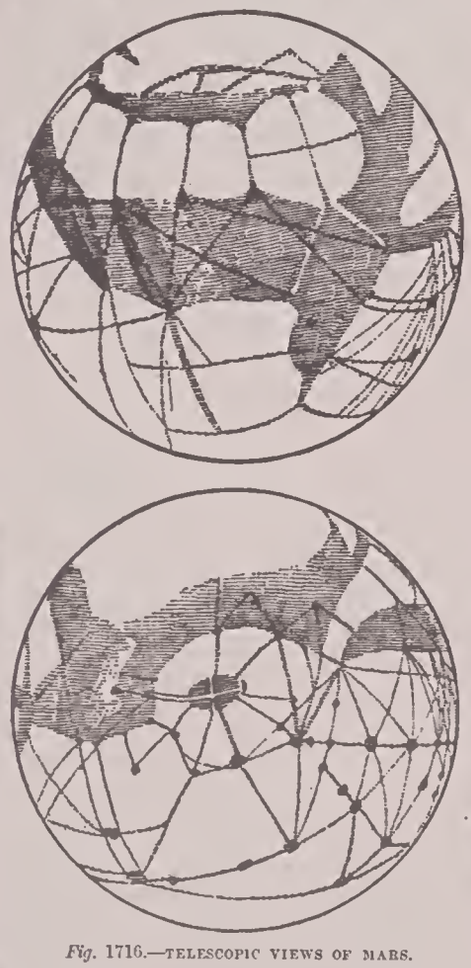


Fig. 1716.—TELESCOPIC VIEWS OF MARS.

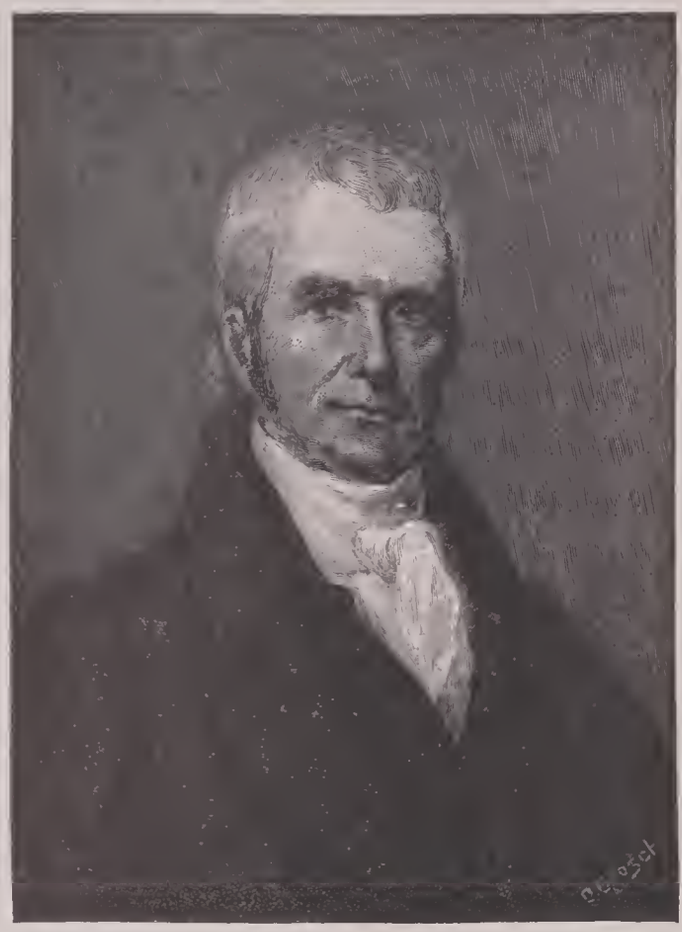
This proximity, called a "favorable opposition," happens every fifteen years. A planet is in oppositiou when it rises when the sun sets, the earth then being between the two; which, in the case of Mars, occurs about every two years. He then shines with a luster so intense as to raise in the popular mind the idea that it is a new star—which has frequently been believed to be the Star of Bethlehem. The eccentricity of his orbit is 13,000,000 miles; consequently, when an opposition occurs when Mars is in perihelion, and the earth is at the same time in aphelion, the planet can approach the earth to within 35,000,000 miles, and even less if the three phenomena simultaneously occur on the second day of July, as the earth in our age is in aphelion on that day. The oppositions of 1833 and 1877 were unusually favorable ones. It was at the latter opposition that his two moons were discovered. (See SATELLITES.) The next favorable one will take place in 1907. The inclination of his equator to his orbit, on which the changes of his seasons depend, is not greatly different from ours, being 24° 52′, while the earth's is 23° 27′. His seasons, therefore, except in their length, and perhaps in their intensity, are very similar to ours.

With small telescopes, Mars is never an interesting object; nor, except at his oppositions, is he particularly attractive with our greatest telescopes, unless the seeing is exceptionally fine, when a magnifying power may be used high enough to reveal unmistakable evidences of the existence of life-supporting arrangements as we find them here. In that far-away world, generally more than 50,000,000 miles distant, we discover what is undoubtedly land and water, snow and ice, heat and cold, clear and cloudy skies, day and night, summer and winter, sunlight and moonlight, years and months and days, and other evidences of a world designed for the gratification and sustentation of life perhaps analogous to our own. We are confronted here with a fanciful field for speculation, which will probably never be brought under the domain of proven facts. The thorough and long-continued observations of this planet, during its last two favorable oppositions of 1877 and 1893, with instruments of moderate size, has resulted in asserting the existence of what are called "canals." Maps of the planet have been constructed showing not only the supposed canals, many of which are represented as being double, but also islands, lakes, seas, bays, straits, continents, &c., to which names have been given with as much confidence in the reality of their existence as to like objects on the earth. It is important to say that this wholesale nomenclature of fanciful objects is not generally approved by astronomers, who, with mammoth telescopes, see next to nothing of the pictorial representations. There is no dispute about the "polar caps" (which all telescopes reveal), of intense whiteness and of large extent, which all agree in ascribing to snow. They appear alternately at either pole on the approach of winter, and disappear in summer. Astronomers can now predict with certainty when they will appear and disappear. No reliance can be placed on an observation of an object that subtends an angle of one second of arc. The linear value of a second of arc at Mars' distance, say 40,000,000 miles, is found by dividing it by the mathematical constant 206,265 = 200 miles. Those supposed canals, therefore, must be 200 miles wide. That some astronomers have seen long, narrow, dark streaks is not denied; but they are as often seen double as single, which fact raises the suspicion that they are not canals, nor even water, and if not optical illusions, may be mountain chains covered with dense foliage, or they may be valleys densely wooded, like the valley of the Amazon. The canal theory, first advanced by the distinguished Italian astronomer, Schiaparelli, rests, at least at present, on too many discrepant drawings of what is assumed as sure to be accepted without reserve. The exciting nature of the subject will doubtless stimulate increased exertion to solve the enigmas that pertain to our interesting neighbor. By observing spots on his disk, its rotational period has been ascertained to be 24h. 39m. 35s., giving him over 668⅔ days in his year, which, being not an even number of days, necessitates the use in one of his years, or six of ours, of two leap years, each of 669 days. The most ancient recorded observation of this planet was made at Alexandria, Egypt, Jan. 17, 272 B. C.; but earth's first inhabitant was no doubt familiar with its motion, color, and varying degrees of brightness. It was through observing the motions of Mars that Kepler was led to the discovery of the three laws of planetary motion, after delving with the problem for seventeen long years. When he had proved them to be the laws of nature, in the exuberance of his fervid zeal, he exclaimed: "Nothing holds me; I will indulge in my sacred fury. If you forgive me, I rejoice; if you are angry, I can bear it. The die is cast, the book is written; to be read either now or by posterity, I care not which; it may well wait a century for a reader, since God has waited 6,000 years for an interpreter."

Marsde'nia, *n.* (*Bot.*) A genus of plants, order *Asclepiadaceæ*. *M. tinctoria* produces a kind of indigo; *M. tenacissima* has very tenacious fibers, which are used for bow-strings by the mountaineers of Rajmahal.

Marseillais', Marseillaise', *a. m.* and *f.* (*Geog.*) Belonging or pertaining to Marseilles, or to its people.

Marseilles, (*mar-sails'*,) the chief seaport of France, cap. of the dept. of Bouches-du-Rhône, on the E. side of a bay of the Gulf of Lyons, 30 m. N.W. of Toulon, and 420 S.E. of Paris; Lat. 43° 17′ N., Lon. 5° 2′ 2″ E. It is situated in the centre of a plain about 7 m. broad, bounded by lofty hills extending in the form of a crescent until each extremity reaches the sea. The city is divided into the Old and New Town: the former, on the N. side of the harbor, is poorly built; the latter, situate on the S. and E. is on the modern style, with regular streets and fine squares. Of these, *Long Champs* is especially handsome. *M.* has numerous public buildings, the principal of which are the Cathedral and the Hotel-de-Ville. It contains also several literary and scientific institutions, the most worthy of mention being the Imperial College, formerly a Bernardine convent, the Imperial Society of Science, Literature, and Art, (a gallery of paintings comprising works by Carracci, Salvator Rosa, Rubens, Vandyk, and other eminent artists,) the Observatory, and the public library of over 50,000 vols., besides 1,030 MSS. *M.* has two harbors. The first, known as the *Vieux Port*, is a fine basin of over 70 acres, stretching about 1,000 yards from W. to E. into the centre of the city, and capable of accommodating 1,200 vessels. The entrance, which does not exceed 100 yards in width, is defended by 2 forts, the tower of St. John on the N., and the fort of St. Nicholas on the S. The 2d harbor, constructed in 1855, is called the *Port-de-la-Joliette*, formed by a break-water 1,224 yards long, thrown out into the sea, running parallel to the shore. Among the docks, the most notable are the *Bassin du Lazaret*, the *Bassin d'Arenc*, and the *Bassin Napoléon*. The trade of *M.* is very extensive, and is rapidly increasing. The



John Marshall

1755–1835

city is the grand emporium of the S. of France, and the centre of the most of her commerce with countries bordering on the Mediterranean. The exports consist principally of silk stuffs, woollens and linens, wines, brandies, and liqueurs, madder, oil, verdigris, perfumery, stationery, gloves, and all kinds of colonial products. The principal imports are sugar, coffee, corn, cotton, coal, timber, &c. It has also an extensive trade with Holland, England, the Baltic, the U. States, and W. Indies. *Manuf.* The most important are soap, coral articles, silk stuffs, woollens, cottons, linens, hats, leather, sail-cloth, china, alum, sulphur, vitriol, salt, &c. There are, besides, refineries for sugar, and manufactures of vinegar and liquors. Another branch of industry is the pickling and preparing for exportation of capers, olives, and other fruits, as well as large quantities of fish. It has also a great variety of trades connected with the building and fitting out of ships. *Pop.* (1897) 344,250. *M.* is one of the most ancient towns of France, having been founded by a colony from Phocæ, a city of Ionia, about 600 B.C. The inhabitants distinguished themselves by their skill as seamen, and the extent of their commerce, and were celebrated for the wisdom of their institutions. They became at an early period allies of Rome; but espousing the party of Pompey, their city was besieged, and after an obstinate resistance, taken by Cæsar. After the fall of the Roman empire, *M.* underwent many vicissitudes. It was finally united to the crown of France in 1481. During the Middle Ages, *M.* rivalled Venice and Genoa in the trade with the Levant. In 1720 it suffered dreadfully from the plague, which carried off about 40,000 inhabitants. Since 1830 the commerce and industry of *M.* has vastly increased, and it is now an important and flourishing city.

Marseilles (*mar-sailz'*), in *Illinois*, a post-town of Le Salle co., on the Chicago, R. I. & Pacific R. R., about 76 m. W.S.W. of Chicago.

Marseilles, in *Ohio*, a post-village and township of Wyandot county, about 60 miles N.N.W. of Columbus.

Marsh, *n.* [A. S. *mersc*; Fr. *marais*. See MORASS.] A morass; a tract of low land usually or occasionally inundated with water, or generally very wet or miry.

Marsh, OTHNIEL CHARLES, an American archæologist, B. 1831, at Lockport, N. Y.; graduated at Yale in 1860. Returned from abroad in 1866 to fill the chair of Paleontology at Yale College. In 1870, he returned from the first of the Yale Scientific Expeditions, richly laden with fossil treasures; over one hundred species of extinct vertebrates, new to science, were discovered. Among the most interesting of *M.*'s discoveries are a new mammal (*Dryolestes*), a new order of reptilia (*Stegosauria*), and many new and gigantic dinosaurs, all from the Jurassic of the Rocky Mountains, and the first found in this formation in this country. From the cretaceous of Kansas he obtained the first American *Pterodactyles*, and a new sub-class of birds with teeth (*Odontornithes*), and many new reptiles. From the eocene tertiary of the Rocky Mountains, he discovered the first monkeys, bats, and marsupials found in this country, two new orders of mammals, and a host of strange forms, all widely differing from anything now living. The collection is now in the museum of Yale College. *M.* was President of the Am. Asso. for the Ad. of Science, and succeeded Prof. Henry as Pres. of the National Acad. of Sci., and in 1878 received the Bigsby medal from the Geological So. of London for his important discoveries in paleontology. Prof. *M.* is a firm believer in evolution, and a prolific contributor to most of the scientific journals.

Marsh, JAMES, an American philosopher and author, B. at Hartford, Vt., in 1794. Entering Dartmouth Coll. in 1813, he graduated there four years later, and after various vicissitudes he was appointed, in 1826, president of the University of Vermont, where he effected important scholastic reforms. D. 1842. His chief works are a preliminary essay to the first American edition of the English poet and philosopher Coleridge; a volume of selections from the Old English divines, and a translation of Herder's *Spirit of Hebrew Poetry*.

Mar'shal, *n.* [Fr. *maréchal*; L. Lat. *marschalcus*, *marescallus*; Ger. *marschall*; O. Ger. *marach*, a horse, and *schalk*, servant.] Originally, a servant or official who had charge of horses.

—The chief officer of arms who regulates combats in the lists, or tilt-yard.

"Nor *marshal* by, as kingly rights require." — *Dryden.*

—A herald; a harbinger; a pursuivant; one who goes before a prince to announce his coming, and provide entertainment.

"Her face . . . a *marshal* to lodge the love of her in his mind." *Sidney.*

—One who regulates the ceremonial of rank and order at a feast, or any other assembly, or conducts the order of precedence, procession, &c.

"A jolly yeoman *marshal* of the hall." — *Faerie Queene.*

(*Mil.*) In France, England, &c., the highest rank of military officer; as, a *marshal* of France, a field-*marshal*.

(*Amer. Law.*) An officer of the United States, whose duty is to execute the process of the courts of the U. States. His duties within the district for which he is appointed are very similar to those of a sheriff. *Bouvier.*

—*v. a.* To arrange in order and regularity; to set in proper rank or style of precedence; to place in suitable form; as, to *marshal* a procession. — To lead, as a harbinger; to conduct the way of.

"Thou *marshallest* me the way that I was going." —*Shaks.*

Mar'shall, JOHN, an American statesman and jurist, B. in Fauquier co., Va., in 1755. His father was a man of intelligence, and early perceived the talents of John; but, owing to a want of means, was able to give him only a limited education, first under the care of a clergyman at a distance from home, and at the end of a year, under another clergyman from Scotland, then an inmate of his father's house. *M.* early took part in the military service of the Revolutionary War, beginning with the action of the Virginia militia at the Great Bridge, under Lord Dunmore. He was promoted to the rank of captain in 1777, and was present at the battles of Brandywine, Gormantown, and Monmouth, continuing with his company till the expiration of its term of service. In the midst of these affairs, he obtained his first knowledge of law, and was admitted to the bar in 1780, but returned to the army to assist in repelling the invasion of Arnold. He made rapid progress in the legal profession, and in 1782 was elected to the legislature of his State, where he continued until 1796. He was a member of the Virginia Convention in 1788, when that body ratified the Constitution of the United States. In 1799 he was sent as minister to France, in company with Pinckney and Gerry, but was unsuccessful in his negotiations with the French Directory. On his return to America, in 1799, he was elected to Congress, where he displayed remarkable ability, particularly in his speeches on the Robbins case, in vindication of the government. He was appointed to the chief-justiceship of the Supreme Court of the U. States in 1801, in which he displayed great legal ability by his decisions. He D. at Philadelphia, in 1835.

Mar'shall, in *Alabama*, a N.E. co.; *area*, about 580 sq. m. *Rivers.* Tennessee and Paint Rock rivers. *Surface*, mountainous; *soil*, generally fertile. *Cap.* Guntersville. *Pop.* (1890) 18,935.

—A post-office of Marshall co.

Marshall, in *Illinois*, a N. central co.; *area*, about 400 sq. m. *Rivers.* Illinois river, Sand and Crow creeks. *Surface*, nearly level; *soil*, fertile. *Cap.* Lacon. *Pop.* (1890) 13,653.

—A city, cap. of Clarke co., on two lines of railroad, 6 m. S. of Paris. *Pop.* (1897) 2,240.

Marshall, in *Indiana*, a N. co.; *area*, about 441 sq. m. *Rivers.* Yellow and Tippecanoe rivers. *Surface*, level; *soil*, in some parts fertile. *Cap.* Plymouth. *Pop.* (1890) 23,818.

Marshall, in *Iowa*, a central co.; *area*, about 576 sq. m. *Rivers.* Iowa river, Timber creek, and some smaller streams. *Surface*, generally level; *soil*, fertile. *Cap.* Marshalltown. *Pop.* (1895) 27,320.

—A village of Henry co., about 40 m. S.W. of Muscatine.

Marshall, in *Kansas*, a N.E. co., adjoining Nebraska; *area*, about 900 sq. m. *Rivers.* Big Blue and Little Blue rivers, Vermilion and several other small creeks. *Surface*, diversified; *soil*, very fertile. *Cap.* Marysville. *Pop.* (1890) 24,567.

Marshall, in *Kentucky*, a S.W. co., bordering on Illinois; *area*, about 330 sq. m. *Rivers.* Tennessee and Clarke's rivers. *Surface*, moderately hilly; *soil*, fertile. *Cap.* Benton. *Pop.* (1890) 11,287.

—A post-village of Bath co.

Marshall, in *Michigan*, a city, cap. of Calhoun co., about 43 m. S.W. of Lansing. It is finely situated on the Kalamazoo River and the Mich. Cent. R. R., and contains extensive manufactories. *Pop.* (1894) 4,599.

Marshall, in *Mississippi*, a N. co., adjoining Tennessee; *area*, about 720 sq. m. *Rivers.* Tallahatchie, Tidpah, and Coldwater rivers. *Surface*, agreeably diversified; *soil*, fertile. *Cap.* Holly Springs. *Pop.* (1890) 26,043.

Marshall, in *Missouri*, a township of Platte co.

—A city, cap. of Saline co., on the Ch. & Alton and Mo. Pac. R.Rs., 85 m. E. of Kansas City; has extensive and varied manufactures. *Pop.* (1897) 5,100.

Marshall, in *North Carolina*, a post-village, cap. of Madison co., about 280 m. W. of Raleigh.

Marshall, in *New York*, a township of Oneida co.

Marshall, in *Ohio*, a post-village and township of Highland co., about 68 m. E. of Cincinnati.

Marshall, in *Tennessee*, a S. central co.; *area*, about 350 sq. m. *Rivers.* Duck river, and several smaller streams. *Surface*, undulating and hilly; *soil*, generally fertile. *Cap.* Lewisburg. *Pop.* (1890) 18,906.

Marshall, in *Texas*, a city, cap. of Harrison co., 74 m. S. of Texarkana, on the Texas Pac. R.R.; here are located the shops of the Tex. Pac. R.R., and numerous other manufacturing industries. Cotton and live stock are largely shipped. *Pop.* (1897) about 10,000.

Marshall, in *Wisconsin*, a post-village of Dane co., about 20 m. E. by N. of Madison.

Marshall, in *West Virginia*, a N. co., adjoining Pennsylvania on the E., and Ohio on the W.; *area*, 248 sq. m. *Rivers.* Ohio river, Fishing and Grave creeks. *Surface*, diversified; *soil*, fertile. *Min.* Coal in abundance. *Cap.* Moundsville. *Pop.* (1890) 20,735.

—A village, former cap. of Clay co., about 35 m. E.N.E. of Charleston.

Mar'shaller, *n.* One who marshals, or disposes in due order. (R.)

"Dryden was the best *marshaller* of English words."—*Trapp.*

Mar'shalling, *n.* Act of arranging in proper rank or order.

(*Her.*) The arrangement and distribution of several coats of arms, belonging to distinct families, in the same escutcheon or shield, together with their ornaments, parts, and appurtenances, so as to denote the several marriages and alliances of the families.

Marshalling of assets. (*Law.*) Disposition of assets in proper order of administration.

Mar'shall's Point, in *Maine*, a promontory and light-house, at the E. entrance of Herring Gut, on the coast of Lincoln co. It exhibits a fixed light 30 feet above sea-level, Lat. 43° 50′ N., Lon. 69° 9′ 30″ W.

Mar'shallsville, in *Georgia*, a post-village of Macon co., abt. 70 m. S.W. of Milledgeville. *Pop.* (1897) 1,150.

Mar'shallsville, in *Ohio*, a post-village of Wayne co., about 100 m. N.E. of Columbus. *Pop.* (1897) 410.

Mar'shallton, in *Pennsylvania*, a post-village of Chester co., about 30 m. W. of Philadelphia. *Pop.* (1897) 728.

Mar'shalltown, in *Iowa*, an important city and railroad center, cap. of Marshall co., about 50 m. N.E. of Des Moines; has a large distributing trade and has varied industries, including the manufacture of linseed oil and pork-packing. It is one of the largest distributing centers in the State. Seat of the Iowa Soldiers' Home. *Pop.* (1897) 13,100.

Mar'shalsea, *n.* A prison formerly existing in London, Eng., belonging to the marshal of the royal household.

Court of Marshalsea, a judicial court formerly held before the Lord Steward and Marshal of the Household to the English monarchs, to decide differences among the domestics of the palace.

Mar'shalship, *n.* Rank, office, or vocation of a marshal.

Mar'sham, or MARSHAN, in *Minnesota*, a township of Dakota co.

Marsh'bog, in *New Jersey*, a village of Monmouth co., abt. 10 m. S.E. of Freehold.

Marsh Creek, in *Pennsylvania*, enters the Monocacy River from Adams co.

Marsh-el'der, *n.* (*Bot.*) See IVA.

Marsh'field, in *Indiana*, a village of Scott co., abt. 31 m. N. of Jeffersonville.

—A post-village of Warren co., about 33 m. S.W. of La Fayette.

Marsh'field, in *Iowa*, a village of Jones co., about 38 m. S.S.W. of Dubuque.

Marsh'field, in *Maine*, a township of Washington co.

Marsh'field, in *Massachusetts*, a post-village and township of Plymouth co., on Massachusetts Bay, abt. 28 m. S.E. by S. of Boston.

Marsh'field, in *Missouri*, a post-village, cap. of Webster co., abt. 30 m. N.E. of Springfield.

Marsh'field, in *Ohio*, a post-village of Athens co., abt. 7 m. W. of Athens.

Marsh'field, in *Vermont*, a post-village and township of Washington county, about 11 m. E.N.E. of Montpelier.

Marsh'field, in *Wisconsin*, a township of Fond du Lac co.

Marsh'-gas, FIRE-DAMP, LIGHT CARBURETTED HYDROGEN, HYDRIDE OF METHYL, *n.* (*Chem.*) A hydrocarbon which is found in nature, being produced wherever vegetable matter is undergoing decomposition in the presence of moisture. The bubbles rising from stagnant pools, when collected and examined, are found to contain marsh-gas mixed with carbonic acid; and there is reason to believe that these two gases represent the principal forms in which the hydrogen and oxygen respectively were separated from wood during the process of its conversion into coal. This would account for the constant presence of this gas in the coal-formations,

Fig. 1717. — PREPARATION OF MARSH-GAS.

where it is usually termed *fire-damp*. It is occasionally found pent up under pressure between the layers of coal; and the pores of the latter are sometimes so full of it that it may be seen rising in bubbles when the freshly hewn coal is thrown into water. Perhaps a similar origin is to be ascribed to the liquid hydrocarbons chemically similar to marsh-gas, which are found so abundantly in Pennsylvania and Canada, and are known by the general name of *petroleum*. Marsh-gas is obtained artificially by the following process: — 500 grains of dried acetate of soda are finely powdered and mixed in a mortar, with 200 grains of solid hydrate of potash, and 300 grains of powdered quick-lime — or with 500 grains of the mixture of hydrate of lime and hydrate of soda, which is sold as *soda-lime*. The mixture is heated in a Florence flask, or better, a copper tube, for the alkali corrodes the glass, and the gas collected over water, (Fig. 1717.) The *M.-G.* will be easily recognized by its burning with a pale illuminating flame, far inferior in brilliancy to those of olefiant gas and acetylene, but unattended with smoke. The properties of this gas deserve a careful study, on account of the frequent fatal explosions to which it gives rise in coal-mines, where it is often found accumulated under pressure, and discharging itself with considerable force from the fissures or *blowers* made in hewing the coal. Marsh-gas has no characteristic smell like coal-gas, and the miner thence receives no timely

warning of its presence; it is much lighter than air (*sp. gr.* 0·5596), and therefore very readily diffuses itself through the air of the mine, with which it forms an explosive mixture as soon as it amounts to one-eighteenth of the volume of the air. The gas issuing from the blower will burn quietly on the application of a light, since the marsh-gas is not explosive unless mixed with the air, when a large volume of the gas is burnt in an instant, causing a sudden evolution of a great deal of heat, and a consequent sudden expansion or explosion exerting great mechanical force. The most violent explosion takes place when one volume of marsh-gas is mixed with two volumes of oxygen, since this quantity is exactly sufficient to effect the complete combustion of the carbon and hydrogen of the gas, and therefore to evolve the greatest amount of heat. The calculated pressure exerted by the exploding mixture of marsh-gas and oxygen amounts to 37 atmospheres, or 555 lbs. upon the square inch. Fortunately, marsh-gas requires a much higher temperature to inflame it than most other inflammable gases; thus a solid body at an ordinary red heat does not kindle the gas, contact with flame, or with a body heated to whiteness, being required to ignite it.

Marsh-har'rier, *n.* (*Zoöl.*) See CIRCUS.

Mars Hill, in *Maine*, an isolated eminence near the E. boundary of Aroostook co. It terminates in two peaks, one 1,506 feet, and the other 1,363 feet above the level of St. John's River.

—A post-village and township of Aroostook co., abt. 135 m. N N.E. of Bangor.

Marsh Island, in *Louisiana*, an island and light-house at the entrance to Vermilion Bay. It exhibits a revolving light 90 feet high.

Marsh'iness, *n.* State of being marshy or swampy.

Marsh'-mallow, *n.* (*Bot.*) *Althea officinalis.* See ALTHEA.

Marsh'-mar'igold, *n.* (*Bot.* See CALTHA.

Marsh'-rosemary, *n.* (*Bot.*) See STATICE.

Marsh'-samphire, *n.* (*Bot.*) The Salt-wort. See SALICORNIA.

Marsh's Appara'tus, *n.* (*Chem.*) See ARSENIC.

Marsh'-trefoil, *n.* (*Bot.*) The *Menyanthes trifoliata.* See MENYANTHES.

Marsh'y, *a.* Boggy; wet; fenny; swampy; resembling a marsh or morass: as, *marshy* ground. — Belonging to marshes; produced in marshes; as, *marshy* weeds.

Marsh'y Hope, a small river, rising in Kent co., Delaware, and, flowing S.W. into Maryland, joins the Nanticoke from Dorchester co.

Mar'si, or **Mar'sians,** *n. pl.* (*Anc. Hist.*) A nation of central Italy, first mentioned in Roman history, B. C. 340, at which time they were on friendly terms with the Romans, against whom they leagued with the Samnites, B. C. 308. They concluded a treaty with the Romans 304 B. C., but again took up arms B. C. 301, when, having been defeated, they were compelled to purchase peace by the cession of part of their territory. They became faithful allies of Rome, and were among the first to offer volunteers to the fleet and army of Scipio, B. C. 205. In the Social, sometimes called the Marsic war, B. C. 91, they took a prominent part, and gained several victories over the Romans; but in the next campaign, B. C. 89, after repeated defeats, they were compelled to sue for peace. The Marsi received the full rights of Roman citizens, and from that time ceased to exist as a separate nation.

Marsi'eo Nuo'vo, a town of Italy, prov. of Naples, 18 m. S. of Potenza; *pop.* 7,500. In 1857 *M.* was nearly destroyed by an earthquake.

Marsilea'ceæ, *n. pl.* (*Bot.*) The Pepper-wort family, a small order of plants, alliance *Lycopodales.* DIAG. Many-celled radical spore-cases, and the reproductive bodies of two different kinds. — They consist of aquatic herbs with small floating or creeping stems. They are widely distributed, but are most abundant in temperate regions. There are 4 genera and about 20 species. Their properties are unimportant.

Mar'ston, in *Wisconsin*, a township of Sauk county

Mars'ton Moor. (*Eng. Hist.*) A plain in Yorkshire, where a decisive battle was fought between the Royalists under Prince Rupert, and the Parliamentary army under Lord Fairfax and Oliver Cromwell, July 2, 1644. It commenced about 7 o'clock in the evening, and the left wing of the king's army totally routed the right wing of the Parliamentarians; but Cromwell with his "Ironsides" managed to defeat the king's right wing. After a severe struggle, victory declared in favor of the Parliamentarians, the Royalists losing all their artillery, ammunition, and baggage.

Marsu'pial, MARSUPIALIAN, MARSUPIAN, *a.* [Fr., from Gr. *marsupion*, a purse.] (*Zoöl.*) Possessing a pouch for the carrying of callow young, as the *Marsupialia.* — Belonging to the marsupialia.

—*n.* (*Zoöl.*) One of the MARSUPIALIA, *q. v.*

Marsupialia, or MARSUPIALA, (*mar-su-pī-ā'le-ă,*) *n. pl.* (*Zoöl.*) An order of mammalia, which differ altogether from others, both by their organization and by the different varieties of nourishment which they consume. As a necessary consequence to these peculiarities, we find their structure altered accordingly, and we find among them the organs of progression, prehension, and digestion so adapted to their various wants and habits, that we may trace in them some of the prominent characteristics of the carnivorous, insectivorous, herbivorous, and rodent forms of other mammalia. Scaliger christened the first species of marsupialia brought under the notice of zoölogists, by the name *Animalia crumenata;* that is, in other words, purse-bearing animals. The leading feature in these mammals is the premature birth of their young, which, in most instances, are received into a peculiar pouch on the abdomen of the mother, where they are nourished till they have acquired a degree of development corresponding to that

Fig. 1718. — SKELETON OF KANGAROO.

in which other mammals are born. The young, after they are able to walk, also resort to the pouch of the mother for safety in times of danger. With the exception of the Opossum family, or DIDELPHIDÆ, (*q. v.*,) found in America, the Marsupials are all confined to Australia and islands immediately adjacent; and it is a singular fact, that all the mammals of Australia, over a hundred species of which are known, belong to this order. The great type of this order is the KANGAROO, *q. v.*

Marsu'piate, *a.* Relating or pertaining to the marsupials.

Mar'supite, *n.* [From Lat. *marsupium.*] (*Pal.*) One of a genus of fossil echinoderms, shaped like a purse. *Mantell.*

Marsu'pium, Marsu'pion, *n.* [Lat. and Gr., purse.] (*Zoöl.*) The pouch in which marsupial animals convey their callow brood.

—A muscle in the eye of hawks, which enables them to flatten the cornea, so as to see to a great distance. *Brewer.*

(*Med.*) A sac or bag with which any part is fomented.

Marsyas, (*mar'se-ăs,*) a celebrated piper of Celænæ, in Phrygia. He was so skilful in playing on the flute, that he was generally deemed the inventor of it. Marsyas was enamored of Cybele, and he travelled with her as far as Nysa, where he had the imprudence to challenge Apollo to a trial of his skill as a musician. The god accepted the challenge; and it was mutually agreed that he who was defeated should be flayed alive by the conqueror. Each exerted his utmost skill, and the victory, with much difficulty, was adjudged to Apollo. The god, upon this, tied his antagonist to a tree, and flayed him alive. Marsyas is often represented on monuments as tied, his hands behind his back, to a tree, while Apollo stands before him with his lyre in his hands. At Celænæ, the skin of Marsyas was shown to travellers for some time. It was suspended in the public place, in the form of a bladder or a football.

Mart, *n.* [An abbreviation of *market*, q. v.] A market; a place of public sale or traffic; an emporium.

Martaban', a town of British Burmah, prov. of Martaban, on the San-luen, near its mouth, 10 miles N.W. of Moulmein, and 92 E.S.E. of Rangoon; Lat. 16° 28′ N., Lon. 97° 30′ E. *Pop.* 6,000.

Mar'tagen, *n.* (*Bot.*) The Turk's Cap (*Lilium martagen*).

Mar'tel, CHARLES. See CHARLES MARTEL.

Mar'tel-de-fer', *n.* [Fr., iron hammer.] An instrument, being a combination of hammer and pick, used by troopers, in former times, to break and pull armor in pieces.

Martell', in *Wisconsin*, a post-township of Pierce co.

Mar'ten, *n.* [A. S. *mearth;* Ger. *marder;* Fr. *marte;* Lat. *martis.*] (*Zoöl.*) See MUSTELA.

Mar'-text, *n.* A blundering preacher.

Martha. (*Script.*) The sister of Lazarus and Mary, at Bethany. (See *John* xi. 5, 20–28, xii. 11; *Luke* x. 38–42.)

Martha Fur'nace, in *Pennsylvania*, a post-village of Centre co., abt. 100 m. W.N.W. of Harrisburg.

Mar'tha's, or MARTHA'S FURNACE, in *Illinois*, a village of Hardin co.

Mar'tha's Vine'yard, in *Massachusetts*, an island in the Atlantic Ocean, off the S. coast, separated from the mainland by Vineyard Sound; *area*, abt. 120 sq. m. It comprises a part of Duke's co. (*q. v.*)

Mar'thasville, in *Missouri*, a post-village of Warren co., abt. 65 m. E. by N. of Jeffersou City.

Martial, (*măr'shal,*) *a.* [Fr.; Lat. *martialis*, from *Mars, Martis.*] Military; pertaining or belonging to war; adapted for war; as, a *martial* appearance or display, *martial* preparations. — Warlike; brave; valorous; full of military spirit or ardor; given to war: as, a *martial* nation. — Partaking of the nature or spirit of war; belonging to an army or navy; as, *martial* law, a court-*martial.* — Having reference to iron, called *Mars* by the old alchemists.

Mar'tial, (MARCUS VALERIUS MARTIALIS,) a Latin epigrammatist, n. about 40 A. D., in the present Aragon in Spain. His poems, which consist of some 1,500 pieces, are interesting for their allusions to the persons and manners of the times, but abound with indelicacies. In the Delphine edition of 1680, these were omitted from the body of the work, and published all together at the end. *M.* went to Rome when about 20 years of age, and obtained the favor of Domitian. D. 104.

Martialize, (*mar'shal-īz,*) *v. a.* To cause to become warlike; as, to *martialize* a nation.

Mar'tial Law, *n.* [From Lat. *martialis*, pertaining to war.] This sentence, which has no definite legal meaning, is used to express the suspension of the ordinary, and the substitution of arbitrary tribunals for the trial of criminal and (if need be) civil cases, by the authority of the President, sanctioned by Congress, in consequence of rebellion, invasion, or insurrection. It is usually carried out by putting under the cognizance of courts-martial a great variety of subjects, which by ordinary military law do not appertain to them, to be tried in a summary way.

Mar'tially, *adv.* In a martial, military, or warlike manner.

Mar'tialness, *n.* State or quality of being martial or warlike.

Mar'tick, in *Pennsylvania*, a township of Lancaster co.

Mar'tickville, in *Pennsylvania*, a post-village of Lancaster co., about 8 m. S. of Lancaster.

Martigues, (Les,) (*mar-teeg',*) a town of France, dept. Bouches-du-Rhône, on an island in the channel between the lagoon of Berre and the Mediterranean, 18 m. W.N.W. of Marseilles. *Pop.* 9,000.

Mar'tin I., POPE, succeeded Theodore in 649, but was deposed by the Emperor, and banished, after suffering great indignities, to the Sarmatian Chersonese, where he died in 655, being afterwards numbered, for his sufferings, among the saints.

MARTIN II. succeeded John in 882, but died within 18 months of his election.

MARTIN III. ascended the papal chair on the death of Stephen IX., in 943, and died three years after.

MARTIN IV., (*Nicolas de la Brie,*) a Frenchman, succeeded Nicholas III. in 1281. Having been, from the time of his election, a devoted adherent of Charles of Anjou, he supported that monarch with all his influence, and even by the spiritual censures which he had at his command, in his effort to maintain French domination in Sicily; and it is to his use of the censures of the Church in that cause that many Catholic historians ascribe the decline and ultimate extinction of the authority in temporals which the Papacy had exercised under the distinguished pontiffs who preceded him. It is in his time that took place the memorable tragedy known as *Vêpres Siciliennes.* D. 1285.

MARTIN V., (*Otto Colonna,*) was elected after the abdication of Gregory XII., and the deposition of John XXIII. and Benedict XIII., his election finally extinguishing the great *Western Schism. M.* presided at the last sessions of the Council of Constance, and the Fathers having separated without discussing the questions of reform, at that period earnestly called for in the Church, *M.* undertook to call a new council for the purpose. The council was summoned accordingly, after several years, to meet at Siena, and ultimately assembled at Basel in 1431. *M.* D. in the same year.

Mar'tin, BON LOUIS HENRI, a French historian, B. in St. Quentin, 1810, has devoted his life to the publication of an *Histoire de France*, whose third edition, greatly enlarged (16 vols., 1855–1860), is the best and most complete work ever published on French history. Several parts of his great work have been honored with peculiar distinction. Henri *M.* having received the first Gobert prize of the Academy of Inscriptions for the volume devoted to religious wars, and the first Gobert prize from the French Academy, for the period of his history relating to the reign of Louis XIV. D. 1883.

Martin, JOHN, an English painter, B. in Northumberland, 1789. He evinced in early life so sincere a desire to become an artist, that he was apprenticed to a coachmaker for the purpose of studying herald-painting: but after a short time he was placed with Bonifaccio Musso, an enamel-painter. He went with his master to London in 1806, and obtained employment in the firm of Mr. C. Muss, and by great industry and perseverance soon gained that knowledge of perspective and architecture, which was so valuable to him in after-life. In 1812 he painted a large picture, *Sadak in Search of the Waters of Oblivion*, which obtained a place in the Royal Academy Exhibition, and for a period made him the most popular artist of his country. He produced a number of striking works; among the most attractive of these pictures are: *Belshazzar's Feast*, *The Seventh Plague*, *The Fall of Nineveh*, *The Eve of the Deluge*, and the *Destruction of Herculaneum.* D. 1854.

Martin, (St.,) was the son of heathen parents, and B. about 316, in Hungary. After embracing the Christian faith, his rise in ecclesiastical preferments was rapid, being in 374 elected bishop of Tours; through this and other dignities, he preserved the same simplicity of the monk, in manners as well as dress. He was the founder of the monastery of Marmoutier; and is considered, from his special labors in that direction, as the apostle of the Gauls. He is also reputed to be the author of a Confession of Faith in the doctrine of the Trinity. Many miracles are attributed to him. D. 397, or 400.

Martin, THEODORE, an English poet and critic, B. in Edinburgh, 1816. In 1846 he established himself at London in legal practice, and speedily made a figure in the literary world, as one of the authors (in conjunction with Prof. Aytoun, *q. v.*) of the famous *Bon Gaultier Ballads*, and by his splendid translations into English verse of the poems, ballads, and dramas of Göthe and Oehlenschläger. *M.*'s translation of the *Odes of Horace*, with notes, appeared in 1860, and was immediately republished in the U. States; his translation of Catullus, in 1861. His fine renderings into English verse of Dante's *Vita Nuova*, and Göthe's *Faust*, were given to the world in 1862. Mr. *M.* is married to Miss Helen Faucit, the

celebrated tragedienne. He was knighted in 1880, and in the same year was elected Lord Rector of St. Andrew's University.

Mar'tin, *n.* [Fr. *martinet.*] (*Zoöl.*) A genus of birds of the Swallow family. The best known of the American species is the Purple-martin, *Progne purpurea*, the largest of the swallows. It arrives in February at New Orleans, and in Boston towards the end of April. The color of the male is a rich deep purplish-blue, with the wings and tale brownish-black; the female is of a more dusky appearance, and has the under surface of the body varied with yellowish stains. The Purple-martin feeds on the larger-winged insects, as wasps, bees, &c. Their flight is graceful, easy, and swift; they are expert in catching their insect prey, in bathing and drinking while on the wing, and in performing aërial evolutions to the annoyance of their bird enemies; they are very bold, and hesitate not to attack crows and hawks, which, from their superior powers of flight, they drive away; even the fierce little king-bird (sometimes called field-martin), with similar fighting propensities, has to yield to the strong and swift martin. They perch easily upon trees, and, notwithstanding the shortness of their legs, walk well upon the ground. It builds its nest of sticks and grass about 10 days after its arrival, and lays from 4 to 6 eggs. Audubon the naturalist observes of this bird, with regard to the estimation in which it is held: "I had a large and commodious box built and fixed on a pole for the reception of the martins, in an inclosure near my house, where, for some years, several pairs had

Fig. 1719. — THE PURPLE MARTIN.

reared their young. The erection of such houses is a general practice, the Purple-martin being considered as a privileged pilgrim, and the harbinger of spring."

Mar'tin, in *Indiana*, a S.S.W. co.; *area*, abt. 340 sq. m. *Rivers.* East Fork of White River, Lick, and other creeks. *Surface*, hilly; *soil*, fertile. *Min.* Coal and iron. *Cap.* West Shoals. *Pop.* (1890) 13,973.

Mar'tin, in *Michigan*, a prosperous post-township of Allegan co.

Mar'tin, in *Minnesota*, a S. co., adjoining Iowa; *area*, about 720 sq. m. *Rivers.* Cbanyuska river, and some smaller streams, affluents of the Blue Earth river, besides several lakes. *Surface*, level; *soil*, fertile. *Cap.* Fairmount. *Pop.* (1895) 13,981.

Mar'tin, in *North Carolina*, an E. co.; *area*, about 570 sq. m. *Rivers.* Roanoke and Tar rivers, besides several smaller streams. *Surface*, level; *soil*, in some parts fertile. *Cap.* Williamston. *Pop.* (1890) 15,221.

Mar'tindale Creek, in *Indiana*, enters Whitewater river from Wayne co.

Mar'tindale Depot, in *New York*, a post-village of Columbia co., about 35 m. S. by E. of Albany.

Martineau (*mär-tin-ō'*), HARRIET, an English author and political economist, was born in 1802, and descended from an old Huguenot family. Miss *M.* early entered upon a literary career, and became a prolific and popular writer. Besides a number of educational and devotional works of smaller pretensions, Miss *M.* was the author of *Traditions of Palestine* (1831); *Illustrations of Taxation*, and *Poor Laws and Paupers* (1832); *Society in America* (1834); *Retrospect of Western Travel* (1838); *Deerbrook*, a novel (1839); and *The Hour and the Man* (1840); *Forest and Game-law Tales* (1844); *Eastern Life, Past and Present* (1848); *The Laws of Man's Nature and Development* (1851); a condensed version of Comte's *Positive Philosophy* (1853). *History of England during the Thirty Years' Peace; British India; Health, Husbandry, and Handicraft*, &c., form her principal later works. In 1869 appeared from her pen *Biographical Sketches*, being her reminiscences of some of the most distinguished characters of the last half-century. D. 1876.

Martinet', *n.* [Fr.] A precise, punctilious, or strict disciplinarian; — said to be so called from a Colonel Martinet, of the army of Louis XIV. of France, who was notorious for his rigorous conduct, and who invented a peculiar whip, called by his name, for the purpose of military punishment.

Martinet', Mart'net, *n.* [Fr. *martinet.*] (*Naut.*) A small line fastened to the leech of a ship's sail, to bring that part of the leech lying next to the yard-arm close to the yard, preparatory to the sail being furled.

Mar'tinetism, *n.* Stringent application of discipline.

Martinet'ta, in *Wisconsin*, a township of Brown co.

Martinez, (*mar-tee'nez,*) in *California*, a town, cap. of Contra Costa county, about 25 miles N.E. of San Francisco co.

Martinez de la Ro'sa, FRANCISCO, a Spanish statesman, diplomatist, and man of letters, b. in Granada, 1789. After taking an active part in the Peninsular struggle against Napoleon, he went to England to study the principles of constitutional government, and on his return in 1813 became a member of the Cortes. After the restoration of Ferdinand, in the following year, *M.* was imprisoned for 6 years on account of his liberal opinions. The revolution of 1820 setting him at liberty, he became Secretary of State, and after the downfall of the Constitution through French interference, retired to Paris, and there engaged in literary pursuits. After the French revolution of 1830, *M.* returned to Spain, and became premier, when he established a new constitution, the famous *estatuto real.* In 1840 he went as ambassador to Paris, and in 1842–3, to Rome. In 1851, returning home, he was appointed president of the senate, and, in 1858, president of the council of state. D. 1862. *M.* was the author of many highly-esteemed novels, lyrical pieces, and dramas, the most popular of the latter being the *Conspiracy of Venice.* He also wrote a review of the French revolutionary period entitled *Espiritu del Siglo*, 10 vols., Madrid, 1835–41.

Mar'tingale, Mar'tingal, *n.* [Fr. *martingale;* Sp. *martingala*, a martingale, an old kind of breeches.] (*Manuf.*) A strap or thong fastened to the girth under a horse's belly, and, at the other end, to the musrole passing between the fore-legs.

(*Naut.*) (Sometimes called *dolphin-striker.*) A short vertical spar depending from the bowsprit, used for reeving the stays.

Martinique, (*mar-tin-eek'.*) [Sp. *Martinico.*] The most N. of the Windward group of the Caribbee Islands, W. Indies, belonging to France. It is abt. 30 m. S. by E. of Dominica, and 20 m. N. of St. Lucia. Lat. (of Mount Pelee) 14° 48′ N. Lon. 61° 10′ W. *Area*, about 380 sq. m. The surface is much diversified with mountains and valleys, the latter of which are exceedingly fertile, and produce sugar, coffee, cocoa, and cotton, besides the usual tropical fruits. Fort de France, on the west coast, a town of about 15,000 inhabitants, is the capital. Farther north lies St. Pierre, the centre of commerce, with, in 1901, 30,000 inhabitants. *M.* has a governor and privy council of 7 members, and a colonial council of 30 members. It was discovered by Columbus in 1493, and settled by France in 1635. It has been a French colony ever since, except during three intervals (1761–63, 1794–1802, 1809–14), when it was held by the British. Slavery was abolished in 1848. *M.* is of volcanic origin, and possesses an active volcano, Mount Pelee, 4,430 feet high, near whose foot, a few miles from the crater, lies St. Pierre. This mountain was in eruption in 1856, and had a terrible eruption in May, 1902. On the morning of the 8th it broke into explosive violence, hurling out mud, dust, and burning

Fig. 1720.
MARTINIQUE DURING THE ENGLISH ATTACK IN 1794.

gases in vast volumes, which were driven through St. Pierre with the force of a tornado, destroying its buildings and killing by asphyxiation, almost in an instant, its 30,000 inhabitants. Of the ships in the harbor, only one escaped, and the ruins of the city were buried deep in volcanic dust, which the mountain continued to throw out. The disaster was one of the greatest due to volcanic action in all history.

Mar'tinmas, *n.* [*Martin* and *mass.*] (*Eccl.*) The feast of St. Martin, held on the 11th November. (Sometimes written *martlemas.*)

Martino, (*mar-tee'no,*) a village of Brazil, abt. 170 m. W. of Natal; *pop.* 2,000.

Mar'tinsburg, in *Illinois*, a post-village and township, the former cap. of Pike co., about 45 m. S.E. of Quincy.

Mar'tinsburg, in *Indiana*, a post-town of Washington co., about 12 m. S.S.E. of Salem.

Mar'tinsburg, in *New York*, a post-township of Lewis co., about 130 m. N.W. of Albany. *Pop.* (1897) 2,140.

Mar'tinsburg, in *Ohio*, a post-village of Knox co., about 40 m. E.N.E. of Columbus.

Mar'tinsburg, in *Pennsylvania*, a post-borough of Blair co., abt. 112 m. W. of Harrisburg. *Pop.* (1897) 660. —An unimportant village of Butler co., about 18 m. N.N.E. of Butler.

Mar'tinsburg, in *West Virginia*, an important town, cap. of Berkeley co., on B. & O. and Cumb. Vall. R.Rs., 100 m. W. of Baltimore, Md. Here are extensive mills, railroad repair shops, besides other industries. *Pop.* (1897) about 11,000.

Martin's Creek, in *Pennsylvania*, flows into the Delaware river from Northampton co. —A post-village of Northampton co. *Pop.* (1897) 360.

Mar'tinsville, in *Illinois*, a post-village of Clarke co., about 85 m. E. by N. of Vandalia. *Pop.* (1897) 850.

Mar'tinsville, in *Indiana*, a city, cap. of Morgan co., about 31 m. S.S.W. of Indianapolis. *Pop.* (1897) 3,090.

Mar'tinsville, in *New York*, a post-village of Niagara co., about 15 m. N. of Buffalo.

Mar'tinsville, in *Ohio*, a village of Belmont co., on the Ohio river, about 2 m. above Wheeling, W. Virginia. —A post-vill. of Clinton co., about 10 m. S. of Wilmington.

Mar'tinsville, in *Pennsylvania*, a post-village of Lancaster co.

Mar'tinsville, in *Virginia*, a post-village, cap. of Henry co., about 207 m. W.S.W. of Richmond.

Mar'tintown, a village of Glengarry co., prov. of Ontario, about 75 m. S.W. of Montreal.

Martin Vas Islands, a cluster of rocky islets in the Atlantic Ocean, abt. 940 m. E.N.E. of Rio de Janeiro.

Martirios, (*mar-tee're-oce,*) a village of Brazil, abt. 450 m. N.N.W. of Rio de Janeiro.

Mart'let, *n.* [From Fr. *martinet.*] A martinet, a kind of house-swallow.

(*Her.*) A fanciful bird, shaped like a martin or swallow, but depicted with short tufts of feathers in the place of legs. It is the difference or distinction of a fourth son.

Mart'ly, *a.* Resembling, or belonging to a mart. (R.)

Mart'net, *n.* (*Naut.*) See MARTINET.

Martos-y-Fuensanta, (*mar'tose-e-foo-uin-san'ta.*) a town of Spain, prov. of Jaen, 16 m. S.W. of the city of Jaen. It is much resorted to for its mineral waters. *Pop.* 12,000.

Mart'ville, in *New York*, a post-village of Cayuga co., abt. 175 m. W. by N. of Albany.

Martyn'ia, *n.* (*Bot.*) A genus of plants, ord. *Pedaliaceæ*, including the Unicorn Plant, *M. proboscidea*, native along rivers from Pennsylvania to Louisiana; stem 1 to 2

Fig. 1721. — MARTYNIA PROBOSCIDEA.

ft. long; leaves paler beneath; corolla pale, dull-yellow, very large, the limb nearly as broad as the leaves, spotted with brownish-purple. It is a hardy annual plant of strong growth, with curious seed-pods, very highly prized for pickling. They should be used when tender — about half grown.

Martyr, (*mar'tur,*) *n.* [Fr.; Sp. *martir;* It. *martire;* Gr. *martyr;* perhaps akin to Heb. *marè*, sight, vision; from *raa*, to see.] One who suffers death or persecution on account of his religious belief. — One who, for the sake of a great cause or ruling principle, makes sacrifice of life, estate, or worldly station.

(*Eccl. Hist.*) In the early Church, many Christians suffered death at the hands of the Romans, bearing witness to the truth of Christianity with their blood. Many of these underwent, with astonishing fortitude, the most cruel tortures, and doubtless in this way contributed greatly to the spread of Christianity. Those who suffer persecution on account of their faith, but short of death, were called *confessors.* The martyrs were supposed to enjoy very peculiar privileges. According to some, they passed at once to the full enjoyment of heaven, for which others had to wait till the day of judgment. Martyrdom was thought so meritorious that it was called the second baptism, or baptism in blood; and in any case in which a catechumen was apprehended and slain for the name of Christ before he could be admitted into the Church by baptism, his martyrdom was deemed sufficient to answer all the purposes of that sacrament. The day of martyrdom, as being held to be the day of the martyrs' entering into eternal life, is called, by the Roman Catholic Church, *natal* or *birth-day*, and as such is celebrated with peculiar honor, and with special religious services. Their bodies, clothes, books, and the other objects which they had possessed are honored as *relics*, and their tombs are visited for the purpose of asking their intercession. Stephen, the proto-martyr, was stoned in Jerusalem (*Acts* vii. 58–60) in May, 31; Polycarp, the last of the Apostolic Fathers, suffered death in 169. Eusebius, who wrote in the beginning of the 4th century, is the first writer who gives an account of the early martyrs.

—*v. a.* To sacrifice to death for adherence to religious faith, or any great cause which one believes to be the truth; to martyrize. — To torment; to torture; to persecute, with acute mental or bodily pain.

"*Martyred* with the gout." — *Pope.*

Mar'tyrdom, *n.* The doom or death of a martyr; the suffering of violent death on account of adherence to religious faith; loyalty, or devotion to any great principle of truth or belief.

Martyriza'tion, *n.* Act of martyring; state of martyrdom; torment; torture.

Mar'tyrize, *v. a.* [L. Lat. *martyrizare.*] To cause to

suffer martyrdom; to make a martyr of; as, "*martyrized* society." — *E. B. Browning.*

Mar'tyrly, *adv.* After the manner of a martyr.

Martyrolog'ic, Martyrolog'ical, *a.* Relating, or pertaining to martyrology; registered in a catalogue or book of martyrs.

Martyrol'ogist, *n.* A writer of martyrology, or record of martyrs.

Martyrol'ogy, *n.* [Gr. *martyr*, and *logos*, a discourse.] (*Eccl. Hist.*) A catalogue or list of those who have suffered martyrdom in the cause of Christ, with an account of their lives and sufferings. The *M.* of Eusebius was celebrated in the early Church, and was translated into Latin by Jerome; but it is now lost. The so-called *Roman M.* is designed for the entire Church, and was published by authority of Gregory XIII., with a critical commentary by the celebrated Cardinal Baronius in 1586. A still more critical edition was issued by the learned Jesuit, Herbert Rosweid.

Maru'ta, *n.* (*Bot.*) A genus of plants, ord. *Asteraceæ*. They are European herbs, well alternate, much divided leaves. The May-weed, *M. cotula*, is an ill-scented plant, naturalized in all waste places, especially by roadsides, in patches of great extent, presenting almost a uniform whitish surface when in blossom.

Marvao, (*mar-vowng'*,) a town of Brazil, about 150 m. N.E. of Ceiras; *pop.* 4,000.

Mar'vel, *n.* [Fr. *merveille*; It. *maraviglia*, from Lat. *mirabilis* — *miror*, to look on with wonder; akin to Heb. *marĕ*, vision, from *rāā*, to see.] A wonder; a miracle; a prodigy; that which enchains the attention, or excites wonder, admiration, astonishment, or unqualified surprise. — Wonder; astonishment; admiration, accompanied with awe.

— *v. n.* To wonder; to feel unqualified amazement or astonishment, mingled with admiration.

"Harry, I only *marvel* where thou spendest thy time."—*Shaks.*

Mar'vel, in *Missouri*, a post-village of Bates co., about 150 m. W. by S. of Jefferson City.

Mar'vell, Andrew, an English patriot and publicist, b. at Hull, 1620, and educated at Cambridge University. After spending several years in foreign travels, he was appointed secretary of embassy at Constantinople, and after his return to England, in 1657, became secretary to the poet Milton. After the Restoration, he represented his native town in Parliament, and soon became distinguished as the most disinterested and incorruptible man of his day. As a political writer, and as a poet and satirist, his merits were of the highest order. Charles II. delighted in his wit and conversation, although obnoxious to the government, by reason of his outspoken denunciation of political chicanery and jobbery. The latter, indeed, sought to make an ally of the opponent it feared; but *M.* steadily refused to sacrifice his personal and political integrity, and on one occasion being sent a present of £1,000, "as a mark of the king's private esteem," he rejected the gift without hesitation, although obliged, after the envoy's departure, to send to a friend for the loan of a guinea. "Honest Andrew Marvell" d. in 1678.

Mar'vellous, *a.* [Fr. *merveilleux*.] Causing wonder, or a great degree of surprise; wonderful; amaziag; strange; astonishing. — Surpassing credit or belief; incredible; having the appearance of something superhuman or preternatural; as, a *marvellous* story.

The marvellous. (*Rhet.*) That which is characterized by occult or preternatural powers or qualities; — correlative to *the probable*.

Mar'vellously, *adv.* Wonderfully; strangely; in a manner to excite wonder or surprise.

Mar'vellousness, *n.* Quality of being marvellous; wonderfulness; strangeness.

Mar'vel of Peru, *n.* (*Bot.*) See Mirabilis.

Mar'vin, in *New York*, a post-village of Chautauqua co., abt. 280 m. W. by S. of Albany.

Mar'vins, in *Iowa*, a village of Adair co., about 170 m. W.S.W. of Iowa city.

Mar'war, Joudpoor, or Joodpoor, a State of N. Hindostan, tributary to the British, between Lat. 24° and 28° N., and Lon. 70° and 75° E.; *area*, 34,132 sq. m. Marwar may be taken as the type of the old Rajpoot States of N.W. India. The country consists generally of open plains, the hills being almost confined to the S. The

Fig. 1722. — Marwar, or Joodpoor.

soil, almost everywhere watered by torrents and affluents of the Loonee, or Salt River, produces heavy crops of barley and other kinds of grain. The inhabitants are chiefly Rajpoots. Within the limits of *M.* there are several thousand towns and villages, many consisting of from 500 to 1,000 houses. *Pop.* 1,783,600. — Joodpoor, the cap. of *M* is 100 m. W.S.W. of Ajmeer; *pop.* 80,000.

Ma'ry, The Blessed Virgin, (Heb. *Miriam*,) called in the New Testament *The Mother of Jesus*, is held in high honor by all Christians, and her intercession is invoked with a higher religious worship and a firmer confidence than that of all the other saints, not only in the Roman Church, but in all the Christian Churches of the East — the Greek, the Syrian, the Coptic, the Abyssinian, and the Armenian. The incidents in her personal history recorded in Scripture are few in number, and chiefly refer to the Annunciation, and to her relations with our Lord. Many theological questions respecting the Virgin Mary have been raised among Christians of the various Churches, which would be quite out of place here. See, among other works, *Life of the Blessed Virgin Mary*, translated from the French of the Abbé Orsini, by Mrs. J. Sadlier (8vo., New York).

Mary, the mother of Mark the Evangelist. She had a house in Jerusalem, where the followers of Jesus were wont to convene. Hither Peter, when delivered from prison by the angel, came and knocked at the gate. (*Acts* xii. 12.)

Mary, the wife of Cleophas, and mother of James the Less and Joses, (*Matt.* xxvii. 56, 61; *Luke* xxiv. 10; *John* xix. 25.) This last passage leaves it uncertain whether this Mary was sister to Mary, our Lord's mother, or not. Some suppose that four persons are there named: Christ's mother, his mother's sister, Mary of Cleophas, and Salome. She believed early in Jesus Christ, and accompanied him in some of his journeys, to minister to him; followed him to Calvary, and was with his mother at the foot of his cross. She was also present at his burial; prepared perfumes to embalm him, and was early at his sepulchre on the morning of his resurrection.

Mary, the sister of Lazarus, whom our Lord raised from the dead. Her character presents a beautiful companion-picture to that of her more active and impulsive sister Martha. Contemplative, confiding, and affectionate, it was like heaven to her to sit at the feet of her adored Teacher and Lord. (*Luke* x. 39–42.) The character of the two sisters was well contrasted at the supper in Bethany, after the resurrection of Lazarus. No service was too humble for Martha to render, and no offering too costly for Mary to pour out, in honor of their Saviour. (*John* xi., xii. 1–8.) This occurrence should not be confounded with that described in Luke vii. 37–50.

Mary, the Magdalene, or native of Magdala, on the sea of Galilee. She was foremost among the honorable women who ministered unto Christ and his disciples. (*Matt.* xxviii. 1–10; *Mark* xv. 47, xvi. 1–10; *Luke* xxiv. 1–12; *John* xx. 1, 2, 10–18.) She was especially devoted to Christ for his mercy in casting out from her seven evil spirits. (*Luke* viii. 2, 3.) She was early at his tomb; and lingering there when the disciples had retired, she was the first to throw herself at the feet of the risen Saviour. There is no evidence that she was ever a profligate.

Mary I., Queen of England, daughter of Henry VIII. and his first queen, Catherine of Aragon, was b. at Greenwich Palace, 1516. Being educated in the Roman Catholic faith, she early espoused her mother's cause during the proceedings for divorce then pending, and

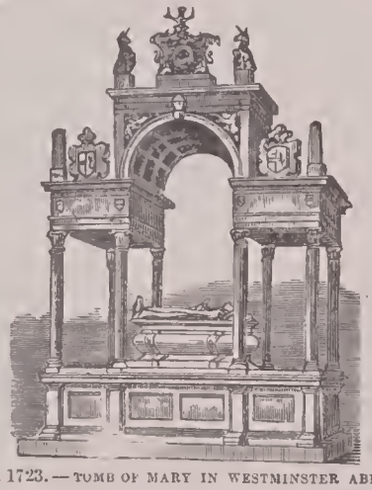


Fig. 1723. — Tomb of Mary in Westminster Abbey.

thereby became estranged from her father. After the death of queen Anne Boleyn, (*q. v.*,) in 1539, *M.* was induced to acknowledge the king as head of the Reformed Church of England, and yielded an outward conformity to the successive changes of religion during Henry's reign, thereby securing to herself the succession (after her brother), by Act of Parliament passed in 1514. During the reign of her half-brother, Edward VI., *M.* steadfastly refused to conform to the Protestant religion; which led to the attempt to transfer the succession to the crown to her cousin, Lady Jane Grey (*q. v.*), to her own exclusion. This proceeding failed, although Lady Jane was actually proclaimed on Edward's death in 1553, and *M.* entered London in triumph. She immediately set herself to the task of undoing the work of the preceding reign, and re-establishing the Roman Catholic faith. She liberated the imprisoned Roman Catholic prelates, substituting Archbishop Cranmer, Bishop Latimer, and other leading Protestant divines in their stead; sent Lady Jane Grey and her husband, Lord Guilford Dudley, to the block on a charge of treason; and on the instigation of Gardiner (*q. v.*), proclaimed the repeal of all the laws of Henry VIII. and Edward VI. for the maintenance of the Reformed religion. An insurrection, headed by Sir Thomas Wyat, having for its object the prevention of her union with Philip II. of Spain, was suppressed after considerable bloodshed, and the marriage took place at Winchester in 1554. The remainder of *M.*'s reign is but a record of relentless persecution of the adherents of the Reformation; her chief advisers being her husband, Philip, Cardinal Pole, and Bishop Gardiner. In 1557, war being renewed between France and Spain, and *M.* taking sides with Spain, Calais was lost to the English nation,—(after being held by them for about 250 years,)—a blow so keenly felt by *M.* that she is stated to have declared on her dying-bed that, "after I am dead, you will find Calais lying at my heart." *M.*, whose health had never been good, died in 1558, and was buried in Westminster Abbey.

Mary, Queen of Scots. See Mary Stuart.

Mary Ann, in *Ohio*, a township of Licking county.

Mary Ann Furnace, in *Pennsylvania*, a village of Cumberland co.

Ma'ryborough, a borough and town, cap. of Queen's co., Ireland, abt. 53 m. S.W. of Dublin; *pop.* 3,683.

Ma'ry-bud, *n.* (*Bot.*) The marigold.

"Twinkling *mary-buds*."—*Shaks.*

Ma'ryland, the most northern of the S. division of States forming the American Union, is situated between Lat. 38° and 39° 43′ N., and Lon. 75° 3′ and 79° 32′ W. from the meridian of Greenwich, or 2° 31′ W., and 1° 58′ E. from Washington. It is bounded on the N. by Pennsylvania, W. and S.W. by Virginia and W. Virginia, E. by Delaware, and S.E. by the Atlantic Ocean. Its outline is extremely irregular, except on the N. and E., where it is separated from the adjoining States of Pennsylvania and Delaware by Mason and Dixon's line. On the S., the Potomac River, with its circuitous course, is its limitary stream, and divides it from Virginia. The main body of the E. section of *M.* is bounded by the Delaware State-line; but a narrow strip, projecting eastward to the Atlantic, intrudes itself between that State and the Virginia portion of the Chesapeake peninsula. The extreme length of the State is 196 miles, and its greatest width 120 miles, its narrowest point is about 5 miles. Chesapeake Bay and the Susquehanna River divide *M.* into two parts. All lying E. of the Bay and River is called the Eastern Shore, and all W. of the Bay and River the Western Shore. Area of the latter is about double that of the former. The State, including its waters, covers about 11,124 square miles, but of land only 9,356 sq. miles. — *Gen. Desc.* That division known as the *tide-water section* of the State is separated by Chesapeake Bay into 2 parts, viz. — that known as the *Eastern Shore*, comprising portions of Harford and Baltimore cos., and the 5 most S. cos. W. of the Bay, with the exception of the narrow strip between Baltimore and Havre de Grace. The other division (*Western Shore*) of this section is in the general form of a triangle, whose base is the Baltimore and Washington Railroad, and its apex Point Lookout, the distance between these points being abt. 70 m. in a direct line; while the two sides of the triangle are formed by the Patapsco River and Chesapeake Bay, and the Potomac River on the W. The latter river is navigable along its entire border, in this section, for vessels of the largest class, varying in breadth, as it does, from about 7½ miles, at its embouchure, to about 1 mile at Washington, the head of the tidal stream. Numerous creeks, inlets, and small bays, branching both from this æstuary and from the still larger expanse of the Chesapeake, afford safe harbors and convenient landing-places. The Patuxent River, also emptying into Chesapeake Bay, traverses this section of the State, running parallel to the Potomac, with safe navigation for steamers and small craft for about 40 miles from its mouth. The W. division of the tide-water section embraces Anne Arundel, Prince George, Calvert, Charles, and St. Mary's cos., together with portions of those of Baltimore and Harford. This division has for its boundaries Chesapeake Bay on the W., and the Potomac on the E., and possesses a gently rolling surface, having neither abrupt nor broken elevations, nor any considerable area of level, flat land, or swamps. It is, also, both well wooded and amply supplied with excellent water. The E. shore of the tide-water division of *M.* actually includes that part of the State E. of the Chesapeake Bay, and S. of the Philadelphia, Wilmington, and Baltimore Railroad, and comprises all that portion of Cecil county S. of the above road, together with the cos. of Kent, Queen Anne, Caroline, Talbot, Dorchester, Somerset, and Worcester. Its E. frontier is Mason and Dixon's line, separating it from Delaware at its N. extremity, while its S limit is found in the Atlantic Ocean in Worcester co. With Chesapeake Bay skirting it on the W., it is bounded on the S. by the outlying segment of Virginia, forming a length of about 125 miles, with an average breadth of about 30. The cos. lying in this division are intersected by numerous rivers, small bays, and inlets, permitting, generally, a considerable navigable water-system. The principal

Fig. 1724. — Seal of the State.

MARYLAND AND DELAWARE

SCALE OF MILES

0 5 10 20 30

State Capital ⊛ County Seats ⊙

Places of 30,000 and over	BALTIMORE
" " 10,000 to 30 000	Cumberland
" " 5,000 to 10,000	Frederick
" " 3,000 to 5,000	Salisbury

Hammond's 8 x 11 Map of Maryland and Delaware
Copyright, 1904, by C.S Hammond & Co., N.Y.

Longitude 77° West from 76°30′ Greenwich

WESTERN PART OF MARYLAND

Same scale as large map

DELAWARE.

Land surface, Sq. m. 1,960
Water surface, Sq. m. 90
Pop. 1900..184,735
White....153,977
African ...30,697
Indian 9
Chinese.....51
Japanese 1
Native-born, 170,925
Foreign-born, 13,810
Males 94,158
Females...90,577

COUNTIES.

Kent .....G 2
Newcastle ....G 1
Sussex ..... G 3

CITIES-TOWNS

Pop.	Thousands.
76	Wilmington G 1
3	Newcastle .. G 1
3	Dover.... ..G 2
2	Milford .....H 3
2	Lewes.....H 3
2	Smyrna .... G 2
1	Laurel..... G 3
1	Seaford .... G 3
1	Georgetown H 3
1	Middletown G 2
1	Harrington G 3
1	Newark .... G 1
1	Delaware City G 1

Pop.	Hundreds.
9	Milton.....H 3
8	Clayton .... G 2
7	Frederica.. H 2
6	Newport.... G 1
6	Bridgeville. G 3
5	Odessa ..... G 2
5	Camden.... G 2
4	Delman.....G 4
4	Frankford..H 3
4	Felton .....G 2
3	Townsend.. G 2
3	Millsboro .. H 3
3	St. Georges. G 1
3	Port Penn...G 1
2	Cheswold .. G 2
1	Reboboth .. H 3
1	Kenton .....G 2
1	Dagsboro .. H 3

MARYLAND.

Land surface, Sq. m. 9,860
Water surface, Sq. m. 2,350
Pop 1900..1,188,044
White.... 952,424
African ..235,064
Indian 3
Chinese.....544
Japanese.....9
Native-born, 1,094,110
Foreign-born, 93,934
Males 589,275
Females..598,769

COUNTIES.

Allegbany.....A 1
Anne Arundel.E 2
Baltimore.....E 2
Calvert. .....E 3
Caroline... ...G 3
Carroll .....D 1
Cecil..... G 1
Charles.....D 3
Dorchester....F 4
Frederick.....D 2
Garrett.....B 4
Harford.....F 1
Howard.....E 2
Kent.....F 2
Montgomery ..D 2
Prince George E 3
Queen Anne... G 2
St. Mary.....E 4
Somerset..... G 4
Talbot.....F 3
Wasbington...C 1
Wicomico.... G 4
Worcester....H 4

CITIES-TOWNS

Pop.	Thousands.
508	Baltimore. E 2
17	Cumberland C 4
13	Hagerstown C 1
9	Frederick...D 2
8	Annapolis...F 3
5	Cambridge..F 3
5	Frostburg...B 4
4	Salisbury....G 4
3	Westminster E 1
3	Crisfield.....G 5
3	Easton.....F 3
3	Chestertown F 2
2	Elkton .....G 1
2	Bruuswick ..C 2
2	Laplata.....E 3
2	Pocomoke City G 4
2	Laurel ..... E 2
1	Westonport. B 4
1	Snow Hill.. H 4
1	Port Deposit F 1
1	Ellicott City. E 2
1	Oxford . ...F 3
1	Centerville.. F 2
1	Chesapeake. G 1
1	Oakland.....A 4
1	Rockville....D 2
1	Sharpsburg..C 2

Pop.	Hundreds.
9	Nortbeast....G 1
9	Belair.....F 1
9	Denton..... G 3
8	Tburmont...D 1
8	Princess Anne G 4
8	Emmitsburg D 1
8	Hancock ....B 1
7	Perryville ..F 1
7	Takoma .....E 3
7	Ridgely .....G 3
7	Boonsboro...C 1
6	Middletown. C 2
6	Taneytown . D 1
6	Union Bridge D 1
6	Delmar.. ...G 4
6	Greensboro..G 2
6	Manchester..E 1
6	Aberdeen....F 1
5	Funkstown . C 1
5	Gaitbersburg D2
5	Federalsburg G 3
5	Sharptown .G 3
4	Hampstead .E 1
4	Kensington. D 2
4	Clear Spr....C 1
4	Leonardtown E4
4	Smitbburg ..C 1
4	Cecilton.....G 2
4	Bowie.....E 3
4	New Windsor D 1
4	Keedysville .C 1
4	Secretary ...G 3
4	Millington ..G 2
3	Bloomington B4
3	Rising Sun..F 1
3	Queenstown.G 3
3	Church Hill.G 2
3	Ocean City..H 4
3	Newmarket D 2
3	Walkersville D 2
3	Girdletree..H 4
3	Mt. Airy .....D 2
2	Deerpark....B 4
2	E. Newmarket G 3
2	Hurlock .... G 3
2	Trappe .....F 3
2	Charlestown G 1
2	Bisbopville .H 4
2	Poolesville..D 2
2	Sudlersville.G 2
2	Crumpton...G 2
1	Hillsboro....G 3
1	Preston ... G 3
1	Garrett Park.D2
1	Grantsville..B 4
1	Brookeville. D 2
1	Laytonsville D 2

DISTRICT OF COLUMBIA.

Land surface, Sq. m. 60
Water surface, Sq. m. 10
Pop. 1900..278,718
Wbite....191,532
African....86,702
Indian.....22
Chinese.....455
Japanese..... 7
Native-born, 258,599
Foreign-born, 20,119
Males.....132,004
Females..146,714

CITIES-TOWNS

Pop.	Thousands.
218	Washington D3
14	Georgetown D3

streams are the Pocomoke, Choptank, Wye, Chester, and Sassafras rivers. The soil of this section is, for the most, highly fertile and alluvial.—The second grand section of this State is the *Blue Ridge division*, including all that part of *M.* between the tide-water division on the E., and the Mountain or Alleghany division on the W., extending entirely through the State from the Pennsylvania line on the N., to the Potomac separating it from Virginia on the S. Commencing at the head of tide-water of the streams emptying into Chesapeake Bay, it expands into a broad belt of country to the foot of the Alleghanies, becoming known thereby as a slope of the Alleghany range. This tract is formed principally of parallel plateaux of gently progressive elevation, with fertile valleys nestling between. Through these valleys, at nearly right angles, a riparian system, finding its many outlets in the Chesapeake, effectually drains the basin of the country, besides affording abundant water-power for manufacturing purposes. The hilly spurs, generally parallel with the ocean, culminate first in a well-defined crest known as Parr's Ridge, in the W. part of Montgomery, Howard, and in Carroll cos., whence a gradual slope extends to the Monocacy River, and meeting the Monocacy Valley, proceeds W. to the foot of Catoctin Mountain, between which and the South Mountain lie the beautiful dales known as the Middletown and Harbaugh's valleys. Between the Blue Ridge and the foot of the Alleghanies, in the W. part of Washington co., is the famous Hagerstown Valley. This section embraces the same varieties of soil, improved to an equal extent, as the best of the famous wheat-lands of Pennsylvania and N. Y. State, with all the advantages of a milder climate. It is a region, indisputably, of the highest salubrity, with the best class of soils for the production of all the staple cereals and vegetables, abounding in almost unlimited water-power, with numerous quarries of granite, marble, roofing-slats, soapstone, and other building-materials of capital quality, with large deposits of iron-ore, besides some good mines of copper and asbestos, and with chrome deposits, whose extent may supply all that is needed of the article in commerce. The soils in this region are of variable productiveness, and hence bear a corresponding ratio in value, being worth from $10 to $200 per acre, according to improved quality and convenient location. Formed as they are from the same kind of geologic strata as the soils of the corresponding region in the neighboring States N., they have the great advantage of being less influenced by rigor of climate than is the case in the latter States, and are, accordingly, far more valuable, as a longer period of time for profitable farm-labor is obtained, and a less consumption of domestic material required, than where there is a somewhat prolonged winter. These soils are all cheaply and readily improved, retain their amelioration with much tenacity, and have easy access to limestone—one of the permanent aids to fertility—at cheap rates. The climate is most favorable, the resources for agricultural industry largely diffused and easily attainable, and the means of transportation to and from its markets quite handy and convenient. Finally, the whole belt is as well timbered as it is watered.—The third, and last, territorial section, called the *Mountain* or *Alleghany Division*, (consisting of Alleghany co.,) embraces by far the largest area of any of the counties, forming the long and narrow segment of country impinged upon by W. Virginia on the S., and bounded on the N. by the Pennsylvanian border; presenting a maximum length of abt. 43, with, in its widest part, a breadth of abt. 30 m. The Potomac River, here barely navigable at high-water for flat-bottomed boats, forms its entire S. limit of demarcation. The surface of this division is much broken by spurs of the Alleghany chain which surround it. One of the most striking and curious features of this district is the *glades*—large, level, swampy bodies of land interspersed between the higher ridges of the mountains. This tract is sometimes for miles found as level as any of the marshes bordering the sea-board, and is covered with a luxuriant covering of wild grass without timber or dendritic growths of any kind. They accordingly form fine pasturage for large flocks of cattle, which are brought hither from Virginia, during the summer months, for feeding. The soil descends to the depth of many feet, contains a large proportion of vegetable matter, and, from this cause, is dark, thin, and chaffy, resembling very much the Black Gum Swamp soils of the lower cos. of the E. Shore. The Little Savage Mountain, an offset of the Alleghanies, divides the E.—which flow into the Potomac—from the W. waters, that find their outlet in the Ohio. The summits of the mountains range from 1,500 to 2,700 feet above high-water mark; and though the climatic temperature in summer is pleasant, the seasons are backward and the winters of long duration and great severity. The crops most generally grown are oats and buckwheat, rye, wheat, and Indian corn. The alluvial bottoms yield, principally, corn; buckwheat and rye are confined more especially to the higher elevations of the country, while wheat is almost exclusively restricted to the clay-limestone lands in the eastern part. *Min.* Geologically, the formations vary with the elevation of the surface. Alluvial deposits exist in the southern section on both sides of the bay, north of which the formation is Tertiary, while northwest of this lie metamorphic rocks. These are followed by a wide belt of Silurian and Devonian rocks, while at Cumberland Carboniferous strata begin. An abundant deposit of marl occurs in the Tertiary strata, while the metamorphic rocks are characterized by gneiss, granite, limestone, and iron. The Carboniferous strata are rich in veins of bituminous coal of the best quality. What is called the Eastern coal fields embraces an area of 120 sq. m. of coal formation, the average thickness of workable coal suitable for commercial use being approximately 11 feet. One remarkable vein in the George's creek district is 14 feet thick. The middle Allegbany coal field produces a fine compact article, approaching nearest in its composition to the Pittsburg coal. Large quantities of iron ore exist almost throughout the State and the bog-ore worked on the Eastern Shore yields, on an average, from 40 to 50 per cent. of metal. Copper mines are extensively worked in the middle district, and almost all the chrome used in the United States comes from the same location. Limestone is everywhere found in abundance, and marble is plentiful, the State yielding over 200 kinds of marble, some of which is equal to that of Italy. Large beds of clay exist near Baltimore, from which bricks of peculiar excellence are made, and there are in the same vicinity quarries of valuable soapstone. The other mineral products include sandstone, gneiss, kaolin, alum, green vitriol, &c.—*Agric. and Nat. Prod.* *M.* is, essentially, an agricultural State, having, on the whole, an exceedingly fertile soil, though patches of poor land occur here and there toward the coast. Large quantities of excellent wheat, of a variety supposed to be peculiar to this State, are raised, especially on the E. Shore; the crop, however, is somewhat precarious, and Indian corn is the main reliable product. Tobacco is another great staple, and is grown almost exclusively within a belt of country on the W. Shore. *M.* ranks as the seventh tobacco-growing State in the Union, as far as absolute quantity is concerned, while, *pro rata* to its population, it stands higher. The chief varieties of the cereals and pulse of the more N., and some common to the more S. States, are produced. Sorghum flourishes in great perfection. The cultivated grasses are clover, timothy, rye-grass, herd-grass—all growing luxuriantly; and there are, besides, many indigenous grasses which afford an almost constant good pasturage for cattle and other stock. Cotton is raised chiefly for domestic purposes; and hemp and flax are cultivated in the W. part of the State. Hemp, dairy-produce, hops, wine, bees-wax, maple-sugar, and molasses also form considerable items of field and farm production. The cultivation of the silk-worm obtains, but is comparatively as yet undeveloped. Fruits and vegetables of the choicest qualities yield a prolific harvest; of the pomological class, melons, cantaloupes, peaches, apples, pears, apricots, nectarines, various kinds of berries, grapes, plums, figs, and pomegranates afford an abundant supply from the earliest part of the season to the latest. Many of the forest trees, especially the oak, hickory and beech, by their abundant mass furnish copious food for hogs. The forests and fields, too, abound with many excellent wild fruits of the nut and and berry varieties. *M.* possessed in 1890, as per the census returns, 40,798 farms, containing 3,412,968 acres of improved, and 1,539,482 of unimproved land, the land and its improvements being valued at $175,058,550, the live stock at $19,194,320, and the estimated value of farm products $26,443,364. The principal grain product at date of the latest report was 16,531,205 bushels of corn, grown on 616,836 acres; 7,800,756 of wheat, on 458,868 acres; and 2,320,070 of oats, on 88,530 acres. The production of tobacco was 7,010,380 pounds, on 11,822 acres.—*Meterol.* The climate of the hilly part of *M.* is healthy and agreeable; but along the coast-line the summer heats are frequently oppressive, and fatal fevers often prevail; the mean summer temperature of the State may be stated as 73° 4′, while the mean annual temperature at Baltimore is about 53° Fahr. The winters are often cold, which weather is intensified and protracted particularly around Baltimore and Washington by the large bodies of fresh ice-water brought by the Potomac and Susquehanna from their mountain sources. This cold influence materially retards the advent of spring; thus, summer-fruits and spring-flowers are from 10 to 14 days earlier at Annapolis and parts adjacent than in the neighborhood of the before-mentioned cities, although not a half a degree S. of them.—*Zoöl.* The fauna of *M.* much resembles that of the surrounding States; the forests abound with game—pheasants, partridges, snipe, woodcocks, wild-pigeons, raccoons, opossum, deer, &c.; and, for sporting-needs, the red and gray fox. The feathered tribe is also represented by considerable numbers of wild geese, swans and turkeys, as well as woodcock, grouse, and quail (locally known as partridges). The estuaries of the Chesapeake are annually visited, on the approach of the cold season, by immense flocks of wild ducks, including various species, prominent among which is the favorite "canvas-back," which is found nowhere else in equal perfection. The fisheries are numerous and important, those of shad and herring in Chesapeake Bay and its tidal arms being unsurpassed in quantity and excellence by any others in the country. Rock-fish, sturgeon, mullet, tailor, trout, sunfish, &c., are caught in great numbers, besides molluscs and crustacea, in the shape of oysters, crabs, turtles, and that epicurean *bonne-bouche*, the diamond-back terrapin. Piscicultural industry, indeed, furnishes employment to millions of capital, and thousands of hands yearly. *M.* is estimated to possess some 370 sq. m. of oyster beds, producing annually about 20,000,000 bushels of oysters, and may, therefore, be said to divide with the neighboring State of Virginia the monopoly of the American oyster traffic.—*Com., Manufact., &c.* The ruling manufactures consist, principally, of coarse cotton and woollen fabrics, salt, hardware, earthenware, pig-cast-, and wrought-iron, leather, and bread-stuffs. The principal articles of export are flour, tobacco, salted and cured provisions, canned fruit and oysters; after these come lumber, iron, Indian corn, flax-seed, and beans. As regards foreign commerce, *M.* takes high place in the Union, and the shipments of grain from Baltimore are of great importance.—*Railroads and Inland Navigation.* The canals and railroads of *M.* are on a scale commensurate with its wealth and commercial importance. The Chesapeake and Ohio Canal, constructed to units Georgstown, D. C., with Pittsburg, on the head-waters of the Ohio, was completed in 1845. It is for the greater part from 60 to 70 feet in width, though in places it is contracted to 50 and expanded to 150 feet; its depth is 6 feet. The rise to Williamsport, 105 miles from Georgetown, is 353 feet, which is overcome by 44 locks, 100 feet long by 15 wide. There are in this distance 119 culverts and 5 aqueducts, one of which is 1,714 feet in length; culverts, aqueducts and locks are all built of solid stone masonry. There are in this State over 1,400 miles of railroad, irrespective of sectional lines; of these railways the Baltimore and Ohio was one of the most stupendous works of the kind ever undertaken on the American continent, and it has largely contributed to the advancement of M., and especially of its great seaport, Baltimore, in her commercial supremacy. In the solidity of its construction and in the beauty and novelty of its scenery, this road has no superior in this country. The policy of the Baltimore and Ohio Railroad has always been loyal to the trade of *M.*'s metropolitan city.—*Pol. Div.* The State is divided into 23 counties, as follows:

Eastern Shore.		*Western Shore.*	
Caroline,	Somerset,	Alleghany,	Garrett,
Cecil,	Talbot,	Anne Arundel,	Harford,
Dorchester,	Wicomico,	Baltimore,	Howard,
Kent,	Worcester.	Calvert,	Montgomery,
Queen Anne,		Carroll,	Prince George,
		Charles,	St. Mary's,
		Frederick,	Washington.

Principal Cities and Towns. Baltimore, Annapolis (State cap.), Havre de Grace, Port Tobacco, Elkton, Frederick, Ellicott's Mills, Chesapeake City, Chestertown, Easton, Hagerstown, Cambridge, Boonesboro, Cumberland, &c. —*Govt.* The government of this State is founded on

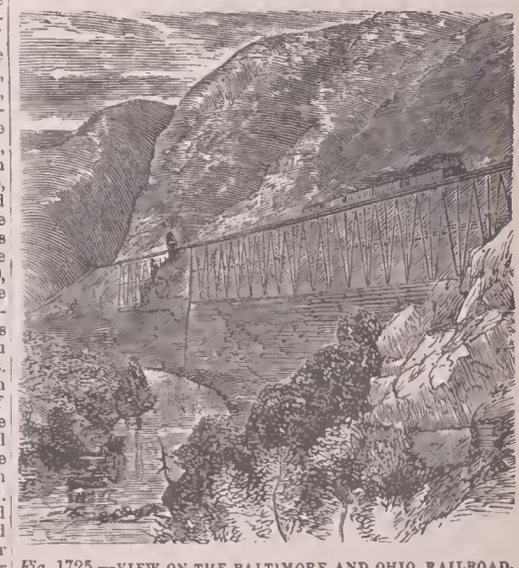


Fig. 1725.—VIEW ON THE BALTIMORE AND OHIO RAILROAD.

the Constitution of 1867. The legislative power is vested in a Senate of twenty-six members, elected for four years (one-half every second year), and a House of Delegates, consisting of 91 members, chosen every second year by the votes of all male citizens above 21 years of age, who have resided a year in the State, and six months in the co. for which the franchise is tendered. Members of both houses must possess a residential State qualification of three years, and a district one of twelve months, besides which the eligibility of senators does not attach under the age of 24, nor that of delegates under 21. The legislature convenes on the first Wednesday of each biennial January, and is directed in the Senate by a *president;* in the House by a *speaker*. *M.* is divided into three gubernatorial sections, east, north, and central, from each of which the governor is elected, in rotation, by a plurality of votes, for four years, and receives a salary of $3,600 per annum. The governor, as chief of the executive, appoints the secretary of state, and certain other officers, treasurer, comptroller, &c. The judiciary comprises a court of appeals, presided over by a chief justice and three puisne judges, elected by popular vote for a period of ten years or until 70 years of age; and of eight circuit courts, each under the direction of a judge, also elected for ten years. There are, in addition, local courts of minor importance. County attorneys are elected by the people for a term of four years, and all judicial and legal functionaries hold office only during good behavior.—*Finances.* The net State debt of *M.* in 1890 was $8,434,368, against which the State holds stocks and bonds in public works for a much larger amount. The municipal debts amounted to $32,847,264, of which about half was that of the city of Baltimore, whose net liabilities on Jan. 1, 1897, were $14,922,620.—*Religion and Education.* The Roman Catholic and Metho-

dist communions form the predominant religious element among the Marylanders. As regards education, *M.* has recently made a radical alteration in its system of public teaching, that of 1864 having been abolished, and a new and improved one substituted. The present law does away with the State superintendent and Board of Education, and transfers their duties to the trustees and professors of the State Normal School. It also gives every county control over its school system, by each county electing triennially its school commissioners, and each school district annually its own trustees. A State tax of 10 cents on the $100 is levied for the exclusive use of the schools, and each county is required to have a local tax to make up the amount required by the county. County examiners take the place of the old county superintendents. Separate taxes are authorized for the support of grammar schools. In 1894 the schools in operation throughout the State numbered 4,318, with an enrollment of 204,846 pupils, of whom about one-fifth are colored. Each county provides a high school or academy, which gives secondary instruction and trains pupils for college. Educational progress is, indeed, highly satisfactory since the adoption of the new system, and great results may be anticipated therefrom. The State possesses several large and important colleges, including Johns Hopkins University, Maryland University, and St. Mary's College, with a library of 20,000 volumes, and Baltimore and Loyola Colleges, all at Baltimore; St. John's College at Annapolis; Mount St. Mary's, at Emmetsburg, and Washington College, at Chestertown. Numerous private seminaries also exist. For the colored element of the population there are provided numerous well-conducted and well-attended schools, and the colored population of this State are advancing in the proper appreciation of educational training. At Baltimore there is a flourishing Normal School for persons of color, with a large average attendance. There is a school for the feeble-minded at Pikesville; a school for the deaf and dumb at Frederick; a school for the blind at Baltimore, and a school for colored blind children and deaf mutes in the same city, all supported by the State. At Catonsville is located an admirably managed asylum for the treatment of the insane.—*Hist.* The earliest settlement in *M.* occurred in 1631, in which year a party of English, from Virginia, under Capt. William Clayborne, established themselves on Kent Island, in Chesapeake Bay. The main colonization of this region, however, was made in 1634, by a body of English Roman Catholic cavaliers, under a charter granted to the 2d Lord Baltimore (*q. v.*) by Charles I., bearing date June 20, 1632. The province covered by the terms of this charter had been, to a certain extent, explored (four years previously) by Sir George Calvert, father of the grantee, and was denominated in the grant *Terra Mariæ*, or "Mary's Land," in honor of Henrietta Maria, queen of Charles I. The expedition, numbering about 200 persons of social position and fortune, under command of Leonard Calvert (*q. v.*), brother of the Lord-Proprietary, sailed from England, in 2 vessels, in Nov., 1633, landed on St. Clement's Island in March, 1634, and, two days afterwards, founded their maiden settlement at St. Mary's, on the mainland. Leonard Calvert was thereupon elected first governor of the new colony, and a House of Assembly established, in 1639, which, eleven years later, was divided into two houses,—the one consisting of members chosen by the Proprietary, and the other by the Freemen. Troubles arose, shortly after the formation of the govt., through the recalcitrant conduct of Clayborne and his settlers, who, refusing allegiance to the established constitution, were expelled the province. In 1642, fresh difficulties supervened from the introduction of the Puritan element into the province in the shape of a body of non-conformists, who had been exiled from Virginia. The latter, true to their natural instincts of bigotry and intolerance, soon manifested a spirit of insubordination toward the executive of their newly adopted country; Clayborne also returned from Virginia, and uniting with the malcontents, succeeded in temporarily subverting the governmental authority, and made themselves masters of the province in 1644. Two years later, however, Gov. Calvert returning at the head of a considerable military force, succeeded in reëstablishing his authority. In 1649 an Act passed the legislature decreeing perfect toleration for all religious denominations, and conferring upon the colony the noble title of "Land of the Sanctuary." The Puritans, however, who were at this time settled at Providence, still manifested their characteristic turbulence, so that, as a measure of conciliation, their settlement was, in 1650, formed into a distinct county, under the name of Anne Arundel, and to this territory Charles co. was shortly afterwards added. On the overthrow of the Royal authority in England, and the substitution of the Commonwealth and Puritan rule, the partisans of the latter, who had by this time obtained a considerable footing in the prov. of *M.*, demanded an instant recognition of the new form of government. The Proprietary and executive, however, proclaimed Charles II., but were compelled, in 1652, to abdicate their functions, which were usurped by commissioners dispatched from the Puritanical home government. In 1654 Lord Baltimore made a resolute attempt to restore his authority, and a civil war ensued, in which the Puritans were eventually victorious, in 1655. At length, after the restoration of Charles II., the power of the Proprietary was reinstated, and his brother, Philip Calvert, elected governor. From 1662 to 1665 the Hon. Charles Calvert held the gubernatorial position, being succeeded, on his coming into his hereditary rights as Lord-Proprietor, by Sir Thomas Noteley. In 1691 Sir Lionel Copley was appointed governor, and during his tenure of office removed the cap. to Providence, changing the name of the city to that of Annapolis. In 1714 the Hon. Benedict Calvert succeeded to his patrimonial heritage; and having been educated a Protestant, the authority of the Proprietary was restored in his person, after being dormant for 24 years, consequent upon the Roman Catholic disabilities accruing from the Revolution of 1688. In 1729 Baltimore was founded, and in 1745 the *Maryland Gazette*, the first journal printed in the prov., was published at Annapolis, maintaining its existence for 94 years afterwards. Frederick City was laid out in 1751, and the colony progressed rapidly in wealth and population. In 1774 the Stamp Act, and the Act levying a duty on tea, met with resolute and active opposition from the Marylanders, who, assembled in convention, abolished the Proprietary government, and substituted therefor a Committee of Public Safety. In 1776 a convention of the people adopted a Bill of Rights, and a Constitution (Aug. 14); in Feb. of the following year, the first elected legislature was convened at Annapolis, and on the 13th, Thomas Johnson, the first republican governor, was elected. During the revolutionary struggle which followed, the Marylanders bore a highly distinguished part, participating in nearly every battle of the war. During the campaign of 1812, *M.* suffered severely from the naval operations of the British; Havre de Grace, Fredericktown, and other places being plundered and burned. The militia of the State as vainly opposed the march of the English army to Washington in 1814. In the same year occurred the battles of Bladensburg and North Point; in the former of which the enemy was successful, while in the latter the British Gen. Ross was killed, and the Americans gained a slight advantage. An attack (Sept. 14–16) on Baltimore by the enemy's fleet was successfully repelled. At the outbreak of the Civil War, in 1861, the Marylanders were divided in sentiment, many of the people being in sympathy with the Confederates, though the State remained loyal to the Federal cause. During a series of Confederate invasions from Virginia during the protraction of the war, the State became the theater of important military operations and sanguinary engagements. *M.* is one of the few States of the Union that rejected the ratification of the 15th Amendment to the Constitution of the United States. In 1867, a new Constitution was adopted, making several important changes in the organic law of the State. In the year 1880, Baltimore celebrated its 150th anniversary with a week of festivities, and in 1884 the 250th anniversary of the landing of the colonists was celebrated. In 1891, a monument was erected to Leonard Calvert, the first governor, on the site of the old city of St. Mary's, the first capital of the State, of which scarcely a trace remains. *Pop.* (1900) 1,188,044.

Ma'ryland, in *Illinois*, a thriving post-township of Ogle co.

Ma'ryland, in *New York*, a post-village and township of Otsego co., about 65 m. W. by S. of Albany. *Pop.* (1897) 2,250.

Ma'rye's Hill, in *Virginia*, a locality of Spottsylvania co., in the vicinity of Fredericksburg, which during Gen. Burnside's attack on that town (Dec. 13, 1862) was held by a force of Confederates under Gen. Longstreet. Gen. French, aided by Gen. Hancock, attempted to carry the post by storm, but they were repulsed with a loss of nearly half of their men. Soon afterwards Gen. Hooker made a similar attempt, and was also driven back, leaving 2,013 men dead on the field. Gen. Howard's division then came to the assistance of Gens. French and Hancock, but met with similar ill-fortune. The whole afternoon had now been spent, to no other effect than the loss of over 5,000 Union soldiers, when Gen. Burnside, in spite of the advice, and even entreaty of many of his officers, declared that, "That crest must be taken tonight." Gen. Humphreys, therefore, with 4,000 men, followed in the fatal track of his predecessors, and was also repulsed, with a loss of 1,700 killed, and many wounded. The approach of darkness only ended the awful conflict. Subsequently, during the battle of Chancellorsville, *M's. H.* was taken by Gen. Sedgwick, May 3, 1863.

Ma'ryport, a seaport-town of England, co. of Cumberland, on the Solway Frith, close to the mouth of the Elleu, 25 m. S.W. of Carlisle. *Manuf.* Iron, glass, and salt. Ship-building is also carried on. It is a great resort for sea-bathing. *Pop.* 6,500.

Ma'rysburg, in *Minnesota*, a post-village of Le Sueur co., about 10 m. E.N.E. of Mankato.

Mary's Creek, in *Texas*, rises in Cook co., and enters Stewart's Fork of Trinity River in Tarrant co.

Ma'ry Stu'art, Queen of Scots, b. at Linlithgow Palace, 1542, was the daughter and only child of James V. of Scotland, by his queen, Mary of Lorraine. Her birth occurred at a gloomy period of Scottish history, the nation being in a state of turmoil, and, indeed, almost anarchy; the Scots having been defeated in several battles by the English, and the nobles (true to their natural proclivities)—while at fend and discord among themselves—combining in antagonism to the throne. James, dying of chagrin a few days after *M.'s* birth, is said to have uttered on his death-bed the words—in allusion to the Scottish crown—"It came wi' a lass, and 'twill gang wi' a lass." After his demise, the parliament made James, Earl of Arran—head of the great house of Hamilton, and heir-presumptive to the throne—regent of the kingdom. *M.* was crowned queen of Scotland, at Stirling, in 1543, and shortly afterwards Henry VIII. of England demanded her hand for his son (later, Edward VI.), with the politic view of uniting the two kingdoms by marriage. A treaty to this effect was accordingly made, but it shortly fell through, the French and Catholic party in Scotland triumphing over the English and Protestant party, and bringing about the young queen's betrothal to the Dauphin, son of Henry II. Upon this the English again made war upon Scotland, and defeated the Scots, with disastrous loss, at the battle of Pinkie, in 1547. *M.* was thereupon taken to the monastery of Inchmahome for protection from the invaders, and succeeded in sailing to France in 1548. Her arrival in that country was welcomed by the French court, at that period a compound

Fig. 1726.—Mary Stuart, when 17 years of age.

of learning and licentiousness, and *M.* was not slow to profit by the advantages which it afforded. George Buchanan (*q. v.*) taught her Latin; Ronsard, poetry. The marriage of the Dauphin with *M.* took place in 1558. On the death of Henry II., and her husband's accession to the throne as Francis II., *M.* became queen of France, a position which lasted not quite 17 months, her husband dying in Dec., 1560. Fresh suitors for her hand were speedily forthcoming; and *M.*, now coldly treated in France, where Catherine de Medicis, her enemy, reigned supreme, resolved to return to her native country. In Scotland, at this time, the Roman Catholic party had been overthrown, and the Protestants, aided by Elizabeth's forces, assumed the rule. By the treaty of Edinburgh, July 5 and 6, 1560, it had been provided, that the French should leave Scotland, and that the Scottish monarchs should cease to bear the arms, cognizance, and title of the English sovereigns. *M.* refused to ratify this treaty, and, accordingly, on applying to Elizabeth for a safe-conduct through England on her return home, was refused permission. She, notwithstanding, embarked at Calais in Aug., 1561, and safely arrived at Leith, after eluding the vigilance of the English cruisers. She found Scotland ruled by her (illegitimate) brother, James Stuart, Earl of Murray, one of the ablest and most unscrupulous men of that age, and a stanch upholder of the Reformed doctrines. Though unpalatable to *M.*, she for some time accepted the situation, and being wisely counselled by Murray, succeeded in pacifying the rebellious Gordons and other great Highland feudatories, and also in coming to a good understanding with Elizabeth. *M.'s* marriage becoming an object of national importance, Elizabeth desired her alliance with her heir-presumptive, the Earl of Arran; but to this, he being a Protestant, *M.* objected, preferring a union with the Spanish prince Don Carlos, her co-religionist. But this, however, the Scottish nation would by no means permit; and, accordingly, fresh candidates put forth their pretensions. The dukes of Nemours and Ferrara, the Archduke Charles, and Elizabeth's favorite, the great Earl of Leicester (*q. v.*), successively offered themselves, only to be rejected. *M.* finally made choice of her cousin, Henry Stuart, Lord Darnley, son of the Earl of Lennox, descended from the blood-royal of both Scotland and England. Darnley was a handsome, accomplished, dissipated youth, not particularly noteworthy for strength of character or liveliness of intellect. On July 20, 1565, Darnley was created *Duke of Albany*, and 9 days after the marriage was solemnized; Darnley being created, also, king-consort on the day preceding. Her brother, the Earl of Murray, utterly opposing this union, headed a rebellion against the Crown, but was defeated. Mary and her husband soon found that they had not been made for each other. Darnley's vices soon extinguished what little love the queen had ever felt toward him; while he, on his part, complained of the indiscreet (to use the mildest term) partiality expressed by his wife for one Rizzio, an Italian musician in her service. Believing that *M.* had dishonored him, Darnley determined to avenge his wrong by the murder of the minion; and accordingly he, in conjunction with several of the great Scottish nobles, burst into the queen's apartment in Holyrood Palace, where she was supping with Rizzio and others, March 9, 1566, and dragging the Italian from the queen's presence, dispatched him on the stairs. They next imprisoned *M.*; but she, effecting her escape, reconciled herself with Murray, and pursued her vengeance on Rizzio's murderers, excepting Darnley, with implacable fury. June 19th of the same year, her only child, afterwards James VI. of Scotland and James I. of England, was born. Shortly after this, her liaison with James Hepburn, Earl of Bothwell, (a true type of the great Scottish noble, handsome, accomplished, fierce and unscrupulous,) commenced. A plan was now entered into between the earls of Murray and Bothwell,

and other nobles, for the assassination of Darnley, then lying ill at Kirk-of-Field, a house near Edinburgh. It is not clear what part, if any, *M.* took in this conspiracy, the question of her complicity even at this day finding advocates both for and against. Certain it is, however, that the house containing the sick Darnley was blown up by gunpowder on the night of February 9, 1567, while the queen was attending a masquerade at Holyrood Palace. Public opinion at once denounced the queen as privy to this foul murder, a popular judgment which *M.* herself strengthened by showering honors and favors on Bothwell, one of the prominent actors in the tragedy. His trial was demanded and took place, but merely as a farce, the whole weight of influence of queen and government being employed in his behalf. April 24, while journeying from Stirling to Edinburgh, *M.* was seized by Bothwell, at the head of a strong body of retainers, and conveyed to his castle of Dunbar; but, being permitted to return to Edinburgh, she there created her lover *Duke of Orkney*, and married him, May 15, to the universal disgust and indignation of the whole nation. The great nobles at once formed a combination against the queen, supported by the burghers of the principal cities, and seized the castle of Edinburgh. June 15, the two armies met at Carberry Hill, where the royal troops at once surrendered. Bothwell fled, and the queen was taken to Lochleven Castle (*q. v.*), and there placed in confinement. On the 25th of the same month, she forcibly signed her abdication of the crown in favor of her infant son, with her brother, the Earl of Murray, as regent. Parliament had just previously passed an Act dethroning *M.*, and denouncing her as being privy to Darnley's murder. On the 9th of May, 1568, she succeeded in escaping from Lochleven, and assembling some adherents, encountered the regent Murray's army at Langside, near Glasgow, May 13, where she was utterly defeated, and her cause irretrievably lost. *M.* fled to England, and was at first considerately treated by Elizabeth; but her old spirit of intrigue leading her into various plots against that queen's government, and, in addition, seeking to marry Thomas Howard, Duke of Norfolk, the first subject of the English crown, Elizabeth committed her to prison. Her place of duress was frequently changed; but nearly through her entire term of confinement, lasting about 13 years, her chief custodian was Gilbert Talbot, Earl of Shrewsbury. It is believed that while in prison she contracted a secret marriage with the Duke of Norfolk, and that a child was born, resulting from the union. The Babington conspiracy against the government, and for the liberation of *M.*, determined her fate. She was removed to Fotheringay Castle, in Northamptonshire, Sept. 25, 1586, where a commission of 46 persons of high rank and eminence assembled to try her. *M.* was the object of both the fear and the hatred of the Reformers, and her death was asked by them through the ministers of Elizabeth, and through the Parliament; therefore, despite a skilful defence, *M.* was declared guilty of treason against the State, and condemned to death. Fruitless efforts were made by the Scottish and French governments to save her life. On the 8th of Feb., 1587, she was brought to the block, and died with a courage worthy of her ancient race. After the accession of her son, James I., to the English throne, 25 years afterwards, her remains were removed to Westminster Abbey.

Ma'rysville, in *California*, a city, cap. of Yuba co., about 100 m. N.N.E. of Benicia. Its fine location on the Yuba River, at the head of navigation, affords almost unsurpassed facilities for trade, as well as manufactories. It is well laid out, neatly and substantially built, and contains many handsome structures. *M.* was settled in 1849. *Manuf.* Machinery, flour, &c. *Pop.* (1897) 4,950.

Marysville, in *Illinois*, a village of Vermilion co., about 18 m. N.N.W. of Danville.

Marysville, in *Iowa*, a village of Benton co., about 40 m. N.W. by N. of Iowa city.

Marysville, in *Kansas*, a city, cap. of Marshall co., 40 m. S.E. of Fairbury, on the Un. Pac. R. R.; is the trade center of a fine farming region. *Pop.* (1895) 2,297

Marysville, in *Minnesota*, a village and township of Wright co., about 16 m. S.S.W. of Monticello.

Marysville, in *Ohio*, a post-village, cap. of Union co., about 30 m. N.W. of Columbus. *Pop.* (1897) 2,950.

Marysville, in *Pennsylvania*, a post-borough of Perry co., on Susquehanna river and Penna. R. R., 8 m. W. of Harrisburg. *Pop.* (1897) 1,280.

Marysville, in *Tennessee*, a post-village, cap. of Blount co., 18 m. S. by W. of Knoxville. *Pop.* (1897) 1,780.

Marysville, in *Virginia*, a post-village of Campbell co., about 115 m. S.W. by S. of Richmond.—A village, former cap. of Charlotte co., about 100 m. S.W. of Richmond.

Ma'ryville, in *Missouri*, a city, cap. of Nodaway co., about 45 m. N. of St. Joseph. *Pop.* (1897) 4,250.

Masaccio, Tommaso Guidi, (*ma-sach'e-o,*) one of the greatest Italian painters, b. in San Giovanni, between Florence and Arezzo, about 1402. He is believed to have studied under Masolino, and went while very young to Rome, where he painted in the church of San Clemente a remarkable series of frescoes, the finest of which represents St. Catherine and the doctors before Maxensius. In 1421 he was admitted into the guild of the Speziali at Florence. The greatest works of Masaccio are the famous frescoes in the Brancacci chapel of the Carmine, among which are the *Expulsion from Paradise; St. Peter's Sermon;* the *Tribute*, the grandest composition in the series; *St. Peter Baptizing;* and the *Resuscitation of the King's Son;* the last of which was partly painted by Filippino. Masaccio by his bold rejection of conventionalism, and his independent study of nature, gave a powerful impulse to the art of painting, and made an epoch in its progress. He introduced the same plastic boldness into painting which Donatello did into sculpture, and was a great master of perspective and color. A mystery hangs over his last days, but it is known that he d. at Rome about 1429.

Masaniello, (*ma-san-e-el'lo,*) the commonly received name of Tommaso Aniello, a fisherman of Naples, who headed the populace in their revolt against the Spanish viceroy, 1647, when only twenty-five years of age. His career lasted but nine days, in which time he had 150,000 men under his orders, and was elevated to sovereign authority. He was murdered by four assassins armed with arquebuses; and as the resistance he commenced never ceased till the Spanish yoke was broken, he has since been venerated as the liberator of his country.

Masar'dis, in *Maine*, a post-township of Aroostook co.

Masaya, a town of Nicaragua, Central America, at the foot of a volcano of the same name, abt. 40 m. N.W. of Nicaragua.

Masbate, (*mas-ba'tai,*) one of the Philippine Islands, lying S. of the island of Luzon. *Extent.* 70 m. long, with an average breadth of 20 m.

Mascag'nin, *n.* [Named after its discoverer, Paolo *Mascagni*, an Italian anatomist, b. 1732, d. 1815.] (*Min.*) A native hydrous sulphate of ammonia, found in the fissures of the lavas of Ætna, Vesuvius, and the Lipari Islands.

Masca'li, a town of Italy, in Sicily, at the E. base of Mount Ætna, 2 m. from the sea, and 10 m. S.W. of Taormina. It was formerly very flourishing, but is now very much decayed. *Pop.* 4,000.

Masca'ren'has, or Mascarens Isles, a collective name given to the islands of *Bourbon*, and of Isle-de-France or *Mauritius*. The island of Rodriquez, 360 m. further E., is sometimes reckoned as one of them.

Mascat', or **Muscat',** (Imaumat of,) an extensive and powerful state of E. Arabia, prov. of Oman, between Lat. 22° and 27° N., Lon 53° and 57° 50′ E. Its authority also extends over the S.E. coast nearly as far as Aden, and over parts of Persia on the Persian Gulf, and that part of S. Africa from the equator S. to Cape Delgado. The Imaun, or sovereign, has unrestricted power, possessing a standing army of 20,000 men, and a navy of 87 war-vessels, numbering 730 guns. The merchant-vessels number about 2,000 of 37,000 tons. *Pop.* 1,600,000.

Mascat', or Muscat', a seaport-town, cap. of the above state, about 96 m. N.W. of Cape Ras-el-had; Lat. 23° 38′ N., Lon. 58° 37′ 30″ E. It is walled around, and strongly fortified. The harbor which is commodious, is defended by forts. *M.* has a large trade with the British settlements of India, the Malay peninsula, the Red Sea, and the coast of Africa; also by caravans with the Arabs of the interior, and is resorted to as a sort of magazine for goods, from all parts of Persia and Arabia. The exports are chiefly drugs of every description, ivory, gums, hides, ostrich-feathers, &c. The principal imports are cotton, rice, sugar, coffee, timber, &c. It is also the centre of the pearl-trade of the Persian Gulf. *Pop.* 60,000.—*M.* was captured by Albuquerque in 1507, and held by the Portuguese until 1648, when the Arabs gained possession. A treaty of commerce and navigation was concluded with the United States at *M.* in 1833.

Mas'cle, *n.* (*Her.*) A bearing in the form of a lozenge perforated, and showing a narrow border; supposed to represent the meshes of a net.

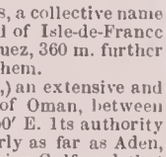


Fig. 1727.—Mascle.

Mas'comy River, in *New Hampshire*, flows into Mascomy Pond in Grafton co.

Masconta'h, (*mas-koo'tah,*) in *Illinois*, a post-village of St. Clair co., abt. 25 m. E.S.E. of St. Louis.

Mas'culine, *a.* [Fr. *masculin;* Lat. *masculinus*, from *masculus*, male, from *mas*, a male.] Male; not female.—Having the qualities of a man: strong; robust; resembling man; coarse; bold; brave. (*Gram.*) It denotes the gender appropriated to the male kind in any word, though not always expressing sex.

Mas'culinely, *adv.* Like a man; in a masculine manner.

Mas'culineness, Masculin'ity, *n.* The quality or state of being masculine; resemblance to man in figure or behavior.

Ma'ser, *n.* The same as Mazer.

Mash, *v. a.* [Ger. *meischen*, to mash, etir, mix; Lat. *misceo.*] To beat into a confused mass; to bruise; to crush by beating or pressure.—To mix, as malt and water together, in brewing.

—*n.* A mixture or mass of ingredients beaten or blended together in a promiscuous manner; a mixture for the food of domestic animals.—A mixture of ground malt and warm water.

Mash'ing-tub, *n.* A tub for holding or containing the mash; a mash-vat; a mash-tub.

Mash'y, *a.* Of the nature of a mash; produced by crushing or bruising.

Masinis'sa, king of Massilia, in Numidia, b. abt. 240 B. C., received a superior education at Carthage, and for some time attached himself to the Carthaginian arms. Leaving his father's army, he routed Syphax, king of the Massæsylians; and afterwards crossing over to Spain, he gallantly fought with the Carthaginian generals, the Numidian horse greatly contributing to the final defeat of the brothers Cneius and Publius Scipio, until the arrival of the son of Publius, afterwards known as Scipio Africanus the elder, who, not less able as a diplomatist than as a general, obtained the defection of the young Numidian prince. *M.* became an ally of the Romans, to whom he remained faithful. Returning to Africa with Scipio, *M.*, conjointly with the Roman general Lælius, took Cirta, the capital of Syphax; Sophonisba, the beautiful daughter of Hasdrubal, became his captive, and soon his wife. Scipio, fearing the influence of Sophonisba, whose patriotism equalled her charms, over her new consort, disapproved the marriage, and asked the surrender of the Carthaginian woman as a captive of Rome. Unable to defend the freedom of his wife, *M.* sent her a cup of poison, which she drank without hesitation. *M.* contributed materially to the success of the battle of Zama, for which he was rewarded with the kingdom of Syphax, and part of the Carthaginian territory. D. 148 B. C.

Mask, *n.* [Fr. *masque;* It. *maschera;* Sp. and Port. *mascara*, a mask.] A sportive cover for the face; that which conceals the face indicrously, especially a cover with apertures for the eyes and mouth; a visor.—A festive entertainment of dancing or other diversions, in which the company all wear masks; a masquerade.—That which disguises; any pretence or subterfuge.

(*Hist.*) The kings and priests of Egypt wore, upon certain occasions, masks of papyrus, representing the heads of hawks, lions, and other birds and animals, and from them the knowledge of masks passed to the Greeks and Romans, by whom they were employed in dramatic exhibitions. The tragic masks of the Greek stage were frequently very beautiful; but in comedy a grotesque

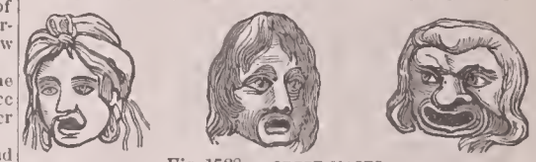


Fig. 1728.—Greek masks.

effect was produced by representing the mouth opened and the features distorted. The custom of the use of masks by public executioners is mentioned in 1295. They were first worn by French, and afterwards by English ladies toward the end of the 16th century; and in the 17th and 18th centuries they were worn by ladies on horseback, being suspended to the side by a string.

(*Arch.*) A kind of corbel, the shadow of which bears a close resemblance to the human face. It was common in works of the 13th and 14th centuries, and is also called *notch-head.*

—*v. a.* [Fr. *masquer.*] To cover, as the face with a mask; to conceal with a mask or visor.—To disguise; to cover; to hide.

—*v. n.* To revel; to play the fool in masquerade.—To be disguised in any way.

Mas'kallonge, *n.* (*Zoöl.*) See Muskallonge.

Masked, (*maskt,*) *a.* (*Bot.*) Same as Peasonate, *q. v.*

M. battery. (*Mil.*) A battery concealed from the enemy's view.

Mask'er, *n.* One who wears a mask; one who plays the fool at a masquerade.

Maskinonge, *n.* (*Zoöl.*) See Muskallonge.

Mas'lach, *n.* (*Med.*) A medicine much used by the Turks, and in which the opium enters. It is excitant.

Mas'lin, *n.* [Also *meslin, mislin, mastlin.*] A mixture composed of different materials, as wheat and rye.

Mas'lin, *a.* Composed of various kinds; as, *maslin* bread, made of wheat and rye.

Ma'son, *n.* [Fr. *maçon;* L. Lat. *macio, makkio, machio, machionis*, from Lat. *machina.*] A builder in stone or brick; one who prepares or cuts stone, and constructs the walls of buildings, &c.

—A member of the fraternity of Freemasons.

—*v. a.* To build in stone or brick.

Mason, in *Illinois*, a W. central co.; *area*, about 560 sq. m. *Rivers.* Illinois and Sangamon rivers, with numerous smaller streams. *Surface*, low and level; *soil*, very fertile. *Min.* Coal in abundance. *Cap.* Havana. *Pop.* (1890) 16,067.

—A post-village and township of Effingham co., about 39 m. S. by W. of Matoon. *Pop.* of village (1890) 425.

Mason, in *Iowa*, a township of Cerro Gordo co.

—A township of Taylor co.

Mason, in *Kentucky*, a N.E. co., adjoining Ohio; *area*, about 225 sq. m. *Rivers.* Ohio river, North Fork of Licking river, and Lee's and Limestone creeks. *Surface*, diversified. *Cap.* Maysville. *Pop.* (1890) 20,773.

Ma'son, in *Michigan*, a W. co., bordering on Lake Michigan; *area*, about 500 sq. m. *Rivers.* Notipeskago or Marquette, Great Sable and Little Sable rivers. *Surface*, somewhat uneven; *soil*, fertile. *Cap.* Ludington. *Pop.* (1894) 18,418.

—A township of Cass co.—A city, cap. of Ingham co., on Mich. Cent. R. R., 25 m. N. of Jackson; has important industries and a fine trade with the rich agricultural region surrounding. *Pop.* (1897) 1,870.

Mason, in *New Hampshire*, a post-village and township of Hillsborough co.

Mason, in *Ohio*, a township of Lawrence co.—A post-village of Warren co., about 90 m. S.W. of Columbus. *Pop.* (1897) 600.

Mason, in *Texas*, a S. central co.; *area*, about 960 sq. m. *Rivers.* Llano and San Saba rivers, besides many less important streams. *Surface*, diversified; *soil*, generally fertile. *Cap.* Mason. *Pop.* (1890) 5,180.

—A post-village, cap. of Mason co., 105 m. W.N.W. of Austin.

Mason, in *West Virginia*, a W. co., adjoining Ohio; *area*, about 440 sq. m. *Rivers.* Ohio and Kanawha rivers, besides numerous smaller streams. *Surface*, pleasantly diversified; *soil*, fertile. *Min.* Coal, iron, and salt. *Cap.* Point Pleasant. *Pop.* (1890) 22,863.

Mason'ic, *a.* Pertaining to the craft or mysteries of Freemasons.

Ma'sonry, *n.* [Fr. *maçonnerie.*] The science of combining and joining stones for the formation of walls, and other parts, in the construction of buildings. There are many different methods of constructing the walls of a building, which vary according to the materials employed, and also according to the date and the country. At first sight it may be thought that the best and cheapest mode of employing any given material would be soon discovered, and continued ever after in the same district; and this is true to a certain extent; nevertheless, it is certain that the mode of construction is often a very useful guide to the age of a building,—sometimes the best and safest guide. Among the earliest buildings on record are the tower of Babel and the walls of Babylon; these were built of sun-dried bricks, cemented with bitumen or pitch; they have nothing to correspond with them in modern times. Probably much earlier than Babylon, in order of date, are the Pyramids of Egypt. These are built of enormous masses of stones in the form of a parallelogram, and the stones are split off the rocks, not cut, and are put together without cement of any kind, arranged in alternate courses, being thrown in cross-wise, and supported by their own enormous weight only (Fig. 751). This kind of construction is called Cyclopean masonry, and is used in all early buildings in the East, where such rocks are found as admit of the stone being split in this manner, such as tufa and sandstone. The walls of the Etruscan cities are built in the same manner, wherever the same materials are found. The later buildings have the stones of smaller size, but the change is very gradual, and in the latest buildings of this class the stones are cut, not merely split, and the joints are then extremely fine. The early temples of Greece are, for the most part, built in this manner, as are the temples at Pæstum. In Rome the wall earliest in character is that called, by tradition, the wall of Romulus (Fig. 1729); this belongs to the earlier class of Etruscan or Cyclopean masonry. The next class are the walls of the *later* kings. These are of more regular character than the wall of Romulus, and agree pretty nearly with the temples of Pæstum. Simultaneously with these, in other districts, where the material is a hard stone that will not split, and cannot be easily cut into square blocks, such as the hill limestone, basaltic stones, and lava, we find a different kind of construction, popularly called Phœnician, and probably used by that people. In this the stones are much smaller, and often polygonal (Fig. 1730); these are closely fitted together, but without cement, and when the stones cannot be made to fit closely, small chippings of stone are wedged in between the joints to make all firm. This construction being the easiest and cheapest with these materials, is also continued at all periods, even to our own day. The next class is where *lime mortar* is used. The art of burning stone into lime and making mortar does not appear to have been invented, or at least brought into use by the Romans, until about three centuries before the Christian æra. It is not found in the temples of Greece, nor at Pæstum. The earliest dated example is the Emporium, on the bank of the Tiber (Fig. 1731), about two cent. before the Christian æra. When men understood the advantages of lime mortar, it was used in profusion, and even excess, and from that time forward the body of a Roman wall was almost universally built of concrete or rough stone *rubble*, well jointed together with lime mortar, the lime being always burnt on the spot, and used quite fresh, before the cooling and crystallization had taken place. These massive, concrete walls were faced in various ways, at first with small pieces of tufa, diamond-shaped on the surface, and wedge-shaped behind, which were driven into the concrete mass while it was wet, and held so firmly by the crystallization of the lime that it is almost impossible to separate the ornamental smooth surface of a Roman wall from the mass of rough concrete behind it. This mode of facing the wall occurs first in buildings of the time of Sylla, the Dictator. Bricks burnt in kilns probably came into use about that period. In the time of Augustus, brick was generally used sparingly, in thin layers, separating the tufa surface, called *opus reticulatum* (Fig. 1732), into panels, and this fashion was continued to the time of Hadrian. In the time of Tiberius the walls are generally faced entirely with the excellent brick-work called *opus lateritium* (Fig. 1733), and this style was imitated in Rome for many centuries. In the earlier brick-work, that is, in the first century of the Christian æra, the bricks are better than at any other period; they are large, flat, and thin, commonly two feet square and one inch thick, what we call *Roman tiles*, but used for building walls, and not merely for roofing or pavement. The facing tiles are commonly triangular, with the broad side outwards. The bricks gradually became thicker and smaller, until in the 4th century they are often only four to a foot on the surface of the wall, as in modern walls. Simultaneously with these brick walls (that is, walls *faced* with brick), stone walls continued to be used, and these are frequently built of the large blocks of stone, like the walls of the kings, but the material is travertine; that of the early walls in Rome is tufa only, and they either have mortar, or are wedged together with wooden wedges, or clamped with metal. In the arcade of the Aqueduct of Claudius, the arches are built of very large stones, which extend right through the width of the arcade from one side to the other, about fifteen feet. These large stones are well cut, and fitted closely, and held together by wooden tenons let into hollows cut for them in the surface of each stone. From the first century to the tenth, a gradual decay took place in the art of building, until the latter period, the masonry of which, it would appear, was barely able to stand at all. In the 11th century the great revival of the art of building began; but it began in the west, in rude imitations of the remains of Roman buildings left in Gaul and Britain; and Rome itself was the last place for the revival to reach. The buildings of the 11th century in France and England are generally very massive, and built of large stones, where they could be had, with wide joints of mortar, which are generally characteristic of this period. The walls being built with good fresh lime, like those of the earliest Roman, are equally lasting, and were commonly suffered to remain as what is called the *gross construction* of the building, even when the whole ornamentation of the building was entirely altered according to the fashion of the later periods, when it was required to adapt it to the fashion of the day. This change of outward appearance mainly took place in the 12th century. The different species of masonry now in use may be reduced to five:—1. Bond masonry, *la pierre de taille*, wherein the stones of each succeeding course are laid so that the joint that mounts and separates two stones always falls directly over the middle of the stone below. 2. Coursed masonry, called by the French masons *moëllon smillé*, in which the rubble masonry is inserted in joints whose bond is carefully broken, and which has all the courses of the same height. 3. Rubble masonry, known by the French masons as the ordinary *moëllon* masonry, which consists of rubble masonry, of small dimensions, laid without much reference to bond. 4. The masonry known in France by the name of *maçonnerie de libage*, which consists in the employment of large stones also, without regard to bond, in the horizontal direction at least. 5. The masonry of *brickwork*, where the bodies and projections of stone enclose square panels or spaces formed of brick.

Fig. 1729.—OPUS QUADRATUM.
(Wall of Romulus, on the Palatine, B. C. 750.)

Fig. 1730.—POLYGONAL. B. C. 500.

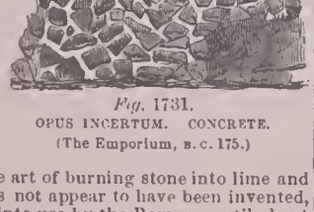


Fig. 1731.
OPUS INCERTUM. CONCRETE.
(The Emporium, B. C. 175.)

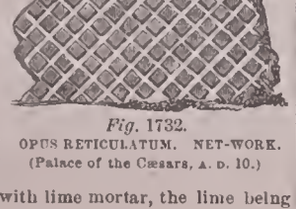


Fig. 1732.
OPUS RETICULATUM. NET-WORK.
(Palace of the Cæsars, A. D. 10.)

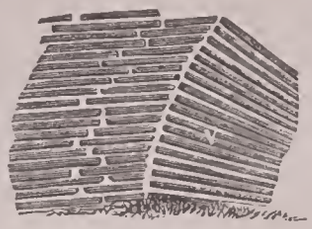


Fig. 1733.
OPUS LATERITIUM. BRICK-WORK.
(Arches of Nero, A. D. 60.)

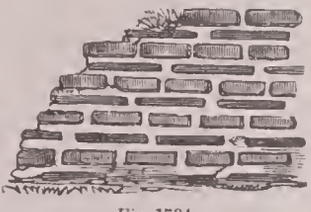


Fig. 1734.
OPERA DELLA DECADENZA.
THE DECADENCE.
(Circus of Maxentius, A. D. 310.)

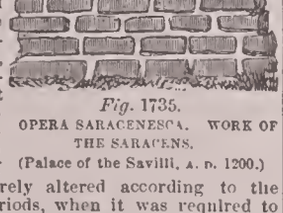


Fig. 1735.
OPERA SARACENESCA. WORK OF THE SARACENS.
(Palace of the Savelli, A. D. 1200.)

Ma'sonry, Free. See FREEMASONRY.

Ma'son City, in *Illinois*, a city of Mason co., on C. & A. and Ill. Cent. R.Rs., 30 m. N. of Springfield. *Pop.* (1897) 2,050.

Mason City, in *Iowa*, a post-village, cap. of Cerro Gordo co., on 3 R. R. lines, 82 m. N. of Marshalltown. *Pop.* (1895) 5,027.

Mason City, in *Nebraska*, a post-office of Custer co.

Mason Island, an island of Ireland, off the coast of Galway, about 15 m. S.E. of Clifden.

Mason River, in *Illinois*, enters the Illinois river in Grundy co.

Ma'sonsville, in *Connecticut*, a village of Windham co.

Ma'sontown, in *Pennsylvania*, a post-borough of Fayette co., about 195 m. W. by S. of Harrisburg.

Mason Village, in *New Hampshire*, a village of Hillsborough co.

Ma'sonville, in *Alabama*, a village of Lauderdale co., abt. 200 m. N.N.W. of Montgomery.

Ma'sonville, in *Iowa*, a post-village of Delaware co., abt. 54 m. W. of Dubuque.

Ma'sonville, in *New York*, a post-village and township of Delaware county, about 95 miles S.W. of Albany.

Maso'ra. [Heb. *Masorah.*] (*Jewish Theol.*) A critical work, containing remarks on the verses, words, letters, and vowel-points of the Hebrew text of the Bible. As the sacred books were originally written without any breaks or divisions into chapters or verses, or even words, the Jews found it necessary to establish a canon to fix and ascertain the reading of the Hebrew text. This rule, or canon, is designated *Masora*, or tradition, in which the verses, letters, words, &c., are all numbered; and by this means the slightest variations can be detected. The Jewish rabbis who drew up this work are styled *Masorites.*

Maso'via, a former palatinate in the interior of Poland, bounded N. and E. by the Vistula, S. by the palatinates of Sandomir and Kolisch, and W. by Prussian Poland. It is now named the province of Warsaw.

Masque, (*mask,*) *n.* [Fr.] (*Lit.*) A species of dramatic performance at one time greatly in vogue. It appears to have originated from the custom in processions and other solemn occasions of introducing personages in masks, in order to represent different characters. Many of these, even in the religious shows of Italy, were of a grotesque nature, and the performance was often mingled with buffoonery. On the introduction of the masque into this country, a dramatic character was added to the exhibition. During the progresses of Queen Elizabeth, monologues or dialogues in verse were often recited by masked performers; and in the reign of James I masques had assumed all the forms of dramatic compositions. With the exception of Milton, who wrote the magnificent masque of "Comus," the only classical English writer who devoted much labor and taste to this class of exhibition was Ben Jonson. His productions were acted at court, and the queen of James I. and Queen Henrietta Maria took part in some of them. During the reign of Charles I., the taste for masques died out, and never came into fashion again after the Commonwealth.

Masque de Fer. [Fr.] See MARCHIALI.

Masquerade, (*mask-er-aid',*) *n.* [It. *mascherata*; Fr. *mascarade.*] A species of amusement, in which persons of both sexes mask or disguise themselves, and engage in dancing, festivities, or miscellaneous conversation. Masquerades are said to have been the invention of Granacci, an Italian, who lived in the beginning of the 16th century. In Italy they were fashionable in 1512, and during the reign of Henry VIII. they were first introduced into England, in 1513; into the French court by Catherine de Medicis (1519–1589); and into Germany towards the end of the 17th century.

—*v. n.* To assemble in masks.

—To go in disguise.

—*v. a.* To conceal with masks; to disguise.

Masquerad'er, *n.* A person wearing a mask; one disguised.

Mass, *n.* [Fr. *masse*; Lat. *massa*, from Gr. *maza*, from *masso*, to squeeze or work with the hands.] A lump; a body of matter concreted, collected, or formed into a lump; a collective body of fluid matter; a heap; a great quantity collected. — Bulk; magnitude. — An assemblage. — A collection of particulars blended, confused, or indistinct; gross body of things considered collectively; the body; the bulk; the quantity of matter in any body.

—*v. a.* To bring together into masses; to assemble.

Mass, *n.* [Fr. *messe*; It. *messa*; Sp. *misa*; L. Lat. *missa*, from Lat. *mitto*, *missus*, to send — the people being dismissed at the end of the service.] (*Eccl.*) The office or prayers used in the Roman Catholic and Greek churches in the celebration of the Eucharist; or, according to the definition of the Roman Catholic theologians, the true sacrifice of the new law — an offering instituted by Christ, in which, by the consecration and consumption of his body and blood under the form of bread and wine, Christ himself is mystically slain and offered to God the Father, in recognition of his sovereign dominion. The prayers of the Mass are all in Latin in the Roman Catholic Church, and in ancient Greek in the Greek Church. Mass is performed entirely by the officiating priest, standing before the altar, and attended by a clerk, who says the responses. It consists of: 1. an *Introductory Prayer* composed of the 43st Psalm, together with the "general confession;" 2. the *Introit*, which is followed by the thrice-repeated petition, "Lord, have mercy," "Christ, have mercy," and the hymn, "Glory to God on high:" 3 the *Collect*, or public and joint prayers of priest and people, followed by a lesson either from the Epistles or some book of the Old Testament, and by

the Gradual; 4. the *Gospel*, which is followed by the Nicene Creed; 5. the *Offertory*, after the reading of which comes the preparatory offering of the bread and wine, and the washing of the priest's hands, in token of purity of heart, and the "secret," a prayer read in a low voice by the priest; 6. the *Preface*, concluding with the trisagion, or "thrice holy"—at which point, by the primitive use, the catechumens and penitents retired from the church; 7. the *Canon*, which is always the same, and which contains all the prayers connected with the consecration, the elevation, the breaking, and the communion of the Host and of the chalice, as also the commemorations both of the living and of the dead; 8. the *Communion*, which is a short scriptural prayer, usually appropriate to the particular festival; 9. the *Post-communion*, which, like the collect, was a joint prayer of priest and people, and is read or sung aloud; 10. the *Dismissal* with the benediction, and, finally, the first chapter of St. John's gospel. A great part of the above prayers are fixed, and form what is called the *ordo*, or *ordinary*, of the Mass. The rest, which is called the *proper of the Mass*, differs for different occasions; some masses being "of the season," as of Lent, Advent, Passion-tide, Quarter-time, &c.; others, of "Mysteries," as of the Nativity, the Circumcision, the Resurrection; others, again, of saints, as of an Apostle, a Martyr, or a Confessor; others, again, "votive," as "of the Passion," "of the Dead," "for Peace," &c. In all these various classes, as well as in the individual masses under each, the "proper" portions of the mass differ according to the occasion, and in some of them certain portions of the "ordinary," as the "glory to God on High," the "Gradual," or the "Nicene creed," are omitted.—A *high* or solemn mass is celebrated by a priest or prelate, attended by a deacon and subdeacon, and is sung by choristers, accompanied by the organ and other musical instruments; but the principal mass on Sundays and festivals is also called high mass, though often there are neither deacons, subdeacons, nor choristers present. A *low*, or ordinary mass, is one in which no part is sung, and at which the priest has no assistant but his clerk. The ordinary duration of a low mass is half an hour; the high mass is a long and pompous service. In the high or low masses, the service, as regards the form of prayers, is the same. Every member of the Roman Church is bound, under pain of mortal sin, by one of the precepts of the Church, to attend mass every Sunday, and on certain holidays called days of obligation, unless prevented by sickness or other grave impediment. In every parish church mass is said daily, and the priest must not break his fast from the previous midnight until he has said mass. The officiating priest is dressed in various-colored garments, according to the festival or ecclesiastical season.

Mas'sac, in *Illinois*, an extreme S. co., adjoining Kentucky; *area*, about 240 sq. m. *Rivers.* Ohio river, and several smaller streams. *Surface*, uneven; *soil*, fertile. *Min.* Coal and lead. *Cap.* Metropolis. *Pop.* 11,313.—A post-village of Massac co., on the Ohio river, a few miles from Metropolis.

Mas'sa-Carrara, a former duchy of central Italy, situated on the S. side of the Apennines, and inclosed on its respective frontier by Modena, Tuscany, Lucca, and the Mediterranean. It was given to the archduchess Maria Beatrice in 1814, and at her death, in 1829, reunited to Modena. It now forms a prov. of the new kingdom of Italy. *Pop.* 140,733.

Massachu'setts, one of the Eastern or New England States of the American Union, having Vermont, New Hampshire, and the Atlantic Ocean on the N.; the Atlantic Ocean on the E.; Connecticut, Rhode Island, and the Atlantic Ocean on the S.; and New York on the W. It lies between Lat. 41° 10′ and 42° 53′ N., and Lon. 69° 56′ and 73° 30′ W., and is about 160 m. in length from E. to W., with a width varying from 47 to 110 m.; *area*, 7,800 sq. m., or 4,992,000 acres, of which nearly one half is improved.—*Desc.* The surface of *M.* is much diversified. Generally speaking, the country ascends according to the distance inland, the slope being from W. to E. A sandy, and in some parts marshy plain, skirts the S.E. coast, extending several miles inland; this is abruptly succeeded by a hilly country, which occupies all the central parts of the State, and abounds in valleys of various extent, numerous rivers, and extensive pine barrens. The valley of the Connecticut River separates this region from a third, or mountainous region, which occupies the extreme W. part of the State. The coast presents a capacious, deep, and admirable bay, between Cape Ann and Cape Cod; from which the State derives its name.—*Rivers, &c.* Though well watered in every part, *M.* has no large rivers rising within its boundaries. The Connecticut River crosses the W. part of the State in an almost direct line from N. to S., through Franklin, Hampshire, and Hampden cos. The Merrimac enters the State in Middlesex co., and flows N.E. through Essex co. into the Atlantic Ocean. The other principal rivers are the Housatonic, Taunton, Blackstone, Deerfield, Nashua, Chicopee, and Westfield.—

Fig. 1736.—SEAL OF THE STATE.

Climate. The climate varies according to elevation; but is generally dry and healthy, except on the coast, where the winters are very severe, and the springs subject to chilling N.E. winds, very unfavorable to delicate lungs. The thermometer, it is said, in the plains, during summer, often exceeds 77°, and sometimes rises to 100° F.—*Min.* The rocks of *M.* are mostly primary, covered in some places with the older secondary formation. In many localities in Bristol and Plymouth cos. beds of anthracite exist, some of which, as at Mansfield, have been worked many years. They prove, however, of little or no value, the coal always being very friable, and the beds most irregular in their production. Gneiss, and talcose, and mica slate in broad belts, traverse the State from N. to S., from the E. portion to the waters of the Housatonic in Berkshire. Among these rocks are interspersed a few beds of metamorphic limestone, but no minerals or ores of value. Along the Connecticut River, the middle secondary red sandstone is met with in one or several belts, in the northern termination of this group of rocks, which is thence traced S. as far as Virginia. Trap-rocks are associated with it, and near the contact of the sandstone and trap, or of the sandstone and gneiss, are found veins of metallic ores, as of copper, lead, and zinc, none of which, however, have repaid the money spent in their exploration. The principal locality of these ores are at Southampton, Leverett, Montague, Whately, &c. Along the Housatonic, and on the high lands which traverse the State from N. to S., are the regions of the altered silurian sandstones and calcareous formations. This is the most important mineral region in the State, numerous beds of iron ore having been worked to advantage, and the quartz rocks affording in their disintegrated beds bodies of glass-sand of unusual purity.—*Soil. M.* is naturally the least fertile of the New England States, but by careful and laborious cultivation large tracts have been improved. In some of the central and W. districts, particularly in the valleys of the Connecticut and Housatonic rivers, the soil is deep and rich; but a large portion of the more elevated lands, and the long, sandy coast, do not repay the labor of the husbandman.—*Agriculture.* In no part of the Union have greater advances been made in agriculture, against greater disadvantages, and by sheer cultivation. Almost every acre of arable land has been improved, so that every variety of grain, fruit, and vegetables common to the temperate region thrives well, and yields an abundant return. The relative importance of the principal grain crops for 1880 and 1895 will appear from the following statement: Indian corn, 1880, 1,805,295 bushels, 53,314 acres; 1895, 1,847,224 bushels, 42,078 acres; oats, 1880, 645,169 bushels, 20,660 acres; 1895, 549,864 bushels, 15,274 acres; wheat, 1880, 15,818 bushels, 968 acres; 1895, no returns. This shows a decrease in cereal production which would be still greater had we taken a longer interval into account. Another of the larger products, that of tobacco, which was 5,369,436 lbs., on an acreage of 3,358, in 1880, had decreased to 3,449,655, on 2,323 acres, in 1895, showing a falling off in this crop also. In the last census year *M.* possessed 34,374 farms, embracing 1,657,024 acres of improved land, and 1,341,258 unimproved, the value of land, fences, and buildings being $127,538,234; of live stock, $14,200,178; of farm products, $28,072,500.—*Fisheries. M.* makes up for her agricultural deficiencies by an unusual abundance of fishery products, in which she exceeds any other State in the Union, her product being more than double that of California, and more than three-fold that of any other State if the oyster yield be omitted. The yield in the census year of general food fish and bait fish amounted to $5,848,932, and of the whale fisheries to $1,132,753. In the latter fishery her only rival is California, whose product was valued at $1,006,662.—*Manufactures.* In manufacturing enterprise *M.* compares favorably with any part of the world. In value of products she is surpassed only by New York, Pennsylvania, and Illinois, each possessed of a great manufacturing city. In the last census year the number of persons employed in manufacturing industries was 485,152, the amount of wages paid $239,670,509. and value of product $888,160,403, being nearly one-tenth the product of the whole Union. The leading products of manufacture are textile fabrics, boots and shoes, machinery, metal goods, paper and paper goods. Cotton goods form the leading product, the capital employed in their manufacture being $128,838,837, while the woollen mills employ a capital of $75,665,637. In manufactures of iron and steel *M.* takes lower rank, being surpassed by many of the States. The total capital employed in 1890 was $568,963,681, with an output valued at $871,061,163.—*Counties, Towns, &c.* The State is divided into the following 14 counties:

Barnstable,	Essex,	Middlesex.	Plymouth,
Berkshire,	Franklin,	Nantucket,	Suffolk.
Bristol,	Hampden,	Norfolk,	Worcester.
Duke's,	Hampshire,		

In proportion to extent and pop., *M.* has more large towns than any State in the Union. The principal are Boston (the cap.), Lowell, Cambridge, Springfield, Chelsea, Fall River, Lynn, Worcester, New Bedford, and Salem.—*Education.* To *M.* is due the honor of first establishing the system of public schools, which has since spread throughout the U. States, and into Europe. The colony as early as 1636 appropriated $2,000 to the establishment of the celebrated HARVARD COLLEGE, *q. v.* The educational article in the Constitution of 1780 was one of the first ever adopted in the organic law of a State. It is made the duty of the legislature "to cherish the interest of literature and the sciences, and all seminaries of them, especially the university at Cambridge, public schools, and grammar schools in the towns." Ability to read and write in the English language is requisite to the right of suffrage in the State. *M.* has a school fund of $3,665,000, to which the State adds large annual appropriations. There are free normal schools in Bridgewater, Framingtou, Salem, Westfield, and Worcester, and a State Normal and Art School in Boston. Industrial training schools exist in Boston, Cambridge, and Brookline. There are various institutions of high repute for the higher education, including, in addition to Harvard University, Amherst College, Tufts College, Williams College, Clark University, Boston University, Boston College, College of the Holy Cross, &c., while for women there exist Smith College, Wellesley College, Radcliffe College, and Monut Holyoke Seminary and College. In addition to these, are the Massachusetts Agricultural College, Massachusetts Institute of Technology, and various other institutions for technical education. *M.* is particularly rich in public libraries, of which there are more than 500 possessing over 1,000 volumes each, the aggregate volumes in the whole being 4,650,088. Of 352 towns in the State, 308 have free libraries. Chief among these is the Boston Public Library, which, aside from the Congressional Library at Washington, is the largest in the U. S. (See BOSTON.)—*Public Institutions.* The State of *M.* maintains a high reputation for the large number and efficient management of its charitable institutions. The most prominent of these are the Perkins Institution and Massachusetts Asylum for the Blind; the six State lunatic hospitals, located at Worcester, Taunton, Northampton, and elsewhere; the three State almshouses at Bridgewater, Monson, and Tewkesbury; the Rainsford

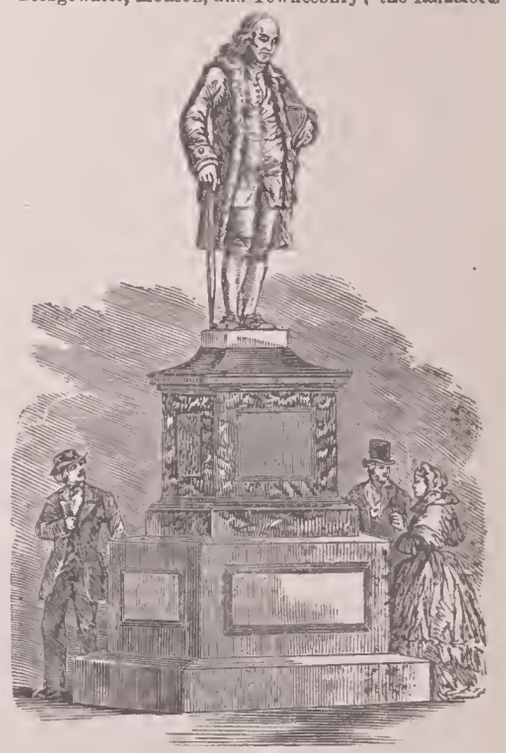


Fig. 1737.
STATUE OF FRANKLIN, FRONT OF CITY HALL (BOSTON).

Island hospital on Boston Harbor; the State Reform School for juvenile offenders at Westborough; the State Industrial School for girls at Lancaster; the Massachusetts School for idiotic and feeble-minded youth; the Hospital for Inebriates; the Reformatory School for Women, &c., besides numerous local benevolent and educational establishments.—*Religion.* Of religious bodies the leading are the Congregationalists, Methodists, Baptists, and Unitarians.—*Government.* The executive department of the government of *M.* consists of a governor (elected for 1 year), a lieutenant-governor, secretary, treasurer, receiver-general, auditor, attorney-general, heads of bureaus, and an executive council (composed of 8 members), also elected annually. The legislative department consists of a Senate of 40 members and a House of Representatives of 240 members, elected annually. The judiciary comprises a supreme judicial court, consisting of a chief-justice and 5 inferior justices. This has exclusive cognizance of all capital crimes, exclusive chancery jurisdiction, so far as chancery powers are given by statute, and concurrent original jurisdiction in civil cases where the amount in dispute exceeds $4,000 in Suffolk and $1,000 in other counties.—*Finance.* The total amount of the State debt on Jan. 1, 1896, was $29,675,229. The sinking-fund established for the liquidation of this debt amounted at the same time to $7,444,001, and loans $13,585,229, leaving the net debt at that date $6,141,227 By Jan. 1, 1897, this debt had been increased $5,000,000. The municipal debts, in 1890, aggregated $70,230,848.—*Hist.* The history of *M.* begins properly with the landing of the English at Plymouth, in 1620, although it is probable that portions of its coast were temporarily

settled by different parties of Norwegians as early as A.D. 1000. In 1628, 8 years after the arrival of the Pilgrims, another colony was established at Salem, and both were united under one government with Maine in 1692. Meantime, the natives had not quietly submitted to this invasion of the white man, and many fierce and sanguinary contests occurred between the settlers and the savages. In 1675, an Indian chief, named Philip of Pokaneket, or King Philip, having aroused many of the neighboring tribes, and collected a large army, began a war which had for its object the entire extermination of the English. This war lasted for 3 years, attended with severe loss on both sides, and only ended by the death of King Philip himself. From this time until the War of Independence, *M.* enjoyed a period of comparative peace and prosperity. The colony had now a population of 250,000, an extensive commerce, and was far advanced in many other departments of industry. When the oppressive measures of the British Parliament finally brought about the rupture with the colonies, none took a more active or more prominent part than *M.* in the national cause. Her course was plain and decided from the first, her leading men uttered the boldest sentiments, which her people indorsed with corresponding actions. Meetings were held, resolutions passed, protests enunciated, and a correspondence with the other colonies invited. The Colonial govt., however, did not entirely sustain the part of the people, and advised milder measures. The passage of the Stamp Act aroused the wildest excitement; and its repeal the following year was received with demonstrations of joy which might have brought the mother-government to a sense of the coercive policy she was pursuing. The arrival of the "Romuey" man-of-war renewed the excitement, and *M.* issued another circular letter to the colonies, which the ministry in vain commanded them to rescind. Then followed the Boston massacre in 1770, the destruction of the tea in 1773, and the Port Bill of 1774. The Revolutionary War had its outbreak in *M.*, the bloodshed at Lexington and the contest at Concord being the instigative incidents that led to the war. Its earliest event was the siege of Boston, made notable by the battle of Bunker Hill, the acceptance of the command by Washington at Cambridge, and the evacuation by the British. From that time forward *M.* was free from warlike invasion or occupation, but nobly sustained her former reputation for patriotism and public spirit, buying the independence of the country with the blood and the gold of her sons. In 1780, a Constitution was framed for the State, and adopted by the popular vote. In 1786, the tranquillity of the State was again disturbed by a party of rioters, who, under the leadership of one Daniel Shays, attempted to resist the authorities. After several trifling contests, the revolt was suppressed at the commencement of the following year. Upon the breaking out of the Civil War in 1861, *M.* was among the first to offer assistance to the national cause; and, until the final success of the Federal army, continued to perform a patriotic and liberal part. The second half of the 19th century has witnessed the change of *M.* from an agricultural to one of the most active manufacturing States of the Union, and the rapid growth of towns and cities, until now more than half the population is urban. This is not that less land is cultivated, but that manufactures have advanced much more greatly than agriculture. *Pop.* (1870) 1,457,351; (1880) 1,783,012; (1890) 2,238,943; (1900) 2,805,346.

Massachu'setts Bay, an indentation on the E. coast of Massachusetts, between Cape Cod and Cape Ann, 70 m. long and 25 m. wide, but including in its irregular form Plymouth Bay, Cape Cod Bay, and several others, with numerous small islands.

Massacre, (*mas'sa-kĕr,*) *n.* [Fr.; L. Lat. *mazacrium*; from Ger. *metzgern*, to butcher.] The murder of an individual, or the slaughter of numbers of human beings, with circumstances of cruelty; the indiscriminate killing of human beings, without authority or necessity, and without forms, civil or military; as, the *massacre* of St. Bartholomew.

—*v. a.* To murder human beings with circumstances of cruelty; to kill men with indiscriminite violence.

Massacre Island. See MAOUNA.

Mas'sacrer, *n.* One who massacres.

Massa di Carrara, or MASSA DUCALE, cap. of Massa Carrara, 3 m. from the Mediterranean, 28 m. N.W. of Lucca, and 58 S.W. of Modena. It is distinguished for the beauty and salubrity of its situation. *Manuf.* Silk; and it has also a trade in oil, agricultural products, and the celebrated marble of Carrara. *Pop.* 15,068.

Mas'safra, a town of Italy, prov. of Terra-di-Otranto, 10 m. N.W. of Taranto; *pop.* 10,000.

Massage'tæ, *n. pl.* (*Anc. Hist.*) An Asiatic tribe, by some supposed to be Scythians, drove the Cimmerians from the Araxes B. C. 635, and penetrated into Media B. C. 632, whence they were expelled by Cyaxares, B. C. 609. Cyrus the Elder was killed in battle against them B. C. 529. Alexander III. (the Great) defeated them B. C. 328. Ammianus Marcellinus calls the Alani "the ancient Massagetæ." Niebuhr considers them Mongols, and Humboldt assigns them to the Indo-European family.

Mas'sa Lombar'da, a town of Italy, 30 m. S.S.E. of Ferrara; *pop.* 4,900.

Massa Lubren'se, a town of Italy, prov. of Naples, 17 m. S. of the city of Naples; *pop.* 8,500.

Mas'saroomy, Maz'arumi, a river of British Guiana, rising near Lat. 4° N., Lon. 60° W. and emptying into the æstuary of Essequibo. Length abt. 400 m. It has numerous rapids.

Mass'-book, *n.* In the Roman Catholic Church, a book of divine service; a missale, or missal.

Masséna, ANDRÉ, (*mas-sai'na,*) PRINCE OF ESSLING, DUKE OF RIVOLI, and marshal of France, B. at Nice, 1758. He went through the regular gradations in an Italian regiment, commencing his military career at the age of 17. After 14 years' service he obtained his discharge; but, in 1792, the revolution presented an enviable field for the display of military talents, and his natural sentiments in favor of liberty caused him to enter the service of the French republic, and he obtained rapid promotion. Napoleon, who was quick to discover genius, formed an intimate friendship with *M.*, and after the successful battle of Roveredo, in 1796, against Beaulieu, called him the favored child of victory. He had the chief command in Switzerland in 1799, when he finished the campaign by completely routing the Austro-Russian army under the archduke Charles and General Korsakoff. In 1800 he commanded in Italy, but with less success than in his former campaigns. He was, however, again successful in the campaigns of 1805 and 1806, taking possession of Naples, and signalizing himself in the campaign of Poland, which terminated by the treaty of Tilsit. He was afterwards employed in Germany, and eminently distinguished himself in the memorable battles of Essling and Wagram. In 1810 he was appointed commander-in-chief of the army in Portugal, but his campaign did not answer to the expectation of Napoleon. Overpowered by the climate, and quite a confirmed invalid during the whole campaign; seeing his army decimated by sickness, and — owing to the jealousy of Sault — not receiving the reinforcement indispensable to carry the position in which Wellington had fortified himself, *M.* began, March 5, 1811, his celebrated retreat in Spain, entering Salamanca in the latter part of April, after having lost 30,000 men within 6 months. On May 5, he fought the bloody but indecisive battle of Fuentes d'Ouoro; and soon after, on account of ill-health, he resigned his command and returned to France, where Napoleon left him without active employment. He gave in his adhesion to the Bourbons after the restoration; became commander-in-chief of the National Guard of Paris, and D. 1817.

Masse'na, in *New York*, a post-village and township of St. Lawrence county, about 40 miles N.E. of Ogdensburg.

Masse'na Centre, in *New York*, a post-village of St. Lawrence co., abt. 42 m. N.E. of Ogdensburg.

Mass'er, *n.* A priest who celebrates mass.

Mas'sera, an island off the S.E. coast of Arabia; Lat. 20° 30' N., Lon. 58° E. *Ext.* 40 m. long, with an average breadth of 15 m.

Mas'seter, *n.* [From Gr. *massamai*, to chew.] (*Anat.*) A short thick muscle which raises the lower jaw, and assists in moving it backwards and forwards in the act of chewing.

Mas'sey's Creek, in *Ohio*, enters the Little Miami River from Greene co.

Mas'sicot, *n.* [Fr.] (*Chem.*) A protoxide of lead, prepared by the oxidation of the metal in a current of air at a temperature below that necessary for the fusion of the oxide. It is a yellow powder, much used as a pigment.

Mas'sie, in *Ohio*, a township of Warren county.

Massillon, JEAN BAPTISTE, (*mas'see-yawng,*) a French prelate, B. 1663, at Hières, in Provence. He entered into the congregation of the Oratory, and became so celebrated for his eloquence, that the general of his order called him to Paris, where he drew crowds of hearers. Louis XIV., who knew the value of a kingly compliment, and seldom passed a bad one, observed to him, "When I hear other preachers, I go away much pleased with them; but when I hear you, I go away displeased with myself." In 1717 he was made Bishop of Clermont, was admitted two years later to the French Academy, and he D. in 1742. His discourses were published in 14 vols. 8vo., and are distinguished for simplicity, a graceful flow of eloquence, great knowledge of the human heart, and a richness of ideas.

Mas'sillon, in *Indiana*, a village of Allen co., abt. 17 m. S.E. of Fort Wayne.

Massillon, in *Iowa*, a post-village and township of Cedar county, about 40 m. north-east by east of Iowa City.

Massillon, in *Ohio*, a handsome city of Stark co., about 112 m. N.E. of Columbus. *Pop.* (1897) 12,800.

Massi'ness, Massive'ness, *n.* State of being massy or massive; great weight, or weight with bulk; ponderousness.

Mas'sive, *a.* Having the nature of a mass; heavy; weighty; ponderous; bulky and heavy.

Mass'ively, *adv.* In a mass or bulk.

Mass'-meeting, *n.* A large meeting of the masses of the people, or of the multitude.

Mas'son, DAVID, an English critic and author, B. 1822, was educated at Aberdeen and Edinburgh Universities. He early adopted literature as a profession, and became a regular contributor to "Fraser's Magazine" and other leading serials. In 1852, he was appointed Professor of English Language and Literature at University Coll., London, which post he resigned in 1865, to take the chair of Rhetoric and English Literature in Edinburgh University. In 1859, he accepted the editorship of "Macmillan's Magazine." Of his numerous works, the most valuable are his papers on *Carlyle*, *Dickens*, and *Thackeray*; *Rabelais Literature*, and the *Labor Question*; *Pre-Raphaelism in Art and Literature*; *Theories of Poetry*; *De Quincey and Prose-writing*; *Essays, Biographical and Critical, on the English Poets*; *Life of Milton*; *British Novelists and their Styles*; *a Critical Sketch of the History of British Prose Fiction* (1859); and *Recent British Philosophy*.

Masson'ah, Massow'ah, MASUAH, or MUSSOUAH, the principal seaport-town of Abyssinia, on the Red Sea, on an island separated from the continent by the narrow but deep channel of Adewa, 250 m. N.E. of Gondar, and 420 S.E. of Djedda; Lat. 15° 30' 45" N., Lon. 39° 24' E. It has a considerable trade with Mocha, Djedda, and Bombay. The imports consist principally of velvets, silks and satins, glassware, arms, &c. The exports are gold-dust, ivory, rhinoceros-horn, and corn. The harbor is safe and of easy access, though the entrance is narrow, and can accommodate about 50 vessels. The island belongs to the viceroy of Egypt. *Pop.* 12,000.

Mas'sy, *a.* Having the nature of a mass; massive; heavy.

Mast, *n.* [A. S. *mæst;* Du., Ger., Dan., and Swed. *mast*]. (*Naut.*) A long, round piece of timber, composed either of one continuous pole, or of a series of such, and placed nearly perpendicularly to the keel of a ship, extending upwards above the surface of the deck, for the purpose of supporting the yards and sails of a ship. The trunk of the mast is called the *lower-mast*, the next piece the *top-mast*, the third the *topgallant mast;* and should there be a fourth, as there is in barques and full-rigged ships, it is called the *royal mast*. Each mast is supported on the one next below it by means of cheeks placed a little below the head; on these cheeks are placed, horizontally, two short pieces of wood, fore and aft, called *trestle-trees*, and across them are the *cross-trees*, while on the masthead is a *cap*. The topmast is then raised perpendicularly along the mainmast below the trestle-trees, and through the foremast hole in the cap; and when the *heel* of the mast is nearly on a level with the cross-trees, a piece of iron bolt, called a *fid*, is pushed through a hole in the same; and on the fid, whose ends are supported on the trestle-trees, the topmast rests. When the mast is to be taken down, it is first raised, in order to pull out the fid, and then it can be lowered to the deck. The supports of the masts of a ship are strong ropes, extending on each side, and also forward and aft. The one leading forward is called the *stay*, and those aft are termed respectively *backstays;* while the side supports are called either *shrouds* or *breast-stays*. The *mizzen-mast* is that which is nearest the stern of a ship; the *mainmast* is the centre one; and the *foremast* is nearest the bows. Of these the main is the largest, the foremast the next in size, and the mizzen the smallest. The length of the lower mainmast, according to the old rule on the subject, ought to be one-half of the sum of the breadth and length of the ship, and the other masts to be on a reciprocal scale; but as the rule is merely for purposes of convenience, more than practical principles, it is not often followed. Masts in the present day, for ships of the navy, and indeed for many mercantile vessels, are constructed of iron, on a tubular plan, and on the same scale as those last mentioned.

—[A. S. *mæste;* Ger. *mast.*] The fruit of the oak and beech, or other forest-trees: nuts; acorns.

—*v. a.* To fix masts in; to supply with a mast, or masts.

Mast'ed, *a.* Furnished with a mast, or masts.

Mas'ter, *n.* [Fr. *maître;* O. Fr. *maistre*, from Lat. *magister*, master.] A person of distinguished rank, station, or consequence; one possessing power, authority, or superior importance; a leader; a chief; — used, for the most part, as a compellation of respect, and sometimes as a term of familiar address to an inferior or juvenile person. (As a word of appellation, it is almost invariably pronounced *mister*.)

"Stand by, my *masters;* bring him near the king."—*Shaks.*

"Where there are young *masters* and misses in the house, they are impediments to the diversions of the servants."—*Swift.*

—One who rules, governs, or exercises authority; a ruler, director, governor, head, or chief manager or controller; — hence, specifically, an owner, a proprietor, a possessor.

"Thou *master* of the poet and the song."—*Pope.*

—One who has supreme control or dominion; a ruler; a chief; a principal; one who has the power of directing and enforcing at pleasure; — correlative of *serf*, *slave*, *servant*, *assistant*, *apprentice*.

"Cæsar, the world's great *master* and his own."—*Pope.*

"Men at some time are *masters* of their fates."—*Shaks.*

—The principal superintendent or director of a school or college; an instructor; a preceptor; a tutor; a teacher; and, in a burlesque sense, a pedagogue; — opposed to *pupil* or *scholar;* as, a head *master*, a French *master*, &c.

"He that was only taught by himself had a fool for his *master.*" *Ben Jonson.*

—A man eminently or perfectly skilled in any avocation or branch of learning, science, or art; an adept; an accepted or esteemed authority; one who has a thorough knowledge of any subject; as, a *master* of the violin, a painting by one of the old *masters*, &c.

(*Naval.*) A superior officer belonging to a ship of war, taking rank next below the lieutenants, and whose duty is to navigate the ship under the immediate direction of the captain. (Also termed *sailing-master.*)

(*Maritime Law.*) The person intrusted with the care and navigation of a merchant-ship, usually styled captain. He is the confidential agent of the owners, who are bound to the performance of every lawful contract entered into by him relative to the usual employment of the vessel. The master has power to pledge both ship and cargo for repairs executed in foreign parts, but not for repairs executed at home. The master of an American ship must be a citizen of the U. States. In Europe generally, their qualifications in point of skill and experience must be attested by examination by proper authorities; but in the U. States the civil responsibility of the owners for their acts is esteemed sufficient. He is liable to the owners by whom he is selected; and the and they are liable to all others whose interests are affected by his acts, for want of reasonable

MASSACHUSETTS AND RHODE ISLAND

SCALE OF MILES
0 5 10 15 20 25 30

State Capitals ☆ County Seats ○
Places of 100,000 and over — BOSTON
" " 50,000 to 100,000 — Springfield
" " 25,000 to 50,000 — Taunton
" " 10,000 to 25,000 — Adams

BOSTON AND ENVIRONS

SCALE OF ONE MILE
0 ½ 1

Hammond's 8 x 11 Map of Massachusetts and Rhode Island.
Copyright, 1904, by C.S. Hammond & Co., N.Y.

MASS.

Land surface, Sq. m. 8,040
Water surface, Sq. m. 275
Pop. 1900, 2,805,346
White.. 2,769,764
African ...31,974
Indian 587
Chinese.... 2,968
Japanese.....53
Native-born, 1,959,022
Foreign-born, 846,324
Males ..1,367,474
Females, 1,437,872

COUNTIES.

Barnstable....N 6
Berkshire..... B 3
Bristol.... ... K 5
Dukes.....M 7
Essex .....L 2
Franklin ..... D 2
Hampden.....D 4
Hampshire... D 3
Middlesex .... J 3
Nantucket....O 7
Norfolk ..... K 4
Plymouth.....L 5
Suffolk ..... K 3
Worcester.....G 3

CITIES-TOWNS

Pop.	Thousands.
560	Boston.... K 3
118	Worcester G 3
104	Fall River K 6
94	Lowell..... J 2
91	Cambridge K 3
68	Lynn ..... L 3
52	Lawrence.. K 2
62	New Bedford L 6
62	Springfield D 4
61	Somerville K 3
45	Holyoke .. D 4
40	Brockton.. K 4
37	Haverhill.. K 1
35	Salem..... L 2
34	Chelsea.... K 3
33	Malden.....K 3
33	Newton.....J 3
31	Taunton... K 5
31	Fitchburg..G 2
26	Gloucester M 2
24	Everett.... K 3
24	N. Adams.. B 2
23	Quincy.....K 4
23	Waltham.. K 3
21	Pittsfield...A 3
19	Brookline..K 3
19	Chicopee...D 4
18	Northampton D 3
18	Medford... K 3
14	Newburyport L 1
14	Woburn ...K 3
13	Beverly... L 2
13	Clinton....H 3
13	Marlboro...H 3
13	Hyde Park K 4
12	Melrose. .. K 3
12	Leominster G 2
12	Westfield .. C 4
11	Peabody... K 2
11	Milford . H 4
11	Attleboro .. J 5
11	Weymouth K 4
11	Framingham J 3
11	Adams .... B 2
10	Gardner... G 2
10	Revere .....L 3
10	Southbridge F 4
9	Watertown K 3
9	Plymouth .. M 5
9	Natick .....J 3
9	Amesbury...L 1
9	Wakefield...K 3
8	Webster.... G 4
8	Arlington...K 3
8	Danvers..... L 2
8	Ware.....E 4
7	Greenfield...D 2
7	Palmer.....E 4
7	Spencer.....G 4
7	Marblehead..L 2
7	Methuen ... K 2
7	Dedham.... K 4
7	N. Attlehoro K 5
7	Winchester K 3
7	W. Springfield D 4
7	Athol .... .. F 2
7	Northbridge H 4
6	Middleboro..L 5
6	Andover ... K 2
6	Milton.....K 3
6	Stoneham...K 3
6	Whitman... L 4
6	Montague...D 2
6	Winthrop... L 3
5	Braintree ...K 4
5	Great Barrington:..A 4
5	Bridgewater L 5
5	Blackstone..H 4
5	Concord.....J 3
5	Easthampton D 3
5	Orange.....E 2
5	Norwood ...K 4
5	Hudson..... J 3
5	Stoughton.. K 4
5	Westboro... H 3
5	Rockland....L 4
5	Saugus..... L 3
5	Wellesley....J 3
5	Hingham.. .L 4
5	Amherst ....D 3
5	Franklin .... J 4
5	Williamstown B 2
5	Winchendon J 2
4	Reading .. .K 2
4	Grafton .... H 4
4	Easton ..... K 4
4	Ipswich .....L 2
4	Rockport... M 2
4	NorthBrookfield F 3
4	Canton ..... K 4
4	Swampscott L 3
4	S. Hadley... D 3
4	Abington....L 4
4	Millbury.... G 4
4	Warren.....F 4
4	Barnstable..N 6
4	Provincetown O 4
4	N. Andover K 2
4	Needham....K 3
4	Mansfield .. K 4
3	Randolph .. K 4
3	Chelmsford J 2
3	Belmont ....K 3
3	Lexington.. K 3
3	Pepperell...H 2
3	Tewksbury K 2
3	Dartmouth L 5
3	Uxbridge... H 4
3	Lee .. ..A 3
3	Walpole.....J 4
3	Fairhaven...L 6
3	Dudley.....G 4
3	Ludlow .....D 4
3	Falmouth...M 5
3	Templeton...J 2
3	Wareham...M 5
3	Leicester....G 4
3	Monson ..... E 4
3	Sutton ..... G 4
3	Foxboro..... J 4
3	Dracut.....J 2
3	Hardwick. .J 3
3	Maynard....H 3
3	Brookfield ..F 4
3	E. Bridgewater L 4
3	Dalton.....B 3
3	Nantucket . O 7
2	Lenox .. ... A 3
2	Medfield ....J 4
2	Westport....K 6
2	Billerica.... J 2
2	Medway .....J 4
2	Cohasset.... L 4
2	Wrentham...J 4
2	Westford....J 2
2	Hopkintown J 4
2	Holliston... J 4
2	Agawam ... D 4
2	Manchester .L 2
2	Lancaster...H 3
2	Scituate.... M 4
2	Holden.....G 3
2	Ayer ... .H 2
2	Groveland..K 1
2	Harwich ... O 6
2	Dennis.....O 5
2	W. Boylston G 3
2	Wayland.... J 3
2	Belchertown E 3
2	Somerset....K 5
2	Holbrook...K 4
2	Northboro..H 4
2	Hanover.... L 4
2	Merrimac...K 1
2	Acton.....J 3
2	Douglas ....H 4
2	Hopedale...H 4
2	Stockbridge A 3
2	Duxbury ...M 4
2	Sharon.....K 4
2	Barre.... ...F 3
2	Sturbridge..F 4
2	Groton.....H 2
1	Deerfield....D 2
1	Northfield...E 2
1	Kingston... M 4
1	Upton.....H 4
1	Williamsburg D 3
1	Southboro..H 4
1	Georgetown L 2
1	Ashburnham G 2
1	Charlton....G 4
1	Rehoboth... J 5
1	Weston.... . J 3
1	Mason .....J 11
1	Norton..... K 5
1	Marshfield..M 4
1	Sheffield.... A 4
1	Townsend.. H 2
1	Dighton.....K 5
1	Hadley.....D 3
1	Chatham....O 6
1	Avon .. ... K 4
1	W. Bridgewater L 4
1	Hull..... L 3
1	Bellingham..J 4
1	Yarmouth.. N 6
1	Shirley ..... H 2
1	Seekonk.....J 5
1	Essex.....L 2
1	Bourne .....M 6
1	Shrewsbury H 3
1	Auburn... . G 4
1	Hamilton... L 2
1	Newbury ....L 1
1	Wilmington K 2
1	Wilbraham E 4
1	Hyannis.....N 6
1	Norwell.....L 4
1	Salisbury ... L 1
1	W. Newbury L 2
1	Ashland ... J 4
1	Shelburne. D 2
1	Hatfield .... D 3
1	Hinsdale... B 3
1	Sherborn ... J 4
1	Huntington.C 3
1	Conway.....D 2
1	Hanson..... L 4
1	Chester .... C 3
1	Sandwich... N 5
1	W. Brookfield F 4
1	Buckland... C 2
1	Sterling.....G 3
1	Rowley... ..L 2
1	Boylston....H 3
1	Rutland .... G 3
1	Lunenburg H 3
1	Westminster G 2
1	Pembroke...L 4
1	Hubbardston J 3
1	Cheshire.. . B 2
1	Edgartown M 7
1	Bedford .... J 3
1	E. Long Meadow D 4
1	Littleton ...H 2
1	Nahant .....L 3
1	Sudbury .... J 3
1	Harvard....H 2
1	Lincoln.....J 3
1	Orleans.....O 5
1	Westwood...J 4
1	Cottage City M 7
1	Charlemont C 2
1	Millis .....J 4
1	Granville... C 4
1	Southwick.. C 4
1	Enfield... ..E 3
1	N. Reading. J 2
1	Topsfield .. L 2
1	Mattapoisett L 6
1	Southampton D 4
1	Berlin.....H 3
1	Stow..... H 3

Pop.	Hundreds.
9	Becket.....B 3
9	Wellfleet ...O 5
9	Rochester...L 5
9	Norfolk ..... J 4
9	Princeton...G 3
9	Erving..... E 2
9	Lakeville . L 5
9	Royalston...J 2
9	Ashfield..... C 2
9	Berkley.....K 5
9	Clarksburg..B 2
9	Brimfield....F 4
9	Mendon . .H 4
9	Marion.....M 6
8	Lynnfield...K 2
8	Ashby.. ....G 2
8	Petersham...J 3
8	Wenham ...L 2
8	Middleton...K 2
8	Blandford...D 4
8	Brewster... O 6
8	Long Meadow D 4
8	New Salem..E 2
7	Russell..... C 4
7	Bernardston D 2
7	Dana..... F 3
7	Hampden....E 4
7	Tyngsboro..K 2
7	Wales... ....F 4
7	Sunderland D 3
7	Bolton.....H 3

skill, care, or prudence in the navigation or management of the vessel. He has a right to control and direct the efforts of the crew, and to use such force as may be necessary to enforce obedience to his lawful demands. He may even take life to suppress mutiny.

Little Masters. (*Fine Arts.*) A term given to certain German engravers of the 16th cent., on account of the peculiar smallness of their prints.—*Master in Chancery.* (*Law.*) An officer acting in courts of equity as assistant to the chancellor or vice-chancellor.—*Master of Arts.* One who gains the second degree conferred by a university; also, the degree itself, indicated by the abbreviation M.A. or A.M. suffixed to the recipient's proper name. (See DEGREE.)—*Master of the Horse.* In England, the title borne by the third great officer of state attached to the royal household. He has the exclusive control of the royal stud, stables, &c.; and on grand state occasions, as in royal cavalcades, &c., immediately precedes the sovereign, mounted.

Master of the Rolls. (*Eng. Law.*) A high, legal functionary in England, who has charge of the State records, and all documents, patents, &c., that have passed the Great Seal; he also acts as assistant-judge of the High Court of Chancery.—*To be master of one's self*, to be in possession of perfect self-control; not liable to be swayed by passion or any sudden impulse.

(NOTE. *Master*, in a sense implicative of *superiority, pre-eminence*, or *governing quality*, is employed in the construction of numerous compound words, all, for the most part, self-explaining; as, *master-spirit, master-gunner, master-builder, master-passion, master-pilot, master-mind, master-touch*, &c.)

Mas'ter, *v. a.* To obtain dominion, power, or authority over; to conquer; to overpower; to subdue; to bring under control.

—To make one's self master of; to execute with skill; as, to *master* a science.

Mas'terdom, *n.* Dominion; rule.

Mas'terful, *a.* Possessing the power or skill of a master.

Mas'terfully, *adv.* In a masterly manner; imperiously.

Mas'ter-hand, *n.* A man eminently skilful.

Mas'ter-key, *n.* The key that opens many locks; hence, figuratively, a general clue to lead out of many difficulties.

Mas'terless, *a.* Destitute of a master or owner; ungoverned; unsubdued.

Mas'terlessness, *n.* The quality of being masterless; ungovernableness.

Mas'terliness, *n.* Eminent skill; the quality of being masterly.

Mas'ter-lode, *n.* (*Mining.*) The principal lode of ore.

Mas'terly, *a.* Suitable to a master; formed or executed with superior skill; most excellent; skilful; imperious; as, a *masterly* air or manner.

—*adv.* With the skill of a master; as, a *masterly* performance.

Mas'terpiece, *n.* A capital performance; anything done or made with extraordinary skill.—Chief excellence or talent.

Mas'tership, *n.* Office of a master; headship; dominion; rule; supreme power; superiority; pre-eminence.

Mas'ter-sinew, *n.* (*Far.*) A large sinew that surrounds the hough of a horse, and divides it from the bone by a hollow place, where the wind-galls are usually seated.

Master-singer, *n.* [Ger. *meistersänger.*] See GERMAN LANGUAGE AND LITERATURE.

Mas'ter-stroke, *n.* Capital performance.

Mas'terwork, *n.* A master-piece; a skilful performance.

Mas'terwort, *n.* (*Bot.*) See PENCEDANUM.

Mas'tery, *n.* Dominion; power of governing or commanding.—Superiority of competition; pre-eminence.—Victory in war.—Eminent skill; superior dexterity. Attainment of eminent skill or power.

Mast'ful, *a.* Abounding in mast, or fruit of oak, beech, or chestnut.

Mast'-head, *n.* (*Naut.*) The top of a mast.

Mastic, Mastich, (*mas'tik,*) *n.* [Fr. *mastic*; Gr. *mastiche*, from *mastichao*, to chew.] The exudation of a shrubby tree, the *Pistachia lentiscus*. It is used in the arts as a varnish, and the Eastern ladies chew it constantly, to give whiteness to the teeth, a purpose which it unquestionably effects. The name of *M.* is also given to oleaginous cements, composed of about 7 parts of litharge and 93 of burnt clay, reduced to fine powder, made into a paste with linseed oil.

(*Bot.*) The *Pistachia lentiscus*. See PISTACIA.—Also, the *Thymus mastichina*. See THYMUS.

Masti'cable, *a.* That can be masticated.

Mastica'dor, *n.* [Sp., from *masticar*, to chew.] The slavering-bit of a bridle.

Masticate, *v. a.* [Lat. *mastico, masticatus*; Gr. *mastichao.*] To grind with the teeth, and prepare for swallowing and digestion; to chew.

Mastica'tion, *n.* [L. Lat. *masticatio.*] Act of chewing food.

(*Physiol.*) *M.* is one of the most important of all the operations connected with the function of digestion, as on the effectual manner in which the food is ground depends the completeness with which the stomach can soften and prepare what is received, and allow of the entire elimination of the chyle.

Masti'catory, *a.* Chewing; adapted to perform the office of chewing food.

—*n.* (*Med.*) One of a class of drugs which, when chewed, purify the breath, clean the teeth, benefit the condition of the mouth, or induce a copious flow of saliva; and in this last respect they are supposed to afford relief in cases of toothache. Of these substances the chief are orris-root, mastich, myrrh, and pellitory-root.

Mas'ticin, *n.* (*Chem.*) That part of mastic which is insoluble in alcohol; it has some of the characters of caoutchouc. The part of mastic soluble in alcohol is termed *masticic acid.*

Mas'tiff, *n.*; *pl.* MASTIFFS. [Old Fr. *mestiff*, a mongrel, also *mastin*; Fr. *mâtin*; It. *mastino.*] (*Zoöl.*) A large variety of dog, distinguished by large head and broad muzzle, ears of moderate size and dependent, a heavy brow, thick drooping lips, a well-proportioned, strong body, and a full tail. The strength of the *M.* is immense, and its vigilance and faithfulness as a house-dog and guard are unrivalled; and whilst it faithfully protects the property intrusted to it, showing a disposition the very reverse of that of the bull-dog, it has the merit of refraining from the infliction of personal injury on the invader. It becomes much attached to its master, although not very demonstratively affectionate; it is excelled by many kinds of dog in sagacity. The English *M.* is usually of some shade of buff color, with dark muzzles and ears. The *M.* of Tibet (Fig. 1738), is still larger than the English; the head is more elevated at the back; the skin, from the eyebrow, forms a fold which descends on the hanging lip; the hair is very rough, and the tail bushy; the color mostly a deep black. It was known and much appreciated by the Greeks and the Romans for the combats in the amphitheatres.

Fig. 1738.—MASTIFF OF THIBET.

Mastigoph'erous, *a.* [Gr. *mastix*, a whip, and *phero*, to bear.] Carrying a wand, scourge, or whip.

Masti'tis, *n.* (*Med.*) Inflammation of the breast in women; it commonly terminates in suppuration.

Mast'less, *a.* Bearing no mast.

Mast'lin, *n.* See MASLIN.

Mas'todon, *n.* [Sp., It., and Fr., *mastodonte*; from Gr. *mastos*, a nipple, and *odons, odontos*, a book.] (*Pal.*) A genus of extinct quadrupeds, the remains of which in a fossil state show that it was a pachydermatous animal allied to the elephants. It has received its name from the conical projections on the surface of the molar teeth. Some of these were natives of the Old World; but by far the largest in size have been found in this country, chiefly in the States of New York, Kentucky, Alabama, Mississippi, Missouri, Kansas, Texas, and as far as Lat. 65° N. The finest of the skeletons of this stupendous animal is that discovered at Newburg, N. Y., 1845, (Fig. 1739), now in the city of Boston, and described by Dr. Warren (*The Mastodon Giganteus of N. America*, 2d edit., Boston, 1855.) This skeleton is 11 ft. high, 17 ft. from end of face to beginning of tail, the latter being 6⅔ ft.; circumference around ribs 16 ft. 5 in.; tusks about 11 feet, of which 8⅔ project beyond the sockets. There are no traces within the period of tradition or history of the existence of these animals as a living gen.

Fig. 1739.—SKELETON OF MASTODON GIGANTEUS.

When and how they perished, if ascertained at all, must be revealed by geological data. It is worthy of remark that the skeletons, found either in the tertiary or more recent deposits, seem to have been unmoved since the death of the animal; some, in fact, which were found near the banks of the great rivers, appearing in a vertical position, as if they had sunk down or been imbedded in the mud.

Mastodon'tic, *a.* Belonging to, or resembling, a mastodon.

Mas'toid, *n.* [Gr. *mastos*, a nipple, and *eidos*, form.] (*Anat.*) Resembling the nipple or breast; as, the *mastoid processes*, the name given to certain nipple-like protuberances of the bones, and more especially to a process situated at the interior and posterior part of the temporal bone.

Mastoid'eal, *a.* Relating to the mastoid process.

Mastol'ogy, *n.* [Gr. *mastos*, and *logos*, a discourse.] (*Zoöl.*) The natural history of the mammalia; mammalogy.

Masturba'tion, *n.* [Fr.; from Lat. *manus*, hand, and *stupro*, I ravish.] Self-pollution; onanism.

Mast Yard, in *New Hampshire*, a post-village of Merrimac co., abt. 7 m. N.W. of Concord.

Masulipatam', a seaport-town of Hindostan, presidency of Madras, cap. of the dist. of same name, on the Coromandel coast, 230 m. N.E. of Madras; Lat. 16° 15′ N., Lon. 81° 14′ E. It formerly carried on a considerable trade with China, Calcutta, Persia, and Arabia, but latterly it has very much fallen off. The principal exports are piece-goods, tobacco, indigo, and cotton. *Pop.* 28,000.

Mat, *n.* [A. S. *meatta*; Ger. and Dan. *matte*; Du. *mat.*] A texture of sedge, rushes, flags, husks, straw, or other material used for various purposes of cleanliness and protection from injury.—A web of rope-yarn, used in ships to secure the standing rigging from the friction of the yards, &c.

—*v. a.* To cover or lay with mats; to twist together; to interweave like a mat.

—*v. n.* To grow thick together; to become matted, as hair.

Ma'ta, a lake of Brazil, abt. 170 m. S.S.W. of Maranhao. It gives rise to the river Codo.

Mat'ador, Mat'adore, *n.* [Sp., a slayer.] (*Sports.*) In Spanish bull-fighting, the man whose office is to give the dead-blow to the bulls wounded.

(*Games.*) One of the three principal cards in the games of ombre and quadrille, which are always two *black aces* and the deuce of spades and clubs, and the seven of hearts and diamonds.

Matagor'da, in *Texas*, a S.E. co., bordering on the Gulf of Mexico and Matagorda Bay; *area*, about 1,150 sq. m. *Rivers.* Colorado, and Cuny Bayou. *Surface*, mostly level; *soil*, fertile. *County-seat*, Malagorda. *Pop.* (1890) 3,980.

—A town, cap. of the above co., on the bay of that name, at the mouth of the Colorado River, abt. 250 m. S.E. of Austin. It has an active trade.

—A bay of the Gulf of Mexico, at the mouth of the Colorado River, washing Calhoun and Matagorda cos. It covers an area of abt. 385 sq. m.

Matamo'ra, in *Tennessee*, a village of Hardeman co., abt. 67 m. E. of Memphis.

Matamor'as, or MATAMOR'OS, a town and river-port of entry of Mexico, on the Rio Grande, abt. 40 m. above its mouth, in the Gulf of Mexico, and abt. 450 m. N. by E. of the city of Mexico. The chief exports are specie, hides, wool, and horses, and the imports are mostly manufactured goods from the U. States and Great Britain. *Pop.* 20,000.

Matamor'as, in *Indiana*, a village of Blackford co., abt. 85 m. N.E. of Indianapolis.

—A village of Greene co., abt. 5 m. E. by N. of Bloomfield.

Matamor'as, in *Pennsylvania*, a village of Dauphin co., abt. 13 m. N. of Harrisburg.

—A post-village of Pike co.

Matan', an island of the Philippines, lying E. of Zebu, where Magellan, in a skirmish with the natives, was killed, in 1520.

Matanzas, (*ma-tăn'thas,*) a seaport-town on the N.W. coast of the island of Cuba, abt. 52 m. E. of Havana; Lat. 23° 3′ N., Lon. 81° 40′ W. It is finely situated on both sides of the San Juan River, and is strongly fortified. It ranks next to Havana in commercial importance. *M.*, though situated in one of the most fertile districts of the island, was an inconsiderable place till within the last 40 years. Under the old colonial govt. it was merely a subsidiary port to Havana; but all restrictions being removed in 1809, *M.* has since rapidly grown in prosperity. *Exp.* Sugar, coffee, tobacco, honey, wax, and fruits. *Imp.* Machinery, &c. *Pop.* 30,000.

Matapan', (**Cape.**) the S. extremity of the Morea, Greece; Lat. 36° 23′ N., Lon. 22° 29′ E.

Matapas, (*ma-ta'pas,*) a town of Central America, abt. 65 m. E.S.E. of Guatemala.

Matarieh, (*ma-ta-ri'a,*) a village of Lower Egypt, prov. of Ghiveh, on the site of the anc. Heliopolis, 6 m. N.E. of Cairo; Lat. 30° 48′ N., Lon. 31° 58′ E. Here the Turks were defeated by the French under Gen. Kleber in 1800.

Matar'o, a seaport-town of Spain, prov. of Barcelona, 20 m. N.E. of the city of Barcelona. *Manuf.* Calicoes, laces, silk and cotton-stuffs, velvets, ribbons, canvas, and leather. *M.* is celebrated for its red wine and brandy, much of which is exported to the U. States. *Pop.* 17,500.

Mataruna, (*ma-ta-roo'na,*) a village of Brazil, abt. 70 m. N.E. of Rio de Janciro; *pop.* abt. 4,000.

Mat'awamkeag, or MATTAWAMKEAG, (*mat-a-wom'keg,*) in *Maine*, a river rising in Aroostook co., and flowing into the Penobscot River in Penobscot co.

Mat'awan, or MATAVAN, in *New Jersey*, a township of Monmouth co.

Match, *n.* [Fr. *meche*, wick of a candle; Lat., from Gr. *myxa*, the lamp-nozzle.] A small stick of combustible material, furnished with some very inflammable composition, and used for producing fire. The manufacture of these useful and marvellously cheap articles marked a curious stage in the progress of civilization, when luxuries first became conveniences, and afterwards necessaries. The friction of two pieces of dry wood we now regard as a barbarous mode of procuring light; yet it is a scientific one, when the materials for a quicker process are wanting. The flint and steel were long the only means of getting fire, and we are not very far from the time when the sulphur-tipped match, arranged in bundles, spread out in a fan-like manner, formed the stock in trade of many an itinerant dealer. As mechanical ingenuity supplied the flint and steel, and tinder-box, to supersede the rubbing-sticks, so has chemical ingenuity made a wide step in advance, by showing how to tip the little splints or matches with a composition which will kindle by slight friction. Whether called *Congreves, Lucifers*, or *Instantaneous lights*, these small but valuable articles are now made in almost inconceivable quantities. It has been estimated that six matches a day

for each individual of the population of Europe and North America is the average consumption. From these figures it is easy to see how rapidly and extensively the business has grown. Hand-cutting has long been insufficient to produce the splints in sufficient quantities; nothing less than steam-power can do this. The best wood for matches is clear white pine. It is first sawed into blocks about 12 inches long, 5 or 6 wide, and 3 thick. Several of these blocks are placed in a machine, where a number of revolving cutters, worked with great rapidity, slice the blocks up into layers, and cut the layers into splints. One machine will cut up two million splints in a day. The splints, as liberated from the machine, slide down into another room, where women and girls tie them up in boxes, the boxes in parcels, and the parcels in bundles. These splints are sold by the *hogshead* to the match-makers, each hogshead containing perhaps two million splints. A dipping frame, capable of holding from 2,000 to 3,000 splints, fed into it by filling machines, of which there are several kinds of American invention, is used for immersing the splints in paraffin and afterward dipping them into the igniting composition. This is spread of the proper thickness on a hollow iron table, kept hot by steam. It consists of phosphorus, combined with chlorate of potash, nitrate of potash, or other oxidizing agents, with glue and coloring matters. In former times the mixing and dipping rooms were very unhealthy, necroses of the lower jaw being often caused by the fumes of phosphorus. This disease has become rare through a reduction in the quantity of phosphorus used and improved ventilation. It never occurs where red or amorphous phosphorus is employed. The safety or "Swedish" matches, which are now coming into considerable use, differ from the ordinary match in having the phosphorous composition glued upon the sides of the boxes, so that the match can be ignited only by friction with the prepared side. The rubbing surface for these matches is made of a mixture of 5 parts of amorphous phosphorus, 4 of sulphide of antimony, and 2½ of glue, while the match is dipped into a mixture of 5 parts of chlorate of potash, 2 of sulphide of antimony, and 1 of glue. *Vestas* are made by replacing the wood by small tapers of stearin (called wax tapers). Matches are largely made in Sweden and Norway, where some 60 factories are in active existence. In Germany and Austria there are about 450 factories. They are largely made also in Great Britain and the U. S., in which country the manufacture is controlled by a "trust," or combination of capitalists. In France it is a government monopoly.

(*Gun.*) A material employed in firing mines, &c. *Slow-match* consists merely of hempen rope loosely twisted, and dipped in a solution of saltpetre and lime-water. It burns at the rate of one yard in three hours. *Quick-match* is merely cotton coated with a composition of mealed powder, gum, and water. When not confined, it burns at the rate of one yard in thirteen seconds.

Match, *n.* [A. S. *máca*, a mate, wife; Icel. *maki*, an equal, a wife.] A person who is equal to another in strength or other quality; one able to cope with another; one who suits or tallies with another, or anything that equals another.—Union by marriage; sometimes, a contract of marriage.—One to be married.—A contest on equal grounds; competition for victory, or a union of parties for contest.

—*v. a.* To show an equal to.—To be equal to.—To oppose as equal; to set against, as equal in contest.—To suit; to make equal; to proportion.

—To marry; to give in marriage.

—*v. n.* To be united in marriage.—To suit; to correspond; to be of equal size, figure, or quality; to tally.

Match'able, *a.* Fit to be matched, joined, or compared; suitable; equal.

Match'ableness, *n.* The state or quality of being matchable.

Matchapo'nix Brook, in *New Jersey*, enters South River in Middlesex co.

Match'-cloth, *n.* A coarse woollen cloth, for the Indian trade.

Match'-coat, *n.* A large, loose coat made of match-cloth.

Match'er, *n.* One who matches or joins.

Match'less, *a.* That cannot be matched; having no equal.

Matchless'ly, *adv.* In a manner not to be equaled.

Match'lessness, *n.* State or quality of being matchless, or without an equal.

Match'-lock, *n.* Formerly, the lock of a musket, containing a match for firing; the musket itself.

Match'-maker, *n.* One who contrives marriages.—One who makes matches to burn.

Match'-making, *n.* Act of making matches.

—*a.* Employed in making matches.

Match'-planes, *n. pl.* (*Carp.*) Planes used in joining boards by grooving and tonguing; one plane, called the plough, being used to form the groove, and the other to form the corresponding tongue.

Mate, *n.* [Du. *maat*, a comrade; Fr. *mat.*] An equal; a match.—A companion; an associate; one who customarily associates with another.—A husband or wife.—The male or female of animals which associate for propagation and the care of their young.—One who eats at the same table.

(*Naut.*) An officer in a merchant-ship, or ship-of-war, whose duty is to assist the master or commander, and to take, in his absence, the command. There are sometimes only one, and sometimes two, three, or four mates in a merchantman, according to her size, denominated *first, second, third*, &c. mates. The law, however, recognizes only two descriptions of persons in a merchantman—the master and mariners, the mates being included in the latter, and the captain being responsible for their proceedings.

—*v. a.* To match; to marry.—To oppose; to equal.

Maté', *n.* A South American drink. See ILEX.

Mate'less, *a.* Having no mate or companion.

Matel'ica, a town of central Italy, in the Marches, 23 m. W.S.W. of Macerata. *Manuf.* Coarse woollen cloths. *Pop.* 7,500.

Matelote, *n.* [From Fr. *matelot*, sailor.] A kind of fish chowder, prepared by stewing in wine.

Mat'er, *n.* [Lat., mother.] (*Anat.*) See DURA MATER, PIA MATER, and BRAIN.

Alma-mater. This name, originally used as an epithet for the earth, is now applied by students to the college or university in which they have been educated.

Mate'ra, a town of S. Italy, prov. of Potenza, 37 m. W. N.W. of Taranto. *Manuf.* Leather, and arms. *Pop.* 13,300.

Mate'ria, *n.* [Lat.] Substance; matter; body.

Mate'ria Med'ica. [Lat., medicinal materials or agents.] (*Med.*) A general name for the substances and agents which are employed for the relief or cure of disease. The term is also applied to that branch of study which elucidates the nature and properties of such substances and agents. In medical schools it is customary to connect Materia Medica with Therapeutics, and to expound both departments of science in one course of lectures. Therapeutics may be described as that branch of study which treats of the application of the Materia Medica for the prevention and cure of the various diseases. These allied branches of professional study are of the utmost importance; for before a thorough knowledge of the nature and action of medicines is obtained, it is impossible to know how and when to prescribe them. Medicines have been defined as "all substances which have the power of modifying the actual state of one or more of our organs, and which possess this property independent of their nutritive qualities." It is not easy to define medicines or remedies as distinct from poisons, for there are many substances that act either as remedies or poisons, according to the quantities in which they are applied to our organs. The Materia Medica may be classified in two ways; the first being according to their natural history, and the second according to their physiological and therapeutic effects. In the natural history arrangement, remedies obtained from the inorganic kingdom (mineral and chemical substances) form the first class; remedies yielded by the vegetable kingdom (herbs, fruits, roots, leaves, principles separated from plants, &c.,) form the second class; and remedies yielded by the animal kingdom (insects, fats, animal secretions, &c.,) form the third class. Many classifications, based upon the effects of remedies, have been proposed, but they are all more or less imperfect, as several remedies produce very different effects, and many diseases are curable by different modes of treatment. The following comprehends the principal features of all the best schemes of classification.

A.—MECHANICAL REMEDIES.—Diluents, Demulcents, Emollients.

B.—CHEMICAL REMEDIES.—Escharotics, Acids, Alkalies, Antilithics, Disinfectants, Astringents, Antidotes.

C.—VITAL AGENTS.—1. *Evacuants* or *Local Stimulants.* Alteratives, Errhines, Sialagogues, Emetics, Expectorants, Diaphoretics, Diuretics, Cathartics, Anthelmintics, Emmenagogues, Rubefacients. 2. *General Stimulants.* Tonics, Stimulants, and Aromatics. Diffusible and Special Stimulants. 3. *Depressants, or Contra-Stimulants.* Narcotics, Antispasmodics, Refrigerants, Sedatives.

The groups of medicinal agents ranged under the head of "Mechanical Remedies," are supposed to act only as ordinary physical agents, or by their simple mechanical properties. *Diluents* are remedies which are supposed to increase the fluidity of the blood: their general effect is to allay thirst and to diminish the heat of the skin; to promote transpiration from the skin, as well as to increase the flow of urine. *Demulcents* and *Emollients* are substances which are calculated to soften and lubricate the parts to which they are applied. The former term is restricted to such as are intended for internal exhibition, and the latter to such as are intended for external application: thus, arrow-root, calves'-feet jelly, and liquorice, are demulcents; while liniments, embrocations, and cataplasms, are emollients.—Under the head of "Chemical Remedies" are placed those agents which seem to act chiefly by producing chemical changes in the solids or fluids of the body. *Escharotics*, usually called *caustics*, are substances employed for destroying the vitality of the part to which they are applied. *Acids* and *Alkalies* act upon the secretions as they act upon substances out of the body, and respectively counteract alkalimity and acidity. *Antilithics* are medicines which counteract the tendency to the deposition of urinary sediments or calculi. *Disinfectants* are substances suited to free the air of buildings, and infected bodies in general, of the invisible particles which propagate disease; while *Antiseptics* are those chemical agents which prevent the decomposition of organic structures, whether vegetable or animal. *Astringents* are remedies which have the power of corrugating, or of producing a contraction, of the muscular fibres of the part to which they are applied, as well as of coagulating or precipitating albuminous fluids. *Antidotes* are agents which counteract the effects of poisons.—The division "Vital Agents" includes those groups of medicines which are considered to act in a more special manner upon the living structures,—upon the muscular, sanguineous, and secerning systems, and all as dependent upon the nervous system. The groups placed in the first subdivision, *Evacuants*, cause increased secretion or evacuation from the different organs. *Alteratives*, according to the usual interpretation of the term, are remedies which, when taken in comparatively small doses, and continued for some time, by degrees, and almost without any perceptible effect, produce changes in the secretions and in disordered actions. *Errhines* are medicines which are applied to the mucous membrane of the nostrils: those which cause sneezing are sometimes distinguished by the term *Sternutatories*. *Sialagogues* are medicinal agents which increase the secretion of saliva; *Emetics*, those which evacuate the stomach by vomiting: *Expectorants*, those which favor the expulsion or secretion of mucus from the organs within the chest; and *Diaphoretics*, those which increase exhalation from the surface, and the natural function of perspiration: to the latter, when acting so as to produce sweating, the term *Sudorifics* is applied. *Diuretics* are medicines which are considered to have the power of augmenting the secretion of urine; *Cathartics* increase the peristaltic movements of the intestinal canal, evacuate its contents, and usually augment its mucous secretions. These were formerly divided into *Hydragogues*, causing watery evacuations, and *Cholagogues*, favoring the secretion of bile. Cathartics are also often distinguished according to their energy of action; as *Laxatives*, which merely evacuate the intestinal contents, and *Purgatives*, which stimulate secretion and accelerate evacuation. The more violent purgatives are further distinguished as *Drastics* and *Hydragogue Cathartics*. *Anthelmintics* are medicines which are prescribed against the production of worms, also to destroy or prevent them. Those which destroy or expel worms are also termed *Vermifuges*. *Emmenagogues* are medicines which are considered to have the power of promoting the menstrual discharge, when either retained or suspended. *Rubefacients*, as their name indicates, produce redness of the skin, with warmth and increased sensibility. These are also known as *Counter-irritants*, and when concentrated, as *Epipastics*, or *Vesicants*. The second subdivision, *General Stimulants*, includes those remedies which excite all the principal functions of life, by directly influencing the nervous system. *Tonics* are those which possess the power of gradually increasing the tone of the muscular fibre when relaxed, and the vigor of the body when weakened by disease. *Stimulants* or *Excitants* are medicines which exalt nervous power. *Aromatics*, are those stimulants which are grateful in odor and taste, as the spices, &c.; and *Diffusible stimulants* those which excite the whole system with great rapidity through the medium of the brain. Of the latter group, alcohol and ether are examples. The subdivision *Depressants* includes those medicines which are employed to subdue inordinate action; the *Narcotics*, which, by acting on the brain or spinal marrow, assuage pain, control restlessness, and procure sleep; the *Antispasmodics*, which allay the irregular muscular contractions called spasms; the *Refrigerants*, which diminish the force of the circulation, and so reduce the heat of the body; and the *Sedatives*, which directly and primarily depress the powers of life without previously exciting nervous action or increasing the circulation.

Mate'rial, *a.* [It. *materiale;* Fr. *materiel*, from Lat. *materia*, matter.] Consisting of matter; corporeal bodily; substantial; physical;—opposed to *spiritual;* as, "The *material* elements of the universe."—*Whewell.*—Relating, pertaining to, or influencing man's physical being, as distinguished from the moral or religious nature; having reference to the physical necessities, interests, and aliments of mankind.—Having importance or effect; weighty; essential; momentous; consequential; indispensable.

"In this *material* point, the constitution of the English government far exceeds all others."—*Swift.*

(*Logic.*) Pertaining or having reference to the matter or substance, as opposed to the form of anything. See MATTER.

—*n.* Anything composed of matter; the substance or matter of which anything is made, or may be made.

Mate'rialism, *n.* [Fr. *matérialisme.*] (*Phil.*) That metaphysical theory which is founded on the hypothesis that all existence may be resolved into a modification of matter, including, of course, the conscious subject. The most celebrated materialists were, among the ancients, Democritus and his later disciples, Epicurus and his sect, to whom may be added, though in a somewhat different sense, the Stoics; among the moderns, Gassendi, Hobbes, Hartley, and Priestley. From the loose and general way in which the term *M.* is used, it embraces systems that differ widely from each other. A very modified system of *M.*, if, indeed it ought to be called *M.* at all, is one which, while admitting the existence of a soul, attempts to account for the various mental phenomena by physical causes. Then there is what we may term the *M.* of Priestley, which denies the existence of a soul in man capable of surviving the body, but yet believes in the resurrection of the body, and a future state of rewards and punishment. Again, there are those materialists who deny the existence of anything in this world but matter, and consequently do not believe in the existence of Deity, or in a future state. The last of these are strictly and purely atheists. (See ATHEISM.) Priestley has more clearly and fully than any other person expounded the principles of materialism in the pure and proper sense of the word. He denies the existence of an immaterial principle in man, because he thinks that it could not exist in union with a material body; and because he thinks that all the mental phenomena may be explained by "medullary vibrations," and other supposed movements of the material parts. The corporeal and mental faculties are inherent

in the same substance; grow, ripen, and decay together; and whenever the system is dissolved, it continues in a state of dissolution till it shall please the Almighty Being, who called it into existence, to restore it to life again. In this view the question of *M.* is not, perhaps, of so much consequence as some may imagine. Its advocates deny that their doctrine militates against the hope of a resurrection; on the contrary, they maintain that it points out "more fully the necessity and value of a resurrection from the dead," on which alone they say that the sacred writers build all their hopes of a future life; for the apostle Paul says, "If the dead rise not, then is not Christ risen," &c. (1 *Cor.* xv. 16.) These views were at one time held by Robert Hall, though he afterwards saw reason to change them. *M.* almost of necessity involves the doctrines of Socinianism and philosophical necessity. The great objection to it is that it is unphilosophical. It rests entirely upon hypothesis and conjecture. We have no evidence for the assertion of some Materialists, that "medullary matter thinks." Much as it is known that mind depends upon matter for its development in man, every property of mind, and every property observable in matter, are so essentially different, that the idea of homogeneity in the two substances is difficult to be admitted, except on much stronger evidence than Materialists have yet been able to bring forward. Until it can be inductibly established that the modes of *extension* and the modes of *thought* are alike ultimately referable to one common substance, the laws of a sound philosophy demand the ascription of the one class of phenomena to one substance, termed *matter*, and of the other class of phenomena to another substance, termed *mind*. Much mischief is often done to philosophy by mixing up the results of observation with what can only be matter of conjecture. The true philosopher, setting aside all speculation regarding the ultimate nature of matter or spirit, will set out from these as fixed principles, and apply himself to observing their qualities, capabilities, and laws.

Mate'rialist, *n.* [Fr. *materialiste.*] One who asserts that all existence is material; one who denies the existence of spiritual substances, and maintains that man's psychological development is the result of a peculiar organization of bodily matter.

Materialist'ic, Materialis'tical, *a.* Relating or pertaining to, or partaking of, materialism; as, a *materialistic* thinker.

Material'ity, *n.* [Fr. *matérialité.*] State or quality of being material; material existence; corporeity. — Importance; signification; tangibility; moment; as, the *materiality* of direct evidence.

Mate'rialize, *v. a.* [Fr. *matérialiser.*] To reduce to a state of matter; to view or appreciate as matter. — To treat by the recognized rules or principles which are relevant to matter. — To characterize with materialistic powers or influences; to subserve material, rather than moral or religious interests; as, to *materialize* one's bent of thinking.

Mate'rially, *adv.* In the state of matter; corporeally. —Not formally; in its essential nature; substantially. —In an important sense, degree, or manner; essentially; momentously; weightily; as, this affair concerns him *materially.*

Mate'rialness, *n.* State or quality of being material; materiality; importance; momentousness.

Mate'rials, (Strength of.) (*Phys.*) The power which any substance, such as a rod, bar, beam, rope, or chain, possesses, so as to enable it to resist any attempt made to sever the adhesion of the various parts of which it is composed. The strength of materials consequently depends, in the first place, on the relative disposition of the particles of the substance to each other; secondly, on the intensity of the force by which the particles adhere to each other; and lastly, on the manner in which the straining power is applied. The relative properties of a beam between its strength and the strain to which it is subjected, can only be made the subject of mathematical investigation by supposing the material to consist of an infinite number of threads, or fibres, arranged in lines parallel to each other in the direction of its length. These particles must also be supposed to cohere together by means of powers exerted in that direction, and also to cohere laterally by powers which may be either equal or unequal to the powers that act along its length. In glass, and some metals — in fact, in the generality of homogeneous bodies, the particles are disposed of symmetrically through the substance, and attract each in every direction with equal force. In timber, however, the lateral cohesion of the particles is less than the longitudinal cohesion of the various particles in each fibre. In trying, therefore, the load which a piece of timber will sustain, we must first find out the weight that will suffice to break it, and anything less than that will be the weight which it can bear. The stiffness of a beam is the proportion that exists between its deflection and its length, and the deflection is the extent to which it sinks, when loaded, below a horizontal line. The deflection of beams of the same timber, similarly loaded, varies as the weight applied and the cube of the length directly, and as the breadth and cube of the depth inversely; and this deflection, according to an eminent authority on the subject, should never be permitted to extend beyond $\frac{1}{480}$ part of the length, or $\frac{1}{40}$ part of an inch to the foot. The lateral strength of a beam is less than its absolute longitudinal strength, either against compression or extension, from the causes stated above with regard to the cohesion of the particles. Timber will bear considerable weight if it is suspended to it perpendicularly, or when pressing in the direction of its length, provided the timber is prevented from bending; and, therefore, in using timber, a lateral strain should be avoided where a longitudinal one can be substituted. The fibres of ropes have no lateral cohesion, and the strength must necessarily depend on the twisting of the fibres together, and the cohesion of all the particles in any transverse section must be destroyed before a disruption can take place. In an article in the *Penny Cyclopædia*, the writer observes, that in a rod of any material consisting of parallel fibres, as supposed above, being placed in a vertical position and strained by a weight applied at the lower extremity, the particles in every fibre will be separated from each other by the action of the weight, and consequently, its length will be increased. The cohesive power by which the particles are kept together will, in most cases, be lessened by the separation; and if the weight be heavy enough, or if it be allowed to act long enough, the cohesive power will be altogether overcome; that is to say, the rod will be torn asunder in some part or other. The elongation of a rod, when strained by a weight, and the amount of the weight necessary to produce fracture will, of course, depend considerably on the nature of the material. The following is the table of breaking-weights in pounds avoirdupois, taking the area of a transverse section of each rod to be one square inch: oak, 8,000 to 12,000 lbs; fir, 11,000 to 13,488; beech, 11,500; mahogany, 8,000; teak, 15,000; cast-steel, 134,256; iron wire, 93,964; Swedish bar-iron, 72,064; best malleable iron, 60,000; cast-iron, 18,656 to 19,488; wrought-copper, 33,792; platinum wire, 52,987; silver wire, 38,257; gold wire, 30,888; zinc wire, 22,551; tin wire, 7,129; lead wire, 3,146; and rope of one inch circumference, 1,000 to 12,566. A piece of timber has been proved to be of the greatest strength when cut out of a round tree, by dividing the diameter into three equal parts, raising perpendiculars upon them, and prolonging these until they cut the circumference; a rectangle uniting these points shows the form of the strongest beam that can be obtained. The strain upon a beam fixed at one end in a wall, and loaded at the other, is four times greater than when the same weight is hung upon the middle of the same beam, and the latter is supported at both extremities. When a beam is fixed at both its extremities, and is loaded in the middle, its strength is to that when only supported at its two ends as 3 to 2; and when a weight is uniformly distributed over a beam, its mechanical action to produce fracture is only one-half of what it is when collected in the middle. If a body is compressed in a direction perpendicular to the length of the fibres, the points of support being very near together, and on opposite sides of the place at which the force is applied, the strain to which the body is subjected has been called the *force of detorsion.*

Materiel, (*ma-tā're-ĕl,*) *n.* [Fr. See MATERIAL.] That which constitutes the collective system of materials, appliances, or instruments employed in the formation, operation, or transaction of anything, in contradistinction to the *personnel*, or staff of men engaged in conjunction therewith; as, the baggage, munitions, commissariat of an army, &c.

Mater'nal, *a.* [Lat. *maternus*, from *mater;* Ir. *mathair;* Slav. *mati;* Gr. *meter;* Sansk. *mâtri*, a mother. See MOTHER.] Motherly; pertaining or having reference to a mother; peculiar to, or becoming, a mother; as, *maternal* duties, *maternal* love.

Mater'nally, *adv.* In a maternal or motherly manner.

Mater'nity, *n.* [Fr. *maternité;* L. Lat. *maternitas.*] The state, condition, character, or relation of a mother.

Mat'felon, *n.* [W. *y fad felen*, the basilisk.] (*Bot.*) A common name applied to some species of the genus *Centaurea.*

Mathemat'ic, Mathemat'ical, *a.* [Fr. *mathématique;* Lat. *mathematicus.*] Pertaining to, or used in, mathematics; as, *mathematical* instruments, *mathematical* science.

—According to the principles of mathematics; demonstrated by mathematics; — hence, theoretically exact; precisely accurate.

> "I suppose all the particles of matter to be situated in an exact and *mathematical* evenness."—*Bentley.*

Mathemat'ically, *adv.* According to the laws or principles of mathematical science; demonstrably; with mathematical exactness of proposition and solution.

Mathematician, (*-tish'an,*) *n.* [Fr. *mathématicien.*] One versed in mathematics.

Mathemat'ics, *n. sing.* [Fr. *mathématiques;* Gr. *mathematike*, from *mathesis*, learning.] The science which investigates the consequences which are logically deducible from any given or admitted relations between magnitudes or numbers, without being descriptive of their subject-matter. Mathematics is divided into two classes; namely, *pure* and *mixed.* Pure mathematics embrace such subjects where magnitude is only considered in the abstract. From the fact of this branch being founded on the simplest notions of quantity, the conclusions which are deduced from it have the same evidence and certainty as the elementary principles from which they are obtained. Pure *M.* consequently comprehends *Arithmetic*, treating of the properties of numbers; *Geometry*, treating of extension as dependent on the three qualities of length, breadth, and thickness, without considering any physical qualities with which bodies may be endowed; *Algebra*, which compares together all quantities, whatever may be their value; and lastly, the *Differential* and *Integral Calculus*, which operations consider magnitudes as of two kinds — constant and variable; the variable magnitudes being generated by motion, the operations of the calculus being to determine the values of these quantites from the velocities of the motions with which they are generated. On the other hand, *mixed mathematics* consider the application of *pure mathematics* to certain established physical principles; and this branch comprehends all the mathematical sciences which appertain to physics; as *mechanics*, *hydrodynamics*, *optics*, *astronomy*, *acoustics*, *electricity*, and *magnetism.* A writer in the "English Cyclopædia" observes: "The unavoidable certainty and definite character of mathematical conclusions have obtained for *M.* the name of *exact science;* but to this name it has not exclusive right. The laws under which we must think are the foundation of a science which has an equal claim with *M.* to any epithet which indicates either necessity or precision. Accordingly, logic and *M.* are separate branches of exact science. There are but three things of which we cannot divest ourselves, so long as we imagine ourselves to retain both existence and consciousness of existence — they are thought, space, and time. With everything else there is a possibility of dispensing; that is, the imagination can conceive everything got rid of and out of existence, except its own consciousness in some kind of activity, and the space and time, without which it cannot conceive existence. The necessary laws of thought are the subject-matter of logic; the necessary properties of space and time are the subject-matter of *M. Number* is an offspring of the notion of time; enumeration is a succession in time: in no other way can *number* be distinguished from *multitude.* And geometry is, without need of illustration, the offspring of the notion of space." The rise of *M.*, from the days of Thales and Pythagoras, will be found given under the head GEOMETRY, and it need not be commented upon here. Mathematical science may be either used as a discipline of the mind, or it may be applied as an instrument in the advancement of the arts, and in studying the wonderful panorama of the world around us. Taken in the former point of view, the object of *M.* is to strengthen, by frequent examples, the power of logical deduction; to put forth a view of the difference between reasoning on probable premises and on certain ones, by constructing a body of results which do not involve, in any case, the uncertainty arising from the introduction of that which might have been false. *M.* also tends to form the habit of concentrating the attention closely to difficulties which can possibly be only overcome by thought, and over which victory is certain, so that the right means be used. As an instrument in advancing the arts and investigating the laws of nature, *M.* enables us to acquire vast knowledge; and without its aid most of the physical and other sciences would still be in a state of embryo. This knowledge, therefore, is gained by our applying abstract truths and tried formulas in order to obtain results before hidden; and, by advancing fictitious premises, to arrive at the real truth, which custom might endeavor to conceal. It would be impossible, in the present article, to enter at length upon the metaphysical discussion of the subject, neither is it necessary to our purpose so to do. The various branches of *M.*, however, will be found given under their respective headings, and to those articles the reader is referred for further information. — See FLUXIONS, GEOMETRY, INTEGRAL CALCULUS, &c., &c.

Math'er, COTTON, son of the following, b. in Boston, in 1663. After graduating at Harvard College, in 1678, and early manifesting a truly Puritan spirit of austerity, he devoted himself to theological studies, and, in 1684, was ordained as his father's colleague in the pastorate of the North church, Boston. In this avocation he displayed a singular fervency of sectarian religious zeal, and strove to maintain the declining ascendency of the Puritan clergy in civil affairs. More notably, however, did he distinguish himself as the self-called exterminator of witchcraft; in relation to which delusion he published, in 1685, his *Memorable Providences relating to Witchcraft and Possessions*, a work redolent of the bigoted superstitious spirit of the period. Following this diatribe against demonology, appeared, in London, a discourse from his pen, pronouncing witchcraft "the most nefandous high treason against the Majesty on high," — with a preface by Richard Baxter (*q. v.*) In 1692, he produced his *Wonders of the Invisible World*, and from this time forward till his death, wrote voluminously, his chief work being *Illustrations of the Holy Scriptures.* Falling into public odium through his many eccentricities and self-delusion, the latter years of his life were passed in comparative obscurity. In 1713, for his work, *Curioso Americana*, he received the diploma of F. R. S. of London, being the first American to receive this distinction. D. 1728.

Math'er, INCREASE, an eminent American divine, born at Dorchester, Mass., 1635, was educated at Harvard College, where he took his degree, in 1656. In the following year he went to England, where he obtained preferment, and was greatly distinguished for his urbanity and integrity; but in consequence of his Nonconformist opinions was obliged to return to his native colony, where he was appointed minister at Boston; in 1684, was elected president of Harvard College, and created n. n. D. in 1723. He was the author of many theological works, a *History of the Indian War*, and a *Discourse on Comets and Earthquakes.*

Math'erton, in *Michigan*, a post-village of Ionia co., abt. 28 m. N.N.W. of Lansing.

Mathe'sis, *n.* [Lat. and Gr.] The mathematical branch of learning. (R.)

Math'ew, THEOBALD, the Irish *Apostle of Temperance*, was an illegitimate son of the Llandaff family, born in Tipperary, 1790, and was educated at St. Patrick's College, Maynooth, for the Roman Catholic priesthood. He was afterwards appointed missionary, and became president of a temperance association in Cork, where he instituted religious societies for visiting the sick and

poor, and devoted himself to the task of inducing spirit-drinkers to take the "*pledge*," a solemn promise to abstain from alcoholic liquors; and in a few months converted 150,000 persons in the co. of Cork alone. He afterwards visited Dublin, Liverpool, Manchester, and London, attended with the same success. In recognition of his services he was granted a pension of $1,500 a year. D. 1856, deservedly respected by all classes.

Mathil'de, (PRINCESS) MATHILDE LÆTITIA WILHELMINE BONAPARTE, daughter of the late ex-king Jerome by the Princess Catharine of Wurtemburg, and cousin of the Emperor Napoleon III., was B. at Trieste, in 1820, and married at Florence, 1841, a Russian millionaire, Prince Anatole Demidoff. This union proved unhappy, and in 1845 they separated by mutual consent, her husband being compelled by the Czar to allow the Princess an annuity of 200,000 roubles. From 1849 till the marriage of Napoleon III., Princess *M.* did the honors of the presidential court, and on the reëstablishment of the empire was comprised among the members of the French Imperial family, receiving the title of Imperial Highness. The Princess is a clever amateur artist, having on several occasions exhibited her pictures at the *Salon de Peinture*. She is also eminent as a patroness of literature, and as the friend of savans and men of letters generally, her *salons* being the focus of all that is distinguished in French art and literature.

Mati'eo, *n.* (*Bot.*) The dried leaves of *Piper augustifolium*, a shrub of the order *Piperaceæ*, which are imported from Peru, and are used for staunching wounds. They are also useful as an aromatic stimulant in mucous discharges of various kinds.

Matil'da, a village and township of Upper Canada, abt. 15 m. N.N.E. of Prescott.

Matilda Furnace, in *Pennsylvania*, a village of Mifflin co.

Matil'daville, in *Pennsylvania*, a village of Clarion co., on the Clarion River, a few m. above its mouth.

Matin, *a.* [Fr.; Lat. *matutinus*.] Pertaining or having reference to the morning; used in the morning.

"I waste the *matin* lamp in sighs for thee." — *Pope.*

—*n.* Morning.

"The glow-worm shows the *matin* to be near." — *Shaks.*

Matina, (*ma-tee'na*,) a river of Costa Rica, Central America, flowing into the Caribbean Sea, abt. Lat. 10° N., Lon. 8° 25′ W. There is a village of the same name at its mouth.

Matinée, (*măt-ĭ-nā'*,) *n.* [Fr., from *matin*.] A mid-day reception, theatrical performance, or musical entertainment; — correlative to *soirée*.

Matines, *n. pl.* [From MATIN, *q. v.*] (*Eccl.*) In the Roman Catholic Church, the earliest of the canonical hours of prayer.

Mat'lock, a village of England, co. of Derby, on the Derwent, 16 m. N.W. of Derby. It is chiefly noted for its romantic scenery, and hot springs. *Pop.* 4,000.

Mato-Gros'so, a prov. of Brazil. See MATTO-GROSSO.

Mat'rass, *n.* [Fr. *matras*, from Lat. *materis*.] (*Chem.*) A glass vessel formerly used in the chemical laboratory, for distilling or digestive purposes; it was generally egg-shaped in form, and sometimes tapering into a conical figure, with an orifice at the top of the neck. In modern experiments and processes it has been superseded by the CUCURBIT, *q. v.*

Mat'ress, *n.* An unusual spelling of MATTRESS, *q. v.*

Matrica'ria, *n.* [From Lat. *matrix*, womb.] (*Bot.*) A genus of plants, ord. *Asteraceæ*. The species *M. chamomilla* bears flowers which have similar properties to those of the true chamomile plant. See ARTHEMIS.

Mat'rice, *n.* See MATRIX.

Mat'ricidal, *a.* Pertaining to, or concerning, matricide.

Matricide, (*măt'rĭ-sīd*,) *n.* [Lat. *matricidium*—*mater*, and *cædo*, to kill.] The felonious killing or murder of a mother. — One who feloniously kills his mother.

Mutric'ulate, *v. a.* [It. *matricolare*, to matriculate, from Lat. *matricula*, a roll, list, or catalogue, from *matrix*, a public register.] To enter or admit to membership in a body corporate or society, especially in a college or university, by inscribing the name in a register; to enroll.

—*n.* One enrolled in a register; specifically, one who is matriculated to the membership of a university body; as, "the *matriculates* of that famous university."

Arbuthnot.

Matriculation, (*-lā'shun*,) *n.* [L. Lat. *matriculatio*.] Act of matriculating; act of registering or enrolling a name, and thus admitting to membership.

Matrimo'nial, *a.* [Fr.; It. *matrimoniale*.] Relating or pertaining to matrimony or marriage; connubial; marital; nuptial; hymeneal; as, *matrimonial* duties, a *matrimonial* imbroglio, *matrimonial* felicity, &c. — Springing from marriage; occasioned by marriage.

Matrimo'nially, *adv.* According to the manner or laws of matrimony.

Mat'rimony, *n.* [Lat. *matrimonium*, from *mater*, a mother.] That state of conjugal union in which women become lawful mothers; marriage; wedlock; the nuptial state, or connubial condition; marital tie.

M. vine. (*Bot.*) A climbing plant of the gen. *Lycium*.

Ma'trix, *n.*; *pl.* MATRICES, *n.* [Lat., womb, from *mater*, mother.] (*Anat.*) The mother's womb; the cavity in which the fœtus of an animal is formed and nourished till the time of parturition.

—That which forms, generates, or modifies anything.

(*Mech.*) A mould; the cavity in which anything is formed, and which gives it shape; as, the *matrix* of a type.

(*Min.*) Same as GANGUE, *q. v.*

(*Osteology.*) The productive organ of the teeth.

Ma'tron, *n.* [Fr. *matrone*; Lat. *matrōna*, from *mater*.] An elderly married woman; a spinster or elderly unmarried female; the female head of a household, or family-circle.

—In a hospital, a female superintendent or nurse; as, the *matron* of an asylum for the blind.

Ma'tronage, *n.* State, quality, or condition of a matron. — The body of matrons taken collectively.

Ma'tronal, *a.* [Lat. *matronalis*.] Pertaining, or having reference, to a matron; suitable to a married woman or to an elderly female; motherly; sedate; as, "*matronal* years."—*Bacon.*

Ma'tronhood, *n.* State or condition of a matron.

Ma'tronize, *v. a.* To make to appear matronly; to render matron-like.

Ma'tronly, *a.* Advanced in years; elderly; as, a *matronly* woman. — Becoming or beseeming a matron; sedate; grave; motherly; as, a *matronly* deportment.

Matross', *n.* [D. *matroos*.] (*Mil.*) The name formerly given to an artillery soldier next in rank to a gunner; — perhaps, corresponding with the modern *bombardier*.

Matsumai', a city of Japan, on the island of Yezo, at the mouth of a river on its S. coast; Lat. 41° 30′ N., Lon. 140° E.; *pop.* 50,000.

Mattamiscon'tis, in *Maine*, a township of Penobscot co. *Pop.* (1897) 55.

Mat'tamore, *n.* [From Sp. *matar*, to kill, and *Moro*, a Moor.] A vault or cellar underground used as a depository for grain.

Mattapoi'sett, in *Massachusetts*, a post-town of Plymouth co., on Buzzard's Bay, about 60 m. S. by E. of Boston.

Mattapo'ny, in *Virginia*, rises in Spottsylvania co., and flowing S.E. unites with the Pamunky to form the York River.

Mattawan', in *Michigan*, a post-village of Van Buren co., abt. 156 m. W. of Detroit.

Matte, (*măt*,) *n.* [Sp. *mate*; Ger. *matt*, dull, dim — said of metals.] Crude black copper reduced, but not refined from sulphur, &c.

Matteawan', in *New York*, a post-village of Dutchess co., abt. 90 m. S. of Albany; *pop.* abt. 3,000.

Mat'ten, in *W. Virginia*, a village of Kanawha co., on the Kanawha River, abt. 5 m. above Charleston.

Mat'ter, *n.* [Fr. *matierè*; Lat. *materia*, from *mater*, a mother, a producing cause, origin, source; Icel. *máttr*, force, power.] The substance of which all bodies is constituted; that of which anything is made, formed, or composed; constituent elements. material or substantial part of anything; essential nature; embodiment. — Body; extended substance; that which is visible or tangible to the perceptive senses; that which fills space, and of which the macrocosm of nature, and all essential bodies consists. — Purulent humor discharged from living animal bodies; substance excreted or thrown out in a boil, tumor, or abscess; pus; as, vaccine *matter*. — Subject; concern; affair; thing treated; business in hand. — That which employs thought or discussion, or excites emotion; theme; subject of argument, action, consideration, and the like. — Thing of moment or consequence; importance; consequence; significance; import; — principally, as applying in the phrases *no matter, what matter?* &c.

"When Bishop Berkeley said 'there was *no matter*,'
And proved it — 'twas *no matter* what he said." — *Byron.*

—Cause of any event or occurrence, as of any disturbance, of a disease, or of a difficulty; subject of complaint, suit, debate, or demand; trouble; as, what is the *matter?*

"Slender, I broke your head: what *matter* have you against me?" *Shaks.*

—Space, time, or quantity indefinitely computed.

"Away he goes to the market-town, a *matter* of five miles." *L'Estrange.*

(*Printing.*) Copy; written manuscript prepared for setting up in type; also, type set up preparatory to being used in printing; as, a full page of *matter*.

(*Physics.*) That which possesses the properties whose existence is revealed to us by our senses; that part of the universe which is neither mind nor force; — substance. We know nothing of the essential or intimate nature of matter, and are only acquainted with its existence through its *essential properties*, which are; DIVISIBILITY, IMPENETRABILITY, POROSITY, COMPRESSIBILITY, *q. v.*; to which may be added EXTENSION, and FIGURE, *q. v.*, which belong also to space, and form the subject of geometry. The contingent properties of matter are MOBILITY and WEIGHT, *q. v.* Matter in every form is capable of being moved from one place to another; and every substance is subject to the attraction of gravitation. But motion has reference to space, and weight to the attraction of other *M.* The above are the general properties of *M.*, upon which physical investigations depend. There are, however, various other qualities belonging to particular substances, or to *M.* in particular states, the consideration of which is important in mechanical philosophy. Among these the principal are ELASTICITY, FLUIDITY, HARDNESS, RIGIDITY, SOLIDITY, *q. v.*

Dead-matter. (*Printing.*) Type ready for distribution into case after printing. — *Live-matter*, type set up, but which has, as yet, not been printed from. — *Upon the matter*, considering the whole; taking all into account; with respect to the main.

"The elder, having consumed his whole fortune, when forced to leave the title to his younger brother, left *upon the matter* nothing to support it." —*Clarendon.*

—*v. n.* To bear significance; to import; — generally with *it, this, that, what*, or *not*; as, what *matters it?* — To generate pus or matter by suppuration.

Matterhorn or **Mont Cervin.** See CERVIN (MONT).

Mat'ter-of-fact, *n.* A real or actual existence or event, in contradistinction from anything imagined or supposed; a palpable occurrence; a veritable cause or occasion.

—*a.* Abiding by facts; unimaginative; indisposed to deviate from realities; dry; hard; and, often, prosaic; as, a *matter-of-fact* person.

Mat'tery, *a.* Purulent; generating pus or suppurated matter; as, a "*mattery* cough." — *Harvey.*

Mat'teson, or MAT'TISON, in *Illinois*, a post-village of Cook co., abt. 28 m. S. by W. of Chicago; *pop.* abt. 1,800

Mat'teson, or MAT'TISON, in *Michigan*, a post-township of Brauch co.

Mat'teson, in *Wisconsin*, a township of Shawano co.

—A township of Waupaca co.

Mat'thew Cantacuzenus, (*kăn-ta-ku-se'nus*,) the son of John, emperor of Constantinople, and his associate in the empire in 1354. John abdicated the throne some time after, on which Matthew remained emperor, with John Palæologus. These princes at length disagreed, and had recourse to arms. A battle was fought between them in Thrace, and Matthew being taken prisoner, was compelled to renounce the throne to his rival. He then retired to the monastery of Mount Athos, where he composed commentaries on the Song of Solomon.

Mat'thew, (Gospel of St.) The first in order of the four Gospels of the New Testament, and generally believed to have been first also in point of time; but the exact date is unknown. Opinion is divided as to whether this Gospel was originally written in Greek or Hebrew, or whether Matthew did not write it in both languages. On the genuineness and authenticity of St. Matthew's Gospel we have the most satisfactory evidences, though there have not been wanting critics to call them in question. The Gospel of St. Matthew, as compared with the other Gospels, is characterized by the clearness and particularity with which many of our Saviour's discourses and moral instructions are related; as in the Sermon on the Mount, &c. In general, it may be said that the narration of our Lord's actions is commonly made subservient to his instructions, which are introduced. The style is everywhere plain and perspicuous. This Gospel was evidently primarily written for Christians of Jewish descent in Palestine. Every circumstance is carefully pointed out which might tend to strengthen the faith of that people, and every unnecessary expression is avoided that might tend to obstruct it. Everywhere there is kept in view the evolution of the twofold title of the first verse, "son of David," "son of Abraham." This Gospel consists of four parts: — 1. On the infancy of Jesus Christ (i. ii.); 2. the discourses and actions of John the Baptist preparatory to our Saviour's commencing his public ministry (iii.-iv. 11); 3. the discourses and actions of Christ in Galilee, by which he demonstrated that he was the Messiah (iv. 12-xx 16); 4. containing the transactions relative to the passion and resurrection of Christ (xx. 17-xxviii.).

Mat'thew, (St.,) or LEVI, the son of Alphæus, an apostle of Jesus Christ, before which he had been a publican (*i. e.* a tax-gatherer, or receiver of tribute). His gospel is supposed to have been written A. D. 64. Matthew is said to have been put to death in Parthia, where, and in Persia, he had propagated Christianity with zeal and success.

Matthews, (*math'ūz*,) in *Virginia*, an E. co., bordering on Chesapeake Bay; *area*, abt. 90 sq. m. *Rivers.* Piankatank River, and some smaller streams. *Surface*, level; *soil*, not very fertile. *Cap.* Matthews.

—A post-village, cap. of Matthews co., abt. 70 m. E. of Richmond.

Matth'ewsville, in *W. Virginia*, a village of Pocahontas co., abt. 150 m. S.S.E. of Wheeling.

Matthias, (*măth-thī'as*.) (*Script.*) One of the seventy disciples of Jesus Christ who was chosen by lot, in preference to Joseph Barsabas, into the number of the apostles, to supply the deficiency caused by the treachery and suicide of Judas (*Acts* i. 23–26). Nothing is known of his subsequent career.

Mat'thias, emperor of Germany, son of Maximilian II., B. in 1557. At the age of 21 he was sent by the Emperor Rudolph II. to take the government of the Low Countries, then in revolt against Spain, but he was unequal to the task, and in a few years returned. In 1592 he commanded the army against the Turks in Hungary, and three years later became heir presumptive by the death of his brother Ernest. He was elected king of Hungary in 1607, king of Bohemia in 1611, and on the death of Rudolph in the following year he was chosen emperor. He resigned the crown of Bohemia to his cousin Ferdinand in 1617, and the persecution of the Protestants in that country by the latter occasioned the Thirty Years' War. *M.* died broken down by the sense of the calamities impending over his dominions, 1619

Mat'thias Cor'vinus, called the GREAT, king of Hungary and Bohemia, B. 1443, was the son of John Hunniades. The enemies of his father confined him in prison in Bohemia; but, on regaining his liberty, he was elected king of Hungary, in 1458, when only 15 years of age. His election, however, was opposed by many of the Hungarian magnates, who offered the crown to Frederick III. The Turks, profiting by these divisions, invaded the country, but were expelled by Matthias, who compelled Frederick to yield to him the crown of St. Stephen, of which he had obtained possession. The war was afterwards renewed, and Matthias, overrunning Austria, took Vienna and Neustadt; on which the emperor was obliged to make a peace, in 1487. Matthias reformed many abuses, particularly with respect to duels and lawsuits, and was preparing an expedition against the Turks, when he died of an apoplexy, in 1490.

Matthio'la, *n.* (*Bot.*) The Stock, or Stock-gilly

flowers, a gen. of plants, order *Brassiaceæ*, having cylindrical or compressed pods, and a stigma consisting of two upright appressed plates, the outer side of which often rises into a knob or horn. The species are herbaceous, or half-shrubby, natives of south Europe, most of them thickly clothed with white or grayish stellate hairs: the flowers in racemes, and generally beautiful and fragrant. The Ten-weeks' Stock, *M. annuus*; the Purple July-flower, *M. incanus*; the Window July-flower, *M. fenestralis*; and the Grecian Stock, *M. Græcus*, are cultivated in our gardens.

Mat'ting, *n.* A texture composed of rushes, flags, grass, straw, &c., used in packing various articles, and also for covering the floors of houses; also, the materials used in the weaving of mats; as, India *matting*. — A decorative margin of thin beaten brass, fixed between the plate and glass of a dagnerrotype picture, as a preventative against damage.

Mattituck', in *New York*, a post-village of Suffolk co., about 8 m. E. of New York City.

Mat'tock, *n.* [A. S. *mattuc*; Ir. *mudóg*; W. *matog*; Gael. *madag*, a pickaxe.] An implement for penetrating the earth; a kind of pickaxe, having one end flat, after the form of an adze.

Mat'to-Gros'so, or MATO-GROSSO, ("great or dense forest,") the most W., and after Para, the largest prov. of Brazil. It adjoins Bolivia on the W. and Paraguay on the S., and lies mostly between Lat. 7° and 22° S., and Lon. 51° and 65° W. *Area*, about 673,526 sq. m. The chief rivers are the Paraguay, the Guapore, the Tapojos, and the Cuyaba, besides numerous less important streams, and many lakes. The surface is comprised of every variety, from the highest mountains to extensive tracts of swamp-lands — the former prevailing in the N.W. and the latter in the S., while the N.E. is comparatively level, and adapted to agriculture. The soil is almost uniformly fertile, though a comparatively small portion is under cultivation. *Min.* Gold is found in every part of this prov., and iron is abundant. Diamonds are also found, and in sufficient numbers to form a large item in the revenue of the govt. *Cap.* Cuyaba. *Pop.* about 145,000.

Mat'to-Gros'so, or VILLA-BELLA, a city of Brazil, in the above prov., on the Guapore River, about 300 m. W. of Cuyaba.

Mat'tole, in *California*, a township of Humboldt co.

Mat'tole River, in *California*, flows into the Pacific Ocean from Humboldt co.

Mat'toon, in *Illinois*, a manufacturing city of Coles co., on the Ill. Cent. and 2 other R.Rs., 11 m. W. of Charleston. Here are extensive railroad repair shops. *Pop.* (1897) 8,000.

Mat'tress, (sometimes written MATRESS,) *n.* [W. *matras*; Ger. *matratze*. See MAT.] A kind of mat, made smooth to form a couch; a quilted bed; a bed stuffed with hair, moss, or other floccose material, and quilted.

Matu'raut, *n.* [From Lat. *maturare*.] (*Med.*) A medicine or liniment to superinduce suppuration.

Matu'rate, *v. a.* [Lat. *maturare*.] To bring to maturity; to cause to ripen; as, to *maturate* a plant. — To bring to a state of complete suppuration, as an abscess, &c.

—*v. n.* To suppurate completely.

Matura'tion, *n.* [L. Lat. *maturatio*. See MATURE.] Act or process of ripening or coming to maturity; as, the *maturation* of fruits.

(*Surg.*) The period at which an abscess is ripening, or progressing to maturity; or the time when it will be fit to open, and allow the escape of the purulent matter or pus.

Matura'tive, *a.* [Fr. *maturatif*.] Ripening; conducive to ripeness or maturity. — Conducive to the formation of matter in an abscess.

—*n.* (*Med*) A maturant; a medicine or application to promote suppuration.

Mature', *a.* [Lat. *maturus*.] Perfected by time or natural growth; ripe; brought to perfection; full-grown.

"A man of learning and virtue, *mature* in years and experience." *Addison.*

—Brought to a state of maturity; thoroughly digested; completed; fit for execution; ready; as, a *mature* project. — Come to suppuration, as an abscess or tumor.

—*v. a.* [Lat. *maturo*, from *maturus*.] To ripen; to hasten to a perfect state; to promote the ripeness of; to advance toward perfection. — To bring into a state of ready application for a special use.

—*v. n.* To advance toward ripeness or perfection; to become ripe or perfect; as, the judgment *matures* by experience, wine *matures* by keeping. — To become due; as, a promissory note or bill of exchange.

Mature'ly, *adv.* In a mature manner; ripely; perfectly; completely. — Early; soon. — (A Latinism, rarely used.)

Mature'ness, *n.* Same as MATURITY, *q. v.*

Matures'cent, *a.* [Lat. *maturescens*.] Advancing to maturity.

Maturin, (*ma-too-reen'*,) in Venezuela, a N.E. dept., comprising the provs. of Barcelona, Cumana, and Margarita. *Cap.* Cumana. *Pop.* 130,000.

—A town, near the Gulf of Paria, Lat. 9° 30′ N., Lon. 62° 50′ W.

Matur'ing, *a.* Approaching to maturity; as, *maturing* fruits, *maturing* bills.

Matur'ity, Mature'ness, *n.* [Lat. *maturitas*.] State of being mature; ripeness; state of perfection or completeness; as, the *maturity* of age or wisdom, *maturity* of wine or fruits, *maturity* of a scheme, &c. — A becoming due; time of arrival of a specified time for payment; as, three days are allowed beyond the time of *maturity* of a bill of exchange.

Matuti'nal, Matu'tine, *a.* [Lat. *matutinus*.] Belonging; or having reference to the morning; early; as, breakfast is the *matutinal* meal.

Mat'y, *n.* In Hindostan, a native domestic.

Mau'ban, a town on the E. coast of Luzon, one of the Philippine Islands, lying to the S.E. of Manila; *pop.* 6,000.

Maubeuge, (*mo'be(r)ge*,) a town of France, dept. Nord, on the Sambre, 13 m. from Mons. *Manuf.* Firearms, and iron and steel goods. *Pop.* 8,000.

Mauch Chunk, in *Pennsylvania*, a post-borough, cap. of Carbon co., on the Lehigh river, about 100 m. N.E. of Harrisburg. It is situated in a rugged, mountainous region, abounding in coal and iron. The inhabitants carry on an active trade, particularly in coal and lumber. *Pop.* (1897) 4,400.

Mauck'port, in *Indiana*, a post-village of Harrison co., abt. 135 m. S. of Indianapolis.

Maud, *n.* In Scotland, a gray, striped, tartan plaid.

Maud'lin, *a.* [Corrupted from *Magdalen*, who is represented by painters with eyes red and swollen with weeping.] Disposed to shed tears from the effects of intoxication; crying drunk; fuddled; sentimentally stupid.

"*Maudlin* eloquence of trickling eyes." —*Roscommon.*

—Sickly sentimental; rhapsodical; sillily lugubrious.

"A *maudlin* poetess, a rhyming peer." — *Pope.*

Mau'gre, Mau'ger, *adv.* or *prep.* [Fr. *malgré* — *mal*, ill, and *gré*, will.] In spite of; in opposition to; notwithstanding; — used only in burlesque.

Mau'kin, *n.* Same as MALKIN, *q. v.*

Maul, *n.* A heavy wooden mallet. See MALL.

Maul, *v. a.* [Fr. *mailler*; Sp. *majar*; It. *magliare*, from Lat. *mallens*, a hammer.] To beat or bruise with a maul, or with a heavy stick or cudgel; hence, to wound in a coarse or brutal manner; as, to *maul* an adversary. — To damage or deform to a serious extent; to greatly harm or deteriorate.

Maule, (*mow'la*,) in Chill, a river flowing into the Pacific Ocean, abt. 100 m. N.E. of Concepcion.

— A S. prov. b. N. by Talca, and S. by Nuble and Concepciou. *Area*, 8,100 sq. m.; cap. Cauquenes; *pop.* 211,567.

Maul'ing, *n.* A sound, vigorous cudgelling, or a bruising with the fist; as, to give a fellow a *mauling*.

Maul'main, or **Moul'mein,** a seaport-town of India beyond the Ganges, cap. of the British prov. of Martaban, on the S.E. of the Bay of Bengal, at the month of the Salween, opposite the Burmese town of Martahan, 28 m. N.E. of Amherst; Lat. 16° 30′ N., Lon. 97° 43′ E.

Maul'-stick, *n.* (*Painting.*) Same as MAHL-STICK, *q. v.*

Maumee, (*maw-mee'*,) a river formed by the junction of St. Mary's and St. Joseph's rivers, at Fort Wayne, in Allen co., Indiana, and flowing N.E. into Ohio, enters Maumee Bay of Lake Erie, abt. 4 m. below Toledo.

Maumee', in *Indiana*, a township of Allen county.

Maumee' City, in *Ohio*, a post-village of Lucas county, on the Maumee River, about 8 miles S.W. of Toledo.

Mauneh, (*mänsh*,) MANCHE, *n.* (*Her.*) A sleeve.

Maunch, *v. a.* Old spelling of MUNCH, *q. v.*

Maund, *n.* [A. S. *mand*; D. *mande*.] In Scotland, a hand-basket.

—[From Hind. *man*.] A weight used in the East Indies, varying in quantity; the *M.* of Bengal (containing 40 seers) is equal to 2,054 lbs. avoirdupois; that of Bombay, =28 lbs.; of Madras, 25 lbs. 20 *M.*, also, form 1 *candy*, equivalent to 24·3 bushels Eng.

Maun'dy Thurs'day, *n.* [Said to be a corruption of Lat. *mandati* (*dies mandati*, day of the commandment), in allusion to the commandment which Christ gave on this day, after washing his disciples' feet, to love one another. Others suppose that the name is from the *maunds*, or baskets of gifts, which Christians were in the habit of presenting to each other on this day, in token of mutual affection.] (*Eccl. Hist.*) The Thursday in Passion-week, or next before Good Friday, on which it was customary for sovereigns, bishops, &c., to wash the feet of twelve poor persons, which act was followed by a distribution of *doles*. In England, and down to Elizabeth's reign, it was usual for the sovereign to wash and kiss as many feet of old women and men as he or she was years old. It is still customary in many countries to distribute alms to the poor on that day.

Maun'der, *v. n.* [From Fr. *mendier*, to supplicate alms. See MENDICANT.] To mumble; to murmur; to beg in a whining, muttering manner. — To talk incoherently or irrationally; to speak loosely, or in a wandering manner.

Maun'derer, *n.* A murmurer; a grumbler; an idle, incoherent prater.

Maund'ering, *n.* Rambling, discursive, incoherent talk.

Maun'drll, *n.* (*Mining.*) A bi-shanked pick, used in the coal measures.

Maur, (Congregation of St.) (*Eccl. Hist.*) A learned body of religious of the Benedictine order; so called from a village near Paris, where they were established in 1618. On the request of Louis XIII., Gregory XV. gave this order his approval by an apostolical brief, 1621; and it obtained new privileges from Urban VIII., 1627. The fame of this body attracted the attention of many other religious orders, several of which were induced to submit to its rules; and at last it numbered upwards of 100 religious houses. The literary world owes to them a series of very valuable editions of ancient Greek authors, chiefly Fathers, during the 17th century. Broken up by the French revolution, the congregation attempted unsuccessfully its re-establishment in 1815.

Maur, (St.,) an abbot of Glanseuil, in Anjou, and a disciple of St. Benedict. D. 584.

Maurepas, JEAN FREDERIC PHILIPPEAUX, COUNT DE, (*mor'pa*,) a French statesman, B. 1701, flourished at the court of Louis XIV. from 1715 to 1749, when he was banished by the intrigues of Madame de Pompadour. He was recalled to the ministry by Louis XVI., in 1774, and it was by his advice that the French government took part against England in our War of Independence. D. 1781.

Maurepas, (*mo're-pa*,) in *Louisiana*, a lake surrounded by Livingston, Ascension, St. James, and St. John Baptist parishes. It receives the Amite River, and communicates with Lake Pontchartrain by a channel abt. 3 miles long.

Mauresque', *a.* and *n.* Same as MORESQUE, *q. v.*

Maurice, (*maw'ris*,) JOHN FREDERICK DENISON, M.A., an eminent English theologian and divine, B. 1805, and educated at Cambridge and Oxford. In 1846 he was appointed Professor of Theology in King's College, London, where he distinguished himself by the breadth and Catholicism of his religious views. Besides being for sometime editor of the "Athenæum," *M.* is author of *Lectures on the Apocalypse*, or *Book of Revelation* (1861); *Claims of the Bible and of Science* (1861); *The Commandments as Instruments of National Reform*, &c. In 1866, he was elected Professor of Moral Philosophy in Cambridge University.

Mau'rice of Nas'sau, PRINCE OF ORANGE, one of the most famous generals of modern times, was the youngest son, by his second marriage, of William I., Prince of Orange, B. at Dillenburg, 1567, and was studying at Leyden, 1584, when his father was assassinated. The provs. of Holland and Zealand, and, soon after, Utrecht, immediately elected the young prince stadtholder; and 3 years afterwards he was appointed captain-general of the United Provinces. His task was to conquer the Spaniards, and recover from them the large portion they still occupied of the Low Countries. Previous to the truce of 12 years, concluded in 1609, about 40 towns and several fortresses had fallen into his hands. His life was an almost unbroken series of battles, sieges, and victories. He had foes worthy of him in the celebrated Duke of Parma, and the Italian general Spinola. Like Montecuculi, he possessed the rare art of conducting a march and pitching a camp; like Vauban, the genius of fortification and defence; like Eugene, the skill to support the most numerous armies in the most unproductive and exhausted country; like Condé, that nuerring *coup d' œil* which determines the issue of a battle; like Charles XII., the power of rendering the troops insensible to cold, hunger, and sufferings; like Turenne, that of sparing human life. In the opinion of Tolard, *M.* was the greatest infantry general that had existed since the time of the Romans. The moral qualities of *M.* were not worthy of his renown as a soldier; and most of all is his name stained by his base treatment of the noble old Pensionary, Barneveldt, who saw and fearlessly opposed his selfish aims. *M.* also took part in the war in 1621, and D. in 1625. He was succeeded by his brother, Frederick Henry.

Mau'rice of Sax'ony. See SAXE, (MARSHAL.)

Mau'rice, in *Indiana*, a village of Decatur co., abt. 50 m. W.N.W. of Cincinnati.

Mau'rice (or PRINCE MAURICE) **River,** in *New Jersey*, flows into Delaware Bay from Cumberland co.

—A township of Cumberland co.

Maurice, (St.) (*Her.*) This military order, established in Savoy in 1434, by Duke Amadeus VIII., was renewed by Emanuel Philibert, and joined to that of St. Lazarus in 1572. It was reorganized and extended to civilians in 1816.

Mau'rlcetown, in *New Jersey*, a post-village of Cumberland co., abt. 36 m. S.E. of Salem.

Mau'rlcius, emperor of Constantinople, B. in Cappadocia, A. D. 539. He rendered great services to the empire under Justin and Tiberius, especially in his four campaigns in Persia, 578–581; and on his return to Constantinople, in 582, was declared Cæsar, and soon after crowned emperor, and married the daughter of Tiberius. His reign of 20 years was occupied almost constantly with wars; — wars with the Persians, terminated by the defeat of Bahram, and the restoration of Chosroes in 591; and wars with the Avars, which lasted from 592–599. These were, however, mostly carried on by his generals. In 599 Comentiolis was defeated, and an immense number of his troops captured by the Avars, who, on the refusal of *M.* to ransom them, put them all to death. In 602 a mutiny broke out in the army on the Danube. Phocas was proclaimed emperor, and *M.*, with his five sons, was murdered at Chalcedon. Three years later his wife and daughters were put to death by Phocas.

Maurita'nia, (*Anc. Hist.*,) a country or kingdom of Northern Africa, embracing nearly all the points now known as Fez, with part of Algeria and Morocco. It was bounded on the north by the Mediterranean; south, by Getulia or Libya; east, by Numidia; and west, by the Atlantic Ocean. It was divided by Claudius into two provinces, Mauritania Cæsariensis and Mauritania Tingitana. That the country was originally inhabited by a people from Phœnicia, is borne out by a passage in the writings of Procopius, a Greek historian of the 6th century, who says that in his time there were standing two white pillars, bearing the following inscription in the Phœnician characters: — "We are the Canaanites who fled from Joshua, the son of Nun, that notorious robber." The early history of Mauritania has afforded abundant material for Greek and Roman mythological tables. Neptune, Atlas, and Antæus were some of their earlier kings. From the defeat of the last-named monarch, little is known of Mauritania, till it fell under the dominion of the Romans, who doubtless succeeded the Carthaginians as masters of the country. *M.* was

subdued by the Mohammedan Arabs in the latter part of the 7th century.

Mauritius, (*maw-rĭsh'yus,*) or the **Isle of France,** an island of the Indian Ocean, situate bet. Lat. 19° 58′ and 20° 32′ S., Lon. 57° 17′ and 57° 46′ E., 75 m. N.E. of the Isle of Bourbon, and 500 m. E. of Madagascar. It is 36 m. long from N.E. to S.W.; breadth varying from 18 to 27 m. *Area*, 676 sq. m. The surface consists of rugged and irregular mountains, rising usually into points or pinnacles, and well wooded. The soil, in many parts, is exceedingly rich. The whole coast is surrounded by coral reefs, with the exception of a few openings, through which vessels can approach the shore, and at these points military posts have been established. The climate is remarkably fine, the thermometer ranging from 76° to 90°, and in the elevated districts about 8° lower *Prod.* Principally sugar, a large amount of which is annually exported to England, France, and Australia. It also produces wheat, maize, and yams. Besides sugar, the principal exports are ebony, tortoise-shell, &c. The chief towns are, Port Louis, the cap., and Grande Port or Mahebourg, the S. port, the latter difficult of access. *Pop.* 340,664.—*M.* was discovered by the Portuguese, in 1505. The Spaniards called it Cerne,

Fig. 1740. — MODE OF TRAVELLING IN MAURITIUS.

and in 1598 it was seized by the Dutch, who named it Mauritius, in honor of their stadtholder, Maurice; but they formed no settlement till 1644. They abandoned the colony in 1712, and it was neglected until the French formed a settlement in 1715, and took possession of the island in 1721. It was captured by the English in 1810, and has remained in their possession ever since. *M.* has been made interesting as the scene of the tale of *Paul and Virginia*, by Bernardin de St. Pierre.

Fig. 1741.

THE CHIEF MOHAMMEDAN MOSQUE AT PORT LOUIS.

Maury, MATTHEW FONTAINE, LL.D., a distinguished American naval officer, astronomer, and hydrographer, B. in Spottsylvania, Va., in 1806. In 1825, entering the navy as midshipman, *M.* was appointed to the *Brandywine*, then fitting out in Washington to convey La Fayette to France. Returning in that vessel to the U. States, in the spring of 1826, he again sailed in her to the Pacific, where he joined the *Vincennes*, sloop-of-war, and having circumnavigated the globe, returned to his native land after an absence of about four years. After passing his examination, *M.* was ordered to the Pacific station as master of the *Falmouth*. He commenced his work on navigation while serving in the *Vincennes*, and completed it in the frigate *Potomac*, to which he was appointed as acting-lieutenant when the *Falmouth* was about to return to the U. States. On his arrival home, he was regularly promoted to a lieutenancy, and received the appointment of astronomer to the South Sea Exploring Expedition, under Com. Ap-Catesby Jones; on whose retirement from the command of the expedition, *M.* withdrew also and was placed in charge of the depôt of charts and instruments, which has served as a nucleus for the National Observatory and Hydrograph Office of the U. States, of both of which he became the sup't. His labors in organizing the Observatory, as well as his investigations with regard to the winds and currents of the sea, are familiar to all who take an interest in such subjects. In 1854, *M.* visited England, where he drew public attention to his important inquiry into the ocean currents, local winds, &c., in illustration of which he published his well-known work, *The Physical Geography of the Sea*, with charts and diagrams, which has gone through many editions, and also been translated into many foreign languages. The king of Prussia presented to *M.* a gold medal for these investigations, accompanied with one of the gold medals struck in honor of the publication of Humboldt's *Cosmos;* and the emperor of Austria bestowed on him the large gold medal of the Arts and Sciences, "as a recognition of his long and useful labors." On the outbreak of the Civil War, in 1861, *M.* gave up his appointments, and embraced the Confederate cause. D. in Va., Feb. 1, 1873.

Maury, in *Tennessee*, a S.W. central co; *area*, abt. 600 sq. miles. *Rivers.* Duck River, and numerous smaller streams. *Surface*, diversified; *soil*, very fertile. *Cap* Columbia. *Pop.* (1890) 38,112.

Mausole'an, *a.* Relating or pertaining to a mausoleum; monumental.

Mausoleum (*maw-sa-le'um*), a magnificent tomb, or stately sepulchral monument. The name is derived from Mausolus, king of Caria, to the memory of whom his queen, Artemisia, erected a splendid monument at Halicarnassus, B. C. 353. The *M.* is described by Pliny. Its site was discovered at Boodroom, in 1856, by Mr. C. T. Newton, keeper of the Greek and Roman antiquities in the British Museum, and extraordinary statues and sculptures were obtained from the excavations made under his direction.

Maus'ton, in *Wisconsin*, a city, cap. of Juneau co., about 68 m. E. of LaCrosse. *Pop.* (1897) 1,600.

Mauth'er, Mawth'er, *n.* [Prov. Eng. burlesque rendering of *mother.*] In some districts of England, an ironical term for a clumsy wench, or awkward girl.

Mauvaise (or MUSHKEE) **River,** (*mo-varz',*) in *Wisconsin*, enters Lake Superior from Ashland co.

Mauvaiseterre, (*-tair',*) in *Illinois*, a township of Morgan co.

Mauve, (*mōv,*) *n.* [Fr., from Lat. MALVA, *q. v.*] (*Dyeing.*) A purple dye obtained from aniline and from benzol, 2 of the constituents of coal-tar. This coloring matter was discovered in 1861 by Mr. Perkin, and is made by oxidizing aniline with chromic acid. Heated together, sulphate of aniline and bichromate of potash yield a precipitate which is crude mauve. If this be dissolved in alcohol and the solution evaporated, the pure dye is obtained. Silk and wool readily take up mauve dye, while cotton and calicoes require mordanting with tannin or a basic lead-salt.

Mauvi'la, or **Mauvila,** in *Alabama*, a post-village of Mobile co., about 13 m. N.W. of Mobile.

Maver'ick, in *Texas*, a S.W. co., adjoining Mexico; *area*, about 1,320 sq. m. *Rivers.* Rio Grande, Nueces river, and several smaller streams. *Surface*, diversified; *soil*, fertile. *Cap.* Eagle Pass. *Pop.* (1890) 3,698.

Ma'vis, *n.* [Fr. *mauvis;* L. Lat. *malviscum;* It. *malvigia*, from Lat. *malis*, evil.] The throstle or song-thrush (*Turdus musicus*); so-named from being injurious to ripe grapes.

Mavrocorda'to, or **Maurocorda'tos,** ALEXANDER, PRINCE, a Greek patriot and statesman, B. at Constantinople, 1787, was the descendant of a distinguished family, several members of which officiated, at various periods, as hospodars of Moldavia or Wallachia. *M.*, whose father and mother became victims of the Moslems of Constantinople at the outbreak of the Greek revolution, took an active part in the contest for independence, prepared the declaration of independence and the plan of a provisional government, and was elected president of the executive body; and being appointed commander-in-chief, undertook, in 1822, an expedition to Epirus, which ended in the unsuccessful battle of Peta; but he delivered the Peloponnesus by his bold and resolute defence of Missolonghi (1823). Notwithstanding the opposition of the party of Colocotronis with Dimitrios and Ypsilanti, he was able afterwards to render important services to his country — as, for instance, by the heroic defence of Navarino and Sphacteria; but his endeavor to promote British influence made him at times very unpopular. After the accession of King Otho, he was at various times a cabinet minister and ambassador at different courts. D. 1865.

Maw, *n.* [A. S. *maga;* D. *maag;* Ger. *magen;* Dan. *mave;* Hind. *mia;* probably from Sansk. *manth*, to agitate.] The stomach, especially of animals, the paunch; the craw of fowls. — Appetite; propensity; inclination. (R.)

Mawk'ish, *a.* [Probably from *maw* = A. S. *maga.*] Apt to cause satiety or loathing; tasteless; insipid; nauseous.

" So sweetly *mawkish*, and so smoothly dull."— *Pope.*

Mawk'ishly, *adv.* In a mawkish or insipid way.

Mawk'ishness, *n.* Aptness to cause or induce loathing.

Mawks, *n.* [Scot. *mauk*, a slattern.] A hoyden; a hig, gauche, awkward, badly-dressed girl. (Vulgar.)

Mawk'y, *a.* Maggoty. (An English provincialism.)

Maw'-worm, *n.* A hypocrite. [Derived from a celebrated character in Bickerstaff's comedy, *The Hypocrite.*]

Maxatawn'y, in *Pennsylvania*, a post-township of Berks co.

Maxentius, MARCUS AURELIUS VALERIUS, (*măx-en'-she-us,*) a Roman emperor, was the son of Maximianus Herculius, and declared himself emperor in 306. He was opposed by Galerius Maximianus, who was defeated, and slew himself. *M.* then marched into Africa, where he became odious by his cruelties. Constantine afterwards defeated him in Italy, and he was drowned in crossing the Tiber, in 312.

Max'ey, in *Georgia*, a post-village of Oglethorpe co., abt. 95 m. W. by N. of Augusta.

Max'field, in *Iowa*, a post-village and township of Bremer county, about 15 miles north-east of Cedar Falls.

Max'field, in *Maine*, a post-township of Penobscot county.

Maxil'la, *n.*; *pl.* MAXIL'LÆ. [Lat. See MAXILLARY.] (*Anat.*) The jaw. The upper jaw consists of the two maxillary bones, the largest, with the exception of those of the lower jaw, of all the bones in the face. The superior, or upper maxillary bones, assist to form the orbit, the nose and the cheek being attached to the nasal, ethmoid, lachrymal, and malar bones, and articulating with the zygomatic process. The lower jaw, or inferior maxillary bones, are too well known to require any description. Each jaw is furnished with a row of alveolar processes, or cases between which the teeth project, and are, in a measure, supported; for only the fangs or roots of the teeth are embedded in the substance of either jaw.

(*Zoöt.*) The upper jaw in *vertebrata;* and one of the second or lower pair of jaws in insects, distinguished by bearing feelers.

Max'illar, Max'illary, *a.* [Lat. *maxillaris*, from *maxilla*, the jaw-bone, the jaw; dim. of *mala*, the cheek-bone, the jaw; akin to *mando*, to chew; Sansk. *mad*, to grate, to grind.] (*Anat.*) Belonging to the jaw or jaw-bone; as, the *maxillary* bones.

Maxil'liform, *a.* [Lat. *maxilla*, and *forma*, form.] Having the form of a jaw or cheek-bone.

Maxil'liped, *n.* [Lat. *maxilla*, and *pes, pedis*, foot.] (*Zoöl.*) One of the outermost or feet-like jaws of decayed *crustacea.*

Max'im, *n.* [Fr. *maxime;* L. Lat. *maxima*, from Lat. *maximum*, super. of *magnus*, great. See MAGISTRATE.] An established principle or proposition; a principle generally received or admitted as true; an axiom; an aphorism; an adage; a proverb.

Maxima and **Minima,** (*măks'e-mȧ, min'e-mȧ.*) [Lat., the greatest and least.] (*Math.*) Terms employed not to signify the absolute greatest and least (as the words imply) values of a variable quantity, but the values it has on the instant when it ceases to increase and begins to decrease, or *vice versâ.* A variable quantity may, therefore, have several *maxima* and *minima.* The theory of the *maxima* and *minima* will be found given in most elementary works on the differential calculus.

Maximianus, MARCUS AURELIUS VALERIUS, (*măx-im-i-ai'nus,*) surnamed HERCULIUS, a Roman emperor, who, from being a common soldier, was associated in the government by Diocletian. When that emperor abdicated the crown, in 304, he compelled *M.*, much against his will, to do the same; but about a year afterwards the latter resumed the dignity, and opposed his son Maxentius. The troops, however, mutinied against *M.*, who fled into Gaul, where he was put to death by order of Constantine, in 310, aged 60.

Maximia'nus, GALERIUS VALERIUS, emperor of Constantinople, was originally a shepherd in Dacia, afterwards a soldier, and was raised to the imperial dignity by Diocletian, who also gave him his daughter in marriage. In 305 he compelled Diocletian to abdicate the throne; but his cruelty soon rendered him odious to the Romans, who raised Maxentius to the throne. D. 311.

Maximilian I., (*măx-i-mil'yan,*) emperor of Germany, son of Frederick III., B. 1459. At the age of 18 he married Mary, heiress of Charles the Bold, duke of Burgundy, and was involved in a war with France. Mary dying in 1482, he obtained the promise of the hand of Anne, heiress of Brittany, but she was afterwards married to Charles VIII. of France. In 1486, *M.* was elected king of the Romans, and in 1493 he succeeded his father in the empire. He was the first who took the title of emperor without being crowned at Rome. For the sake of a large dowry, he married Blanche, daughter of Lodovico Sforza, whom he made duke of Milan; and soon after married his son Philip to Joanna, daughter of Ferdinand and Isabella, and thus brought Spain into the power of the House of Hapsburg. He invaded Burgundy, but was abandoned by the Swiss, who formed part of his army; he then made war on the Swiss, but was several times defeated, and had to make peace with them. In 1508 he set out for Rome, was refused a passage through the Venetian territories, and, attempting to force his way, was defeated. The same year he joined in the famous league of Cambray against the Venetians; from which he withdrew in 1513, and formed another league against France. He served in the English army as a volunteer at the siege of Terouenne, and contributed to the victory of Guinegate. In 1516 he made an unsuccessful attempt on the Milanese. Two years later he assembled the diet of Augsburg, at which Luther appeared on citation, and appealed to the Pope. *M.* was not only ambitious of dominion, and successful in his schemes of aggrandizement, but he had the desire to be pope, and to be canonized. D. 1519

Maximilian II., the son of the Emperor Ferdinand I., was B. in 1527, elected king of the Romans in 1562, and was soon after advanced to the thrones of Hungary and Bohemia; and on the death of his father, in 1564, was crowned emperor. The twelve years this monarch reigned were chiefly devoted to the internal welfare of the country and happiness of his people. D. 1576.

Maximilian, Duke of Bavaria, B. 1581, was named, on account of his courage and success, the "Defender of Germany," and, for his singular prudence, he acquired the name of "Solomon." He zealously opposed the Protestants, and was considered as one of the principal supporters of the Catholic religion. In 1620 he gained the battle of Prague, against Frederick, Prince-Palatine, who had been elected king of Bohemia. For these services *M.* was named an elector of the empire. D. 1651.

Maximilian, FERDINAND JOSEPH, emperor of Mexico, B. at Schönbrun, Austria, 1832, was son of Francis Charles Joseph, archduke of Austria, and younger brother of Francis Joseph, emperor of Austria. In 1854 he was made admiral of the Austrian navy, and was appointed, in 1857, viceroy of Lombardy and Venice. A perfect gentleman, an accomplished scholar, endowed with a noble and generous heart, and liberal in his views, the fascinating young ruler became a favorite with the Italians, hostile though they were to the Austrians. But his popularity displeased the emperor, his brother, and in 1859, *M.* was removed from the viceroyalty. Returning to his former position as admiral of the Austrian navy, *M.*, with his beloved wife, Maria Carlotta, daughter of Leopold I, King of the Belgians, was spending quietly his hours in study at his castle of Miramar, on the Adriatic, when, at the instance of the French emperor, Napoleon III., (who, then at war with Mexico, did not know how to conquer that turbulent country, or how to get rid of it,) *M.* was elected by the Assembly of the Notables of Mexico as the head of their new form of government, with the title of emperor. *M.* was at first adverse to the acceptance of the imperial crown; but, after long hesitation, yielding to the counsel of his

Fig. 1742. — MAXIMILIAN.

friends, and believing to be called by the great majority of the people, he embarked for Mexico with his wife, and landed at Vera Cruz, June 12, 1864. He at once applied himself to set in order the country of his adoption, rent and distracted by a long term of civil wars and foreign intervention. He met, however, with considerable opposition and inextricable difficulties. The departure of the French expeditionary troops, which was completed in Jan., 1867, was followed by an entire collapse of the empire, and the republican troops, victorious on all sides, were besieging *M.* in his last refuge in Quaretaro, when the unfortunate prince, owing to the treachery of a Col. Lopez of his staff, was taken asleep in his tent. After a quick trial, *M* was sentenced to death, and, the sentence being confirmed by Juarez, notwithstanding the earnest remonstrances of the U. States government and that of Great Britain, he was shot, along with two of his generals, June 19, 1867. *M.*, whose short govt. was perhaps not exempt from faults, was personally one of the best of men, and possessed a noble mind. In the words of his last letter to the empress, he fell gloriously as a soldier: as a monarch vanquished, but not dishonored. Since that time, his most accomplished wife, the Empress Carlotta, who was in Europe, making unsuccessful entreaties to Napoleon III. and other sovereigns in favor of her husband, became insane from despair.

Maximilian, EMANUEL, Elector of Bavaria, B. 1662. He signalized himself at the siege of Neuhaüsel, in 1685; at that of Buda, in 1686; and, the year following, in the battle of Mohacz. He commanded, about this time, the army of Hungary, and took Belgrade, sword in hand, in 1689. He was afterwards governor of the Low Countries; but, taking part with France in the war of the Spanish succession, he was put under the ban of the empire, and, in 1706, deprived of his estates, regaining them, however, at the general peace. D. at Munich, 1726.

Maximilian, JOSEPH, King of Bavaria, B. 1756, succeeded his uncle, Charles-Theodore, in 1799. Attaching himself to the fortunes of Napoleon, he gave his daughter in marriage to Eugene Beauharnais, in 1806. In the same year his duchy was erected into a kingdom. In 1813, however, he formed a member of the league against the emperor, and, by that proceeding, retained his throne after the fall of Napoleon. His reign was marked by a great number of reforms in the administration of his kingdom. D. 1825.

Maximil'ian, *n.* (*Numis.*) A Bavarian gold coin, equivalent to about $3.25.

Maximin'us, CAIUS JULIUS VERUS, a Roman emperor, was of barbarian origin, and was at first a shepherd in Thrace. He was a monster in size, strength, voracity, and ferocity, and when about 20 years of age became a soldier in the Roman armies. His capacity for fighting procured him rapid advancement, and under Alexander Severus he had the command of a legion, with which he served on the Rhine. In A. D. 235 he took part in a conspiracy against Alexander, and on his murder by the soldiers, was proclaimed emperor. He continued the war in Germany, and devastated a large tract of country. The Gordiani having been proclaimed in Africa, *M.* hastened to Italy, and laid siege to Aquileia, which made heroic resistance to the hated tyrant. He was there murdered by his soldiers, together with his son, 238. It is said that *M.* was eight feet high, that he could eat 40 pounds of meat a day, and could break the leg of a horse with a kick.

MAXIM'INUS, *Caius Galerius Valerius*, an Illyrian peasant, known by the name of *Daia*, or *Daza*, who was named Cæsar by the influence of his uncle Galerius, 305, and proclaimed emperor when five others had already assumed the purple, 308, poisoned himself after his defeat by Licinius, 313.

Max'imist, *n.* One who deals in, or quotes, maxims.

Maximiza'tion, *n.* Act or operation of multiplying to the highest degree.

Max'imize, *v. a.* [From Lat. *maximus.*] To increase or multiply to the maximum degree or extent.

Max'imum, *n.*; *pl.* MAXIMA. [Lat., from *magnus*, great.] The greatest quantity or number attainable in any given case; the highest price of any article, as fixed by some law or regulation: — correlative to *minimum.*

Maximum thermometer. See THERMOMETER.

Max'imus, CLODIUS PUPIENUS, a Roman general, proclaimed emperor by the Senate along with Decimus Cælius Balbinus, in opposition to Maximinus, 237; was killed along with Balbinus, 238.

MAXIMUS, *Magnus*, a Roman emperor, a Spaniard, was general of the Roman army in Britain, when he proclaimed himself emperor, in 383. Gratian marched against him, but was defeated, and assassinated. Maximus having made himself master of Gaul, Britain, and Spain, fixed the seat of his empire at Treves. He next marched into Italy, where he committed dreadful cruelties, but was at last besieged in Aquileia, by the emperor Theodosius. His soldiers delivered him up to Theodosius, who caused him to be beheaded, in 388.

MAXIMUS, *Petronius*, a noble Roman, who became emperor in 455. In less than three months afterwards he was wounded in the streets, for attempting to fly on the appearance of the fleet of Genseric, king of the Vandals.

Maximus of Tyre, a Platonic philosopher, who visited Rome in 146, but died in his own country, in the reign of Commodus. Forty-one of his discourses are extant, the best edition of which is that of Reiske, 1774. They have been translated into French by Formey, but have never been reproduced in English.

Maximus the Cynic, tutor of Julian the Apostate, was a native of Ephesus. He professed magic, initiated Julian into the Eleusinian mysteries, and assured him of success in his Persian expedition; he also flattered that prince by saying that the soul of Alexander had passed into his body. Maximus was put to death by the emperor Valens, in 366.

Max'ville, in *Indiana*, a village of Spencer co., about 140 m. S. by W. of Indianapolis.

Max'ville, in *Kentucky*, a village of Washington co., abt. 30 m. S.S.W. of Frankfort.

Max'ville, in *Wisconsin*, a post-township of Buffalo co.

Max'welltown, a town of Scotland, co. of Kirkcudbright, on the Nith, opposite Dumfries; *pop.* 4,000.

May', *n.* [Lat. *Maius.*] (*Calendar.*) The fifth month of the year, having thirty-one days. It was second in the old Alban calendar, third in that of Romulus, and fifth in that of Numa Pompilius. In the Alban calendar it only had twenty-six days, in the calendar of Romulus thirty-one days, and in that of Numa thirty days. The odd day of which Numa deprived it was restored by Julius Cæsar. The etymology of the word is doubtful. It was called *Maius* by Romulus, in respect to the senators and nobles of his city, who were called *Majores*, as the month following was called *Junius*, in honor of the youth of Rome who served him in war, and were named *Juniares.* Some etymologists are of opinion that it was called *Maia*, from the goddess of that name, the mother of Mercury, to whom they offered sacrifices on the first day of the month. The sun enters Gemini during May, and the plants of the earth generally begin to flower.

(*Bot.*) See CRATÆGUS.

—*v. n.* To gather flowers on May morning.

"With merry maids a *Maying* go."— *Sir P. Sidney's Arcadia.*

May, *n.* [Scot.; A. S. *mäg.*] The blush or early part of life.

"His *May* of youth, and bloom of lustihood." — *Shaks.*

—An English colloquialism for the hawthorn-flower.

"Enwreathing garlands of the balmy *May.*" — *Davies.*

May, *auxiliary v.* (*imp.* MIGHT.) [A. S. *magan*; D. *mogen*; Ger. *mögen*; Dan. *maa*; Icel. *megna*; Sansk. *manh*, to increase, to grow.] It qualifies the signification of another verb by expressing:

—Ability; availability; possibility; competency.

"This also tendeth to no more but what the king *may* do; for what he *may* do is of two kinds; what he *may* do as just, and what he *may* do as possible."—*Bacon.*

—Moral power or suasion; permission; license; allowance; liberty; as, you *may* have the money. — Chance; contingency; liability of hap or occurrence.

"Her pure blood . . spoke in her cheeks . . so distinctly wrought, That one *might* almost say her body thought." — *Donne.*

—Courtesy; civility; concession; a seeking to soften an abrupt inquiry.

"How old *may* Phillis be, you ask.
Whose beauty thus all hearts engages?" — *Prior.*

—Desire or hope expressed, as in prayer, objurgation, invocation of happiness, &c.; as, *may* you be happy.

"*May* your shadow never grow less." — *Oriental Proverb.*

(NOTE. — *Maybe, it may be, mayhap*, are phrases corresponding with *perhaps, it is possible, by chance.*)

May, a small island of Scotland, in the mouth of the Frith of Forth, 6 m. E.S.E. of Fifeness; Lat. 56° 11′ N., Lon. 2° 33′ W. It is 1 m. long, and has a lighthouse 240 feet above the sea.

May, a river of Wales, co. of Caernarvon, falling into the Irish channel.

May, in *Illinois*, a township of Lee co.

Maya'ceæ, *n. pl.* (*Bot.*) The Mayaca family, a small order of plants, alliance *Xyridales*, consisting of a single genus of small moss-like plants closely allied to *Commelynaceæ.* They are found from Brazil to Virginia. They are of no known use.

Mayaco, (*mi-a'ko,*) a town on the N. coast of the island of Hayti, abt. 25 m. N.E. of Cape Engano.

Mayagua'na, an island of the Bahama group, in abt. Lat. 22° 25′ N., Lon. 72° 50′ W.

Mayaguez, (*mi-a-wes',*) a seaport-town on the S.W. coast of the island of Porto Rico, W. Indies, abt. 70 m. S.W. of San Juan de Porto Rico.

May'-apple, *n.* (*Bot.*) See PODOPHYLLUM.

Mayari, (*mi'a-ree,*) a seaport-town on the N. coast of Cuba; Lat. 20° 45′ N., Lon. 75° 30′ W.; *pop.* 3,000.

Mayas, (*mi'as,*) a nation of American Indians, once numerous and powerful, inhabiting the territory of Tabasco and Yucatan. They were conquered by the Spaniards and are now nearly extinct.

May'-beetle, May'-bug, *n.* (*Zoöl.*) The COCKCHAFER, *q. v.*

May'binton, in *S. Carolina*, a village of Newberry dist., abt. 45 m. N.W. of Columbia.

May'-bloom, *n.* The bloomy flower of the hawthorn.

May'-day, *n.* The 1st of May. From an early period it was the custom for all ranks of people in England, France, and other European countries, to go out "a Maying," as it was called, early on the 1st of May. In all parts of England, at the dawn of May-day, the lads and lasses left their towns and villages and repaired to the woodlands with music and singing. They gathered the *May*, or blossoming branches of the trees, and bound them with wreaths of flowers. Returning home by sunrise, they decorated the lattices and doors of their dwellings with their scented spoils, and spent the rest of the day in sport and pastimes. According to Bourne, the after-part of May-day was chiefly spent in "dancing round a tall pole, which is called a Maypole, which, being placed in a convenient part of the village, stands there, as it were, consecrated to the goddess of flowers, without the least violation offered to it in the whole circle of the year." At one time, as we can see from the writings of Chancer, Shakspeare, Browne (anthor of *Britannia's Pastorals*), and others, the customs of May-day were not only observed by the vulgar, but also by royal and noble personages. The Maypole became very popular, and was raised in every town and village; and Robin Hood, Friar Tuck, Maid Marian, and the Morris-dancers, together with other fantastic masquers and revellers, performed their antice round the May-day pole in every town and city. These customs gradually fell into disuse, till the celebration of the day was left entirely to the chimney-sweepers, with their "Jack in the Green," who still go about on May-day in their tawdry finery, merely to beg money from the street spectators. In some country villages, however, a feeble attempt at "going a Maying" is made at the present day. The celebration of May-day probably had its origin in the worship of Flora, who was supposed to be the goddess of flowers, and whose rites were solemnized at that season by the ancients. The earliest notice of the celebration of May-day in England was by the Druids, who used to light large fires on the summits of the hills in honor of the return of spring.

May'-dew, (*-dū,*) *n.* The dew of May; — supposed to have the property of whitening linen, of preserving beauty, and of affording a red, odoriferous spirit by distillation.

May'en, a town of Prussia, prov. of the Lower Rhine, 15 m. W. of Coblentz. *Manuf.* Woollen cloth, leather, paper, and earthenware. *Pop.* 5,500.

Mayence, or **Mentz,** (*mainz,*) a city of S. Germany, in the grand-duchy of Hesse-Darmstadt, prov. of Rhenish Hesse, on the Rhine, near its junction with the Main, 18 m. S.W. of Frankfort, and 38 S.E. of Coblentz; Lat. 49° 59′ 44″ N., Lon. 8° 16′ 32″ E. It is surrounded by walls, and defended by several forts and outworks. The principal among the public buildings and monuments are the ancient electoral palace, now used as a custom-house, the palace of the Teutonic knights, now the residence of the governor, the churches of St. Ignatius, and of St. Stephen; the colossal statue of Güttenburg, in bronze, from a model by Thorwaldsen, and the statue of Schiller, also in bronze. The public library contains 110,000 vols. *M.* derives celebrity from its having been the residence of Güttenberg, and the cradle of the art of printing. *M.* is the chief commercial city of the grand-duchy, and next to Cologne, the principal mart for Rhenish produce in Germany. *Manuf.* Leather, soap, hats, tobacco, musical and philosophical instruments, &c.; and it has a considerable trade in corn, wine, and timber. *Pop.* 53,902, — The site of *M.* was occupied by the Romans as a military position. In the 13th and 14th century, it was a place of some note for literature and the arts. In 1631 it was taken by the

Swedes, and in 1688 by the French, who lost it in 1689. It was again seized by the French in 1792, and retaken by the Prussians in 1793. It was ceded to France by

Fig. 1743. — MAYENCE. (See also Fig. 1285.)

the treaty of Campo Formio in 1797, and erected into the chief town of the dept. of Mont Tonnerre; and in 1814, finally ceded to the Grand-Duke of Hesse-Darmstadt.

Mayenne, CHARLES DE LORRAINE, DUKE OF, (*may'yen,*) second son of Francis of Lorraine, Duke of Guise, was born in 1554. He displayed great courage at the sieges of Poitiers and Rochelle, and at the battle of Moncontour. He also defeated the Protestants in Guienne and Dauphiné. In 1580 he entered Paris, and, as the head of the famous League (*q.v.*), exercised almost sovereign power for a time, with the title of lieutenant-general of the state and crown of France. He carried on war with Henry IV., and was defeated by him at the battles of Arques and Ivry. Disappointed in his hope of being elected king in 1593, and seeing Paris reduced, he kept up a resistance for some time in Burgundy, but at last made his peace with Henry in 1596. Died, 1611.

May'enne, in France, a river rising in the dept. of Orne, joining the Loire near Angers. *Length*, 125 m., of which 55 are navigable.

—A N.W. dept., formerly comprised in the prov. of Maine, between Lat. 47° 45′ and 48° 34′ N., Lon. 0° 5′ and 1° 20′ W., having N. Manche and Orne, E. Sarthe, S. Maine-et-Loire, W. Ille-et-Vilaine. *Area*, 2,010 sq. m. The surface is generally level, except on the N.E. and E. boundary, which is mountainous. The soil is only partially fertile, being occupied in many dist. by extensive sandy heaths. The climate is mild. *Rivers.* The Mayenne, Colmont, and Ondon. *Prod.* Flax, hemp, and fruits, and the forests afford excellent timber for shipbuilding. *Min.* Iron, and marble. *Manuf.* Linen and cotton fabrics, and paper. The iron trade of *M.* is of considerable importance. *Chief towns.* Laval, the cap., Mayenne, and Chateau-Gontier. *Pop.* 367,855.

—A town in the above dept., on the river Mayenne, 18 m. N.N.E. of Laval; Lat. 48° 14′ N., Lon. 0° 35′ W. *Manuf.* Linen, thread, and woollen goods. *Pop.* 11,000.

May'field, in *California*, a post-township of Santa Clara co., about 38 m. S. S. E. of San Francisco.

May'field, in *Georgia*, a post-village of Hancock co., about 50 m. W. by S. of Augusta.

May'field, in *Illinois*, a township of De Kalb co.

May'field, in *Kentucky*, a city, cap. of Greaves co., about 275 m. W. S. W. of Frankfort. *Pop.* (1897) 3,110.

May'field, in *Michigan*, a township of Lapeer co.

May'field, in *Michigan*, a post-township of Grand Traverse.

May'field, in *New York*, a post-town and township of Fulton co., about 47 m. N. W. of the city of Albany. *Pop.* (1897) 2,220.

May'field, in *Ohio*, a flourishing post-townehip of Cuyahoga co.

May'field, in *Pennsylvania*, a post-office of Lackawanna co., 11 m. N. E. of Scranton.

May'field, in *Utah*, a post-village of San Pete co., 12 m. S. of Manti.

May'field's Creek, in *Kentucky*, rises in Graves co., and enters the Mississippi from Ballard co.

May'-flower, *n.* (*Bot.*) In Europe, the Hawthorn, *Cratægus onycanthea;* in the U. States, the Trailing Arbutus, *Epigea repsens.*

May'-fly, *n.* (*Zoöl.*) See EPHEMERIDÆ.

May'-game, *n.* A sport or diversion practised on the first of May; hence, by derisive implication, a bagatelle; a trifle; a frivolous thing or matter.

"Lovers . . . the *May-game* of malicious arts." — *Dryden.*

May'hem, *n.* (*Crim. Law.*) The deprivation of a member proper for defence in fight, and which is not only an arm, leg, finger, eye, or a fore-tooth, but also some others; yet not a jaw-tooth, or the ear, or nose, because they have been supposed to be of no use in fighting. *M.* is punished by the Coventry Act, which has been re-enacted in several of the States. *M.* is not an offence at common law, but only an aggravated trespass.

May'ing, *n.* The gathering of flowers on May-day.

May'-lady, *n.* (*Sports.*) See MAY-QUEEN.

May'lardville, or **Maybardville,** in *Minnesota*, a village of Le Sueur co., abt. 6 m. E. by S. of Le Sueur.

May'-lily, *n.* (*Bot.*) The lily of the valley. See CONVALLARIA, and Fig. 1578.

May'-morn, *n.* Freshness; youthfulness of life and vigor.

"My liege is in the very *May-morn* of his youth." — *Shaks.*

May'nardsville, in *Tennessee*, a post-village, cap. of Union co., abt. 25 m. N.N.E. of Knoxville.

May'nooth, a market-town of Ireland, in Leinster, co. of Kildare, abt. 15 m. W.N.W. of Dublin.

May'o, a marit. co. of Ireland, prov. of Connaught, bordering on the Atlantic Ocean, having N.E. and S. Sligo, Roscommon, and Galway; *area*, 2,131 sq. m. The surface is generally mountainous; but there are many level and fertile tracts in the interior. The soil is, however, better adapted to grazing than tillage. The principal rivers are, the Moy, Guishden, Deal, Owenmore, and Robe. The lakes are Loughs Mask, Carrn, Raheeu, and Conn. The coast is lined with islands, and possesses excellent harbors and bays; such as Killala, Newport, and Blacksod bays. *Prod.* Flax, oats, and potatoes. *Min.* Iron, marble, and slate. It has also valuable fisheries. The chief towns are Castlebar, Balliua, Westport, and Ballinrobe.

May'o, one of the Cape de Verd islands, off the W. coast of Africa, lying E. of Santiago; Lat. 15° 10′ N., Lon. 23° 8′ W. *Ext.* 21 m. in circumference. It abounds in salt, but water is extremely scarce. *Chief port.* Pinosa. *Pop.* Unknown.

Mayo, (*mi'o,*) a river of Mexico, flowing into the Gulf of California from the state of Sonora. *Length*, abt. 130 m.

Mayo, a small river rising in Patrick co., Virginia, and entering the Dan River in Rockingham co., N. Carolina.

Mayor, (*mā'er;* often, colloquially, *mēr,*) *n.* [O. Fr. *maieur;* Fr. *maire*, from Lat. *major*, comp. of *magnus*, great.] The chief magistrate of a city or town corporate; the presiding officer of a municipal body. The power and authority which mayors possess being given to them by local regulations, vary in different places.

Mayor of the Palace. See MAJOR-DOMO.

May'oralty, (colloq. *mēr'al-ty,*) *n.* [L. Lat. *majorinatus.*] Office of a mayor; mayorship.

May'oress, (colloq. *mēr'es,*) *n.* The wife of a mayor.

May'orship, (colloq. *mēr'ship,*) *n.* Same as MAYORALTY.

Maypocha, (*mi-po'cha,*) a river of Chili, tributary of the Maypu, which it joins abt. Lat. 33° 40′ S. *Length*, about 60 m.

May'-pole, *n.* A high pole, crowned with garlands of flowers, erected to dance round at rural festivals on May-day.

Maypu, or MAYPO, (*mi-poo',*) a river of Chili, flowing W. through the dept. of Santiago into the Pacific Ocean, about 40 m. S. of Valparaiso.

Maypu, a peak of the Andes, in Chili; Lat. 33° 50′ S. *Height*, about 15,000 feet.

May'-queen, (sometimes termed MAY-LADY,) a young female selected for her grace and beauty, and crowned with flowers as queen of the May-day festival. (Otherwise written *Queen of the May.*)

May's Landing, in *New Jersey*, a post-village, cap. of Atlantic co., on Egg Harbor River, about 65 m. S. of Trenton.

May's Lick, in *Kentucky*, a post-village of Mason co., about 12 m. S.W. of Maysville.

Mays'ville, in *Arkansas*, a post-village of Benton co., about 25 m. W. of Bentonville.

Mays'ville, in *Illinois*, a village of Clay co., about 122 m. S.E. Springfield.

Mays'ville, in *Indiana*, a village of Daviess co., about 110 m. S.W. of Indianapolis.—A village of Fountain co., about 7 m. N.W. of Indianapolis.

Mays'ville, in *Kentucky*, a city of Mason co., on the Ohio River, abt. 60 m. N.E. of Lexington. It is for the most part regularly laid out, compactly and substantially built, has an active trade, and numerous manufactories. *Pop.* (1897) 5,410.

Mays'ville, in *Maine*, a township of Aroostook co.

Mays'ville, or MAYVILLE, in *Minnesota*, a township of Houston co.

Mays'ville, in *Missouri*, a post-town, cap. of De Kalb co., about 30 m. E. N. E. of St. Joseph.

Mays'ville, in *Ohio*, a village of Columbiana co., about 75 m. S. E. of Cleveland.

—A village of Wayne co.

Mays'ville, in *Pennsylvania*, a village of Mercer co., about 25 m. S. W. of Meadville.

Mays'ville, in *Virginia*, a village, former cap. of Buckingham co., about 87 m. W. of Richmond.

Mays'ville, in *West Virginia*, a post-village, the capital of Grant co.

May'town, in *Pennsylvania*, a post-village of Lancaster co., about 25 m. S. E. of Harrisburg.

May'ville, in *New York*, a post-village, cap. of Chautauqua co., about 60 m. S. S.W. of Buffalo. It is beautifully situated at the head of Chautauqua lake, and is a very popular place of resort for tourists and pleasure-seekers. *Pop.* (1897) 1,400.

May'ville, in *Wisconsin*, a city of Dodge co., about 12 m. N. E. of Juneau.

May-weed, *n.* (*Bot.*) See MARUTA.

Maz'agan, *n.* [From *Mazagan*, a town of Morocco.] (*Bot.*) A kind of bean; *Faba vulgaris.*

Mazagão, (*ma-za-gowng',*) a town of Brazil, about 190 m. W.N.W. of Para.

Mazaltenan'go, a town of Central America, about 110 m. W. of Guatemala.

Mazamet, (*ma'za-mai.*) a town of France, dept. of Tarn, on the Arnette, 10 m. S.E. of Castres. *Manuf.* Woollen weaving and cloth fabrics. *Pop.* 10,500.

Mazande'ran, or **Mazander'oon,** a prov. of N. Persia, bordering on the Caspian Sea, having Khorassan on the E., and Irak-Ajemi on the S.; Lat. between 36° and 37° N., Lon. 50° and 54° E.; *area*, estimated at 10,000. The surface along the Caspian Sea is low and marshy; in the interior it is elevated, and the soil fertile. *Prod.* Rice, cotton, sugar, and a variety of fruits. It exports silk, cotton, and rice to Russia, and imports woollen goods, tobacco, cutlery, &c. *Cap.* Sari. *Pop.* 150,000.

Maz'ard, *n.* An old term for the jaw; also, applied to the skull.

"Knockt about the *mazard* with a sexton's spade."—*Shaks.*

—A kind of cherry. See MAZZARD.

Mazarin, JULES, (*maz'a-răn,*) cardinal, and first minister of Louis XIV., was born of a noble family, in Italy, 1602. He studied at Alcala, in Spain, after which he went to Rome, and became attached to the service of Cardinal Sachetti, whom he accompanied on a mission into Lombardy. Mazarin rendered important assistance in the negotiations which effected a peace between the French and Spaniards. This procured him the esteem of Cardinals Richelieu and Barberini, by the latter of whom he was recommended to the Pope, who sent him, in 1634, as nuncio-extraordinary to the court of France. Recalled two years later, he entered the service of the French king in 1639, and was sent ambassador to Turin. In 1641 he was made a cardinal, and on the death of Richelieu, at the end of the following year, succeeded him as prime-minister. *M.* had to support the crown and the camp of Anne of Austria, during the miserable war of the Fronde, and he was at one juncture obliged to fly for personal safety. Had he been even as able a man as his predecessor, it could not have been expected that he should govern as a native Frenchman could, and perhaps nothing better proves how effectively Richelieu had subdued the discordant elements in France, than that an Italian should be able to govern the country. Under *M.*, nevertheless, the influence of France among the nations was increased, and in the internal government of the country those principles of despotism were established on which Louis XIV. afterwards acted. The administration of justice, however, became very corrupt, and the commerce and finances of the country sunk into deep depression. It is admitted that as a financial administrator he was far inferior to Richelieu. *M.* was privately married to Anne of Austria. He was very niggardly and avaricious, and had acquired in various ways, fair and foul, an immense fortune, amounting to $60,000,000, which he offered to the king shortly before he died; afraid, it is thought, that it might be rudely seized from his heirs. Louis declined the restitution, which was perhaps what the wily minister expected. D. March 9, 1661.

Mazarin, (*năz-a reen',*) *n.* (Named after Cardinal *Mazarin.*) A fine deep-blue color. — (*Cookery.*) A mode of preparing fowls for the table. — A small dish set within one of larger size.

Mazatlan', a seaport-town of Mexico, at the mouth of a river of the same name, and on the Gulf of California, abt. 183 m. S.E. of Sinaloa: Lat. 23° 11′ 48″ N., Lon 106° 23′ 45″ W. In commercial importance *M.* is one of the first cities in Mexico. It is well built, comparatively clean, and contains many fine edifices. *Pop.* abt. 11,000.

Maze, *n.* [A. S. *mase*, a whirlpool.] A perplexing and intricate network of passages or ways; a labyrinth; an involved system of winding paths.

"O'er all the *mazes* of enchanted ground."—*Thomson.*

—Hence, confusion of thought; perplexity; state of mental embarrassment or uncertainty.

"They lose themselves in the very *maze* of their own discourses." *Hooker.*

—*v. a.* To bewilder; to confuse; to confound with intricacy or perplexity; as, a *mazed* conscience. — *South.*

Mazep'pa, hetman of the Cossacks, born about the middle of the seventeenth century, was the son of a Polish gentleman, and page at the court of Casimir, King of Poland; after his return to Podolia, he is said to have engaged in an intrigue with the wife of a neighboring lord or count, who surprised him at one of his clandestine interviews, and caused him to be bound naked upon the back of a wild horse. The frighteued animal galloped till it reached the country of the Cossacks of the Ukraine, where Mazeppa was found, released, and restored to health. Adopting their course of life, he rose by degrees to attain the rank of their *hetman*, or chief; and displaying great talent and energy in that capacity, he succeeded in gaining the notice and esteem of the Czar Peter, who created him Prince of the Ukraine. He was, however, desirous of rendering himself and his ndopted country independent, and accordingly enlisted his forces under the banner of Charles XII. of Sweden, and fought against the Czar at the fatal battle of Pultawa. After the defeat of the Swedish king, he sought refuge in Wallachia, and afterwards at Bender, and ultimately died in Turkey, 1709. His extraordinary life forms the subject of one of Lord Byron's poems.

Mazep'pa, in *Minnesota*, a post-village and township of Wabaehaw co., about 18 m. N. by W. of Rochester.

Maz'er, *n.* [From O. D. *maeser*, a knot of maple; W. *masarn*, sycamore.] A cup, bowl, or goblet, used for festive purposes, and originally made of maple-wood.

"Virgil . . . describes a bowl, or *mazer*, curiously carved." *Dryden.*

Ma'zi, *n. pl.* The Turkish denomination for galls.

Maz'ily, *adv.* In a mazed, confused, or perplexed manner.

Ma'ziness, *n.* Confusion; perplexity; state or quality of being mazed.

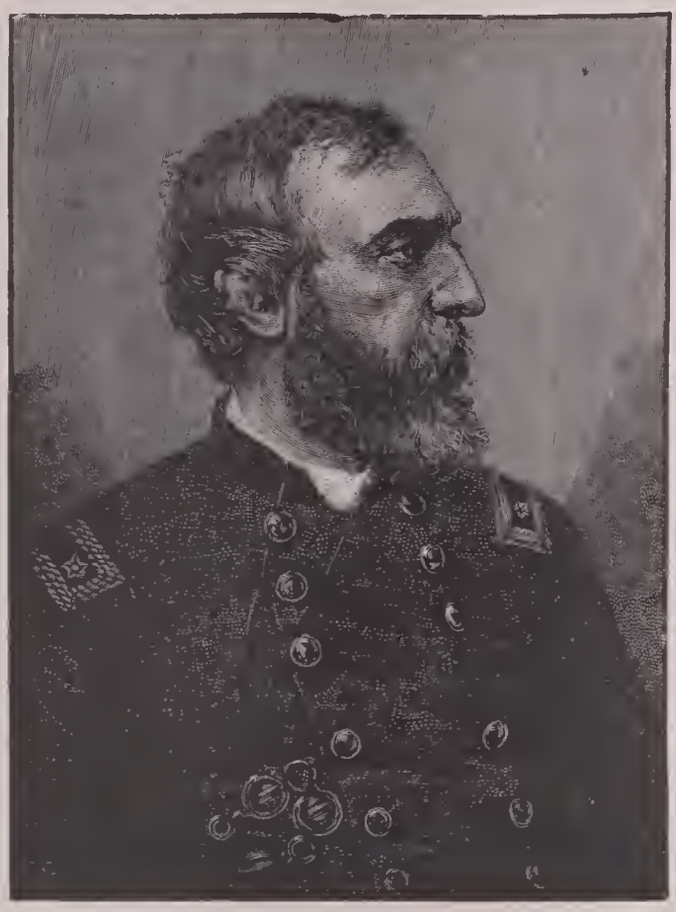
Mazolog'ical, *a.* Relating or pertaining to mazology.

Mazol'ogist, *n.* One versed in mazology.

Mazol'ogy, *n.* [Gr. *mazos*, breast, and *logos*, treatise.] That branch of zoölogical science which treats of the *mammifera.*

Mazomanie, in *Wisconsin*, a post-village of Dane co., abt. 23 m. W. by N. of Madison.

Ma'zon, in *Illinois*, a post-village of Grundy co., abt. [illegible] m. S. of Morris.



George Gordon Meade

1816–1872

Mazourka, Mazurka, (-zŭr'kă,) *n.* (*Dancing.*) A dance originally brought from Poland, in which country it is nationalized; also, the music accompanying it, somewhat resembling that of the *Polacca.*

Ma'zy, *a.* Full of mazes; winding; intricate; characterized by innumerable and perplexing turnings and windings; as, the *mazy* waltz.

Mazza'ra, a town of Italy, in Sicily, on the S.W. coast, 26 m. S. of Trapani. It has a considerable trade in cotton, grown in the neighborhood. *Pop.* 8,000.

Mazza'ra, (Val di,) an old prov. of Sicily, formerly comprising the W. part of the island, now subdivided into the provinces of Girgenti, Trapani, Palermo, and Catanisetta.

Maz'zard, *n.* [Perhaps from Fr. *merise,* wild-cherry.] A variety of small black cherry.

Mazzarino, (*mat-sa-re'no,*) a town of Italy, in Sicily, 15 m. S.E. of Catanisetta; *pop.* 11,600.

Mazzini, (*măt'zē-nē,*) JOSEPH, an Italian author and revolutionist, b. 1808, at Genoa, where his father was a medical practitioner and university professor. Young *M.* was educated for the law at the same university; and to awaken his fellow-countrymen to his notions of political life, established the *Indicator* at Genoa, in which he discussed questions touching the future of Italy. The Italian governments, having been much troubled by the machinations of Carbonarism, united in a league against liberal opinions; and although *M.* did not truly sympathize with the partisans of secret societies, he joined the Carbonari, for which connection he was arrested, and after six months' imprisonment in the fortress of Savona, tried, and though acquitted, sent to exile. He thereupon took up his abode at Marseilles, where he became the founder of *La Giovine Italia,* and conducted the journal of that name, devoted to the cause of the unity and independence of Italy, and a republican form of government. On the application of the Sardinian ambassador, he was eventually ordered to quit the French territory. For nearly twelve months he succeeded in evading the vigilance of the police, and brought out his journal, which was easily distributed from Marseilles into Italy, and went to Switzerland for the purpose of organizing the expedition into Savoy, in 1833, which failed through the treachery of Ramorino, to whom the military command had been given. Driven out of Switzerland, he repaired to London, in 1837, where he supported himself by his pen, and established a school, and a journal called the *Apostolato Popolare,* for Italian workingmen. After the French Revolution, in Feb., 1848, *M.* went to Paris to concert measures with the Republican party there, and shortly afterwards took up his abode at Milan, where he opposed the fusion of Lombardy. He remained at Milan until the advance of the Austrian army forced him to take refuge in the canton of Ticino, Switzerland, whence, shortly after the expedition into the Val d'Intelvi, he was again expelled. Rome having declared itself a republic, *M.* was elected deputy to the Constituent Assembly for the town of Leghorn, where he landed, and was received with acclamations. After spending some time at Florence, in attempting to effect the fusion of Tuscany and Rome, he repaired to the "Eternal City," and from that moment became the leading spirit of the Roman republic, having been, with Armelli and Saffi, appointed, March 30, 1849, a triumvir, and receiving with his colleagues the full powers of the infant State. He organized an army of 50,000 men, cast cannon, and prepared in every way to govern and defend the republic, and for a time maintained the contest against Gen. Oudinot and his army. A cessation of hostilities having been agreed upon, he protested against it, and resigned his post of triumvir. Rather than execute the decree of the assembly, he left Rome, and a second time took up his residence in England, keeping up a correspondence with the Republican party in Italy. In 1857, he organized an expedition to revolutionize Naples; but the scheme proved abortive, and he returned to England. Although an advocate of Italian unity, he opposed the present settlement of the kingdom. In the beginning of 1864, an endeavor was made to implicate him in the attempt of four Italians to assassinate Napoleon III.; and one of the accused, on his trial, affirmed that the arch-conspirator *M.* had given him money and explosive bombs. Among other works, *M.* has written *Italy, Austria, and the Pope* (1845); *Royalty and Republicanism in Italy* (1850); *Italian Question and the Republicans* (1851); *Duties of Man* (1862); *Life and Writings* (1864–6); and *Address to Pope Pius IX.* (1865), all of which were published in England, where he resided. D. at Pisa Italy, March 10th, 1873.

Mazzuoli, FRANCESCO, (*mat-soo-o'le,*) a celebrated painter, known by the name of "Parmegiano," was b. at Parma, in 1504. He became acquainted with Correggio, and studied his works; and in 1523 he went to Rome. There he studied the works of Michael Angelo and Rafaelle, and was employed in the Vatican. He narrowly escaped with his life at the sack of Rome by the Constable de Bourbon. One of his most famous frescoes is *Moses breaking the Tables of the Law,* in a church at Parma. His reputation as a painter was very great, but in his last years he wasted his energies in the delusive labors of alchemy. D. 1540. Parmegiano is chiefly remarkable for the inimitable grace and sweetness of his figures.

M. B., (*Medicinæ Baccalaurens,*) an abbreviation of Bachelor of Medicine.

M. D., (*Medicinæ Doctor,*) a contraction of Doctor of Medicine.

Me, *pron. pers.;* the objective case of *I.* [A. S. and Lat.; Ger. *mich;* Sansk. *mâ.*] Myself; the person speaking. It is occasionally employed as a ludicrous expletive; as, "I goes *me* to the fellow that whips the dogs." (*Shaks.*)

Me, when preceding *think,* as in *methinks,* belongs purely to the dative case, and in conjunction with an impersonal verb, is equivalent to *it appears to me.*

Meach, *v. n.* To skulk; to lurk; to cower; to sneak.

Meach'ing, *pp.* and *a.* Skulking; cowering; sneaking.

Mea'co, or **Mia'ko,** a large city of Japan, in the S.W. of Niphon, 240 miles from Jeddo, in Lat. 35° 24′ N., Lon. 150° 30′ E. It was until 1868, the metropolis of the whole empire, and the residence of the Mikado, the emperor of Japan. It is situated in a large plain, inclosed by mountains. Some of its temples are of extraordinary magnificence, and the imperial palace looks like a city by itself. *M.* is the centre of the literature, science, and art of the empire. *Miako* is a common name which signifies *Capitol* or *Imperial City.* The true name of the city is *Kioto.*

Mead, [Sax. *medo, medu.*] A vinous liquor extracted from honey. It is formed from a solution composed of one part of honey to three of boiling water, flavored with spices, a portion of ground malt and a piece of toast being added, in order that fermentation may ensue. There is no doubt that mead formed the favorite beverage for centuries of the northern people; it is also frequently mentioned in Ossian.—In the U. States, the name is applied to a drink composed of syrup, with sarsaparilla, or other flavoring extract, and water, sometimes impregnated with carbonic acid gas.

—[A. S. *mæd.*] A meadow. This term is seldom used, except in poetry.

Mead, in *Ohio,* a town'p of Belmont co.

Mead, in *Pennsylvania,* a township of Crawford county.

—A township of Warren co.

Meade, GEORGE GORDON, a major-general in the U. States army, born at Cadiz, Spain, in 1816, graduated at West Point, July 1, 1835; entered the regular army as second lieutenant of the 3d Artillery; served in the Florida war against the Seminole Indians, 1835–6; resigned his commission in Oct., 1836, and lived in retirement for 6 years. He was appointed 2d lieutenant of Topographical Engineers, May 19, 1842, and in that capacity served in the Mexican war, during which he distinguished himself at the battles of Palo Alto and Monterey, and after passing through the intermediate grades, attained the rank of major in June, 1862, and that of brig.-gen. of volunteers in Aug., 1862. Gen. Meade took part in the battles of Mechanicsville, June 26, of Gaines's Mill, June 27, a few days after which he was wounded, but not seriously; of Antietam, Sept. 17, in which he was again slightly wounded, and had two horses killed under him; and of Fredericksburg, in Dec., 1862, when the Union forces,

Fig. 1744.—GEN. MEADE.

under Gen. Burnside, were defeated, with much slaughter. Two days after this disastrous repulse he superseded Gen. Butterfield in the command of the 5th army corps; was appointed commander-in-chief of the army of the Potomac, June 28, 1863; and on July 1–3, 1863, fought the battle of Gettysburg, for which, on Jan. 28, 1866, he received the thanks of Congress. On July 3, 1863, he was raised to the rank of brig.-gen. in the regular army. He took part in the engagement at Bristoe Station, Oct. 14, 1863, and the many less important conflicts of the same year, including the operations at Mine Run, Nov. 26 to Dec. 3. During the Richmond campaign, as commander of the army of the Potomac, he signally distinguished himself, taking a prominent part in the battles of the Wilderness, May 5, 6; Spottsylvania, May 8–20; North Anna, May 23–26; Cold Harbor, May 31, and June 1; and the assaults on Petersburg, June 16–18. On Aug. 18, 1864, he was made maj.-gen. in the regular army, and in July of the following year, was assigned to the command of the Military Division of the Atlantic, and in 1866, to that of the East, with headquarters at Philadelphia. General Meade became a member of the Historical Society of Pennsylvania in 1863, and of the Philadelphia Academy of Natural Sciences in 1865. The degree of LL.D. was conferred upon him by Harvard College, Mass., in 1865. Died at Philadelphia, Nov. 6, 1872.

Meade, in *Kentucky,* a N.W. co., adjoining Indiana; *area,* about 382 sq. m. *Rivers.* Ohio and Salt rivers, besides some smaller streams. *Surface,* undulating; *soil,* fertile. *Min.* Cavernous limestone. *Cap.* Brandenburg. *Pop.* (1890) 9,484.

Meadow (*med'ō*), *n.* [A. S. *mæd, mædewe,* from *mawan,* to mow.] (*Agric.*) A flat surface under grass, generally on the banks of a river or lake; but so far above the surface of the water as to be considerably drier than marsh land, and, consequently, to produce grass and herbage of a superior quality. The soil of *M.* lands, if the term be confined strictly to river-side pastures, is generally alluvial, and more or less mixed with sand; it is kept in a state of fertility by the depositions made on its surface, in consequence of being occasionally overflowed by the adjoining river or lake. The produce of *M.* is generally made into hay, which, though not equal in quality to that produced on drier grass lands, is yet superior to that which is obtained from marshes. Such *M.* are called *bottoms* in most of the U. States.—*Water M.* are such as receive generally during the winter months, though occasionally also in the summer time, the waters of an overflowing stream, which, by a suitable arrangement of the land in alternate ridge and furrow, are made to traverse the surface without stagnating anywhere. The result is a rapid and early growth of grass in spring time, which, though not very nutritious, is useful for cows, ewes, and lambs, at a time when green food is not abundant.—The term is also applied generally to grass-land that is mowed at certain times; land appropriated to the production of hay; land unploughed (usually a level tract), green with grass and variegated with flowers. This class of land is called, in American parlance, *bottoms,* or *bottom-land.*

"*Meadows* trim with daisies pied."—*Milton.*

Mead'ow, *a.* Pertaining or relating to a meadow, as, *meadow-land.*

Mead'ow-foxtail, *n.* (*Bot.*) See ALOPECURUS.

Mead'ow-grass, *n.* (*Bot.*) See POA.

Mead'ow-lark, *n.* (*Zoöl.*) A beautiful American species of lark, *Orlanda Magna* (Wilson), found in the eastern United States to the high central plains. It is abt. 11 inches long, and the tail 5 in. The body is thick and stout, the legs large; the bill is nearly straight, and three times as long as high; inner lateral toe longer than the outer; feathers of head stiffened, the shafts above extended into a black bristle. The upper parts are brown, marked with brownish-white, and the exposed portions of the wings and tail with transverse dark-brown bars; the under parts yellow, with a black pectoral crescent.

Mead'ow-ore, *n.* (*Min.*) Conchoidal bog iron-ore. *Ure.*

Mead'ow-pink, *n.* (*Bot.*) A species of *Dianthus.*

Meadow River, in *W. Virginia,* rises in Greenbriar co., and flows N.W. into Gauley River, between Fayette and Nicholas cos.

Mead'ow-rue, *n.* (*Bot.*) See THALICTRUM.

Mead'ow-saffron, *n.* (*Bot.*) See COLCHICUM.

Mead'ow-sage, *n.* (*Bot.*) See SALVIA.

Mead'ow-sweet, Meadow-wort, *n.* (*Bot.*) See SPIRÆA.

Meadowy, (*mĕd'ō-ȳ.*) *a.* Belonging to, resembling, referring to, or consisting of a meadow, or meadows.

Mead'ville, in *Mississippi,* a post-village, cap. of Franklin co., abt. 80 m. S.S.W. of Jackson.

Meadville, in *Pennsylvania,* a thriving city, cap. of Crawford co., on French Creek, about 236 m. W.N.W. of Harrisburg. It is regularly laid out, well built, and contains many fine edifices. *Manuf.* Paper, oil, edge-tools, &c. *Pop.* (1897) 10,250.

Mead'ville, in *Virginia,* a post-village of Halifax co., abt. 136 m. S.W. of Richmond.

Meagre, Meager, (*mē'gẽr,*) *a.* [Fr. *maigre;* Lat. *macer;* Sansk. *mlai,* to become lean or flaccid; Chald. *muk,* to become attenuated.] Thin; spare; lean; wanting flesh, or having little flesh; attenuated; scraggy.

"Fierce famine with her *meagre* face."—*Dryden.*

—Poor; barren; sterile; destitute of fertility, richness or any valuable quality, as soil; wanting force or strength of diction, or expression; deficient in amplitude of ideas or vigor of imagery, as a sketch or description; scanty of definition; defective in quantity, or poor in quality.

"His education had been but *meagre.*"—*Motley.*

Mea'grely, Mea'gerly, *adv.* Poorly; thinly; starvedly.

Mea'greness, Mea'gerness, *n.* Condition or quality of being meagre or attenuated: spareness; leanness; poverty of flesh.—Want of fertility; barrenness, as of soil.—Scantiness; barrenness; destitution, as of income or value.

Meal, (*mēl,*) *n.* [A. S. *mæl, mal;* D. and Dan. *maal;* Ger. *mahl;* Icel. *mál,* a repast.] A repast; a refection; a portion of food consumed at one time. See FOOD, GASTRONOMY, &c.

—[A. S. *melew, meluw;* Ger. *mehl;* Lat. *mola,* to grind in a mill. See MILL.] The substance of edible grains or farinaceous seeds ground to fine particles, and not bolted or sifted; the finer part of pulverized grain; coarse flour, as of maize or oats.

—*v. a.* To sprinkle, mix, or mingle with meal.—To pulverize; as, *mealed* gunpowder.

Meal'-beetle, MEAL'-WORM, *n.* See TENEBRIONIDÆ.

Meal'iness, *n.* State or quality of being mealy or pulverized: smoothness or softness to the taste or touch.

Meal'-moth, *n.* (*Zoöl.*) See PYRALIDÆ.

Meal'-mouthed, *a.* See MEALY-MOUTHED.

Meal'-time, *n.* The customary time when a meal is taken.

Mealy, (*mēl'ȳ,*) *a.* [Comp. *mealier;* super. *mealiest.*] Having the qualities of meal; soft; smooth to the feel; as, the *mealy* parts of plants. (*Arbuthnot.*)—Farinaceous; dry and friable; resembling meal; as, *mealy* potatoes.—Besprinkled with something that appears like meal; as, the *mealy* wings of a butterfly.

Meal'y-bug, *n.* (*Zoöl.*) The *Coccus adonidum,* a red

dish insect, covered with a white powdery substance. It is very injurious to pine-apples and other plants in hothouses. See COCCUS.

Meal'y Mountains, an elevated ridge of British N. America, near the S.E. coast of Labrador. Height abt. 1,480 feet.

Meal'y-mouthed, MEAL-MOUTHED, *a.* Having a soft mouth; — hence, unwilling to tell the truth in plain language; inclined to speak of anything in softer terms than the truth will warrant; finical or affected in utterance.

"She was a fool to be *mealy-mouthed* where nature spoke so plain." — *L'Estrange.*

Meal'y-mouthedness, *n.* State or quality of being mealy-mouthed.

Mean, (*mēn,*) *a.* [A. S. *mæne;* D. *gemeen;* Ger. *gemein,* common, vulgar.] Wanting station or dignity; low in rank or position; ignoble: vulgar; low; common; humble; poor; lacking eminence or distinction; as, a *mean* condition. — Low-minded; void of dignity of character; destitute of honor; base; spiritless; sordid; as, a *mean* disposition. — Contemptible; despicable; low in worth or estimation; worthy of little or no regard; of little value or account; not costly or elegant.

"Great Cæsar found our fathers no *mean* foes. — *Philips.*

—[O. Fr. *meane;* Fr. *moyen;* Lat. *medium;* Gr. *mesos,* for *medjos;* Sansk. *madhya,* middle.] Middle; at an equal distance from the extremes; intervening; intermediary; as, in the *mean* time. — Intermediate; coming between; moderate in quality or degree of excellence.

(*Math.*) Having an intermediate value between two or more quantities which are formed according to any assigned law of succession; average; as, *mean* distance.

(NOTE. *Mean* is sometimes used in the formation of self-explaining compound words; as, *mean*-born, *mean*-spirited, *mean*-looking.)

—*n.* The middle point, place, rate, or degree; that which is median between two extremes; medium; mediocrity; moderation; measure. — Intervening period; interval of time; interim; meantime. (R.)

"Reserve her cause to her eternal doom,
And in the *mean* vouchsafe her honourable tomb."—*Sidney.*

—Instrument; that which is used to effect or accomplish an object; intermediate agency; the medium through which something is done; — most frequently used in the *plural.*

"The end must justify the *means.*" — *Prior.*

"Philosophical doubt is not an end, but a *mean.*" *Sir W. Hamilton.*

—*pl.* Income; revenue; resources; substance or estate; instrumental agent of action or performance; as, a man of *means,* he lives above his *means.*

(*Math.*) A quantity which possesses an intermediate value between several others which are formed according to any assigned law of succession. The *Arithmetical M.* is the *average* of any series of numbers, and is found by adding the values of the quantities together and dividing by their number. The arithmetical mean a and b, any two quantities, therefore is $\frac{a+b}{2}$; if $a+b+c$ $=\frac{a+b+c}{3}$; and so on. The *Geometrical M.* between any two quantities, or the mean proportional, is the quantity which forms the middle term of a duplicate ratio, or, in other words, is the continued proportion of those terms; so that the first quantity is to the number sought as the number sought is to the third term. To find the geometrical mean between a and b, any two quantities as before, let x be the required mean,—

$$\therefore a : x = x : b;$$

and consequently, $x = \sqrt{ab}$. Therefore, the geometrical mean between any two quantities equals the square-root of their product. The *Harmonical M.* is such a number, that the first and third terms being given, the first is to the third as the difference of the first and second is to the difference of the second and third. The harmonical *M.*, therefore, between a and c may be, say b; and b, as the mean required $= \frac{2ac}{a+c}$.

By all means. Certainly; of course; without doubt; without fail; without hesitation; at any rate, assuredly; as, come and see me *by all means.* — *By any means.* In any way possible; as, if you can *by any means* assist me. — *By no means,* or *by no manner of means.* Certainly not; not at all; not in any degree; as, this wine is *by no means* as good as the last.

Mean, *v. a.,* (*imp.* and *pp.* MEANT, *mĕnt.*) [A. S. *mœnan;* D. *meenen;* Ger. *meinen.*] To have in the mind, view, or contemplation; to intend; as, he *means* to reform. — To design, with reference to a future act. — To denote; to indicate; to imply; to import.

"While poor John Bull, bewildered with the scene,
Stares, wondering what the devil it can *mean.*"—*Byron.*

—*v. n.* To have thought or ideas; to have meaning.

Mean'der, *n.* [From Lat. *Mæander,* the name of a winding river in Phrygia.] A serpentine or winding course; a flexuous path or passage; a maze, a labyrinth; — hence, intricacy; perplexity.

"Through all the *meanders* of the law."—*Arbuthnot.*

—An intricate, tortuous, or involved course or movement.

—*v. a.* To wind, turn, or circumvolve; to make flexuous or serpentine.

—*v. n.* To be intricate, tortuous, or perplexing; to wind or turn in a course or passage.

Mean'der Creek, in *Ohio,* enters the Mahoning River about 7 m. below Warren.

Mean'dering, *n.* A winding, serpentine course.

Mean'drian, Mean'drous, Mean'dry, *a.* [Lat. *mæandrius.*] Winding; flexuous; serpentine; having many turns or involutions.

Meandri'na, *n.* [Fr. *méandrine.*] (*Zoöl.*) See BRAINSTONE.

Mea'nel, *n.* A black or a red spot on a white horse.

Mean'gis Islands, a group in the Eastern Archipelago, 90 m. S.E. of Mindanao; Lat. 5° N., Lon. 127° E. Its principal island is Nanusa.

Mean'ing, *a.* Significant; important; as, a *meaning* look.

—*n.* That which exists in the mind, view, or contemplation, as a settled aim or purpose, though not directly expressed; intention; purpose; aim, with reference to a future act. — Signification; import; the sense of words or expressions; that which is to be understood; that which the speaker or writer intends; force. — Sense; power of thinking.

"No *meaning* puzzles more than wit."— *Pope.*

Mean'ingless, *a.* Without a meaning; as, a *meaningless* answer.

Mean'ingly, *adv.* With meaning; significantly.

Mean'ly, *adv.* In a mean manner; without dignity of character or elevation of mind; without honor; with a low mind or narrow views; niggardly; sordidly; as, he acts *meanly* towards every one. — Poorly; in a manner indicating a low origin or condition. — Disrespectfully; disparagingly; ungenerously; unworthily; as, to think *meanly* of one's poor relations.

Mean'ness, *n.* State or quality of being mean; want of dignity, or rank, or excellence of any kind; lowness of origin or condition; want of dignity and elevation; poverty of mind; lack of honor or generosity of feeling; rudeness; sordidness; niggardliness.

"The name of servant has been reckoned to imply a certain *meanness* of mind, as well as lowness of condition."—*Swift.*

Means, *n. pl.* Resources; also, agency toward the attainment of an end. — See MEAN.

Meant, (*mĕnt,*) *imp.* and *pp.* of MEAN.

Mean'time, Mean'while, *adv.* In the interim, or intervening time; during the interval. — See MEAN.

Mear, *n.* (*Mining.*) In English lead-mines, 32 yards of ground in a vein of ore.

Mease, (*mēz,*) *n.* [Ger. *mass,* a measure.] The number of five hundred; as, a *mease* of herrings.

Measled, (*mē'zld,*) *a.* Infected or speckled with measles.

Measledness, (*mē'zld-nes,*) *n.* State or condition of being measled; — used, specifically, of swine.

Measles, (*mē'zlz,*) *n.,* with a plural termination. [D. *mazelen;* Ger. *maser,* spot, speck, pl. *masern,* the measles.] (*Med.*) A contagious fever of an inflammatory type, attended with a characteristic eruption, and all the symptoms of a violent cold, watery discharge from the eyes and nose, dry cough, hoarseness, &c. It commences with the ordinary symptoms of fever, — chilliness, loss of appetite, lassitude, and is almost invariably attended with inflammation of the mucous membrane lining the air-passages. The eruption commonly appears on the fourth day; at first about the head and neck, then the trunk and arms, and finally reaching the lower extremities. It takes two or three days to complete its course, and when it reaches the feet and legs, it has usually begun to disappear from the face. At the end of six or seven days from their first appearance, the papules have again disappeared. The eruption consists of little papules somewhat resembling flea-bites, of a dark-red color. When the eruption is fully out, the cough, at first dry and troublesome, generally becomes softer and less frequent. All ages are liable to attack, though infants at the breast are not so liable as those somewhat older. It is not commonly a dangerous disease, though sometimes it has proved exceedingly fatal. Where danger occurs, it is from inflammation of the air-passages, when the disease may become complicated with croup; or in subjects predisposed to consumption, the seeds of that disease may be developed. In general, a simple diet, and the maintenance of an equable temperature, is almost all that is required, with, perhaps, the exhibition of a mild diaphoretic or expectorant. Sometimes the application of a mustard cataplasm to the chest is of advantage.

—A disease engendered in swine from impurity of the blood.

"The swine died of the *measles,* and the sheep of the rot."
Ben Jonson.

—A disease of trees.

"Fruit-bearers are often infected with the *measles.*"—*Mortimer.*

Measly, (*mē'zly,*) *a.* Infected with measles, blotches, or eruptions; as, *measly* pork.

Measurable, (*mĕzh'ur-a-bl,*) *a.* [Fr. *mesurable;* Lat. *measurabilis.*] That may be measured; susceptible of mensuration or computation. — Moderate; in small degree, extent, or quantity; as, a *measurable* share of the world's goods.

Meas'urableness, *n.* Quality of being measurable or computable.

Meas'urably, *adv.* In a measurable or computable manner; in a limited degree; moderately.

Measure, (*mĕzh'ur,*) *n.* [Fr. *mesure;* Sp., from Lat. *mensura* — *meteor, mensus,* to measure; Gr. *metron,* a measure; Heb. *madad,* to measure.] That by which extent or dimension is ascertained, either length, breadth, thickness, capacity, or amount; the whole magnitude, extent, or dimensions of a thing, including length, breadth, and thickness, ascertained by comparison with a fixed standard; estimated extent or content. — A limited or definite quantity; portion allotted; determined extent or length; due proportion. — A rule or standard by which anything is adjusted or proportioned; a fixed unit of quantity, dimension, or extent; hence, a criterion by which anything is estimated or judged.

"God's goodness is the *measure* of his providence." — *Sir T. More.*

—Moderation; due bounds; degree or extent without excess; — particularly, in the phrases *in measure, with, without,* or *beyond measure.*

—Indefinite quantity, extent, or degree.

"There is a great *measure* of discretion to be used in the performance of confession." — *Taylor.*

—An instrument for determining the measurement of quantity or dimensions, as a graduated line, rod, vessel, &c. — Stated or fixed quantity, dimensions, degree, or amount, as settled by a rule or standard; contents of a vessel by which quantity is determined; as, a *measure* of corn.

(*Mus.*) The quantity of notes which are placed in the bar, and which is generally called the *time,* of which there are but two kinds, viz., *common time,* containing an equal quantity of notes in the bar, and *triple time,* containing an unequal quantity. Common time is generally marked with a C at the beginning, which means that every bar contains four crotchets, or their value in other notes. There are also other kinds of common time which are marked $\frac{2}{4}$, $\frac{6}{4}$, $\frac{6}{8}$. Triple time is marked $\frac{3}{2}$, $\frac{3}{4}$, $\frac{3}{8}$, $\frac{9}{8}$, $\frac{9}{4}$. Sometimes, in common time, we have $\frac{1\,2}{4}$, $\frac{1\,2}{8}$. The lower figure indicates the parts of the semibreve, and the upper figure shows how many of these parts there are in the bar.

(*Rhet.*) The manner of ordering or combining the quantities, or the long and short syllables in poetry, rhythm; metre; — hence, a foot, as, the Alexandrine *measure.*

(*Dancing.*) The intervals between steps in dancing corresponding to the interval between notes in music; harmonious regulation of pedal movement and action — A grave, stately dance resembling the minuet, formerly in vogue.

"Now tread we a *measure,* said young Lochinvar."—*Sir W. Scott.*

—*pl.* Acts, means, steps, or proceedings toward the accomplishment of an end or object; — a term of extensive comprehension; as, fiscal *measures,* legislative *measures,* political *measures,* public *measures,* effectual or inefficient *measures,* stringent or lax, or prudent or rash *measures,* &c.

"*Measures,* not men, have always been my mark."—*Goldsmith.*

Standards of measure. See WEIGHTS AND MEASURES, and METRIC SYSTEM.

Meas'ure, *v. a.* [Fr. *mésurer;* Lat. *mensurare.*] To compare with a fixed standard; to compute or determine extent, quantity, dimensions, or capacity, by a certain rule or established criterion; to ascertain, as the degree of anything; hence, to judge, as of distance, extent, or quantity; to estimate; to value; to appraise.

"Jehovah! what thought can *measure* thee, or tongue relate thee?" *Milton.*

—To pass through or over; to determine extent by marching off and on

"We must *measure* twenty miles to-day." — *Shaks.*

—To adjust; to proportion. — To allot or distribute by measure.

"With what *measure* ye mete, it shall be *measured* to you again." *Matt.* vii. 2

—*v. n.* To have a certain or limited extent; as, one English mile *measures* 1,760 yards.

Meas'ured, *a.* Regulated or determined by a rule or standard; — hence, equal; uniform; steady; as, she gave him a *measured* look of scorn.

—*a.* Limited, circumscribed, or restricted.

"Choice word and *measured* phrase." — *Wordsworth.*

Meas'ureless, *a.* Without measure; boundless; vast, illimitable; infinite; immense; immeasurable.

Meas'urement, *n.* Act of measuring; mensuration. — Amount, extent, or quantity determined by measuring; area; content; as, the *measurement* of a ship.

Meas'urer, *n.* One who measures anything.

Meas'uring, *a.* Employed in measuring; as, a *measuring* tape, rod, or line.

Measuring cast. (*Sports.*) In the game of bowls, a term applied to a cast whose length cannot be distinguished from that of another, except by measuring.

Meat, (*meet,*) *n.* [A. S. *mæte, mett;* N. Fris. *mêt,* flesh. Icel. *mata;* Swed. *mat;* Dan. *mad,* food; Corn. *methia,* to nourish; Lat. *mando,* to masticate.] Food in general; anything eaten for nourishment, either by man or beast. See FOOD. — The flesh of animals used as food; flesh-meat; animal muscle.

"God sends *meat,* and the Devil sends cooks."—*Ray's Proverbs.*

To sit at meat, to sit at table during meals.

Meat-biscuit, (*-bis'kĭt,*) *n.* Concentrated essence of meat extracted by boiling, which, when thickened with flour, is formed into the shape of biscuit, for use on a long voyage, journey, &c.; preserved or canned meat.

Meat'ed, *a.* Containing meat; consisting of meat; — used principally in composition; as, full-*meated.*

Meath, (*meeth,*) a marit. co. of Ireland, prov. of Leinster, bordering on the Irish Sea, and having N. the cos. Cavan, Monaghan, and Louth, S. Kildare, and W. Westmeath. *Area,* 906 sq. m. The surface is generally level, rising slightly towards the N. and N.W. The soil is a rich loam, and very fertile, but for the most part given to pasture. The principal rivers are the Boyne and Blackwater. *Prod.* The usual cereals. *Manuf.* Linens. The chief towns are Trim, Navan, and Kells. *Pop.* 140,000.

Meat'iness, *n.* State or quality of being meaty; fleshiness.

Meat'less, *a.* Destitute of food; having no meat or flesh.

Mea'tus, *n.* [Lat., a passage, from *meare,* to go.] (*Anat.*) A term applied to different parts of the body, particularly to channels leading from the external parts to an internal organ, as in the ear, where the external tube or passage is called *meatus auditorius externus,* &c.

Meat'y, *a.* Abounding in meat; fleshy; as, a *meaty* pie, a *meaty* carcass.

Meaux, (*mo,*) a town of France, dept. of Seine-et-Marne, on the Marne, 24 m. N.E. of Paris. Among the objects of interest is the Cathedral, a fine Gothic structure containing the tomb of Bossuet, formerly bishop of Meaux. *Manuf.* Cotton stuffs, earthenware, and glue. *Pop.* 11,700.

Meaw, (*mū,*) *v. n.* See MEW.

Meawl, (*mūl,*) *v. n.* Same as MEWL, or MIAOUL, *q. v.*

Meazling, (*mēz'ling,*) *a.* Mizzling; patterlug; mistliug; sprinkling.

"*Meazling* and soaking rain." — *Arbuthnot.*

Mc'ean, in *Wisconsin,* a towuship of Marquette county.

—A river which rises In Waushara co., and flowing S.E. enters Fox River from Marquette co.

Mecca, (*mek'ka,*) a city of Arabia, prov. of El-Hedjaz, 51 m. E. of Djedda, on the Red Sea, and 270 m. S.E. of Medina; Lat. 21° 28′ 17″ N., Lon. 40° 15′ E. *M.*, meaning literally "the place of assembly," but called by the Arabs, Om-el-Kora, "mother of towns," and Beled-al-Ameyn, "region of the faithful," is situate in a long, narrow, sandy valley, running N. and S., called in the Koran "the valley without seeds." It is 2 m. long, and about 1,500 feet wide. The houses, which are handsome, follow the windings of the valley, being built partly on the declivities on both sides. The streets are wide and regular. The only public building of consequence is the Beitullah, or El-Haram, the famous mosque of *M.* (Fig. 1745), in the interior of which is the Caaba, or Holy House. The mosque is about 350 feet long and 300 feet in breadth, and is formed by colonnades, roofed with numerous small cupolas supported by 450 pillars, about 20 feet in height, of marble or Mecca stone. The walls,

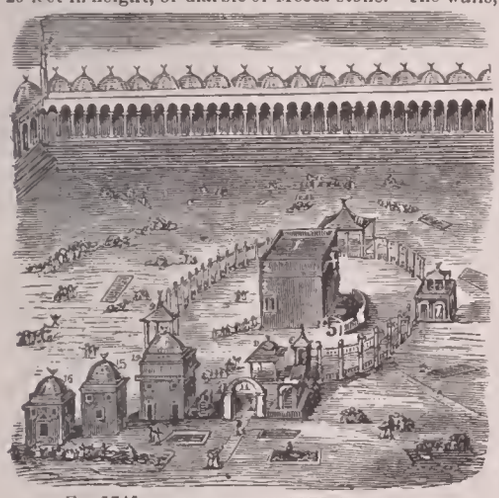


Fig. 1745. — THE HOLY MOSQUE OF MECCA.

1. Al-Caaba. 2. The hand of gold. 3. The black stone. 4. The golden spout. 5. The sepulchre of Ishmael. 7. The station of the Hanisites. 8. The place of Abraham and the Shafsites. 9. The station of the Hanbalites. 10. The station of the Malekites. 11. The old gate. 12. The steps moving on wheels to mount up to the door of the Caaba. 13. The inner inclosure, which at night is illuminated with lamps. 14. The building over the well Zemzem. 15. The treasury. 16. The cupola of the Abbas.

arches, and minarets are gaudily painted in stripes of red, yellow, and blue. The Caaba is an oblong massive structure, abt. 45 feet in length and 35 feet in breadth, and from 35 to 40 feet in height, its doors being coated with silver, embellished with gold ornaments. At the N.E. corner is the celebrated "black stone," said to have been brought by the angel Gabriel to form the foundation. It forms part of the sharp angle of the structure 4 or 5 feet above the ground. It is oval-shaped, 7 inches in diameter, of a dark-brown color resembling lava, and surrounded by a border of silver and cement, to prevent its being worn away by the kisses and touches of the pilgrims. Round the building is a broad pavement of marble, and the sides of the Caaba are covered with a curtain of embroidered black silk stuff, called the Kesona, annually brought from Cairo at the time of the Hadj or pilgrimage. The Holy Well of Zem-zem, said to have been found by Hagar when her son Ishmael was dying with thirst, supplies the city with water for drinking and ablution, its use for other purposes being forbidden. There are no manufactures of any consequence, but there is a large trade during the month of Dhabhadja (the latter end of June and the beginning of July), owing to the pilgrims from the different countries exposing articles for sale, as well for gain as to defray the expenses incurred by the journey. The climate of *M.* is sultry and unwholesome. About 15 m. E. of *M.* is the hill of Arafat, where Mohammed used to retire to pray, and which is much frequented by pilgrims, whose numbers amount annually to about 70,000. *M.* is celebrated as the birthplace of Mohammed, in 570, who was expelled in 622, and captured it in 630. In 692 it was captured by Abd-el-melik, and in 929 it was plundered by the Carmathians. In 1184, Renaud de Chatillon failed in an attempt upon *M.* In 1803 It was seized by the Mosiem sect of the Wahabees, from whom it was taken in 1818 by Ibrahim Pasha. *Pop.* abt. 45,000.

Mec'ca, in *Ohio,* a post-village and township of Trumbnll county, about 11 miles north-north-east of Warren.

Mecca, (BALSAM OF.) See BALSAMODENDRON.

Meccawec', *n.* (*Geog.*) A native or inhabitant of Mecca, the Holy City of the Mohammedans.

—*a.* (*Geog.*) Belonging or relating to Mecca, Arabia, or to its inhabitants.

Mecejana, (*ma-sa-zha'na,*) a village of Brazil, abt. 12 m. E. of Ceara; *pop.* 3,000.

Mechanic, (*me-kăn'ik,*) **Mechanical,** (*me-kăn'i-kl,*) *a.* [Lat. *mechanicus;* Gr. *mēchanikos,* from *mēcha-nē,* any contrivance, from *mēchos,* a means, expedient, remedy.] Skilled in mechanics, or in the art of making machines; pertaining to mechanics, or to machines, or to the art of constructing machines; relating or belonging to the art or craft of making wares, goods, instruments, furniture, &c.; constructed or performed by the rules or laws of mechanics; governed by the laws of motion; depending upon mechanism; as, *mechanical* operations, *mechanical* appliances, *mechanical* forces. — Pertaining to, or proceeding from, the philosophical principles of mechanics; acting by physical power; noting performance without design or reflection, from the mere force of habit; as, *mechanical* action, the *mechanical* arts, *mechanical* movements. — Bred to manual labor; pertaining to artisans or mechanics; belonging to the artisan class. — Servile; vulgar; ill-bred; low.

"*Mechanic* slaves
With greasy aprons, rules, and hammers." — *Shaks.*

—Performed and made by mechanical power, and not by chemical action; as, *mechanical* deposits.

Mechanical philosophy. The science of mechanics applied to physical inquiries.

Mechanical forces. See MECHANICS.

Mechanical work. The exertion of force through space. It is estimated in foot-pounds, the unit being the work performed in raising one pound avoirdupois, against gravity, to a height of one foot. In the modern mechanical theory of heat, the utmost mechanical work that can be accomplished by the expenditure of a quantity of heat sufficient to raise one pound of water one degree (F.) in temperature is called the *mechanical equivalent of heat.* Accordlug to Joule's experiments it is equal to 772 foot-pounds.

Mechan'ic, *n.* One who constructs machines, or fabricates goods, wares, instruments, furniture, and the like; one skilled In a mechanical occupation or art; an artificer; an artisan.

Mechan'ic, in *Ohio,* a township of Holmes county.

Mechan'ically, *adv.* According to the laws of mechanism and accurate workmanship; by the laws of regulating motion, without intellectual application or design, or by the force of habit; by physical force or power.

Mechan'icalness, *n.* State or quality of being mechanical, or controlled by the power of mechanism; conformity to the laws of mechanics.

Mechanician, (*mĕk-a-nĭsh'an,*) *n.* [Fr. *mécanicien.*] One skilled in mechanics; a machinist.

Mechan'ico-chem'ical, *a.* A term applied to the sciences connected with mechanics and chemistry, as magnetism, electricity, and galvanism.

Mechan'ics, *n. pl.* The science which treats of forces and their applications. The tendency of force acting upon matter is to produce motion, but two such tendencies may oppose one another, as the direction of the motions which they seek to produce may differ. When two do not completely counteract one another, it is possible that three or four or any number of forces — so many of them acting in general direction and so many in another, so many for instance trying to produce motion eastward, and so many motion westward — may produce no motion whatever. From the application of any number of forces there may be rest produced, and it is quite evident that there may be motion. The science of *M.* treats those two cases, embracing in its sphere the theory, as well as practice, of motion and equilibrium, both with and without the aid of machinery. The theory of mechanics properly comprehends: — 1. dynamics; 2. the motion of projectiles; 3. the theory of simple machines, or the mechanical forces; 4. the theory of compound machines, and their maximum effects; 5. the doctrine of the centre of gravity; 6. the doctrine of the centre of oscillation, gyration, &c.; 7. the collision of bodies; 8. the theory of rotation; 9. the theory of torsion; 10. the strength of materials; 11. and lastly, the equilibrium of arches and domes. The elementary machines, or mechanical powers, properly speaking, are six in number, and may be thus enumerated: — the *lever,* the *wheel* and *axle,* the *pulley,* the *inclined plane,* the *wedge,* and the *screw;* all of which will be found duly described under their usual appellations. Under the articles Statics, Dynamics, Hydrodynamics, and so on, the description of the elements of mechanics will be found fully given, and consequently they need not be treated of in the present article, which only has for its object the uniting of the several component parts of this branch of natural philosophy under one head. — *Hist.* From the remnants left us of the customs and exploits of the ancients, there can be no doubt that mechanics and mechanical powers were known many years prior to the birth of Christ. The stupendous pyramids of Egypt are striking evidences of the wonderful mechanical aids which the Egyptians must have been acquainted with, — powers so vast, that even in the present day, with our amount of theoretical and practical knowledge, they could not be equalled, much less eclipsed. Aristotle is the first author about whom we have any proof of having written on mathematics, and he describes the simple powers of forces clearly, but somewhat erroneously. The first great machinist is, however, undoubtedly, Archimedes, and he did much, not only for geometry but also for hydrostatics, of which he discovered and explained the general principles. Archimedes also discovered the centre of gravity (see GRAVITATION), and many useful and important machines which have not descended to our own times. Water-mills are the oldest of mechanical inventions that have come down to us from the ancients; although hand-mills for grinding corn were well known to the Romans. The inclined plane was invented by Cardan. Simon Stevens, of Bruges, discovered and applied the theory of the parallelogram of forces; and the centre of gravity, as applied to solid bodies, was modelled, *in extenso,* from the early theory of Archimedes, by Lucas Valerius. Galileo was the first modern mathematician who did much for mechanics, for under his hands that science assumed perfectly different proportions from what it had done before. Toricelli, his pupil, further enlarged the theories which Galileo had started. The names of Pepin, the Marquis of Worcester, Huygens, Wallis, and Wren, may likewise be added as illustrating mechanics in the 17th century. One of the greatest inducements, however, to the prosecution of this study was the publication of Newton's *Principia* (see PRINCIPIA). The steam-engine may be said to be the greatest of discoveries which have been made in this path, and a full description will be found given of it under articles headed STEAM-CARRIAGE, and STEAM-ENGINE. Euler's treatise on mechanics is one of the best works on the subject extant, and the student would do well likewise to consult Lagrange's *Mécanique Analitique,* and also Wood's, Whewell's, and Moseley's works.

Applied mechanics, the practical application of the laws of matter and motion to the construction of machinery, &c.

Mechan'icsburg, in *Illinois,* a post-village of Sangamon co., abt. 15 m. E. of Springfield.

Mechanicsburg, in *Indiana,* a village of Boone co., abt. 7 m. N. of Lebanon. — A post-village of Henry co., abt. 40 m. W.N.W. of Richmond. — A village of Marion co., abt. 10 m. N.W. of Indianapolis.

Mechanicsburg, in *Iowa,* a village of Van Buren co., abt. 8 m. S.S.W. of Iowa City.

Mechanicsburg, in *Missouri,* a village of Macon co., abt. 105 m. N.N.W. of Jefferson City.

Mechanicsburg, in *Ohio,* a village of Carroll co. — A post-vill. of Champaign co., abt. 10 m. E. of Urbana.

Mechanicsburg, in *Pennsylvania,* a village of Beaver county.

—A post-borough of Cumberland co., about 8 m. S.W. of Harrisburg. *Pop.* (1897) 3,850.

—A village of Indiana co., about 38 m. W. of Altoona.

—A village of York co., about 45 m. S.S.E. of Harrisburg.

Mechanicsburg, in *Virginia,* a post-village, former cap. of Bland co., about 100 m. W. by S. of Lynchburg.

Mechan'ic's Falls, in *Maine,* a post-village of Androscoggin co., about 37 m. N.N.W. of Portland.

Mechan'icstown, in *Maryland,* a village of Frederick co. Its post-office is THURMONT.

Mechan'icsville, in *Georgia,* a post-village of Jasper co., about 46 m. N.W. of Milledgeville.

Mechanicsville, in *Indiana,* a village of Vanderburg co., about 3 m. N. of Evansville.

Mechanicsville, in *Iowa,* a post-town of Cedar co., 24 m. E. by S. of Cedar Rapids. *Pop.* (1895) 642.

Mechanicsville, in *Maryland,* a village of Montgomery co., abt. 18 m. N. of Washington, D. C.

Mechanicsville, in *New Jersey,* a village of Hunterdon co., abt. 12 m. N.E. of Flemington.

Mechanicsville, in *New York,* a post-village of Saratoga co., abt. 12 m. N. of Troy.

—A village of Westchester co., abt. 45 m. N.N.E. of New York city.

Mechanicsville, in *Pennsylvania,* a post-village of Bucks co., abt. 100 m. E. of Harrisburg. — A village of Lehigh co., abt. 6 m. N.W. of Allentown.

Mechanicsville, in *Tennessee,* a post-village of Cannon co.

Mechanicsville, in *S. Carolina,* a post-village of Sumter district.

Mechanicsville, in *Vermont,* a post-village of Rutland co., abt. 8 m. S. by W. of Montpelier.

Mechanicsville, in *Virginia,* a village of Hanover co., abt. 7 m. N.N.E. of Richmond. Here, on June 26, 1863, a terrible but indecisive battle was fought between the Union forces under Gen. McClellan, and the Confederates under Gen. A. P. Hill. — A village of Lonisa co., abt. 65 m. N.W. of Richmond.

Mechanism, (*mĕk'an-izm,*) *n.* [Fr. *mécanisme.*] Motion depending upon mechanical laws; mechanical action. (R.)

"All must be performed either by *mechanism* or accident." *Bentley.*

—The structure or construction of a machine, engine, or instrument; the parts composing a machine, &c.; action of a machine according to the laws of mechanics; any mechanical contrivance; as, an ingenious piece of *mechanism.*

Mech'anist, *n.* [Sp. *maquinista.*] One skilled in mechanics; a machinist, or maker of machines.

Mech'anize, *v. a.* [Fr. *mécaniser.*] To form by, or make subject to skilful contrivance, art, or design.

"Power . . . makes the human frame a *mechanized* automaton." *Shelley.*

Mechanograph'ic, *a.* Treating of, or describing mechanics.

Mechanog'raphist, *n.* An artist who reproduces copies of artistic works by mechanical process.

Mechanog'raphy, *n.* [Gr. *mechanē,* machine, and *graphein,* to write.] Art or process of multiplying or reproducing a writing or work of art by mechanical means.

Mechanurgy, (*mĕk'an-ur-jĭ,*) *n.* [Gr. *mechanē,* and root *ĕrgein,* to work.] That branch of science which treats of moving machines.

Mechitarists, or **Mekhitarists,** (*mek'hi-tar-ists,*) *n. pl.* (*Eccl. Hist.*) A congregation of Armenian Christians named after Peter Mechitar, or Mekhitar, who was born at Sebaste in 1676. He repaired to Constantinople in 1700, and having in vain endeavored to unite the Armenians, was compelled to quit the city, and took refuge in the Morea, founding at Modon, in 1708, an Armenian monastery. On the conquest of the Morea by the Turks in 1717, Mechitar repaired to Venice, and the island of St. Lazaro was granted to him, and here he established a printing-press, and formed the society that bears his name, for the diffusion of a knowledge of the Christian Armenian literature. Mechitar D. at Venice, 1749. The society have branches at Constantinople, Paris, Vienna, and other places, and their publications find a large circulation in the Levant.

Mechlin, (*mĕk'lin,*) *n.* A kind of fine, gauzy lace, originally made at Mechlin, Belgium.

Mechlin, or **Malines,** (*mek'lin,* or *ma-leen',*) a city of Belgium, prov. of Antwerp, on the Dyle, a tributary of the Scheldt, 14 m. S.E. of Antwerp, and 14 N.E. of Brussels. It was formerly a very flourishing place, but it has latterly fallen behind most of the Belgian cities in commercial enterprise and activity. The most remarkable among its public buildings are the Cathedral, a Gothic structure, and the Church of the Récollects, both of which contain many fine paintings by Rubens, Vandyke, and other great artists. *Manuf.* Fine Brabant lace and linen, besides damask, silk and woollen stuffs, shawls, gilt-leather chairs, tobacco, &c. It has an extensive trade in corn, flax, and oil.

Mecho'acan, a state of Mexico. See MICHOACAN.

Mecho'acan, or **Micho'acan,** *n.* The root of the Mexican plant *Convolvulus mechoacan.* It is a mild purgative.

Mecklenburg, a territory of N. Germany, between Lat. 53° 7′ and 54° 20′ N., and Lon. 10° 35′ and 13° 57′ E., having N. the Baltic, E. and S. the Prussian dominions, and W. Hanover, Denmark, and Lübeck; *area,* 5,820 sq. m. It is divided into:

MECKLENBURG-SCHWERIN, (GRAND-DUCHY OF,) a state of N. Germany, between Lat. 53° 7′ and 54° 20′ N., Lon. 10° 37′ and 13° 15′ E., having N. the Baltic, E. Pomerania and Mecklenburg-Strelitz, S. the prov. of Brandenburg, W. Luneburg and Lauenburg, and part of Mecklenburg-Strelitz; *area,* 4,833 sq. m. The surface is undulating, and the soil generally fertile. The principal rivers are the Rechnitz, Warnow, Stepnitz, the Elde, a tributary of the Elbe, and others. *Prod.* Wheat, corn, hemp, flax, tobacco, &c. The horses and horned cattle, which are both numerous and excellent, find a ready sale in every part of Germany, and are a source of great profit to the landed proprietors. *Manuf.* Woollen and linen fabrics, cotton, paper, and glass. *M.* is famous also for its distillation of corn-spirits. It has an extensive trade in farm produce. — The government of M.-Schwerin is intimately connected with that of M.-Strelitz. Each grand-duchy has its separate diets, which also meet separately: but the diets of both grand-duchies assemble once a year, alternately at Sternberg and Malchin. The joint assembly has the right, in conjunction with the grand-duke of Mecklenburg-Schwerin, to make laws and impose taxes for the whole of Mecklenburg; it consists of the landed proprietors among the nobility, and of deputies from towns, in all amounting to between 500 and 600 members. The executive power is intrusted to a *directorium,* consisting of eight grand-ducal councillors, 3 heads of noble families (*Erb-Landmarschälle*), and a deputy from the town of Rostock, which is itself a sort of little republic, or *imperium in imperio.* Justice is administered in primary courts in the towns and villages; in patrimonial courts on the estates of the nobility, with courts of secondary jurisdiction at Schwerin, Güstrow, and Rostock, and a high-court of appeals at Parchim, which is the supreme legal tribunal for both grand-duchies. With the exception of between 3,000 and 4,000 Jews, the inhabitants are nearly all Lutherans. The public revenues of the grand-duchy amount to nearly $2,500,000 per annum, and the public debt is about $7,500,000. In 1872 the army of *M.-S.* was incorporated with that of Prussia. The only commercial towns and ports of consequence are Schwerin, Rostock, Wismar, and Ludwigslust. Schwerin is the political capital, but Ludwigslust is the usual summer-residence of the grand-duke. *Pop.* 553,785.

MECKLENBURG-STRELITZ, (GRAND-DUCHY OF,) a state of N. Germany, consisting of two separate territorial divisions: the first and largest, or the duchy of Stargard, lying between Lat. 53° 9′ and 53° 47′ N., and Lon. 12° 40′ and 13° 57′ E., having W. Mecklenburg-Schwerin, and surrounded on all other sides by the Prussian territories; the second, or principality of Ratzeburg, between Lat. 53° 40′ and 53° 51′ N., and Lon. 10° 39′ and 11° E. *United area,* abt. 997 sq. m. The general features of the country are the same as those described in the above article. Its mean elevation is, however, somewhat less than that of Mecklenburg-Schwerin, though the Helpterburg, near Woldeyk, rises to 640 ft. above the sea. The chief river in Stargard is the Havel, and in Ratzeburg the Stepnitz. The land is divided among the sovereign, the nobility, and the towns, in the proportion of about 7-10ths to the first, 2-10ths to the nobles, and 1-10th to the municipalities. Nearly ¼th part of the grand-ducal property consists of forest-lands. Agriculture and cattle-breeding are the chief branches of industry here, as in Mecklenburg-Schwerin. The manufactures are even more insignificant than in the latter grand-duchy. The government is a feudal monarchy, as in Mecklenburg-Schwerin. Justice is administered in eight courts of primary jurisdiction, the superior court of Ratzeburg, and the court of chancery in New Strelitz, from which appeal lies to the supreme tribunal at Parchim. Neu-Strelitz is the capital and residence of the grand-duke. The other chief towns are Neu-Brandenburg, Friedland, and Old Strelitz. In 1872 the army of *M.-S.* was incorporated with that of Prussia. *P.* 95,673. *Hist. M.-S.* was originally peopled by the Heruli and the Vandals, who were expelled by the Obotrites in 782. Charlemagne failed in his attempts to reduce this tribe to subjection; but in 1159, Henry the Lion subdued its chief, Niclot, and seized his territories. The two lines of Mecklenburg and Werle were founded by John the Theologian, and Niclot, on the death of their father Henry Burwin II., in 1236. The latter became extinct in 1436. The entire duchy was conferred upon Wallenstein by the emperor Ferdinand II., March 4, 1628; but in 1631 it was again restored to Adolphus Frederick and John Albert, the then existing representatives of the lines of Mecklenburg-Schwerin and Mecklenburg-Güstrow. The division of the entire duchy between the grand-duchies of Strelitz and Schwerin was effected March 8, 1701. In 1815, the dukes assumed the title of grand-duke.

Meck'lenburg, in *North Carolina,* a S.W. co., adjoining South Carolina; *area,* about 640 sq. m. *Rivers.* Catawba river, and McAlpin's and Sugar creeks. *Surface,* hilly; *soil,* fertile. *Cap.* Charlotte. *Pop.* (1897) 47,500.

Mecklenburg, in *New York,* a post-village of Schuyler co., about 13 m. W. of Ithaca. *Pop.* (1897) 495.

Mecklenburg, or MECHLINBURG, in *Tennessee,* a post-village of Knox co.

Mecklenburg, in *Virginia,* a S. by E. co., adjoining North Carolina; *area,* about 658 sq. m. *Rivers.* Roanoke and Meherrin rivers, and Alleu's and Bluestone creeks. *Surface,* finely diversified; *soil,* generally fertile. *Cap.* Boydton. *Pop.* (1890) 25,359.

Mecom'eter, *n.* [Gr. *mēkos,* length, and *metron,* measure.] (*Med.*) A kind of graduated compass used to measure the length of new-born infants.

Mec'onate, *n.* [Lat. *meconatum.*] (*Chem.*) A salt obtained from meconic acid by association with a base.

Mecon'ic, *a.* [Fr. *méconique,* from Gr. *mekōnikos.*] Belonging or relating to, or obtained from poppies; as *meconic* acid.

Mecon'ic Acid, *n.* (*Chem.*) A tribasic acid existing in opium. It is soluble in hot water, and crystallizes, on cooling, in plates which contain six equivalents of water of crystallization. It gives a blood-red color with solution of perchlorido of iron.

Meco'nina, Mec'onine, Meco'nia, *n.* (*Chem.*) A white, neutral, fusible substance, procured from opium. About 2 grains of it are said to be contained in a pound of opium.

Meco'nium, *n.* [Lat.; Gr. *mekōnion,* from *mekōn,* poppy.] The first fæces of infants.

Meconop'sis, *n.* [Gr. *mekōn,* a poppy, and *opsis,* resemblance.] A gen. of plants, ord. *Papaveraceæ.* They are herbs, with a yellow juice, a species of which, *M. diphylla,* is 12 to 18 inches high; leaves pinnately divided, glaucous beneath; petals, deep yellow; — found in woods in the U. States.

Mecos'ta, or NECOSTA, in *Michigan,* a W. central co. of the lower peninsula; *area,* about 580 sq. m. *Rivers.* Maskego river, and several smaller streams. *Surface,* somewhat diversified; *soil,* fertile. *Cap.* Big Rapids. *Pop.* (1894) 20,730.

Med'al, *n.* [Fr. *medaille;* Lat. *metallum,* a metal.] (*Numis.*) The name applied to those coins that are cast on some especial occasion to celebrate some important or remarkable event or personage; the first, strictly speaking, medals of antiquity being, undoubtedly, the medallions of the Romans. The greatest difference that exists between the medals of ancient and modern times is owing to the fact that those of the latter period have often portraits of illustrious personages who are not of regal origin, while those of the former never bear any but royal or imperial celebrities. The study of this branch of science and art is indispensable to archæology, and, indeed, to a thorough acquaintance with the fine arts. Medals indicate the names of provinces and cities, while determining their position, and they also present pictures of many places celebrated in history. They also fix the period of events, determine occasionally their character, and at the same time enable us to trace the different races of sovereigns who at various times have governed particular parts of the world. They also show us the different metallurgical processes; they enable us to discover the various alloys, the mode of gilding and plaiting practised by the ancients, the metals which they used, and their weights and measures; their different modes of reckoning, the names, titles, and orders of their various magistrates and princes, while also giving us their portraits; their different characters, modes of worship, with all their attributes and ceremonies, are likewise disclosed, and in fact everything that pertains particularly to civil, military, and religious usages. The ancient medals were either struck or cast; some, however, were first cast and then struck. Medals have two sides: the obverse side, (*pars adversa, antica, l'avers,*) which contains a portrait of the person in whose honor it was struck, or other figures relating to him. This portrait consists either of the head alone, or the bust, or of a half- or full-length figure. The reverse of the medal (*pars adversa, postica, le revers*) contains mythological, allegorical, or other figures. The words which are around the border form what is termed the *legend,* while those in the centre are the *inscription.* Of all medals those from Egypt are the most ancient; and next to these rank those of Greece, the latter far surpassing the former in beauty of design and clearness of execution. Those of ancient Rome are extremely beautiful, the engraving being fine, the taste unexceptionable, and the invention simple. These latter are divided into two classes — *consular* and *imperial.* Of these the former are the most ancient, for the copper and silver ones do not go further back than the 484th year of the Roman period, while those of gold do not extend further back than to the year 540. The imperial medals first commenced under Julius Cæsar, and continued until the year A.D. 260, the Lower Empire containing a space of 1,200 years, ending with the capture of Constantinople. In the arrangement of medals, it is observed, in an article in the "Encyclopædia Britannica," that a general uniformity is no slight gain, and may reconcile us to partial defects. These defects must be remedied, in large collections, by the use of cross references from one cabinet to another, and by the formation of independent series to illustrate the general one. The latter suggestion is well worthy of careful consideration. A series illustrative of Greek art, and another of Roman art, might be formed. A series of portraits, and another of groups, would be equally valuable. Others might be made to show the changes of states, by the weights and values of the materials used in their construction, while illustrating the history of the particular country or city in question.

Med'alet, *n.* A small medal.

Medal'lic, *a.* Pertaining or having reference to a medal or medals; as, "*medallic* history."—*H. Walpole.*

Medallion, (*me-dăl'yon,*) *n.* [Fr. *médaillon,* from *medaille,* medal.] (*Numis.*) A name given to coins struck in Rome and in the provinces under the empire, which, in gold or silver, exceed in size the largest coins of which the name and value are known in their respective metals: viz., the *aureus* in gold, and the *denarius* in silver. It has been doubted whether they were intended for the purpose of circulation, or merely struck, like modern medals, to commemorate persons or events.

(*Arch.*) Any circular tablet, resembling a medal, on which figures are embossed.

Med'allist, *n.* [Fr. *médailliste.*] One who is skilled in medals; a virtuoso in medals. — One who has gained a medal as the reward of merit; as, a gold-*medallist* at the English universities.

Medal'lurgy, *n.* [Eng. *medal,* and Gr. *ergein,* to work.] The art of making or striking medals.

Med'ara, in *Ohio,* a village of Putnam co.

Meda'ry, in *South Dakota,* a township of Brookings co.

Meda'ry, in *Wisconsin,* a post-office of La Crosse co., on the C., M. & St. P. R. R.

Meda'rysville, in *Indiana,* a post-village of Pulaski co., about 46 m. N. of La Fayette.

Meddle, (*mĕd'dl,*) *v. n.* [Belg. *middelen,* to intervene; Ger. *mittler;* Goth. *mildumunds,* a mediator. Allied to MIDDLE, *q. v.*] To interfere; to interpose or intervene inopportunely or officiously; to thrust one's self into a matter which does not concern one; to mix one's self in a prying, offensive, or improper manner; to make mischief; to handle, as the business of another; — usually preceding *with,* and frequently *in.*

"Every fool will be *meddling.*"—*Prov.* xx 3.

To meddle and make, to thrust one's self forward officiously into the concerns of another.

Med'dler, *n.* One who meddles; an intrusively officious person; a busybody: one who pokes his nose into other people's business; one who interferes in matters with which he has no concern.

Med'dlesome, *a.* Given to meddling; apt to interpose in the affairs of others; prone to officiously interfere with others; as, a *meddlesome* woman.

Med'dlesomeness, *n.* Quality of being meddlesome; disposition of a busybody.

Med'dling, *a.* Officious; busy in other persons' affairs. —*n.* Officious interposition.

Med'dlingly, *adv.* Officiously; interposingly; pryingly; interferingly.

Mede'a. (*Fabulous History.*) A celebrated magician, daughter of Æetes, king of Colchis, and the niece of Circe. When Jason came to Colchis in quest of the golden fleece, Medea became enamoured of him, and it was to her arts that the Argonauts owed their preservation. (See JASON.) Medea had an interview with her lover in the temple of Hecate, where they bound themselves by the most solemn oaths, and promised eternal fidelity. No sooner had Jason overcome all the difficulties which Æetes had placed in his way, than Medea embarked with the conquerors for Greece. To stop the pursuit of her father, she tore to pieces her brother Absyrtus, and left his mangled limbs in the pass through which Æetes was to pass. When Jason reached Iolchos, the return of the Argonauts was universally celebrated; but Æson, the father of Jason, was unable to assist at the solemnity, on account of the infirmities of his age. Medea, at her husband's request, removed the weakness of Æson, and, by the juice of certain herbs, restored him to the vigor of youth. Her conduct, however, to the daughter of Pelias, and her refusal to bring Pelias to life after they boiled his flesh in a caldron, greatly irritated the people of Iolchos, and Medea, with her husband, fled to Corinth, to avoid the resentment of an offended populace. Here they lived for ten years; but the love of Jason for Glauce, the king's daughter, soon interrupted their mutual harmony, and Medea was divorced. Medea revenged the infidelity of Jason by causing the death of Glauce and the destruction of her family. (See GLAUCE.) This act was followed by another more atrocious. Medea killed two of her children in their father's presence, and when he attempted to punish the barbarity, she fled through the air upon a chariot drawn by winged dragons. From Corinth Medea went to Athens, where she married king Ægeus. From her connection with Ægeus, Medea had a son,

who was called Medus. She fled at length from Athens, after having attempted to poison Theseus at a feast, and went to Colchis, where, according to some, she was reconciled to Jason, who had sought her in her native country, after her sudden departure from Corinth. The story of Medea's life has furnished a subject for both ancient and modern tragic writers; Euripides, Seneca, and Corneille being the principal.

Medeah, (*me'de-a,*) a fortified town of Algoria, 40 m. S.S.W. of Algiers; *pop.* 4,000.

Med'eba. (*Script.*) A town east of the Jordan, in the tribe of Reuben, (*Josh.* xiii. 9, 16.) Near it the army of David gained a great victory, (1 *Chr.* xix. 7.) Long afterwards, it fell again into the hands of the Moabites, its ancient masters, (*Num.* xxi. 30; *Isa.* xv. 2.) Its ruins, on rising ground a few miles S.E. of Heshbon, still retain the old name.

Medellin, (*ma-del-yeen',*) a city of the U. States of Colombia, abt. 48 m. S.E. of Antioquia. It has an elevation of 5,030 ft. above sea-level, and is the principal entrepôt for the produce of the surrounding territory. *Pop.* 15,000.

Medellin', a river of Mexico, flows through the State of Vera Cruz into the Gulf of Mexico.

Medeo'la, *n.* [Named after *Medea*, from its supposed medicinal virtues.] (*Bot.*) A genus of plants, order *Liliaceæ*, including the Cucumber Root, or Indian Cucumber, *M. Virginica*, 1–2 feet high, and remarkable for the symmetry of its form, and its root shaped like a cucumber. It is common in woods in the U. States, and is said to possess diuretic properties.

Med'field, in *Massachusetts*, a post-village and township of Norfolk county, abt. 18 m. S.W. of the city of Boston.

Med'ford, in *Maine*, a post-township of Piscataquis co.

Med'ford, in *Massachusetts*, a post-village and township of Middlesex county, about 5 miles N.W. of Boston.

Med'ford, in *Minnesota*, a post-village and township of Steele county, about 9 miles south of Faribault.

Med'ford, in *New Jersey*, a post-village and township of Burlington county, about 7 miles south of Mount Holly.

Medford, in *New York*, a village of Suffolk co., abt. 55 m. E. of Brooklyn.

Me'dia. [Heb. *Madai.*] (*Anc. Geog.*) A country of Asia, which extended on the W. and S. of the Caspian Sea, from Armenia and Assyria on the N. and W., to Farsistan or Persia proper on the S.; and included the districts now called Shirvan, Aderbeitzan, Ghilan, Mazanderan, and Irak Adjemi. It covered a territory larger than that of Spain, lying between 32° and 40° of N. Lat., and was one of the most fertile and earliest cultivated among the kingdoms of Asia. It had two grand divisions, of which the N.W. was called *Atropatene*, or *Lesser Media*, and the S., *Greater Media*. The former corresponds to the modern Aderbeitzan, now, as formerly, a province of the Persian empire, on the W. of the Caspian, surrounded by high mountains of the Tauritic range, except towards the east, where the river Kur, or Cyrus, discharges its waters into the Caspian. The Greater Media corresponds principally to the modern Irak Adjemi, or Persian Irak. Ecbatana was the ancient capital. Media is one of the most ancient independent kingdoms of which history makes mention. Berosus states that the Medes had conquered Babylon B. C. 2,000, and that the dynasty lasted 224 years. Rawlinson (*Anc. Monarchies*, iii. ch. vi.), who ranks Media third among the five great monarchies of the ancient world, declares that Median history from B.C. 2234 to B.C. 835 is a blank. The Medians were in language, religion, and manners very nearly allied to the Persians. After they had shaken off the yoke of the Assyrians, their tribes united about 708 B. C., according to the common account, and chose Dejoces (Kai-Kobad) for their chief. His son Phraortes, or Arphaxad, subdued the Persians. Cyaxares (Kai-Kaous), the son of Phraortes, in alliance with Nabopolassar, king of Babylon, overthrew the Assyrian empire about 604 B. C., and spread the terror of his arms as far as Egypt. He was succeeded by his son Astyages (Asdehak), who was deposed (560 B C.) by his own grandson Cyrus (Kai-Khûsru), king of Persia; and from this time the two nations are spoken of as one people. Ecbatana, the capital of *M.*, became the summer residence of the Persian kings. After the death of Alexander the Great (324 B. C.), the N.W. portion (*Atropatene*) became a separate kingdom, and existed till the time of Augustus; the other portion, under the name of *Great Media*, forming a part of the Syrian monarchy. Media was on several occasions separated from Persia. In 152 B. C., Mithridates I. took Great Media from the Syrians, and annexed it to the Parthian empire, and about 36 B. C. it had a king of its own, named Artavasdes, against whom Mark Antony made war. Under the Sassanian dynasty, the whole of Media was united to Persia.

Media, in *Pennsylvania*, a post-borough, cap. of Delaware co., 15 m. W.S.W. of Philadelphia. *Pop.* (1897) 3,100.

Mediæ'val, Medie'val, *a.* [Lat. *medius*, middle, and *ævum*, ago. See AGE.] Pertaining or having reference to the Middle Ages: as, *mediæval* history, *mediæval* architecture.

Mediæval or Gothic Architecture. Before the reign of Constantine, Christian architecture can scarcely be said to have had any existence; and when, at his conversion, the empire became nominally Christian, the existing temples were found unsuited to the requirements of the faith which he professed. But the basilica, or secular hall of justice, furnished a type as susceptible of development as it was pre-eminently adapted for the accommodation of large bodies of worshippers. An oblong area, broken by two rows of columns into three divisions, the central being the widest, furnished a plan which might be amplified to any extent, while the tribunal of the magistrate and

Fig. 1746. — BATHS OF DIOCLETIAN. (Now used as a church.)

his assessors presented the model for the arrangement of the altar with the seats of the bishop and presbyters. In this form we have the genuine precursor of the most complicated Gothic buildings; and the type of the Roman basilica is reproduced uninjured in Cologne. In the construction of these basilicas the architecture of the entablature is seen combined with that of the arch. Their columns were frequently the spoils of ruined heathen temples; but the greater difficulty of procuring architraves led to a larger employment of the arch, and this in its turn to the construction of groined vaults. Here the Christian architects had only to revert to the forms presented by earlier Roman buildings. The Temple of Peace at Rome exhibited the profound knowledge of the Romans in the practice of vaulting; nor was this knowledge lost in the decline of Roman architecture down to the days of Diocletian. In the baths of this emperor are to be seen not only groined vaults in three divisions, whose span is nearly seventy feet, but at the back of each springer a buttress, precisely of the nature of a flying-buttress, is contrived to counteract the thrusts of the vaulting. If a comparison be made between this large hall (now used as a church) of the baths of Diocletian (Fig. 1746) with the nave of a Gothic church, the contrast will be found to be more such as must result from the nature and employment of the materials, than from difference of style. The full development of Gothic vaulting, which was the forerunner of the whole style, was first carried out in the royal domain in France about the middle of the 12th century. The Normans had settled in the north of France more than a century before this, and had applied their talents and the fruit of their conquests to the building of splendid temples in honor of their victories. In doing

Fig. 1747. — LATE NORMAN DOORWAY.
(From Middleton Stoney, Oxon, England, 1160.)

so, they followed out the round-arched style, and brought it forward by a great stride towards true Gothic. (See NORMAN ARCHITECTURE.) South of the royal domain, in Burgundy, there had existed for centuries great establishments of monks, famous for their architecture. The Abbey of Cluny was their central seat, whence they sent out colonies, and built abbeys after the model of the parent one. The style in which they worked was also an advanced Romanesque, but different from that of the Normans. Between these two provinces lay the royal domain. Owing to the weak state of the kingdom, architecture had hitherto made little progress in the Isle of France. About the beginning of the 12th cent. the monarchy revived, and for the next two centuries was governed by wise and powerful monarchs, who succeeded in re-establishing the royal supremacy. A new impulse was thus given to the literature and arts of the country, by which architecture profited largely. From the state of ruin into which the kingdom had fallen, there were almost no churches existing worthy of the new state of things. New and great designs were formed: hitherto, almost all the important churches of France were abbey churches; now, under the royal patronage, cathedrals were to be built. The bishops, envious of the power of the monks, lent their powerful aid, and the whole of the laity joined heartily in the work. With such a universal impulse, no wonder that architecture took a great stride, and new forms were introduced. It is to this period and people that we owe the development of the true or pointed Gothic style. The earliest example we have of the fully developed Gothic style is the Cathedral of St. Denis, in which are deposited the remains of the kings of France. It was founded by the Abbé Suger in 1144. The Cathedral of Notre Dame of Paris soon followed, and almost contemporary with it arose the magnificent cathedrals of Chartres, Rheims, Amiens, Beauvais, Bourges, and a host of others. Another cause which tended much to hasten the progress of the style was the invention, about the same time, of painted glass. The Romanesque architects had been in the habit of decorating their churches with frescoes and other paintings; but this new mode of introducing the most brilliant colors into their designs was at once seized upon by the northern architects. The small circular arched windows, which were still in many instances retained long after the pointed arch had become usual in the vaulting, no longer sufficed to light the churches when filled with stained glass. They were therefore enlarged, two or three even were thrown into one, divided only by mullions; this compound window was again increased until the compartment of the clere-story became almost wholly absorbed. The architects were then forced to conform the arches of their windows to the pointed outline of the side-arches of the vaulting. This desire for more and more space for stained glass was the origin of the window-tracery, which forms so beautiful a feature of the style. It is the last attenuated remains of the wall-space of the clere-story, which was at last entirely absorbed. Figure 1748, from Nôtre Dame, is a good illustration of the progress of the French-Gothic. The left-hand portion of the elevation shows the mode of fenestration adopted. The clere-story windows are small; and, in order to give more light, the vault of the gallery next the window is kept very high. This was the original design; but during the construction of the cathedral, the importance of stained-glass had become so great, that the design was altered to give larger windows for its display, as shown on the right-hand portion of the elevation. These windows also show the simple early forms of tracery; that in the aisle windows being later and more advanced. Fig. 1749 shows two bays from Tournay Cathedral, and is a good specimen of the mode in which the whole space of the side-walls was made available for window tracery and stained glass. The further history of Gothic architecture in France is simply the following out, to their furthest limits, the principles above indicated, on which the early architects had unconsciously been working when they originated the style. So long as the Gothic architects worked on these principles, they advanced and improved their architecture. When, however, the style had become fully developed and matured (about 1300 A. D.), the spirit of progress died. No new features were developed. The architects seemed to think that in its main elements their style was complete, and contented themselves with continuing the traditional style of their forerunners, pushing to their extremest limits the principles handed down to them. Thus, the height of the cathedrals was extended till, at Beauvais, it exceeded the power of the architects to prop up the vaulting. The system of buttresses and pinnacles was developed with the utmost skill, till at last the original simplicity and repose of the designs were lost, and the exteriors presented an elaborate system of scaffolding and propping-up in stone. The

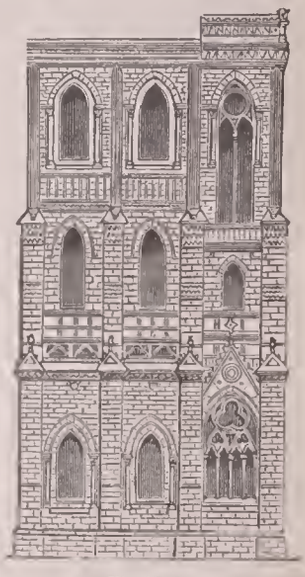


Fig. 1748.
FROM NÔTRE DAME, (Paris).

Fig. 1749.
From the Cathedral of Tournay.

beautiful forms of the early tracery became distorted into all manner of flowing curves, graceful but unmeaning, of the Flamboyant period; and, in short, the art became lost in mere cleverness of design and dextority of execution, and the architect's place was usurped by the mason. It is in the cathedrals of the 12th and 13th centuries, above referred to, that we find the noblest development of the Gothic style. Everything tended to make them so. The nation was united in the effort — all the science, all the arts, all the learning of the times were centred in the Church. In it, and that almost exclusively, the sculptor, the painter, the historian, the moralist, and the divine, all found scope for the expression of their ideas on the sculptured walls, porches, and niches, or the painted windows of the cathedrals — the churches of the people. The progress of this style in other countries is no less remarkable. At no time in the world's history did any style of architecture ever spread so wide, or give rise, in so short a time, to so many splendid buildings. No sooner had the style been invented in the central provinces of France, than it immediately spread over the whole of the west of Europe, superseding all other styles, and producing similar splendid buildings wherever it went. The Germans were nearly a century in adopting the pointed style after its invention in France; and when it was introduced, it retained the appearance of a foreign importation. It was nowhere so completely naturalized as in England, where the Gothic style lasted even longer than in France. The so-called beauties of the German-Gothic are, for the most part, to be regarded rather as excellent specimens of masonry than as artistic developments of the style. The open-work spires, for example, are fine pieces of construction, and have a striking effect; but from the first there is a tendency to commit the work to masons, who rejoice in displaying their manual dexterity. The later Gothic in Germany is the most splendid development of the stone-cutter's art and the draughtsman's ingenuity; these run riot, while the artist is entirely wanting. The Gothic style might be traced in all countries of Western Europe; but it is only in France and England that it had a complete existence,—there it was born, arrived at maturity, and died, leaving architecture in the hands of trade-corporations, who acted independently of the directing mind. In their hands, architecture became masonic skill, and Gothic was finally superseded by the revival of classic architecture in the 16th century.

Medie'valism, Medic'valism, *n.* Spirit of the institutions, manners, and practices of the Middle Ages.

Mediæ'valist, *n.* One who is skilled in the history, manners, and character of the Middle Ages; one who advocates the customs and practices of the Middle Ages.

Me'dial, *a.* [Fr. *médial;* L. Lat. *medialis*, from Lat. *medius*, mid, middle. See MEAN.] Noting a mean or average; mean; middle.

Medial alligation. (*Arith.*) The method of finding the price or quality of a compound of several simple ingredients, each of which has a known price or quality.

Me'dian, *a.* [Lat. *medianus.*] Traversing the middle; as, a *median* channel.

Median line. (*Anat.*) A vertical line, supposed to divide a body longitudinally into two equal parts.

Me'diant, *n.* [From Lat. *medius*, middle.] (*Anat.*) The space left in the median line of the chest by the non-approximation of the two lungs. It extends from the sternum in front to the spine behind, and contains all the thoracic viscera excepting the lungs.

Medias'tine, Medias'tinum, *n.* [L. Lat. *mediastinum*, from Lat. *medius*, middle.] (*Anat.*) The membraneous septum, formed by the duplicature of the pleura, that divides the cavity of the chest into 2 parts. It is divided into an anterior and posterior portion.

Me'diate, *a.* [Fr. *médiat;* L. Lat. *mediatus*, from *medius*. See MEAN.] Middle; interposed; intervening; being between two extremes.

"We hover in a *mediate* state betwixt infinity and nothing."—*Prior.*

—Acting by a mean, or through an intervening agent, cause, or instrument. — Obtained by a medium; as, "*mediate* knowledge." — *Sir W. Hamilton.*

—*v. a* To come into or be in the middle or midst, or between two. (R.) — To interpose between parties as the common friend of each; to act indifferently between contending parties with a view to reconciliation; to intercede; to interpose; to arbitrate; to play the part of go-between; to act as umpire; as, to *mediate* between husband and wife.

—*v. n.* To effect by mediation, interposition, or arbitration between parties; as, to *mediate* a peace.

Me'diately, *adv.* By means, or by a secondary cause, acting between the first cause and the effect; in a mediate manner.

Me'diateness, *n.* State, quality, or condition of being mediate.

Media'tion, *n.* [Fr.; L. Lat. *mediatio.*] Act of mediating; interposition; intervention; arbitrative agency. —Agency interposed for reconciliation or adjustment of differences; intercession; entreaty on behalf of another.

Mediatiza'tion, *n.* [Fr. *médiatisation.*] Act of mediatizing.

(*Hist.*) The annexation of the smaller German sovereignties to larger contiguous states, which took place on a large scale, after the dissolution of the German empire in 1806. The same thing had been done on various occasions during the continuance of the empire; and the dominions so annexed were said to be mediatized, *i. e.* made *mediately* instead of *immediately* dependent on the empire. The term was retained when the abolition of the German union had rendered it in strictness inappropriate. A few more were mediatized after the peace of 1815. After the victory of Sadowa, Prussia mediatized Hanover and many principalities of Northern Germany.

Me'diatize, *v. a.* [Fr. *médiatiser.*] To make mediately instead of immediately dependent; to annex.

Me'diator, *n.* [Fr. *médiateur;* L. Lat. *mediator*, from *medio, mediatus*, from Lat. *medius*. See MEAN.] One who mediates or interposes between parties at variance, for the purpose of reconciling them; an intercessor; an advocate: a propitiator;—hence, in the highest sense, Christ, as our advocate and intercessor with God the Father, is called the *Mediator.*

Mediato'rial, Me'diatory, *a.* Belonging or befitting a mediator; pertaining or having reference to mediation or interposition; as, "Christ's *mediatorial* office." — *Fuddes.*

Mediato'rially, *adv.* In the manner of a mediator; by intercession.

Me'diatorship, *n.* The office of a mediator.

Me'diatory, *a.* Same as MEDIATORIAL, *q. v.*

Me'diatress, Me'diatrix, *n.* [Fr. *médiatrice;* Lat. *mediatrix.*] A female mediator.

Med'ic, *a.* Medical; having reference to medicine. (R.)

Med'icable, *a.* [Lat *medicabilis*, from *medicare.*] That may be medicated, cured, or healed.

Medica'go, *n.* (*Bot.*) A genus of plants, order *Fabaceæ.* The None-such, *M. lupulina*, is common in fields from Canada to Florida. Its leaves resemble those of clover; it gives from May to Oct. yellow flowers in small spikes; and its pods are somewhat spiral, a form which characterizes the genus. — The Lucern Medick, *M. sativa*, is a deep-rooting, perennial plant, sending up numerous, tall and slender, clover-like shoots, with spikes of blue or violet flowers. It is a native of Europe, where it is highly valued as a forage-plant. It has been naturalized and cultivated to some extent in this country, but has hitherto proved of less value than clover. — *M. intertexta*, the Hedge-hog, *M. scutellata*, the Snail, and other species, natives of Europe, are cultivated in our gardens more for the curiosity of their pods than for the beauty of their flowers.

Med'ical, *a.* [Fr.; L. Lat. *medicalis* — *medicus*, pertaining to healing, a healer, physician, from *medeor*, to heal, to cure; probably allied to Gr. *mēdos*, care, and *mēdomai*, to take care of.] Relating or pertaining to medicine, or the art of curing or healing diseases; having to do with medicine; as, the *medical* profession, *medical* knowledge, a *medical* book. — Containing that which medicates, cures, or heals; medicinal; tending to cure; restorative; as, the *medical* virtues of quinine. — Originated, adapted, or promoted to instruct in the knowledge of medical science; as, a *medical* class, a *medical* school, a *medical* degree.

Medical rubber, a coarse towel used for drying and applying friction to the body after a bath.

Medical Jurisprudence, is that department of science in which medical knowledge is called in to the aid of legislation, and consists in the application of the principles of medical science to the administration of justice, and the preservation of the public health. Even as early as the institution of the Mosaic economy, we find traces of a medical jurisprudence, when the judges were enjoined to consult the priests, who were then the only physicians, on the modes of distinguishing leprosy from other diseases, &c. In ancient Greece, though the principles of medical science were successfully cultivated, they seem to have been little employed in legislation. In the Justinian code, we find very obvious traces of the relation between medicine and law. But the origin of medical jurisprudence as a science cannot be considered to date farther back than the middle of the 16th century, when the celebrated Carolinian criminal code was published in Germany. The code of Charles V. enjoined the magistrate, in all cases of doubt respecting arrested pregnancy, infanticide, the means of homicide, and other cases of death by violence, to consult the opinion of living medical men; for, singularly enough, the Justinian code referred the decision of medical questions, not to living witnesses, but to "the authority of the learned Hippocrates." During the latter part of the 16th and the earlier part of the 17th century, medical jurisprudence made marked progress. Ambrose Paré, the first writer on this subject in France, wrote on monstrous births and simulated diseases; in 1602, Fortunatus Fidelis published, at Palermo, his system of legal medicine, and about twenty years later, Paulus Bracchias commenced the publication of his celebrated *Quæstiones Medico-legales*, which, for completeness and learning, was the first great work on the subject. In France, in 1609, Henry IV. authorized the appointment of two persons, skilled in medicine and surgery, in every considerable town, to make examinations, and report in all cases of wounded or murdered persons; and from the middle to the end of the 17th century, various decrees of the parliament of Paris were directed to the improvement of legal medicine. Bartholin, Swammerdam, and Jan Schreyer, are distinguished names in this science in the latter half of the 17th century. About the middle of that century, Michaelis gave the first course of lectures on it in the university of Leipsic; these were soon after followed by the lectures of the celebrated Bohn. The 18th century teems with important works on this science; among the more important of which may be mentioned the *Pandectæ Medico-legales*, of Valentine (1722); *Systema Jurisprudentiæ Medicæ*, of Alberti (6 vols., Halle, 1725-47); *Institutiones Medicinæ Legalis et Forensis*, of Tischmeyer; *Elementa*, of Plenck (1781); *Systema*, of Metzger (1795); and the *Collectio Opusculorum*, of Schlegel. The celebrated lectures of Haller were published after his death, in 1782-84; and just before the close of the century, Fodère published his *Les Lois éclairées par les Sciences Physiques.* Among the other distinguished names in this science during the period are Ploucquet, Daniel, Portal, Camper, Loder, Antoine Louis, and Chaussier. The short elementary treatise of Dr. Samuel Farr (1788) may be said to be the only work that had yet appeared in the English language. The most important accessions to medical jurisprudence during the present century are derived from our increased knowledge of the nature of mental disease, and the nature and effects of poison, with the means of detecting them. In 1813, Foderé issued a new and much enlarged edition of his treatise, and in the following year appeared the valuable work of Orfila on toxicology (*Toxicologie générale*), followed, five years later, by his *Leçons de Médecine légale.* Devergier, Briand, Caprurori, Biessy, Esquirol, and Marc, are authors of learned treatises, or of dissertations on single subjects. Among the Germans, Schmid, Müller, Rose, Willberg, Gmelin, Remen, Bernt, Henkle, and many others, have made various and valuable additions to the science. The first respectable English work on this subject was by Dr. Male, in 1816, entitled *Epitome of Juridical or Forensic Medicine for the use of Medical Men, Coroners, &c.* In 1818, Dr. Haslane published his *Medical Jurisprudence, as it relates to Insanity*, and Dr. Gordon Smith, his *Principles of Forensic Medicine*, in 1821. Two years later appeared the formal and elaborate work of Messrs. Paris and Foublanque (a lawyer and physician), in 3 volumes 8vo. The works of Prof. Christisson on poisons, of Drs. Rand, Beck, Traill, Taylor, and of Messrs. Wharton and Stillé, may be referred to, as in their latest editions, being the most able and complete treatises in our language. Medical jurisprudence is usually divided into forensic medicine, and medical police; the first comprising— (1) questions affecting the civil rights or social duties of individuals; (2) injuries to property; and (3) injuries to the person; the latter (1) questions affecting the preservation of individuals; (2) what relates to the health of men collected in communities. Under the head of questions affecting the civil or social rights of individuals come to be considered — (*a*) the development of the human frame, with the periods of growth, maturity, and decay; (*b*) duration of human life; (*c*) personal identity; (*d*) marriage, with the physical circumstances affecting its legality, or which may justify divorce; (*e*) impotence and sterility, with the causes and marks of; (*f*) pregnancy, its signs and limits; (*g*) parturition; (*h*) monsters and hermaphrodites; (*j*) paternity and affiliation; (*k*) presumptions of survivorship, as where a mother and new-born infant are found dead together, it is often of importance to find out which survived the other; (*l*) mental alienation, and the means of distinguishing between real and affected cases of insanity; (*m*) the rights of the deaf and dumb; (*n*) maladies exempting from public duties; and (*o*) simulated diseases. Under injuries to property are included — (*a*) nuisances from manufactories, &c.; (*b*) arson; (*c*) forgery and falsification of documents; (*d*) coining of false money. Injuries against the person include—(*a*) defloration; (*b*) rape; (*c*) mutilation; (*d*) criminal abortion; (*e*) infanticide; (*f*) homicide, including drowning, hanging, strangling, &c.; (*g*) death from starvation; (*h*) death from extremes of temperature; (*j*) wounds; (*k*) toxicology, comprising a knowledge of the various kinds of poisons, their action upon the human body, and the means of their detection. In the second department of the science, or medical police, the circumstances affecting the health of individuals are — (*a*) cleanliness; (*b*) aliment; (*c*) the regulation of apothecaries' shops; (*d*) clothing; (*e*) temperance; (*f*) exercise; (*g*) prostitution; (*h*) celibacy and marriage; (*j*) lactation and care of offspring; (*k*) effects of profession and trade upon health. The circumstances affecting the health of communities are — (*a*) climate; (*b*) the sites of towns and habitations; (*c*) drains and sewers; (*d*) paving of streets and care of public ways; (*e*) cemeteries; (*f*) hospitals; (*g*) schools; (*h*) prisons; (*j*) lazarettos and quarantine establishments; (*k*) punishments. — These various subjects will be found treated of under their respective names in other parts of this work.

Med'ically, *adv.* In the manner of medicine; according to the rules of the healing art, or for the purpose of curing or healing: in relation to the medical art, or to the practice of healing.

Med'icament, *n.* [Fr.; Lat. *medicamentum*, from *medicor*, to heal, to cure.] Anything used for healing diseases or wounds; a medicine; a healing application.

Medicamen'tal, *a.* Pertaining or referring to healing applications; possessing the curative virtues of medicaments; relating to medicine, internal or topical.

Medicamen'tally, *adv.* After the manner of medicaments or healing applications.

Med'icaster, *n.* [Fr. *médicastre.*] A quack; a charlatan; an empiric. (R.)

Med'icate, *v. a.* [Lat. *medico, medicatus*, from *medicus*, healing, curative.] To heal or cure; to treat with medicine. — To tincture or impregnate with anything medicinal; as, *medicated* waters.

Medica'tion, *n.* [Late Lat. *medicatio.*] Act or process of medicating, or of tincturing or impregnating with medicinal substances or ingredients; infusion of medicinal qualities. — Use of medicine.

Med'icative, *a.* Curative; tending to heal.

Medice'an, *a.* Pertaining or having reference to the Florentine family of the Medici; as, the *Medicean* Venus.

Medici, (*med'e-che,*) a distinguished Italian family of Florence, whose historical fame begins in 1351 with GIOVANNI DE MEDICI, who with a small body of 100 men forced his way through a Milanese army which was besieging the fortress of Scarperia, and relieved the place.

—His son, SALVESTRO, who enjoyed the rank of gonfaloniere from 1378 to his banishment in 1381.—GIOVANNI, his son and successor, distinguished for his commercial enterprise, and for promoting the interest of the republic, flourished 1360–1428.—COSMO, one of the sons of the latter, surnamed "Father of his Country," B. 1389. He early took part in the important commercial concerns of his father, and also in the government of the republic. He attended Balthasar Cossa, elected pope as John XXIII., to the council of Constance in 1414; and Cossa being there deprived of the papal dignity, found a home at Florence. In 1433, Rinaldo de Albizzi, head of a party opposed to the Medici, obtained the chief magistracy, and *C.* was banished for ten years. He settled at Venice, and there founded the library in the monastery of St. George. After one year he was recalled, and his life was thenceforth peaceful and prosperous. As chief magistrate *C.* acted with consummate prudence; always aiming to rule without seeming to do so. He employed his influence and wealth in the patronage of literature and art, and had among his friends the most distinguished authors and artists of his age. He formed a large and valuable collection of manuscripts in various languages, which became the basis of the library known as the Laurentian. After the fall of Constantinople he welcomed many learned Greeks who sought refuge there. His influence on the political movements of Italy was immense. He once saved Florence from a war with Naples and Venice by calling in debts from these two States, and so incapacitating them for making war. In his latter years he applied himself to study, especially of the Platonic philosophy, and to farming. D. 1464.—PIERO I., his son and successor, B. 1414, became the victim of a revolt in 1469.—LORENZO, usually styled *The Magnificent*, B. 1448, and the son of Piero, was carefully educated, and early initiated in state affairs. In 1466 he visited the court of Rome, and afterwards the principal States of North Italy, thus forming relations afterwards of importance to him. At the age of 21 he married Clarice, a noble lady of the Orsini family, and the same year, 1469, succeeded his father as head of the Florentine republic. His policy,

Fig. 1750.—LORENZO THE MAGNIFICENT.
(By Michael Angelo.)

eloquence, and fascinating manners succeeded, where ambition less artfully disguised would probably have failed, and the libertles of Florence were charmed away. His will was supreme and almost unquestioned, and a general license and corruption of morals made it easy for him to be tyrant. In 1471 Galeazzo Sforza, duke of Milan, with his duchess and court were entertained at Florence, and the gaieties, pageants, and luxurious habits with which the people were then gratified, demoralized them still more. The next year a revolt broke out at Volterra, which *L.* suppressed by force, and allowed his troops to pillage the town. Literature, philosophy, and art engaged the attention of *L.* no less than political affairs; he patronized scholars and artists; collected manuscripts at great expense; assisted in founding a Platonic academy at Florence; restored the Academy of Pisa; and made great additions to the Laurentian Library. The quiet of his reign was interrupted, in 1478, by the conspiracy of the Pazzi, to which Pope Sixtus IV. was a party, and which had for its object the overthrow of the Medici. The conspirators attacked *L.* and his brother Giuliano in the Duomo, when the latter was killed, and Lorenzo narrowly escaped. The chiefs and many of the associates of the conspiracy were executed. The Pope then excommunicated *L.*, allied himself with the king of Naples, and declared war against Florence. Lorenzo, with happy boldness, went as his own ambassador to Naples, and succeeded in detaching the king from the papal alliance; fear of the Turks induced the Pope soon after to make peace. The influence of *L.* in Italy became greater than ever, and the rest of his administration was unmarked by any important event. In the spring of 1492 he fell ill and retired to his villa at Careggi. On his death-bed he was attended by two of his most intimate friends, Politiano and Pico della Mirandola; he was also visited by the famous monk, Savonarola, the circumstances of whose interview with him are differently related by two contemporary writers. He died at Careggi, 1492. *L.* was author of numerous lyrical and other short poems, many of them of a licentious character, and some devotional. His Life by Roscoe is well known, and is admitted now to be far too eulogistic, and therefore untrustworthy as a history. The darker side of the case is shown in Signor Villari's

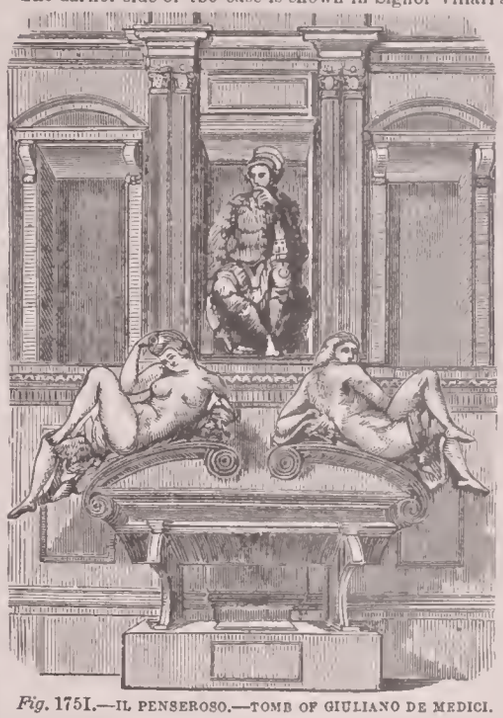


Fig. 1751.—IL PENSEROSO.—TOMB OF GIULIANO DE MEDICI.
(By Michael Angelo.)

admirable *Life and Times of Savonarola*. The story is also more fairly and very ably told by Mr. T. A. Trollope, in his *History of the Commonwealth of Florence*.—He had three sons: Giovanni, who became pope as LEO X., *q.v.*, Giuliano, and Piero.—The latter, PIERO II., succeeded Lorenzo, and was deprived of his estates when the French invaded Italy in 1494. He finished his career in France, leaving two sons, Lorenzo and Cosmo.—GIULIANO, brother and successor of Piero, abdicated in favor of Lorenzo, 1513, and became duc de Nemours by his marriage with the aunt of Francis I. He died 1516.—LORENZO II., eldest son of Piero II., came to power by the abdication of his uncle, and governed under the influence of Leo X., who invested him with the duchy of Urbino. He died 1519, leaving an only daughter. (See CATHERINE DE MEDICI.)—After some reverses we find the family re-established in the sovereignty of Florence, under the influence of Charles V., with the title of *dukes*. The first was ALESSANDRO, proclaimed duke 1532, stabbed by his relative Lorenzino, after poisoning his cousin Hippolytus, 1537.—LORENZINO, murderer of Alessandro, was assassinated at Venice by order of Cosmo I., 1548.—COSMO I., called "The Great," duke of Florence, and grand-duke of Tuscany, was the son of Giovanni, the "Invincible," descended from Lorenzo, and was born 1519. He was raised to power by the influence of Charles V., and abdicated in favor of his son, 1564. In 1569 he became grand-duke of Tuscany, and D. 1574.—FRANCESCO MARIA, son and successor of Cosmo, flourished 1541–1587, and left only a daughter. (See MARIE DE MEDICI.)—FERDINANDO I., brother and successor of the latter, was also cardinal and grand-duke of Tuscany, 1551–1609.—COSMO II., son and successor of Ferdinando I., 1590–1621.—FERDINANDO II., son and successor of Cosmo II., 1610–1670.—COSMO III., son and successor of Ferdinando II., 1642–1723.—GIOVANNI GASTON, son and successor of the latter, was the last of the Medici who reigned over Tuscany, being compelled to abdicate and make way for Francis II., duke of Lorraine, by the great Powers. He flourished 1671–1737.—His daughter, ANNA, wife of John William, elector-palatino, was the last of the family. She D. 1743.

Medicinable, *(-is'in-a-bl,) a.* Medicinal; having the curative properties of medicine. (R.)

Medic'inal, *a.* [Fr.; Lat. *medicinalis*, from *medicina*, medicine.] Having the property of healing, or of mitigating disease; curative; applicable to the cure or alleviation of bodily ailments; as, *medicinal* waters, *medicinal* herbs.—Pertaining or having reference to medicine.

"Learn'd he was in *medicinal* lore." — *Butler.*

Medic'inally, *adv.* In the manner of medicine; with medicinal or curative properties.—With a view to healing or assuaging.

Medicine, *(med'ī-sin,* colloquially *měd'sn,) n.* [Fr. *médecine*; Lat. *medicina*, from *medeor*, to heal.] The art and science of curing disease. From the accidents and infirmities to which human nature is liable, we may readily suppose this art to be almost as old as the human race. Even among the most rude and barbarous people of the present day, we find some kind of appliances to wounds and injuries, and some means adopted to overcome internal disease. In the earliest ages of civilization, we find medicine in the hands of the priests, perhaps from the idea that disease was occasioned by the anger of the gods; and hence its treatment was accompanied with many superstitious rites. The Egyptians must have been possessed of a considerable knowledge of the human body and the nature of disease, from the high degree of perfection to which they had brought the art of embalming; and hence, probably, Moses, who was learned in all the knowledge of the Egyptians, may have acquired that practical knowledge of the nature of disease which appears in his writings. In the *Odyssey* of Homer, mention is made of a drug "that frees men from grief and from anger, and causes oblivion of all ills." The early history of *M.* in Greece is involved in obscurity; but it must have made considerable progress before the time of Hippocrates (born about B.C. 460), who collected the scattered knowledge of his time, and added to it by his own genius and observation. The improvements which he made in *M.* appear to have been so considerable that for many centuries his successors were content to follow him in reverential imitation. The great merit of Hippocrates lies in his descriptions of disease; and, bearing in mind the limited scope of his inquiries, we cannot but admire the sagacity of his observations. Soon after its foundation, Alexandria became the centre of the science and learning of the time, and *M.*, in particular, was assiduously cultivated, and a knowledge of the human body was acquired by dissection, particularly by Herophilus and Erasistratus; for up to that time the knowledge of the human body had been drawn by analogy from dissections of the lower animals. For some centuries after this time, physicians were divided into two classes,—the *Dogmatics*, or followers of Hippocrates, who maintained that, to treat disease, we must be acquainted with its occult as well as excitant causes, and with the natural actions of the human body; while the *Empirics*, on the other hand, held that such knowledge was unattainable and unnecessary, and that experience ought to be the sole guide in practice. During the early period of the Roman empire, medical science appears to have been but little cultivated. The first physician of note who practised at Rome was Asclepiades of Bithynia, who was a contemporary of Cicero. His pupil, Themison of Laodicea, was the founder of the sect of the *Methodists*, who were intermediate between the Dogmatists and Empirics; and while the Dogmatists regarded the fluids as the seat of disease, the Methodists believed that the solids were first affected, and that the derangement of the fluids was but secondary. The most distinguished succeeding physicians of the Methodists were Soranus and C. Aurelianus. Celsus, who flourished probably towards the end of the 1st century, has, in his work *De Medicinâ*, given us a digest of all that was known on the subject up to his time. This work takes almost equal rank with the Hippocratic writings, and shows the great progress which *M.* had made through the labors of the anatomists of Alexandria. He treats of most of the great operations of surgery, of wounds in the intestines, injuries of the brain, the use of ligatures, &c. Aretæus of Cappadocia, who flourished probably in the early part of the 2d century, has left a treatise on diseases, which is one of the most valuable of ancient medical works, and is remarkable for its accuracy and spirited description. The next individual of note in medical science is Galen, a native of Pergamus, who came to Rome at the invitation of the emperor Marcus Aurelius, about A.D. 165. Having mastered all the theories and knowledge of his times, he gave his talents and labor to constructing a summary of them. His works are therefore very voluminous, and constitute a perfect encyclopædia of the medical science of the day. For many centuries after his time physicians were content with rigidly following him. His writings were regarded as the ultimate authority on all points; and everything that seemed opposed to them was at once rejected. The only writers of note were Oribasius (A.D. 360), Aëtius (525), Alexander of Tralles, Procopius (540), and Paulus Ægineta (600–640). The last of these, a learned and talented physician, was a voluminous compiler, and may be said to have brought the science of *M.* in the Eastern empire down to his own time. From that time down to the 12th century, the Arabians were the only people among whom *M.* made any progress. On the taking of Alexandria, they became acquainted with the writings of Hippocrates, Galen, and others, whose works were soon after translated into Arabic, and diligently studied. One of the most distinguished of the Arabian school was Rhazes, who flourished at Bagdad towards the end of the 9th century. He was a voluminous writer; but his works are chiefly compilations from the Greeks, though he also wrote some original treatises, particularly one on smallpox and measles. But the most distinguished author of this school was Avicenna (born 980), who has been styled the Galen of the Arabian empire. His great work, the *Canon*, became the text-book of Arabian commentators and teachers during the 12th and 13th centuries. Avenzoar and Averrhoes, who flourished in Spain in the 12th century, were also distinguished members of the Arabian school. During the rest of the Middle Ages there existed a sort of Galeno-Arabian science of *M.*, mostly fostered by ignorant monks, and suffering, perhaps more than any other science, from every superstition and misconception of nature. Two of the principal medical authors were Albertus Magnus and Roger Bacon,—the one a prelate in high favor with the papacy, the other a Franciscan monk. In the 12th century the medical school of Salerno was established, and followed by several others; and in the beginning of the 14th century, the study of practical anatomy was restored by Mondini at Bologna. With the fall of Constantinople in 1453, and the consequent dispersion of a number of learned men, who established themselves as teachers in Italy and other parts, and thus gave a new impulse to the cultivation of Greek medical science and literature, the study of Hippocrates

was revived, and faith in Galen began to be shaken. In the beginning of the 16th century medical science in England derived great assistance from Linacre, who gave lectures on physic at Oxford, and founded the College of Physicians. With Paracelsus, in the 16th century, began the sect of chemical physicians, who, contemning the learning of the Galenists, devoted themselves to the study of chemistry, maintaining that the operations of the human body are subject to the same laws as govern inorganic matter. In the 17th century, a number of very distinguished names appear in medicine; as Harvey, who discovered the circulation of the blood, Asellius, Sydenham, Malpighi, Riolan, Pecquel, Bartholin, Fabricius, Sylvius, Willis, Fallopius. The beginning of the 18th century was characterized by the establishment of clinical medicine, or bedside teaching on a systematic plan, by Boerhaave, who was appointed lecturer on the theory of medicine at Leyden, in 1701, and four years later became physician to St. Augustine's Hospital, when he commenced a systematic course of clinical lectures. He was, besides, a man of extensive erudition, and brought order and system out of the vast mass of materials that had been accumulating during the preceding century. He likewise advanced practical medicine in all its departments. Among his pupils were Van Swieten and Haller, the former of whom followed his master too closely to add much of real value to the science; but the latter greatly improved it, particularly in the department of physiology. In England, William and John Hunter laid the foundation of the English school of physiology. Dr. Cullen, of Edinburgh, with his varied knowledge and great original powers, rendered eminent service in systematizing the study of practical medicine. In the present century, medical knowledge has made great advances. A much more minute and accurate knowledge of the human body has been obtained; the nature of many of its vital processes has come to be understood; and the characteristics of the different diseases, and the means of counteracting or controlling them, are much better known. Medicine, formerly very largely empirical in its treatment of disease, has become a true science since the discovery of the bacteriological origin of numerous diseases and the employment of inoculation as a preventive. In the hands of Pasteur, Koch, and numerous others, this system has attained great development, and in the treatment of cholera, lupus, tuberculosis, and other infective diseases, is full of promise for the future of medical practice. Great advances have been made in cerebral physiology in the hands of Broca, Hitzig, Ferrier, and others, and splendid work has been done in the development of the science of medicine by American investigators, especially in the field of therapeutics. The various branches into which medicine is now commonly divided are: *Anatomy*, or a knowledge of the structure of the human body, including histology, which treats of the minute structure of parts discernible only by the microscope; *Practical Anatomy*, which applies a knowledge of structure to a right performance of the operations of surgery; and *Pathological Anatomy*, which points out the aberrations from the normal or healthy structure of the organs or tissues of the human body; *Physiology*, or a knowledge of the vital actions; *Pathology*, comprising the nature, cause, and cure of disease; *Nosology*, which treats of the various kinds of diseases, and tries to arrange them systematically; *Surgery*, treating of mechanical injuries, and the modes of relieving diseases and derangements by mechanical means; *Obstetrics*, or *Midwifery*, dealing with the modes of facilitating delivery, and the diseases of children; *Materia Medica*, or the science of medicines, their nature, composition, and effects; *Pharmacy*, or the preparation of medicines; *Therapeutics*, the application and administration of every kind of remedy; *Hygiene*, treating of the laws of health; *Dietetics*, dealing with the rules of diet; *Medical Jurisprudence*, or the application of the science of medicine to the administration of law; *Clinical Medicine*, or the instruction communicated at the bedside of the patient; *Psychological Medicine*, or the nature and treatment of mental diseases; and *Bacteriology*, or the study of bacteria in their relation to disease. Intimately connected with medicine are the sciences of *Natural Philosophy*, *Chemistry*, *Zoölogy*, *Botany*, *Mineralogy*, *Meteorology*, &c.

—Any substance that has the property of curing or mitigating disease, or that is used for the purpose; a remedial agent; a drug; physic. — Anything mysterious, marvellous, or which cannot be accounted for:—a term used by the N. American Indians; as, big *medicine*.

Medicine-bag, a mystery-bag; supposed to possess charms or occult properties; —a term employed by the N. American Indians. — *Medicine-man*, one supposed by the N. American Indians to possess occult powers; one who practises charms; a diviner.

Me'din, Medi'no, *n.* [Ar. *meidi.*] In Egypt, a small coin in value the 40th part of a piastre; — in modern parlance, generally termed *para*.

Medi'na, or **Medinet-el-Nabi,** "the town of the prophet," one of the sacred cities of Arabia, prov. of El-Hejaz, 260 m. N of Mecca, and 100 N.E. of the port of Yembo on the Red Sea; Lat. 25° 13′ N, Lon. 40° 3′ 15″ E. It is, next to Mecca, the great centre of attraction to Mohammedan pilgrims, from its connection with the founder of the Mohammedan faith. This celebrated city stands in a plain, close to a chain of hills which bounds the great desert W. It is of an irregular oval form, within a walled enclosure of 35 or 40 ft. high, flanked by 30 towers, which render *M.* the chief stronghold of Hedjaz. Its most prominent building is the great mosque, Al-Harem, supposed to be erected on the spot where Mohammed died, and to inclose his tomb, as also the tombs of Abou-Beker and Omar, his immediate successors. This mosque, founded by the prophet, is said to be very magnificent, being supported by 400 columns, and containing 300 lamps burning. *Pop.* Estimated at 18,000.

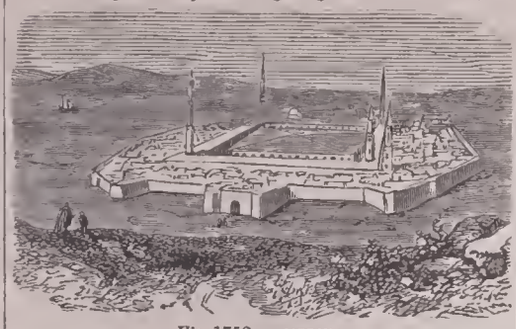


Fig. 1752. — MEDINA.

Medi'na, in *Illinois*, a township of Peoria county.—A village of Winnebago county, about 100 miles N.W. by W. of Chicago.

Medi'na, in *Indiana*, a township of Warren county.

Medi'na, in *Michigan*, a post-village and township of Lenawee county, about 80 miles S.W. of the city of Detroit.

Medi'na, in *Minnesota*, a township of Hennepin county.

Medi'na, in *New York*, a post-village of Orleans co.; abt. 36 m. N.E. of Buffalo.

Medi'na, in *Ohio*, a N.E. co.; *area*, abt. 420 sq. m. *Rivers*. Black and Rocky rivers, besides Killbuck, Chippewa, and several smaller creeks. *Surface*, undulating or hilly; *soil*, moderately fertile. *Cap.* Medina. *Pop.* (1890) 21,742.

—A post-village and township, cap. of Medina co., about 28 m. S. W. of Cleveland.

Medi'na, in *Texas*, a river rising in Edwards co., and flowing S.E. through Bandera to Bexar co., where, after receiving several considerable streams, it acquires the name of SAN ANTONIO RIVER, *q. v.*

—A S. co.; *area*, about 1,270 sq. m. *Rivers*. Medina river, and several creeks. *Surface*, uneven; *soil*, generally fertile. *Cap.* Hondo City. *Pop.* (1897) 6,500.

Medi'na, in *Wisconsin*, a township of Dane county.

Medi'na-del-Cam'po, a town of Spain, prov. of Valladolid, on the Zapardiel, a tributary of the Douro, 27 m. S.S.W. of Valladolid and 83 N.W. of Madrid; *pop.* 4,000.

Medina-del-Rio Seco, (*-del-re'o-sai'ho,*) a town of Spain, prov. of Valladolid, on the Scquillo, a tributary of the Douro, 25 m. S.E. of Leon, 122 N.W. of Madrid; *pop.* 5,000.

Medina Sidonia, (*se-do'ne-a.*) a town of Spain, in Andalusia, prov. of Cadiz, 22 m. S.E. of Cadiz, and 65 m. S. of Seville. It was anciently a very flourishing town, but is now much decayed. *Pop.* 11,000.

Me'dioeral, *a.* Ordinary; middling; not above the average. (a.)

Mediocre, (*mē'dĭ-ō-kr,*) *a.* [Fr., from Lat. *mediocris*. from *medus*, middle. See MEAN.] Being in a middle state, being too much or too little; of moderate degree; of medium quality; middle rate; middling; ordinary; commonplace.

"A very *mediocre* poet." — *Pope.*

—*n.* A person of ordinary quality, talents, or merit; a commonplace person.

Me'dioerist, *n.* A person possessing only ordinary qualifications.

Mediocrity, *n.* [Fr. *médiocrité;* Lat. *mediocritas.*] State, quality, or condition of being mediocre; a middle state or degree; a moderate rate or quantity.

Med'itate, *v.n.* [Lat. *meditor*; Fr. *méditer.*] To consider with deep thought; to dwell on anything in thought; to turn or revolve any subject in the mind; to cogitate; to study; to contemplate; to intend; to have in contemplation. — To plan by turning about in the mind; to revolve mentally; to contrive; to scheme; to purpose.

"Some affirmed that I *meditated* a war." — *King Charles I.*

Medita'tion, *n.* [Fr.; Lat. *meditatio.*] Act of meditating; deep, close, or continued thought; earnest reflection; the turning or revolving of a subject in the mind; serious contemplation.

Med'itatist, *n.* One who meditates; a thoughtful, serious person.

Med'itative, *a.* [Fr. *méditatif;* L. Lat. *meditativus.*] Addicted to meditation; as, a person of *meditative* temperament. — Expressing meditation, contemplation, or design; as, a *meditative* mood.

'Self-disparagement affords to *meditative* spleen a grateful feast.' *Wordsworth.*

Med'itatively, *adv.* With meditation.

Med'itativeness, *n.* State or quality of being meditative.

Mediterra'nean, Mediterra'neous, *a.* [Lat. *medius*, middle, and *terra*, earth, land. See MEAN, and TERRENE.] Middle; inland; situated in the midst of the earth or land; as, "mountains and *mediterraneous* parts." *Browne.*

—Inclosed or nearly encircled by land; as, the *Mediterranean* Sea, between the continents of Europe and Africa.

(*Geog.*) Relating or pertaining to, or living on the shores of the Mediterranean Sea.

Mediterra'nean Sea, a large and important inland sea, bounded N. by Europe, E. by Asia, S. by Africa, and communicating at its W. extremity by the Straits of Gibraltar with the N. Atlantic Ocean; and at its N.E. extremity, by the Dardanelles and Bosphorus, with the Black or Euxine Sea. It extends from Lat. 30° to nearly 46° N., and from Lon. 5° 54′ W. to 36° 8′ E. Greatest length, 2,300 m.; greatest breadth, from Venice to the Bay of Sidra, 1,200 m. *Area*, estimated at 690,000 sq. m. It is of an oblong, but irregular shape, especially on the N., where the large peninsulas of Italy and Greece project S. It includes several other seas, as the Adriatic, Ionian, Tyrrhenian, and the sea of the Grecian Archipelago, besides several smaller inlets, such as the gulfs of Tarento in Italy, Lepanto in Greece, Cades, and Sidra, the ancient *Syrtes* in Africa, the bays of Lyon, Genoa, and Naples, &c. The coast of the *M.* is as remarkable for the difference of altitude as for variety of outline. In the N., with the exception of Italy, it is bold and rugged. On the E. and S. the country presents a low uninteresting flat, with rocky reefs and shoals projecting 5 to 7 m. from the shore, and which render the navigation near these shores both difficult and dangerous; and in this respect the S. side presents a striking contrast to the N., where, generally speaking, deep soundings may be had close to the shore; while in parts, particularly between Nice and Genoa, and near Gibraltar, no soundings can be found under 1,000 fathoms and upwards. The temperature averages from 72° to 76°, or 3½° Fahr. higher than that of the Atlantic Ocean. The principal rivers which flow into the *M* are the Ebro, Rhone, Po, and Nile. The evaporation from the surface of the *M.* is greater than in the Atlantic Ocean, owing to the heat which proceeds from the African deserts, and the shelter which the mountains afford from the cold winds of the N. In consequence of this evaporation, it contains 1·6th per cent. more salt than the waters of the Atlantic Ocean. The *M.* was long considered tideless, but this is untrue, as in the Adriatic, as well as between that sea and the coast of Africa, the tide rises from 5 to 7 feet. The prevalent winds vary during the spring between S.E. and S.W.; at other times, from N.W. to N.E. The most formidable of these winds is the *sirocco*, or *solano*, which is very destructive. The shores of the *M. S.* are in many places subject to earthquakes. There are also the active volcanoes of Ætna, Vesuvius, and Stromboli, and many evidences of volcanic action, as the sudden upheaving of islands, and their equally sudden disappearance. Water-spouts are of frequent occurrence, especially along the coast of Asia Minor. Several springs of fresh water rise in different parts of the *M.*; the largest being in the port of Tarento, near the mouth of the Galesus, where the fresh water ascends with such impetuosity, and in such a volume, that it may be taken up at the surface without the least impregnation of salt. The *M.* possesses several large islands, including Sicily, Sardinia, Malta, Corsica, Crete, and the Balearic Islands, besides a large number of small ones. Around it lie some of the most historically interesting countries of the civilized world.

Me'dium, *n.;* Eng. *pl.* MEDIUMS; Lat. *pl.* MEDIA. [Lat., from *medius*, middle. See MEAN.] The middle place or degree; the mean; the space or substance through which a body moves or passes to any point.

"A generous friendship no cold *medium* knows." — *Pope.*

—The means or instrument by which anything is accomplished, conveyed, or carried on; — hence, vehicle of communication; agency of transmission; intervening or pervading condition, causative of motion or action.

(*Magnetism.*) In animal magnetism, spiritual manifestations, &c., a person through whom is transmitted the action of another being.

(*Spiritualism.*) A person in direct communication with the spirits.

(*Logic.*) The mean term of a syllogism or argument by which extremes of propositions are connected; any ratiocinative agency.

(*Painting.*) The liquid vehicle with which dry colors are ground and intermixed, preparatory to use.

—A kind of middle-sized printing-paper.

Circulating medium, currency; coin; bank-notes, or other paper-money convertible into specie on demand.

Ethereal medium. (*Phys.*) Same as ETHER, *q. v.*

Me'dius, *n.* [Lat.] The middle or longest finger of the hand.

Medlar, (*mĕd'lĕr,*) *n.* [A.S. *mæd*; Lat. *mespilus.*] (*Bot.*) See MESPILUS.

Med'ley, *n.* [From obsol. *meddle*, to mix = O. Fr. *mesler*. Fr. *mêler*, to mix. See MIX.] A mixture; a miscellany; a jumble; a mingled and confused mass of ingredients; a hodge-podge.

"This *medley* of philosophy and war." — *Addison*

(*Mus.*) A pot-pourri of instrumental music; also, a vocal composition of snatches or passages taken from other compositions; a musical mosaic or mélange.

Meduoi', an island belonging to Russia, in Behring Strait. It is 30 m. long, and 5 broad. Copper is found on the W. coast.

Me'do, an island of Brazil, in the Bay of São Marcos, abt. 4 m. W. of Maranhão.

Medoc', *n.* The first class of the French Bordeaux wines, grown in a peninsula of the dept. of the Gironde, called Le Medoc.

Medo'ra, in *Indiana*, a post-village of Jackson co., abt 106 m. W. by S. of Cincinnati.

Medora, in *Missouri*, a post-village of Osage co., abt. 100 m. W. of St. Louis.

Medris'sa, *n.* [Ar.] A high-school among the Mohammedans

Medul'la, *n.* [Lat. See MEDULLAR.] (*Anat.*) The white substance of the brain.

(*Bot.*) The pith or central column of an exogenous plant. See PITH.

Medulla oblongata. (*Anat.*) The mass of gray and white neurine which forms a portion of the small brain or cerebellum (Fig. 407), and descending through the occipital bone, enters the spinal sheath, and becomes the SPINAL MARROW, *q. v.*

Medul'lar, Med'ullary, *a.* [Fr. *médullaire;* Lat. *medullaris*, seated in the marrow, from *medulla*, marrow, which is situated in the middle of the bones; also, the pith of plants, from *medius*, middle.] Pertaining to the marrow of bones; consisting of, containing, or resembling marrow; as, a *medullar* part, *medullary* substance.

(*Bot.*) Pithy; containing a spongy marrow, as in exogenous plants.

Medullary rays. (*Bot.*) The vertical plates of cellular tissue which radiate from the centre of the stem of exogenous plants, through the wood to the bark. They cause that appearance in timber which carpenters call *silver grain*, or flower of the wood.

Medullary sheath. (*Bot.*) A thin layer of vessels which surround the pith of exogenous plants, and thence extend into the leaves and parts of fructification.

Medullary substance. (*Anat.*) Same as MEDULLA, *q. v.*

Medul'line, Medul'lin, *n.* (*Bot.*) The PITH, *q. v.*

Medu'sa, *n.; pl.* MEDUSÆ. [Lat.; Gr. *medousa*, from *medein*, to rub.] (*Myth.*) The mortal GORGON, *q. v.*; according to Hesiod, the daughter of Keto and the sea-god Phorkys, whose face turned all who looked upon her into stone. She was slain by Perseus, who placed her head on the ægis of Minerva, where it retained its petrifying power.

(*Zoöl.*) The genus *Medusa*, of Linnæus, includes marine animals belonging to the sub-kingdom *Cœlenterata*, class *Hydrozöa*. The Medusæ present to the eye, when floating in their native element, an umbrella-shaped disc (Fig. 1753), from beneath which a number of tentacula or filaments depend. In the central part of the concave side of this disc is the stomach, in the middle of which is the mouth, opening downwards, and

Fig. 1753.—MEDUSA, OR JELLY-FISH. (*Pleurobranchia cyanella.*)

surrounded by tentacles, in some cases, as in *Aurelia*, taking the form of four leaf-like processes, with fringed margins. The Medusæ are commonly known by the names of *umbrella fish, jelly fish, sea blubber*, &c. They possess stinging organs, powerful enough to inflame the hand that touches them, and cause serious results in the case of the larger forms. This power in the tentacula aids in obtaining food, by benumbing small animals, which are drawn to the mouth by contraction of the tentacles. Motion through the water is produced by muscular contraction of the margin, which opens and closes, forcing out the water. Many of the Medusæ are phosphorescent, and aid in producing the frequent luminosity of the ocean waters. The *M.* are derivatives from the fixed, branching hydroid forms, on which they first appear as buds, which enlarge, assume the structure of an *M.*, and drop off to lead an independent existence, in which they function as the reproductive forms, yielding eggs from which fixed polyps again appear. They are very widely distributed, and are all marine, though there are some fresh-water Hydrozoa, which, however, do not give origin to Medusæ. They possess a nerve system, and eyes which are capable of vision, though they are very low zoölogically.

Medu'sian, Medu'sidan, *n.* (*Zoöl.*) A medusa; one of the *Medusæ*.

Medvieditza (*med-ve-ai-dit'sa*), a river of Russia, in the country of the Don Cossacks, and after a S.W. course of 300 m. joining the Don 15 m. below the influx of the Khoper. Many German colonies occupy its banks.

Med'way, a river of England, rising near the N. boundary of the co. of Sussex, and after a N.E. course of 50 m. falling into the Thames at Sheerness. It is navigable for 40 m. to Penshurst.

Medway, in *Georgia*, a small river flowing into the Atlantic Ocean between Bryan and Liberty cos.

Medway, in *Massachusetts*, a post-township of Norfolk co.

Med'yhemps, in *Maine*, a post-township of Washington co.

Meech, *v. n.* [See MICHE.] To hide; to skulk; to sneak; hence, to act the part of a mean, servile, despicable spy or tale-bearer.

Meech'ing, *ppr.* and *a.* Skulking; sneaking; mean; servilely parasitical. See MICHING.

Meed, *n.* [A. S. *med*, reward, benefit; Ger. *miethe.*] Reward; recompense; gratification; that which is bestowed or rendered in recognition of merit.

"A rosy garland was the victor's *meed.*" — *Faerie Queene.*

Meek, *a.* [Dan. *myg;* Sp. *mego*, soft; D. *maik*, gentle.] Mild; yielding; gentle and placable of temper and disposition; not easily disturbed, provoked, or irritated; given to forbearance under injury or wrong; humble; patient. — Submissive to the divine will; not proud, self-sufficient, or refractory.

"Sorrow unfeign'd, and humiliation *meek.*" — *Milton.*

(NOTE. *Meek* is often used to form compounds whose meanings are obvious; as, *meek*-eyed, *meek*-hearted, *meek*-spirited, &c.)

Meek'er, in *Minnesota*, a S. central co.; *area*, about 630 sq. m. *Rivers.* Crow river, and several smaller streams. *Surface*, mostly level; *soil*, very fertile. *Cap.* Litchfield. *Pop.* (1895) 17,389.

Meek'ly, *adv.* In a meek manner; softly; mildly; gently; patiently; submissively; humbly; not proudly or roughly.

Meek'ness, *n.* State or quality of being meek; softness of temper; mildness of disposition; gentleness; forbearance under provocations and injuries; humility; resignation or submission to the divine will, without murmuring or peevishness.

Meeme, (*meem,*) in *Wisconsin*, a post-village and township of Manitowoc co.

Meer, *a.* Simple; unmixed; natural. See MERE.

Meer, *n.* A lake; a boundary. Same as MERE, *q. v.*

Meer'schaum, (*-shawm,*) *n.* [Ger., from *meer*, the sea, and *schaum*, spume; literally, sea-foam.] (*Min.*) A peculiar silicated magnesian mineral found in several parts of Europe, but mostly in Greece and Turkey. In the last-mentioned country it is extensively used as fullers' earth; but in Austria and Germany it is adapted to the manufacture of tobacco-pipes, which are prepared for sale by being first soaked in tallow, afterwards in wax, and then finally polished with shave-grass. The true meerschaum always turns from a pure milk-white to a brownish-black color when smoked for some time, by reason of the influence on it of the tobacco-oil; and to connoisseurs this is a true criterion between true and false meerschaum, the latter of which is also extensively manufactured.

Meer'poor, a town of Hindostan, in Scinde, near the Pingaree, a branch of the Indus, 45 m. S. of Hyderabad; *pop.* 10,000.

Meer'ut, a dist. of Hindostan, presidency of Bengal, between Lat. 28° 30′ and 29° 30′ N., Lon. 77° and 78° E.; *area*, 2,250 sq. m. The chief towns are Meerut, Sirdhuna, Katonli, and Hastinapoor. *Pop.* 900,000.

MEERUT, the cap. of the above district, 30 m. N.E. of Delhi; Lat. 28° 59′ N., Lon. 77° 46′ E. *M.* is noted for the breaking out here of the Sepoy insurrection in 1857, when the native troops massacred every European, of both sexes, found in the town.

Meet, *v. a.* (*imp.* and *pp.* MET.) [A.S. *metan, gemittan;* D. *gemoeten.*] To come together, approaching in opposite or different directions; to come face to face; to come together in any place; to fall in with; to fall in; to encounter unexpectedly.

"Our sire to *meet* his godlike guest walks forth." — *Milton.*

—To come in contact with in a hostile manner; to confront; to encounter; to engage; to join issue. — To receive, as a welcome; to have befall one; to find; to be treated with; to light on.

"Your labours *meet* a prosp'rous end." — *Granville.*

—To make concession; as, he *met* my wishes in all respects.

To meet half-way, to make equal concessions to.

—*v. n.* To come together, or to approach near or into company with; to come face to face; hence, to join, as lines. —To come in contact, with hostile views; to engage in conflict.

"When Greek *meets* Greek, then comes the tug of war."—*Addison.*

—To assemble; to congregate; to begin a session; as, the Senate *met* at noon.

"The materials of that building happily *met* together." *Tillotson.*

—To come together by mutual concessions; — hence, to harmonize; to cohere; to assimilate; to agree.

"And all that's best of dark and bright
Meet in her aspect and her eyes." — *Byron.*

To meet with, to light upon; to find; sometimes including the idea of something unlooked for.

"And we *meet with* champagne and a chicken at last."
Lady M. W. Montagu.

To join; to blend in company.

"Falstaff at that oak shall *meet with* us." — *Shaks.*

To suffer unexpectedly; as, he *met with* an accident. — To encounter; to be engaged with.

"Prepare to *meet with* more than brutal fury." — *Rowe.*

To obviate; — a Latinism, rarely used; as, to *meet with* an objection.

Meet, *a.* [A. S. *gemet*, fit, proper; *gemet*, a measure, from *metan*, to measure; Heb. *madad;* Sansk. *mâ.*] Fitting; proper; convenient; appropriate; suitable; qualified; expedient; adapted, as to a use or purpose.

"O Caledonia! stern and wild,
Meet nurse for a poetic child."—*Sir W. Scott.*

Meet, *n.* (*Sports.*) A meeting of sportsmen for fox-hunting or coursing.

Meet'er, *n.* One who meets, accosts, or comes in contact with another.

Meet'in, *v. a.* To make meet, fit, or suitable for. (R.)

Meet'ing, *n.* A coming together; an interview; an assembly; as, let us drink to our next merry *meeting.* —A congregation; a convention; a gathering or collection of people; as, a crowded *meeting*, to hold a *meeting*, &c. — A religious congregation; a conventicle; in England, distinctively applied to an assembly of dissenters from the Established Church; as, to go to *meeting.* — A conflux of rivers; a junction; a union, as of lines; as, "the *meeting* of the waters." — *Moore.*

Meet'ing-house, *n.* A place of worship; — in England, specifically, a place of worship for dissenters; as, a Friends' *meeting-house.*

Meet'ly, *adv.* Fitly; suitably; properly; appropriately.

Meet'ness, *n.* Fitness; appropriateness; suitableness.

Meg'acosm, (*-kôsm,*) *n.* [Gr. *megas*, great, and *kosmos*, universe.] The universe; the great world, the macrocosm.

Meg'achile, *n.*, **Megachil'idæ,** *n. pl.* (*Zoöl.*) See APIDÆ.

Megalesian, (*-le'zhan,*) *a.* [Lat. *Megalesius*, from Gr. *Megalê*, the Exalted, a denomination of the goddess Cybele.] Pertaining or referring to, or held in honor of, Cybele; , the *Megalesian* games.

Magalesian games. (*Rom. Antiq.*) A scenic and calisthenic festival held in honor of Cybele.

Megalich'thys, (*-lik-,*) *n.* [Gr. *megale*, great, and *ichthys*, fish.] (*Pal.*) An extinct genus of ganoid fishes, including species of great size.

Megalith'ic, *a.* [Gr. *megas*, and *lithos*, stone.] Consisting of large stones.

Mega'lo-Kas'tro, the cap. of the island of Crete.

Megalon'yx, *n.* [Gr. *megale*, and *onyx*, claw.] (*Pal.*) An extinct genus of large sloth-like animals, so named in allusion to its large claws, the first species of which was found in Virginia, in Greenbrier co.; but it has since been found at Big Bone Lick, and in S. America over the Pampas as far as the Straits of Magellan.

Megalophonous, (*-lŏf'o-nŭs,*) *a.* [Gr. *megale*, and *phone*, voice.] Possessing a loud or deep voice.

Meg'alosaur, Megalosau'rus, *n.* [Fr. *mégalosaure*, from Gr. *megale*, and *sauros*, lizard.] (*Pal.*) An extinct genus of gigantic saurians, measuring from 40 to 50 feet in length; discovered by Dr. Buckland in the oölitic slate of Stonesfield, near Oxford, England.

Megan'tic, a S.E. co. of prov. of Quebec; *area*, abt. 1,000 sq. m. *Rivers.* Becancour River, and some smaller streams, besides several lakes. *Surface*, much diversified; *soil*, fertile. *Cap.* Inverness.

Megaphyton, (*-găf',*) *a.* [From Gr. *megas*, great, and *phyton*, plant.] (*Pal.*) An extinct genus of gigantic plants, allied to *Sigillaria.*

Megapod'idæ, *n. pl.* [From Gr. *megas*, and *pous, podos*, foot.] (*Zoöl.*) The Mound-bird family, including Rasores birds, natives of India and Australia, and allied to the Curassows. The feet are large, and have large blunt claws. To this family belong the Jungle-fowl, the Brush-turkey, &c.

Mega'ra, (*Anc Geog.,*) a once flourishing city of Græcia, cap. of a district named Megaris, abt. 210 stadia N.W. of Athens. It was almost destroyed by Ptolemy Soter, and Demetrius, son of Antigonus Gonatus; and its destruction was completed by Alain.

Mega'rian, or Megar'ic School. (*Philos.*) A school of philosophy, founded at Megara by the disciples of Socrates, who retired thither after his death, which was distinguished by its logical subtlety. Its most celebrated names are those of Euclides, Eubulides, and Stilpo.

Megass', *n.* Same as BAGASSE, *q. v.*

Megathe'rium, *n.* [Lat.; Fr. *mégathérium*, from Gr. *megas*, and *therion*, beast.] (*Pal.*) The name given by Cuvier to an extinct genus of gigantic quadrupeds, several remains of which have been found in S. America. The one described by Cuvier was in a fossil state, and found a hundred feet below the surface of a sandy soil, in the vicinity of the river La Plata; other specimens, however, have since been found on the same continent, but not in so complete a state. The haunches of the *M.* must have exceeded 5 feet in width, while its body was about 12 feet long and 8 high. Its feet were a yard in length, and terminated in formidable compressed claws of great size; its tail was also of great length and thickness, exceeding the size of that member in either living or extinct quadrupeds. The *M.* belonged to the order Edentata, and was closely allied to the sloth. Its head was of small size, and its brain-development slight. The enormous size of its hind-limbs, pelvis, and tall gave it great power, when in a sitting position, to pull down, by aid of its fore-legs, trees whose roots it had loosened by its powerful claws. The foliage of the trees thus pulled down constituted the chief food of this animal.

Fig. 1754. SKELETON OF THE MEGATHERIUM.

Meg'gers, in *Wisconsin*, a post-office of Manitowoc co.
Meg'gett, in *South Carolina*, a post-office of Colleton co.
Megilp', Megilph', *n.* (*Painting.*) Same as MAGILP, *q. v.*
Me'grim, *n.* [Fr. *migraine*, corrupted from Gr. *hemicrania*—*hemi*, half, and *kranion*, skull.] A neuralgic affection, in which the chief symptoms are an acute pain in the temples and forehead, with a remarkable depression of spirits. The disease is generally found in persons of a melancholic temperament and of a weakly habit of body, and often existing with great debility. The pains in the head, though remittent, are, for the time they continue, long and severe, and most generally occur at the decline of the day, or towards evening. This distressing malady is more a symptomatic affection, depending on a general functional derangement of the system, than a disease proceeding from any intelligible chain of causes. An apathetic state of the stomach, and a torpid condition of the liver, will, in general, be found existing in all such cases. When it is associated with anæmia (paleness and general debility), it should be treated with the preparations of iron, the shower-bath, nourishing food, and plenty of exercise in the open air. When it is strictly periodical, quinine in full doses should be tried (the bowels being previously well cleared out); and if the quinine fails, Fowler's solution of arsenic, given in small doses (three minims in a wine-glassful of water), 3 times a day, after meals, will be almost sure to remove it.
—A fantastic idea; a freak; a whimsey; an odd humor.
"These are his *megrims* and melancholies." —*Ford.*

Me'hemet A'li, Pasha of Egypt, and one of the most remarkable men of the age, was B. at Cavalla, in Roumelia, in 1769; the same year that witnessed the birth of Napoleon Bonaparte, and that of the Duke of Wellington. He commenced life as a tobacconist; but afterwards volunteered in the army, to which his taste was more congenial. In his new career he soon obtained high favor with the governor of Cavalla. In 1799, the period of the French invasion of Egypt, he raised a large body of men for the service of the sultan: and gave such proofs of his military capacity as led to his elevation to a higher command. By intrigue, combined with the attachment of his followers, he was enabled to seize the pashalic of Egypt, and was then prepared to set the Sultan at defiance, had the latter attempted to overthrow him. But the Sultan resolved to compromise by exacting an annual tribute from Mehemet Ali as an acknowledgment of his subjection. In this arrangement, which virtually constituted Mehemet Ali the independent ruler of Egypt, he had the prudence to acquiesce, and he directed himself steadily to the consolidation of his newly acquired power,—no easy task in a country which had been distracted by invasion, and at best loosely governed. One great obstacle to his becoming the sole ruler and regenerator of the country, lay in the presence of the Mamelukes, a privileged body-guard, jealous of their power, and ever ready for revolution when it was threatened. He succeeded in breaking their power; and by treacherously inviting them to a festival as friends, he

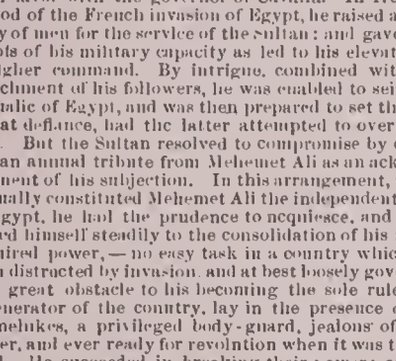


Fig. 1755.—MEHEMET ALI.

obtained an opportunity, of which he mercilessly availed himself, to massacre the last of these formidable cavaliers in 1811. He carried on, by his sons, several campaigns in behalf of the Sultan against the Wahabite rebels in Arabia; and he afterwards sent troops under his son, Ibrahim Pasha, to the Morea, who gave important aid to the Turks in the Greek war of independence. In 1830, he obtained from the Sultan the government of the island of Candia; and he next endeavored to make himself master of Syria, which Sultan Mahmoud had refused him. He sent a large army to that important province, and was thereupon declared a rebel by the Porte, and the Turkish armies were sent against him. Mehemet Ali's troops had been carefully trained by European officers, and they beat the Sultan's in every encounter. Peace was made between the powerful viceroy of Egypt and his humiliated sovereign in 1833, by the intervention of the chief states of Europe. Hostilities broke out again between them in 1839; and, as before, the Egyptian forces were uniformly victorious over the Turkish. The armed interposition of the English, and the capture of Acre and the other fortresses on the Syrian coast by the English fleet, under the guidance of Admiral Napier, compelled Mehemet Ali to come to terms again with the Porte. He was obliged to give up Syria; but the hereditary pashalic of Egypt was secured to him and his children.—*M. A.* was free from bigotry; he was an earnest admirer of European civilization, and he strove to introduce it among his subjects; a principle steadily adhered to by his successors.

Meher'rin, a river, rising in Charlotte co., Virginia, and flowing S.E. into N. Carolina, joins the Nottoway River in Hertford co., to form the Chowan. *Length*, about 150 m.
Mehul, ETIENNE HENRI, (*me(r)l,*) an eminent musical composer, was B. at Givet, in France, in 1763; and was an excellent organist when only 10 years old. He settled at Paris in 1779, where he studied with great advantage under Gluck; became inspector at the Conservatory of Music; professor of composition at the royal school; member of the Academy and Institute, and knight of the Legion of Honor. He produced the operas of *Stratonice*; *Irato*; *Joseph*; *Cora et Alonzo*, &c., besides the ballets of *The Judgment of Paris*; *Perseus and Andromeda*, &c. D. 1817.
Meiaponte, (*ma-e-a-pon'ta,*) a town of Brazil, about 65 m. E. of Goyaz.
Meibo'mian Glands, CILIARY FOLLICLES. (*Anat.*) A series of small glands, named after their discoverer, Meibomius, which, like minute pins-heads, are situated at the margin of each eyelid, a duct from every gland supplying nourishment to each eyelash. These glands are in children, and some persons of a scrofulous habit, liable to a state of acute and chronic enlargement. In children this enlargement is called a *sty*, and in the adult produces the disease known as *blear eye*.
Meigs, (*mēgz,*) in *Ohio*, a S.S.E. co. adjoining W. Virginia. *Area*, abt. 350 sq. m. *Rivers*. Ohio and Hockhocking rivers, besides several smaller streams. *Surface*, hilly; *soil*, moderately fertile. *Min.* Coal in great quantities, and salt. *Cap.* Pomeroy.
—A township of Adams co.
—A township of Muskingum co.
Meigs, in *Tennessee*, an E. by S. central co.; *area*, abt. 160 sq. m. *Rivers*. Tennessee River, and several of its small affluents. *Surface*, elevated and hilly; *soil*, fertile. *Cap.* Decatur.
Meigs Creek, in *Ohio*, enters the Muskingum River in Morgan co.
Meigs'ville, in *California*, a village of Mendocino co., about 140 m. N.N.W. of San Francisco.
Meigs'ville, in *Ohio*, a post-township of Morgan county.
Mein'ingen, a town of Central Germany, grand-duchy of Saxe-Meiningen, on the Werra, 31 m. N.E. of Fulda. Its principal public building is the ducal palace. *Manuf.* Woollen, linen, and mixed fabrics. *Pop* 8,219.
Mei'onite, *n.* [Gr. *meiōn*, less.] (*Min.*) A silicate of alumina and lime, found in grains or small crystals of a whitish or grayish white color at Monte Somma near Vesuvius. The name implies that the terminating pyramids of the crystals are lower than in Idocrase, and consequently that the axis of the primary form is shorter.
Meio'sis, *n.* [Gr., from *meiō-ō*, to lessen.] (*Rhet.*) Diminution; a figure of rhetoric, hyperbolically representing a thing less than it is.
Meissen, (*mīs'en,*) a town of N. Germany, in Saxony, on the Elbe, 14½ m. N.W. of Dresden. *Manuf.* Porcelain, known as Dresden china, hosiery, leather, and colors. *Pop.* 9,806.
Meissonnier (*mī-sŏn-yā'*), JEAN LOUIS ERNEST, a French painter, of the style termed in France *genre*, born at Lyons, 1815. Among his most celebrated works are: *The Cuirassiers, or 1805*; *Friedland, or 1807*; and *Campaigne de France, 1814*. All his works were painted with Flemish care and finish, but were, nevertheless, thoroughly original in their treatment. His pictures, although generally of small size, obtained very large sums, and he stood at the head of a crowd of enthusiastic imitators. He was likewise very successful as a designer of book illustrations. The best of these last are the sketches for *Paul and Virginia*, Balzac's novels, &c. Died Jan. 3, 1891.
Mekong', or CAMBODIA, one of the principal rivers of S.E. Asia, rising in Thibet, where it bears the name of Lan-Thsang-Kiang, flowing S. and entering the China sea, by several months, in Cochin-China, which country is formed by its alluvial deposits.
Mekran', or MUKRAN', a prov. of Beloochistan, bordering on the Arabian Sea, and extending from Scinde on the E. to Kerman on the W.; Lat. between 25° and 28° N., Lon. 58° and 66° E. *Area*, estimated at 100,000 sq. m. It is divided into a great number of petty districts held by separate chiefs. The inhabitants are principally engaged in pastoral pursuits. *Pop* 200,000.
Mela'da, *n.* [Sp., from Lat. *mel*, honey.] Crude, undrained sugar.
Melæ'na, *n.* [Gr. *melaina*, fem. of *melas*, black.] (*Med.*) A hæmorrhage from the bowels, and popularly known as Black Jaundice.—The peculiarity of this disease is that it is seldom attended with pain, though it generally attacks persons of weak or exhausted constitutions, and those suffering from chronic dyspepsia. The cause of the thick, pitchy evacuations, which form what may be called the distinctive feature of the disease, is supposed to be a hæmorrhage from the minute branches of the vena porta, charged with the impure blood from the bowels, on its way to the liver to secrete the bile.
Melaleuca, (*mel-āl-lu'kă,*) *n.* [Gr. *melas*, black; *lukas*, white, because the trunk is black and the branches white.] (*Bot.*) A genus of plants, ord. *Myrtaceæ*. The species *M. minar*, or *Cajeputi*, is a small tree of the Molucca Islands. Its leaves, when allowed to stand so as to undergo a species of fermentation, and then distilled with water, yield a volatile oil of a limpid nature and a light-green color. This product, which is called cajeput-oil, was formerly much employed as a remedy in cholera, but without any success. It has been used internally as a diffusible stimulant, and is spasmodic and diaphoretic; and externally, when mixed with olive-oil, as a stimulant embrocation. It has the property of dissolving caoutchouc. In Australia the leaves of the species *M. scoparia* and *genistifolia* are used as substitutes for tea.
Mel'anin, *n.* [From Gr. *melas*, black.] The inky matter of the liquid exuded by the cuttle-fish.
Mel'anin, *n.* (*Chem.*) A substance formed during the distillation of a mixture of sal-ammoniac and sulphocyanide of potassium.
Mel'amine, *n.* (*Chem.*) A colorless crystalline salifiable base derived from melam, by boiling with strong solution of potash.
Melam'pyrum, *n.* [Gr. *melas*, and *puros*, wheat, the seeds blackening the flower of wheat if ground with it.] (*Bot.*) A genus of plants, order *Verbenaceæ*. The Cow-wheat, *M. pratense*, an American species found in woods, has a stem 8–10 inches high; leaves linear and lanceolate, opposite; flowers in the axils of the upper leaves, yellowish, slender; capsules acuts, declined, 4-seeded.
Melancholic, (*mĕl-an-kŏl'ik,*) *a* [Fr. *melancholique.*] Affected with gloom or melancholy; depressed in spirits; dejected; hypochondriac; mournful; unhappy; unfortunate; as, a *melancholic* temperament.
—*n.* A desponding, gloomy state of mind. (R.)
Mel'ancholily, *adv.* In a melancholy manner; dispiritedly.
Mel'ancholiness, *n.* State or condition of being melancholy or dejected; disposition to indulge in mental depression.
Melancho'lions, *a.* Melancholy; hypochondriac. (R.)
Melancholy, (*mĕl'an-kŏl-y,*) *n.* [Fr. *mélancholie*; Gr. *melas*, *melan*, black, and *cholē*, bile: Lat. *melancholia.*] A gloomy, desponding state of mind, that is often of some continuance or chronic; dejection of spirits occasioned or induced by grief; hypochondria.
(*Med.*) *M.* is correctly designated a form of insanity when it continues for an inordinate period after any given cause of grief has been removed. It is undoubtedly so when it arises without the operation of any mental cause. We find it connected with dyspepsia, with constipation, and other signs of physical disease. Systematic writers speak of various forms of melancholic insanity, such as the religious, the nostalgic, &c.
Mel'ancholy, *a.* Atrabilious; depressed in spirits; affected with mental gloom; dejected; hypochondriac; dismal.
"Sweet bird . . . most musical, most *melancholy*."—*Milton.*
—That may or does produce great evil or sorrow; inducing gloom or dejection; calamitous; afflictive; sad; as, a *melancholy* accident.
Melanchthon, PHILIP, (*me-lăngk'thon.*) coadjutor with Luther in the Reformation, B. at Bretten, or Bretheim, in the palatinate of the Rhine, in 1497. His family-name was *Schwarzerde*, of which *M.* is intended to be the Greek equivalent. While studying at Pforzheim he became acquainted with the great scholar, Johann Reuchlin, who remained his friend. He next studied at Heidelberg and Tübingen, and in 1518 was appointed Greek professor at Wittenberg, where he became the friend of Luther, and a convert to his doctrines. Luther was at that time professor of divinity there. In the following year he took part with Luther in the disputation with Dr. Eck at Leipsic. Their personal characters, however, were widely different—*M.* being as remarkable for suavity of manners as Luther was for impetuosity and unbending firmness. *M.*'s judgment, ripened by classical study, his acumen as a philosopher and critic, the uncommon distinctness and order of his ideas, and the steadfast zeal with which he held and defended his opinions when formed, contributed greatly to the progress and success of the Reformation. The Augsburg Confession was drawn up by *M.* in 1530, and, under the sanction of the elector of Saxony, he aided in framing a code of ecclesiastical constitutions. He wrote numerous theological treatises, Latin poems, works on history, philosophy, &c., and died at Wittenberg, in 1560.
Mélange, (*mā-lŏngzh',*) *n.* [Fr.] A mixture; a medley; a miscellany; a jumble; an olio.
Melan'ic Acid, *n.* (*Chem.*) An amorphous black substance derived from hydride of salicyl.
Melan'iline, *n.* (*Chem.*) A crystalline base, produced by the action of chloride of cyanogen upon aniline. *Form* $C_{26}H_{13}N_3$.
Mel'anite, *n.* [Fr.] (*Min.*) A variety of Iron-lime Garnet, occurring in black dodecahedrons in the older lavas of Vesuvius. Those found at Frascati, near Rome, are locally called *Black Garnets of Frascati*.
Melanoch'roite, *n.* [Gr. *melas*, and *chroa*, color.] (*Min.*) Chromate of lead, found massive and in tabular rhombic prisms, of a color between cochineal and hyacinth red, at Beresow, in Siberia. The name has reference to the change of color which the mineral undergoes before the blow-pipe.
Melanos'sis, *n.* [Gr. *melas*, *melanos*, black, and *osis.*] (*Med.*) An organic affection in which the tissue of the parts is converted, owing to a *melanic* deposit, into a black, hard, homogeneous substance, near which ulcers or cavities may form.
Melanot'ic, *a.* (*Med.*) Relating to melanosis.
Melantha'ceæ, or COLCHICACEÆ, *n. pl* [Gr. *melas*, black, and *anthos*, flower.] (*Bot.*) An order of plants, alliance *Liliales*. DIAG. A marked perianth, flat when withering, anthers turned outwards, distinct styles, and fleshy albumen.—They are herbs with bulbs or corms, and tuberous or fibrous roots. Flowers regular, usually

hermaphrodite, rarely unisexual; perianth inferior, white, green, or purple, petaloid, 6-parted or 6-leaved; stamens 6; anthers extrorse; ovary superior or nearly so, 3-celled; style 3-parted. Fruit 3-celled, 3-valved, septicidal, or rarely loculicidal dehiscence. Seeds with a membranous testa. The plants of the order are generally diffused, but most abundant in Europe, North America, and Northern Asia. There are 31 genera, which include 130 species. They are generally poisonous, owing to the presence of powerful alkaloids. In proper doses, however, several are valuable medicines. See COLCHICUM, VERATRUM.

Melas, (*mel'a,*) *n.* (*Med.*) A disease endemic in Arabia, consisting in the formation of dark brown or black spots upon the skin.

Mc'las, BARON VON, an Austrian general, who, in 1796, commanded against the French in Italy, and uniting with Suwaroff, in 1799, defeated Championnet at Genola, but was himself beaten by Napoleon at Marengo, in the following year. D. 1807.

Melas'ma, *n.* [Gr. *melasma*, black spot.] (*Med.*) A black spot or ecchymosis, occurring on the lower extremities, of old people especially. — Also, a cutaneous affection analogous to chloasma, differing from it only in the dark color of the morbid pigment.

Melas'ses, *n.* See MOLASSES.

Melas'sic, *a.* (*Chem.*) An acid produced, together with glucic acid, by the action of potash on grape-sugar.

Melastoma'ceæ, *n. pl.* [Gr. *melas*, black, and *stoma*, the mouth; the black berries of some of the species are eaten by children, whose mouths they stain black.] (*Bot.*) The Melastoma family, an order of plants, alliance *Myrtales*. — DIAG. A plurilocular ovary, polypetalous flowers, an imbricated calyx, definite stamens, rostrate anthers, and usually dotless leaves. They are trees, shrubs, or herbs, with opposite leaves, almost always ribbed. Calyx 4-, 5- or 6-lobed, more or less adherent to the ovary; petals equal in number to the divisions of the calyx, twisted in æstivation; stamens equal in number, or twice as many as the petals, filaments curved downward in æstivation; anthers long, 2-celled, usually dehiscing by two spores at the apex, or sometimes longitudinally, in æstivation lying in spaces between the ovary and sides of the calyx; ovary more or less adherent. Fruit either dry, distinct from the calyx, and dehiscent, or succulent, united to the calyx, and indehiscent. Seeds very numerous, minute, exalbuminous. The plants of this order are principally natives of tropical regions, but a few are also extratropical. They are generally characterized by astringency. Many produce edible fruits, and some are used for dyeing black and other colors. Some of the species are cultivated on account of the beauty of their flowers. The order includes 165 genera and 2,000 species.

Melbourne, (*mĕl'burn,*) WILLIAM LAMB, VISCOUNT, an English statesman, b. in London, 1779. After graduating at Trinity College, Cambridge, and Glasgow University, and being called to the bar in 1804, he, in the following year, entered Parliament as a member of the Whig party, then under the leadership of Mr. Fox, remaining throughout his political career a consistent adherent to that party. In 1827, he was appointed Secretary of State for Ireland, and the next year took his place in the House of Lords, succeeding his father, the first viscount. In 1830 he joined Earl Grey's cabinet as Secretary of State for the Home Department, and, in 1834, became prime minister of England, retaining that position with one brief interruption (1834–5) till 1841, when he was succeeded by Sir Robert Peel. Lord *M.*'s tenure of the premiership, though marked by no prominent political events, obtained popular esteem from the tact, suavity, and other high personal qualifications he exhibited. D. 1848. Lord *M.*'s wife, (best known as LADY CAROLINE LAMB,) a woman of singular beauty and accomplishments, obtained celebrity through the romantic passion she conceived for Byron, an attachment unreciprocated by the noble poet.

Mel'bourne, the capital of the British colony of Victoria, in Australia, on the Yarra-Yarra, about 9 miles from its mouth, in the basin of Port Phillip; Lat. 37° 48′ 6″ S., Lon. 144° 57′ 7″ E. *M.* occupies the first rank among the ports of the British colonies, and is the most important trading town of the S. hemisphere. It was founded in 1837, and during the gold mania of 1853 the population increased immensely. It is well built, the streets are regular and wide, and the public buildings, stores, and warehouses are constructed of stone. *M.* likewise contains extensive iron-foundries, and flour-mills. The trade of *M.* represents very nearly that of the whole colony of Victoria, which is at present in a very flourishing condition. *Pop.* 450,000.—PORT PHILLIP, the harbor of *M.*, is a spacious and beautiful inlet of the S. Pacific Ocean, on the S.E. coast of Australia. It is 35 m. long, by 25 broad. Its entrance, which is only 2 m. in width, is formed by 2 fortified hills called the Heads.

Melchis'edek. (*Jewish Hist.*) See SECTION II.

Melchisedec'ians, *n. pl.* (*Eccl. Hist.*) Melchisedec was a king of Salem, and priest of the most high God, who met Abraham after his victory over Chederlaomer, king of Sodom, and presented to him bread and wine, with his benediction. St. Paul having said, in his Epistle to the Hebrews, that Melchisedec was without father and without mother, led some ancient heretics to assert that he was a celestial being, superior to angels, and even to Jesus Christ. These were called Melchisedecians. Many divines of later times have entertained the belief that the Son of God appeared to Abraham under the form of Melchisedec.

Mel'chites, *n. pl.* (*Eccl. Hist.*) The Eutychians, when condemned by the council of Chalcedon, gave this name (royalists, imperialists) to the orthodox, who endeavored to put the order of the emperor Marcian into execution against them. Among Oriental Christians it now designates in a general manner all those who are neither Jacobites nor Nestorians, including the Maronites, Catholic Greeks, and non-Catholic Greeks, of the three Eastern patriarchates.

Mele'ager, [Gr. *Meleagros*] (*Homeric Myth.*) A chieftain of the Ætolian Calydon, son of Æneus and Althæa, and husband of Cleopatra. A part of the myth connected with the name of *M.* is repeated by Phœnix to Achilleus in the tenth book of the *Iliad*, but this part relates only the war between the Ætolians and the Curêtes, in which *M.*, angry on account of a curse laid on him by his mother for the slaughter of her brothers, refuses to aid his countrymen, until prevailed upon to do so by his wife Cleopatra. The character of *M.*, as here depicted, exhibits the same readiness to take offence, the same sullen moodiness, and alternate energy and inaction which characterize both Achilles and Paris. A passing reference to his death is the only notice taken in the *Iliad* of his later history; but in the other versions the tale ran, that while he was a child, the Mœræ appeared to his mother, and said that he should live only while a brand which lay burning on the hearth should be unconsumed; that Althæa immediately extinguished the flame, and put the wood carefully away; but when afterwards irritated by the death of her brothers, she threw the wood into the fire; that *M.* died as its last spark flickered out; and that his death was followed immediately by that of his mother and his wife. Like Achilles and Paris, like Balder and Sigurd in northern mythology, *M.* dies young; like them, he is invincible in the field; like Theseus, Perseus, and Bellerophon, he is the destroyer of noxious beasts; in the hunt of the wild boar of Calydon, Atalanta exhibits the swiftness and strength of Daphnê, Arethusa, and Kyrênê, while the chase itself is paralleled by the exploits of Heracles and other heroes against the beasts of the field. With him die his mother and his wife, as the death of Heracles and Paris is followed by that of Deianira and Œnônê; and as Achilles falls at the close of day, so *M.* dies when the torch of day is burnt out. Like those heroes again, he can only be slain one way, or in one vulnerable spot, and his sisters weep for his death, until they are changed into guinea-hens, as the sisters of Phaethon shed amber tears over his dead body and are changed into poplars.

Mele'ager, a Greek poet who flourished in the 2d cent. His epigrams are in the collection of Greek poetry called the "Anthologia." The latest and best edition of his works was that of Græfe (Leipsic, 1811).

Melea'gris, *n.* [Lat., a guinea-fowl.] (*Zoöl.*) A genus of birds, order *Rasores*, containing the turkey. See TURKEY.

Melec'tidæ, *n. pl.* (*Zoöl.*) See APIDÆ.

Mele'da, an island of Austria, in Dalmatia, in the Adriatic Sea, 19 m. W.N.W. of Ragusa. It is 23 m. long, and 4 broad. The surface is generally mountainous. *Prod.* Corn, fruit, wine, and oil. The harbor of Palazzo on the N. side is considered the best on the Dalmatian coast. *Pop.* 1,000.

Mêlée, (*mā-lē',*) *n.* [Fr., from *mêler*, to ruin.] A confused hand-to-hand fight; a bloody conflict; a battle; a contest; an affray.

Mele'tians, *n. pl.* (*Eccl. Hist.*) The partisans of Meletius, bishop of Lycopolis in Egypt, deposed in a synod at Alexandria abt. 306, on the charge of having sacrificed to idols during the persecutions of Diocletian. He was supported by numerous adherents; and thus a schism began, which was partially concluded by the submission of Arsenius, chief of the party, to Athanasius in 333, but does not seem to have been wholly extinct for 150 years.

Mel'fi, a town of Italy, prov. of Basilicata, near the Ofanto, 34 m. S. of Foggia. It was nearly destroyed by an earthquake in 1851. *Pop.* 9,500.

Melgaço, (*mel-ga'so,*) a town of Brazil, abt. 168 m. S.W. of Pará; *pop.* 4,000.

Melia'ceæ, *n. pl.* [From Gr. *meli*, honey, from its aromatic flavor.] (*Bot.*) The Melia family, an order of plants, alliance *Rutales*. DIAG. Consolidated berried or capsular fruit, deeply monadelphous stamens, a few wingless seeds, and dotted leaves. — They are trees or shrubs, with usually alternate, simple, or pinnate exstipulate leaves. Flowers hypogynous and generally symmetrical; calyx and corolla with 3, 4, or 5 divisions; stamens twice as many as the petals, anthers sessile; disc hypogynous and often surrounding the ovary like a cup; ovary 2–5, rarely 10- or 12-celled; style 1; ovules 1, 2, or 4, attached to axile placentas. Fruit with loculicidal dehiscence; albumen of seeds fleshy, or altogether absent. The order is very nearly allied to *Cedrelaceæ*, the Mahogany family, and are found more or less in all tropical regions. Some produce edible fruits, others have valuable oil-yielding seeds, and some are remarkable for their medicinal properties, which in general are bitter, tonic, and astringent, but in some cases purgative and emetic. The most interesting member of this order is *Melia azedarachta*, the Neem-tree or Pride of India, or, as it is sometimes called, the Margosa-tree. It possesses febrifugal properties. The pericarp yields, by expression, a fixed oil, which is used for burning. The tree also yields a kind of toddy, which is employed as a stomachic. The order includes 33 genera and 150 species.

Melian'thus, *n.* [Lat. *mel*, honey, *anthos*, a flower.] (*Bot.*) A genus of plants, order *Zygophyllaceæ*. The flowers of the species *M. major* contain much saccharine matter, which is extracted and used as food by the natives of the Cape of Good Hope, where the plant abounds.

Melic'eris, *n.* [Gr. *meli*, honey, and *lithos*, stone.] (*Med.*) An encysted tumor, the contents of which resemble honey.

Melic'erous, *a.* Consisting of matter resembling honey; — said of a tumor.

Melicer'ta, (*Myth.*) A son of Athamas and Ino, was saved from the fury of his father by his mother, who threw herself and him into the sea. Neptune, out of compassion, changed both into sea-deities. Melicerta was known among the Greeks by the name of *Palamon*; and the Isthmian games were instituted in his honor.

Melicotoon', *n.* The same as MELOCOTON, *q. v.*

Mel'ilite, *n.* [Gr. *meli*, honey, and *lithos*, stone.] (*Min.*) A silicate of alumium, peroxide of iron, lime, magnesia, soda, and potash, found in small square prisms of a yellowish color, and generally coated with oxide of iron, in the fissures and cavities of lava, at Capo di Bove near Rome.

Melil'la, a seaport-town on the N. coast of Morocco, belonging to Spain, 40 m. E.N.E. of Beni-Botoya; *pop.* 3,000.

Melilo'tus, *n.* [From Lat. *mel*, honey, and *lotus*, lotus.] (*Bot.*) The Melilot, a genus of plants, order *Fabaceæ*. The flowers and seeds of *M. officinalis*, and other species, possess a peculiar fragrance, which is due to the presence of *coumarine*. They are used to flavor *Gruyère* and other kinds of cheese.

Mel'iorate, *v. a.* [Fr. *méliorer*; It. *migliorare*, from Lat. *melior*, better, comp. of *bonus*, good.] To make better; to improve; to soften.

— *v. n.* To grow better.

Meliora'ter, *n.* The same as MELIORATOR.

Meliora'tion, *n.* [Lat. *melioratio.*] Act or operation of meliorating or making better; improvement.

Meliora'tor, *n.* A person who meliorates.

Melipha'gidæ, *n. pl.* (*Zoöl.*) The Honey-eaters, a family of Australian birds, order *Insessores*, allied to the Sun-birds and to the Humming-birds. They have a long, curved, sharp bill, not so slender as in humming-birds and sun-birds; the tongue terminates in a pencil of delicate filaments, the better to adapt it for sucking honey from flowers, or juices from fruits. These are a principal part of the food of the Honey-eaters; but they also devour insects in great numbers. They are birds of elegant form, and generally of gay plumage. Most of them have a long and broad tail. They may be observed fluttering and darting among trees and shrubs when in blossom; and are very abundant in all parts of Australia. They are extremely vivacious and active, and keep up a continual chattering. One of the most splendid species, *Meliphaga*, or *Ptiloris paradiseus* (Fig. 1756), is called the Rifleman, or Rifle-bird, by the Australian colonists.

Fig. 1756.—MELIPHAGA. (The Rifle-bird.)

Melipilla, (*ma-le-peel'ya,*) a town of Chili, on the Maypu River, abt. 38 m. S.W. of Santiago.

Melis'sa. The ancient name of MALTA, *q. v.*

Melis'sa, *n.* [Gr. *melissa*, a bee.] (*Bot.*) A genus of plants, order *Lamiaceæ*. *M. officinalis*, the common Balm, possesses mild stimulant properties, and its decoction is used as a diaphoretic in fevers, as an exhilarating drink in nervous affections, and as an emmenagogue. The bees obtain a great deal of honey from the balm.

Melitæ'a, *n.* (*Zoöl.*) A genus of Butterflies, family *Nymphalidæ*, distinguished by their antennæ (Fig. 1757), which have a wide, flat club. The eyes are naked.

Fig. 1757. MELITÆA SELENE.

Melk'sham, a town of England, co. of Wilts, 26 m. N.W. of Salisbury, and 86 m. of London. *Manuf.* Woollen goods. *Pop.* 6,300.

Mel'lay, *n.* The same as MELLE.

Mel'lenville, in *N. York*, a village of Columbia co., abt. 9 m. E. by N. of Hudson.

Mel'lic, *a.* (*Chem.*) The same as MELLITIC, *q. v.*

Melliferous, Mellific, *a.* [Lat. *mel*, *mellis*, honey, and *fero*, to produce.] Producing honey.

Mellifica'tion, *n.* [Lat. *mellificatio.*] The art or practice of making honey; production of honey.

Mellifluence, *n.* [Lat. *mel*, *mellis*, honey, and *fluo*, *fluens*, to flow.] A flow of honey or sweetness; a sweet, smooth flowing.

"He was rather struck with the pastoral *mellifluence* of its lyric measures."—*Warton.*

Mellifluent, *a.* [Lat. *mellifluens.*] Flowing with honey or sweetness; smooth; sweetly flowing.

Mellifluently, *adv.* Smoothly; softly.

Mellifluous, *a.* Flowing with honey or sweetness, sweetly flowing; smooth.

Mellifluously, *adv.* Smoothly; flowingly.

Mellig'enous, *a.* That has the qualities of honey.

Mellil'oquent, *a.* Speaking sweetly.

Mel'lit, *n.* (*Fur.*) A dry scab on the heel of a horse's fore-foot.

Mel'lite, *n.* (*Min.*) A native hydrous mellate of

alumina. It occurs in yellowish octohedrons, and was first observed in the brown-coal of Arten, in Thuringia.

Mellit'ic, *a.* (*Chem.*) Characterized by saccharine secretions; as, *mellitic* diabetes. — Obtained from honeystone; as, *mellitic* acid.

Mel'lon, *n.* (*Chem.*) A lemon-yellow substance, composed of six equivalents of carbon and four of nitrogen, obtained by heating dry sulphocyanogen. It is a compound radical, and combines with metals to form mellonides.

Mel'lonsville, in *Kentucky*, a village of Lawrence co., on the Levica River, abt. 15 m. above Louisa.

Mel'lonville, in *Florida*, a post-village of Orange co., abt. 240 m. S.E. of Tallahasses.

Mel'low, *a.* [A. S. *mearu, mearwu*, soft, tender; Lat. *mollis;* Gr. *malakos*, soft.] Soft with ripeness or maturity; easily yielding to pressure; as, a *mellow* apple. — Soft to the ear; as, *mellow* notes. — Soft and smooth to the tasts; as, *mellow*-tasted wine. — Soft or easy to the eye; as, *mellow* light. — Soft with liquor; intoxicated; merry.

—*v. a.* To soften by ripeness or age; to soften; to ripen; to bring to maturity; to mature; to bring to perfection. — To soften; as, the earth is *mellowed* by frost.

—*v. n.* To become soft; to be ripened, matured, or brought to perfection.

Mel'lowly, *adv.* In a mellow manner.

Mel'lowness, *n.* Softness; the quality of yielding easily to pressure; ripeness, as of fruit. — Maturity; softness or smoothness from age, as of wine.

Mel'low-toned, *a.* Having soft, smooth tones.

Mel'lowy, *a.* Soft; smooth; delicate.

Mel'more, in *Ohio*, a post-village of Seneca co., abt. 8 m. S.S.E. of Tiffin.

Me'lo, a town of Uruguay, about 200 miles N.E. of Montevideo.

Melocac'tus, *n.* [Gr.] (*Bot.*) The Melon-cactus, a genus of plants, order *Cactaceæ*. The fleshy stems of this genus have been likened to large green melons, to turbans, and to hedgehogs. In the dry districts of S. America they are eaten by cattle on account of their juice.

Melocoton', Melocotoon', MELICOTOON', *n.* [Sp. *melocotone;* Lat. *malum cotoneum.*] (*Bot.*) A quince; — also, a large kind of peach.

Melo'deon, *n.* (*Mus.*) A name which has been applied to musical instruments of different kinds, but is now restricted to the instrument invented, in 1836, by Mr. Jeremiah Carhart, of Dutchess co., N. Y., and now extensively manufactured in the U. States and in England. As in the piano, the notes are determined by touching the keys of a finger-board. Each key, lifting a valve, allows a current of air from a bellows, worked meanwhile by the foot on a pedal, to agitate the corresponding one at a series of metallic free reeds. The *rocking M.*, constructed on the same principle, was known in America since 1825, but it was so unsightly, so tardy in sounding, and of so harsh a tone, that the improvements introduced by Mr. Carhart may be said to constitute a new invention.

Melod'ic, *a.* Belonging, or relating, to melody.

Melod'ics, *n. sing.* (*Mus.*) That department of the science which treats of the laws of melody.

Melo'dious, *a.* [Fr. *melodieux.*] Containing melody; musical; agreeable to the ear by a succession of sweet sounds.

Melo'diously, *adv.* In a melodious manner.

Melo'diousness, *n.* Quality of being melodious; sweet sounds.

Mel'odist, *n.* A composer or singer of melodies.

Mel'odize, *v. a.* To make melodious.

—*v. n.* To compose, or to sing melodies.

Melodra'ma, *n.* [Fr. *mélodrame;* Gr. *melos*, a song, a strain, and *drama*, a drama.] (*Dram. Lit.*) A dramatic performance in which music is intermixed; or that species of drama in which the declamation of certain passages is interrupted by music. If only one person acts, it is a *monodrama;* if two, a *duodrama*. It differs from the opera and operetta in this, that the performers do not sing, but declaim, and the music only fills the pauses, either preparing or continuing the feelings expressed by the actors. *M.* are generally romantic and extravagant.

Melodramat'ic, *a.* Pertaining to a melodrama; as, a *melodramatic* performance.

Melodram'atist, *n.* One skilled in melodramas, or who prepares them.

Mel'odrame, *n.* The same as MELODRAMA.

Mel'ody, *n.* [Gr. *melōdia*, from *melos*, a strain, an air, and *ōdē*, a lay, an ode.] (*Mus.*) An air; a succession of simple sounds, so arranged as to produce a pleasing effect upon the ear. It may be defined as a series of sounds more fixed, and generally longer than those of common speech, arranged with grace, and of proportionate lengths, such as the mind can easily measure and the voice express. Of the relative importance of melody and harmony it is useless to speak, as they may be said to generate into each other, the one being the selection of single sounds from an harmonic source, and the other a union of two melodies simultaneously heard. Thus they are closely connected and of equal importance, the one being necessary to the other. See HARMONY.

Me'loë, *n.* (*Zoöl.*) A genus of beetles, family *Cantharidæ*, including the Narrow-necked Oil-beetles, an American species. Latreille thinks that the modern meloës were the *Bubrestes* of the ancients, insects to which they attributed very noxious properties, supposing them to be fatal to the oxen that swallowed them. In this genus the antennæ are composed of short and rounded joints, the intermediate of which are the largest, and sometimes so disposed that these organs present at this point, in several males, an emargination or crescent. The wings are wanting; and the elytra, oval or triangular, with a portion of the inner margin, crossing each other, only partially cover the abdomen, particularly in the females, in which this segment of the body is extremely voluminous. The meloës crawl along the ground, or upon low plants, on the leaves of which they feed. A yellowish, or reddish, oleaginous liquid exudes from the articulations of their legs. In some districts of Spain these insects are used in the place of the true blister-flies (*Canthar-ides*); they are also employed by the farrier.

Fig. 1758.
Meloë proscarabæus.

Mel'on, *n.* [Fr. and Sp. *melon;* It. *melone;* Lat. *melo*, from Gr. *melos*, an apple.] (*Hort.*) The fruit of several plants of the genus *Cucumis*, q.v. The principal species is *Cucumis melo*, the Musk-melon. The varieties in cultivation are very numerous, some of them distinguished by a thick and warty rind, some by a rind cracked in a net-like manner, some by ribs and furrows, some by a perfectly smooth and thin rind; they differ also in the color of the *flesh* of the fruit, which is green, red, yellow, &c.; and in the size of the fruit, which varies from 3 or 4 inches to a foot or more in diameter. The *M.* is either eaten by itself, or with sugar, and sometimes with pepper or ginger. The *M.* can be grown in the open air

Fig. 1759. — GREEN CITRON MUSK-MELON.

in the Southern and Middle States. Its cultivation in hotbeds is extensively carried on in all parts of the U. States, but not generally with the care bestowed on it in Europe. A loamy soil is best suited to it. The *setting* of the fruit by dusting the female flower with the pollen of the male flower, is constantly practiced by French and English gardeners. Warmth and bright sunshine are requisite to the production of fruit of good quality. — The Water *M.*, or Citrul, *Cucumis citrullus*, is highly esteemed and much cultivated in almost all warm countries. It is a native of the warm parts of the old world. It has deeply lobed and gashed leaves, and a large round fruit, with smooth dark-green spotted rind, and pink or white flesh, less sweet than the *M.*, but much more juicy or watery, and therefore much prized in many warm countries, not merely as an article of food, but for quenching thirst and allaying fever.

Mel'on-thistle, (*-this'l,*) *n.* (*Bot.*) The *Cactus melocactus*. See CACTACEÆ.

Melopœia, (*mel-o-pe'ya,*) *n.* [Gr. *melopoia.*] (*Mus.*) The art of melody. — A melodic passage.

Melo'ria, an island in the Mediterranean, off the coast of Tuscany, 4 m. W. of Leghorn.

Me'los, the ancient name of the Greek island MILO, *q.v.*

Melo'sis, *n.* [Gr. *mele*, a probe.] (*Surg.*) The act of probing a wound, ulcer, &c.

Melospi'za, *n.* (*Zoöl.*) A genus of birds, family *Fringillidæ*, comprising the LONG-SPARROW, *q. v.*

Mel'otype, *n.* A daguerreotype process, valuable to tourists for the reason that the dark chamber is not needed in the field, because the pictures can be developed at any subsequent time.

Mel'pine, in *Iowa*, a post-village of Muscatine co., abt. 40 m. E.S.E. of Iowa City.

Melpom'ene. [From Gr. *melpo*, a recliter of heroic verse] (*Myth.*) One of the nine muses who presided over tragedy. She is represented as having the form and face of a woman still young, with a commanding mien, and richly dressed. On her feet is the cothurnus; in one hand she holds a pontard, and in the other a tragic mask.

Fig. 1760. — MELPOMENE.

Mel'rose, a village of Scotland, co. of Roxburgh, beautifully situated on the Tweed, 31 m. S.E. of Edinburgh. It is celebrated for possessing the finest monastic ruin in Scotland. Melrose Abbey, originally founded by David I., in 1136, was destroyed by Edward II. of England in 1322. In 1336 it was rebuilt by Robert Bruce, and completed in the reign of James IV., about 1488–1513. It was again destroyed by the English in 1545. It was of Gothic style, and the ruins (Fig. 5) still attest its grandeur and magnificence. *Pop.* 1,141.

Mel'rose, in *Illinois*, a township of Adams county.

—A post-village and township of Clarke co., abt. 9 m. W. S.W. of Darwin.

Mel'rose, in *Iowa*, a township of Grundy co.

Mel'rose, in *Massachusetts*, a post-village and township of Middlesex county, about 7 miles north of Boston.

Mel'rose, in *Minnesota*, a post-village of Stearns co., abt. 78 m. W.N.W. of St. Cloud.

Mel'rose, in *Missouri*, a post-village of St. Louis co., abt. 28 m. W. of St. Louis.

Mel'rose, in *Texas*, a post-village of Nacogdoches co., about 260 m. N.E. of Austin.

Mel'rose, in *Wisconsin*, a post-township of Jackson co.

Melt, *v. a.* [A. S. *meltan;* Du. *smelten;* Icel. *melta*, to dissolve; Gr. *meldo*, to make liquid.] To reduce from a solid to a liquid or flowing state by heat. — To mollify; to soften; to overpower with tender emotion. — To waste away; to dissipate.

—*v. n.* To be changed from a fixed or solid to a flowing state. — To be softened to love, pity, tenderness, or sympathy; to become tender, mild, or gentle. — To be dissolved; to lose substance. — To be subdued by affliction; to sink into weakness; to faint; to be discouraged or disheartened.

Melt'able, *a.* That may be melted. (R.)

Melt'er, *n.* One that melts.

Melt'ing, *v. a.* Dissolving; mollifying; softening. — Making tender; affecting.

Melting-point. (*Chem.*) The exact amount of heat at which metals, and other substances, become fused, and lose their identity.

Melt'ing, *n.* Act of softening; the act of rendering tender.

Melt'ingly, *adv.* In a manner to melt or soften; like something melting.

Melt'ingness, *n.* The quality of being melting.

Melt'ing-pot, *n.* A vessel used for melting anything; a crucible.

Mel'ton Mow'bray, a town of England, co. of Leicester, on the Wreak, a tributary of the Soar, 14 m. N.E. of Leicester, and 92 m. N.W. of London: *pop.* 4,500.

Melun, (*me-lu'',*) a town of France, cap. of dept. of Seine-et-Marne, on the Seine, 25 m. S.E. of Paris. *Manuf.* Woollen, cotton, and linen goods, and glass; and it has a considerable trade in corn and other products destined for the Paris market. *Pop.* 12,000.

Melu'sine, *n.* (*Mediæval Myth.*) A beautiful nymph or fairy, whose history occupies a large space in the popular superstitions of France. She is represented as the daughter of Helmas, king of Albania, and the fairy Persine; and as having married Raymond, count of Toulouse, who built the magnificent castle of Lusignan (originally called Lusineem, the anagram of Melusine). Like most of the fairies of that period, she was doomed to a periodical metamorphosis, during which the lower part of her body assumed the form of a fish or a serpent. On these occasions she exerted all her ingenuity to escape observation; but having been once accidentally seen by her husband in this condition, she swooned away, and soon afterwards disappeared, none knew whither. But her form is said to be seen from time to time on the tower of Lusignan, clad in mourning, and uttering deep lamentations; and her appearance was universally believed to indicate an impending calamity to the royal family of France.

Mel'ville, ANDREW, a Scottish theologian and reformer, B. 1485. After completing his education at St. Andrew's University, he was appointed, in 1574, principal of Glasgow College, and took a leading part in the establishment of Presbyterianism in Scotland. In 1582, being then principal of St. Mary's College, St. Andrew's, *M.* was the first to sign the well-known Remonstrance of the Presbyterian divines against the royal policy in ecclesiastical affairs. He was then summoned before the Privy Council on a charge of treason, and sentenced to imprisonment. He evaded the latter, however, by escaping into England, returning to Scotland, eventually, in 1585. In 1595, *M.* was elected Lord Rector of St. Andrew's University. After the accession of James I. to the English throne, *M.* having indited a biting epigram upon certain ceremonies of divine worship at Whitehall, he was brought before the privy council, found guilty of *scandalum magnatum*, and committed to the Tower of London, whence he was released in 1611, on the intercession of the French ambassador. Expatriated to France, *M.* was made professor of theology at the university of Sedan. D. at Sedan, 1622.

Mel'ville, HERMAN, an American author, B. of Scottish descent, in the city of New York, 1819. In his 18th year, young *M.* shipped as ordinary seaman in a voyage to England, and after his return home, he, in 1841, engaged in a whaler, on a voyage to the South Seas. In 1842, he abandoned his ship at one of the Marquesas Islands, and was held by the natives in captivity for 4 months. Rescued from this condition by a Sydney whaler, he successively visited Tahiti and the Sandwich Islands, finally shipping at Honolulu as an ordinary seaman in the U. S. frigate *Constitution*, in which vessel he returned to Boston, reaching there toward the close of 1844. Shortly after his return he made his début as an author by the publication of *Typee*, — a narrative of his adventures in the Marquesas Islands, — brought out simultaneously in London and New York. This work being favorably received, others of a similar stamp

followed; as, *Omoo, a Narrative of Adventures in the South Seas; Mardi, and a Voyage Thither; Redburn; White Jacket, or the World in a Man-of-War; Moby Dick, or the Whale.* Died Sept. 28, 1891.

Mel'ville, in *Louisiana*, a post-town of St. Landry parish. *Pop.* (1897) 450.

Mel'ville, an island off the N. coast of Australia, in Lat. 11° 28′ S., Lon. 131° E. It is 70 m. long, and 30 broad.

Melville, an island of British N. America, in the Arctic Ocean; Lat. 75° N., Lon. 110° W. It was first discovered by Captain Parry, in 1819, and the coast afterwards (in 1851) partly explored by Lieut. McClintock.

Mel'ville Bay, an inlet of Baffin's Bay, on the N.W. coast of Greenland; Lat. 76° N., and Lon. abt. 62° W.

Mel'vin Village, in *New Hampshire*, a post-village of Carroll co., abt. 45 m. N.E. of Concord.

Mem'ber, *n.* [Fr. *membre;* Lat. *membrum.*] A part or portion of a whole body; a limb; a part appendant to the body of an animal. — Part of a discourse, or of a period or sentence; a clause; a part of a verse. — An individual of a community or society, secular or religious; a representative in a legislative body; one of a body corporate; as, a *member* of Congress, Parliament, &c.

(*Arch.*) A subordinate part of a building, as a cornice.

(*Math.*) One of the parts of an equation which are separated by the sign of equality.

Mem'bered, *a.* Having limbs.

(*Her.*) Noting the beak and legs of a bird, when of a different tint from the body.

Mem'bership, *n.* State of being a member. — Community; society; companionship.

Mem'brane, *n.* [Fr.; Lat. *membrana*, from *membrum*, a member.] (*Anat.*) The expansion of any of the tissues of the body into a thin layer. Anatomists generally enumerate three kinds of membranes; namely, the *mucous*, the *serous*, and the *fibrous*. The mucous membranes are those which line the canals of the body which are exposed to the action of air or foreign matters, such as the lining of the nose, trachea, œsophagus, stomach, intestines, &c. The serous membranes form the lining of the sacs or closed cavities, as of the chest, abdomen, &c. The fibrous membranes are tough, inelastic, and of a tendinous character; such as the dura mater, the pericardium, the capsules of joints, &c

Membrana Tympani. [Lat.] The membrane which separates the internal from the external ear. — The drum of the ear. See EAR.

Membrana'ceous, Membra'neous, Mem'branous, *a.* Belonging to, or resembling, a membrane; consisting of membranes.

(*Bot.*) Thin and soft, like a membrane.

Membraniferous, *a.* Having membranes.

Membra'niform, *a.* [Fr. *membraniforme.*] Of the form of a membrane.

Membranol'ogy, *n.* The science relating to membranes.

Mem'el, a seaport-town of Prussia, dist. of Königsberg, on the Baltic, on the N.E. side of the entrance to the great salt lake or lagoon called the Frische Haff, 50 m. N.W. of Tilsit, and 74 N.E. of Königsberg; Lat 55° 42′ 15″ N., Lon. 21° 5′ 20″ E. *M.* is divided into Old Town, New Town, and Frederick's Town, and is strongly fortified. The harbor is spacious and safe, and capable of accommodating 300 vessels. *Manuf.* Woollens and soap. Ship-building is carried on to a considerable extent. *M.* is the great entrepôt of the country watered by the Niemen. *Pop.* 20,000.

Memen'to, *n.; pl.* MEMENTOS. [Lat., from *memini*, remember.] A hint, suggestion, notice, or memorial to awake memory.

Mem'mingen, a town of Bavaria, dist. of Suabia, on the Iller, 40 m. S.W. of Augsburg. *Manuf.* Woollen, cotton, and linen stuffs, hosiery, ribbons, oil-cloth, copper and iron wares. It has also an active trade in salt, corn, wool, &c., with Switzerland and Italy. *Pop.* 7,300.

Mem'non, *n.* (*Myth.*) A son of Eos (the morning) and Tithonis (=Titan, a name for the sun), represented in the legend as a son of Laomedon and brother of Priam. As Tithonis was a prince of Troy, his son, the Ethiopian *M.*, had to take part in the Trojan war, in which he was slain by Achilles; but his mythical character is again shown by the tears of morning-dew, which his mother sheds on his death, just as the big drops fall from the sky when Zeus weeps for the untimely fate of his son Sarpedon. At the intercession of Eos, Zeus raised *M.* from Hades to Olympus. The name *M.* is by some supposed to be a general appellation or epithet, Mei-amun, *beloved of Ammon.* The famous statue called by the Greeks *M.*, in the sepulchral quarter of Thebes called *Memnoneia*, which possessed the real or imaginary property of emitting a sound like that of a harp at the rising of the sun, is supposed to have been in the building called by Champollion the *Rhamesseion*, from its reputed founder Rhameses, or Sesostris, of which the stupendous ruins are still seen between Medinet-Habou and Kournah. The Vocal *M.* (Fig. 911) is the northernmost of two colossal sitting figures, each of whom is about 60 feet high, including the pedestal upon which they rest. Upon the Vocal *M.* there are 72 inscriptions in Greek and Latin by the emperor Hadrian, the empress Sabina, several governors of Egypt, and distinguished travellers, testifying that they have visited the *M.* and heard his voice at sunrise.

Memoir, (*mem-wor′*,) *n.* [Fr. *memoire*, from Lat. *memoria*, faculty of remembering, memory, from *memor*, mindful.] (*Lit.*) A short biographical notice of an individual, or a short essay on a particular subject (especially to accompany and explain a map, view, fac-simile, or other representation of any object in art, &c.); — more especially, a paper read before a scientific or literary society.

—*n. pl.* (*Lit.*) A species of history, written by persons who had some share in the transactions they relate; answering to what the Romans called *commentarii* (commentaries). They furnish the reader with interesting individual anecdotes, and often expose the most secret motives, or disclose the whole character of events, which may be barely hinted at in books of general history. These qualities, when the writer is to be relied on for his veracity and judgment, give them an advantage over every other kind of historical writings, since they satisfy the mere reader for amusement, as well as the student; but when undertaken by a person whose love for the wonderful is greater than his regard for truth, their tendency is in the highest degree pernicious. The French appear to excel all other nations in characteristic and piquant memoirs. — The name is also applied to the journals and proceedings of a society; as, the *Memoirs* of the Historical Society.

Mem'oirist, *n.* A writer of memoirs.

Memorabil'ia, *n. pl.* [Lat., from *memorabilis.*] Things worthy of record or remembrance.

Memorabil'ity, *n.* The condition of being memorable.

Mem'orable, *a.* [Fr. *mémorable;* Lat. *memorabilis*, from *memoro*, to bring to remembrance.] Worthy to be remembered; signal; extraordinary; remarkable; famous; illustrious; celebrated.

Mem'orableness, *n.* The state or quality of being memorable.

Mem'orably, *adv.* In a manner worthy to be remembered

Memoran'dum, *n.;* Eng. *pl.* MEMORANDUMS; Lat. *pl.* MEMORANDA. [Lat., from *memoro, memoratus*, to bring to remembrance.] Something to be remembered; a note to help the memory.

(*Law.*) An informal instrument recording some fact or agreement; so called from its beginning when it was made in Latin. It is sometimes commenced with this word, though written in English; as, "*Memorandum*, that it is agreed;" or it is headed by the words, "Be it remembered that," &c. The term *M.* is also applied to the clause of an instrument.

(*Insurance.*) A clause in a policy limiting the liability of the insurer.

Memo'ria, *n.* [Lat.] Memory.

Memo'rial, *a.* [Fr. *mémorial*; Lat. *memorialis*, from *memoria*, memory.] Pertaining to memory or remembrance; preservative of memory. — Contained in memory; as, *memorial* possessions.

—*n.* Anything that serves to keep in memory; a monument; a remembrancer. — A written representation of facts, made to a legislative or other body, as the ground of a petition, or a representation of facts accompanied with a petition.

M. of St. Helena. (*Lit.*) The name of a celebrated book written by the Comte de Las Casas, giving an account, day by day, of the life of Napoleon I. at St. Helena.

Memo'rialist, *n.* One who writes a memorial.

—One who presents a memorial to a legislative or any other body, or to a person.

Memo'rialize, *v. a.* To present a memorial to; to petition by memorial.

Memor'iter, *adv.* [Lat.] By memory; by heart.

Mem'orize, *v. a.* To record; to cause to be remembered. — To commit to memory; to learn so as to be able to repeat from memory.

Mem'ory, *n.* [Fr. *mémoire;* Lat. *memoria;* Gr. *mneme.*] The power or capacity of having what was once present to the senses, or the understanding, suggested again to the mind, accompanied by a distinct consciousness of past existence; remembrance; reminiscence; recollection.

(*Phil.*) *M.* is one of the most important of all our faculties. It is obviously the great foundation of all mental improvement, being that which enables us to treasure up for future use the knowledge we acquire, and without which no advantage could be derived from the most enlarged experience. Memory, perhaps more than any other faculty of the mind, is dependent upon the physical condition of the body. We may smile as we read in the old writers on memory, of plasters and powders and perfumes for strengthening the memory; but even at the present day, Sir B. Brodie has said that it is possible, that, by accurate observation, the proper means may be discovered of preserving that temperament of the brain which is favorable to memory; all indicating a belief in the dependence of memory upon physical conditions. The term memory implies two things; namely, *retention* and *reproduction* — the capacity of retaining knowledge, and the power of recalling it to our thoughts when we have occasion to use it. These vary greatly in different individuals, some having good retention but a bad recollection; others, a good recollection but a bad retention. Though apparently so different in character, yet we are inclined to regard them as the result of one principle — that of association; the man of recollection having his ideas so connected that the one readily calls up the other; the man of retention having them so intermixed and interwoven that it is only after a time or by some lucky chance that the right idea comes up. Indeed, so far as retention is concerned, it is held by many philosophers that whatever has once been the object of consciousness is ever after retained, its being recollected or not depending entirely upon the laws of association. In support of this doctrine, we have numerous instances of persons recollecting, in the delirium of a fever, things which had long since been forgotten, or even speaking in a language — that of their childhood — which had otherwise long passed from the mind. Not the least singular feature of memory is the way in which it is affected by certain diseases of the brain. Sometimes the patient loses the whole stock of his knowledge acquired previous to the disease, the faculty of acquiring and retaining new information remaining entire. Sometimes he loses his memory of words and retains that of things, or he may retain his memory of nouns and lose that of verbs, or *vice versâ*. But, perhaps, the most singular case — and it is not very uncommon — is when one language is taken entirely out of his retention without affecting the memory of others. Memory, then, as we have said, depends upon the association of ideas, by which one thought, feeling, or emotion tends to recall or reproduce another. Ideas that have been in the mind together, or in close succession, ever after manifesting a tendency to recall or reproduce one another. Hence it follows, as a general rule, that the closer two or more ideas are brought together in the mind, the more strongly will they be associated, and the greater will be their power of reproducing one another. Where any interval takes place between ideas which we wish to associate together, irrelevant ideas will be apt to intervene and weaken their adhesion. Hence the importance of *M.* to sound health and a mind free from anxieties. The objects of *M.* are either things external to us, or internal states and modes of consciousness. There are different kinds of memory — as for figures, names, places, events, and so on; some persons being distinguished for one kind of memory, others for another. The circumstances which have a tendency to increase the retention or recollection of anything are chiefly vividness, repetition, and attention. Ideas that make a vivid impression on the mind are readily recalled, as also, on the same principle, those to which the attention has been specially directed. The longer an idea is before the mind, or the more frequently it is recalled, the better it is remembered. See MNEMONICS.

Mem'phian, *a.* Pertaining to Memphis; a term expressive of something very obscure; a sense borrowed from the intellectual darkness of Egypt in the time of Moses.

Mem'phis. [Egyptian *Menfis*, or *Mennofre*, good abode.] (*Anc. Geog.*) A celebrated city of Egypt, on the W. bank of the Nile, 10 m. S. from the modern city of Cairo; Lat. 30° 6′ N., Lon. 31° 15′ E. Herodotus ascribes the foundation of this place, the *Moph* of the Old Testament, to Menes, first king of Egypt; B. C. 3893, according to Lepsius; B. C. 3643, according to Bunsen; B. C. 2412, according to Hales; and B. C. 2320, according to Wilkinson. Some fix as the date of its foundation B. C. 2188; and Diodorus Siculus ascribes it to Uchoreus, one of the successors of Osymandyas, king of Thebes, B. C. 2100. In order to reconcile the discrepancy in these statements, some historians ascribe its foundation to Menes, and its completion and extension to Uchoreus, who first made it a royal city. Memphis was taken by the Persians under Cambyses, B. C. 525, when many of its temples and palaces were destroyed. Alexander III. (the Great), who wintered here B. C. 332, did it much injury by founding Alexandria. Memphis, made capital B. C. 272, was taken by Antiochus Epiphanes B. C. 171, and was visited and restored by Septimius Severus, in 202. In the 7th century it passed under the dominion of the Arabs, and gradually fell into decay, Cairo being built from its ruins. The Arabian traveller Abd-al-latif visited it in the 12th century. The ruins were discovered and excavated by M. Mariette, between 1850 and 1854. The most celebrated of its sacred buildings were, the temple of Ptah, or Hephæstos, — the elementary principle of fire, — said to have been co-eval with the foundation of the city, and improved and beautified by several monarchs: the temple of Proteus, said to have been founded by the Phœnicians about the æra of the Trojan war; the temple of Isis, founded at an early period, and completed by Amasis B. C. 564; and the temple of Apis, called the cathedral of Egypt, founded by Psammetichus. The position of Memphis was such as to command the whole inland trade of Egypt, ascending or descending the Nile; it was the chief seat of learning and religion in Egypt. It ceased to be the metropolis of Egypt on the foundation of Alexandria, B. C. 332. It soon after fell into such obscurity and decay, that, till lately, even its site, overwhelmed with drifted sand, was disputed.

Memphis (*mĕm′-fis*), in *Alabama*, a post-village of Pickens co., on the Tombigbee river.

Memphis, in *Indiana*, a post-village of Clarke co., about 15 m. N. of Louisville, Ky. *Pop.* (1897) 540.

Memphis, in *Michigan*, a post-village of Macomb co., on F. & P. M. R. R. *Pop.* (1895) 614.

Memphis, in *Missouri*, a post-town, cap. of Scotland co., about 130 m. N. of Jefferson city. *Pop.* (1897) 1,890.

Memphis, in *Tennessee*, a city and port of entry of Shelby co., on the Mississippi river, about 209 m. W.S.W. of Nashville. It is beautifully situated on the Fourth Chickasaw Bluff, 30 feet above the highest floods; and is one of the most important and populous cities on the river. The city is well built, and contains some very fine edifices. The river is navigable for the largest vessels, and the admirable facilities afforded to trans-shipment by the long landings at the foot of the bluff render it the principal depôt for the cotton raised in the neighboring cos. *Pop.* (1897) 76,000. On June 6, 1862, a Confederate fleet of 8 vessels, under the command of Com. Montgomery, was attacked within sight of the city by a Union fleet of 14 vessels (5 gun-boats and 9 rams), under Colonel Ellet. Four of the Confederate vessels were sunk, and three run on shore and abandoned. The National loss was comparatively trifling; — one ram, the *Monarch*, was disabled, and several other vessels more or less injured, but not a single man, it is said, was killed.

Memphrem'agog, a lake of N America, extending from Orleans co., Vermont, N. into Canada. It is about

30 m. in length, and from 1 m. to 4 m. in breadth. It receives the surplus waters of several small lakes, and discharges its own by the St. Francis River into Lake St. Peter, an expansion of the St. Lawrence River.

Men, *n. pl.* of MAN. [See MAN.] Two or more males: individuals of the human race; males of a brave spirit; persons; people; mankind.

Menac'anite, *n.* (*Min.*) A variety of Titaniferous iron occurring in grains and small angular fragments of an iron-black color in Cornwall, in the bed of a stream near Menaccan.

Men'ace, *v. a.* [Fr. *menacer*, from Lat. *minor, minatus*, to threaten.] To threaten; to express or show a disposition or determination to inflict punishment or other evil upon. — To show or manifest the probability of future evil or danger to.

—*n.* [Fr. *menace;* Lat. *minatio.*] A threat or threatening; the declaration or show of a disposition or determination to inflict an evil; the show of a probable evil or catastrophe to come.

Men'acer, *n.* A threatener; one who intimidates or menaces.

Men'acingly, *adv.* In a threatening manner.

Men'ado, a town in the N. part of Celebes, cap. of an important and rich Dutch residency. The town is neatly built, has a church, a school for the children of Europeans, and others for those of the natives. *Pop.* of the residency, 240,000; of the town, 7,000.

Menage, (*men-azh',*) *n.* [Fr. *ménage.*] A collection of brute animals; a menageris. — Horsemanship; manege.

Menagerie, (*men-azh'er-y,*) *n.* [Fr. *ménagerie.*] A yard or place in which wild animals are kept. — A collection of such animals.

Men'agogue, *n.* (*Med.*) The same as EMMENAGOGUE.

Men'ahem. (*Script.*) The 16th king of Israel, previously general of the army of Zachariah. He was at Tirzah when he heard of his master's murder; and immediately marching against Shallum, who had shut himself up in Samaria, he captured and slew him, and then ascended the throne. He reigned in Samaria ten years, 771–760 B.C., and was a tyrannical and cruel idolater. He seems to have died a natural death; but his son and successor, Pekahiah, reigned only two years, and was the last of that dynasty, (2 *Kings* xv. 13–22.)

Menai Strait, (*mā'nă,*) a strait or channel of N. Wales, separating the island of Anglesea from the co. of Caruarvon. It runs N.E. and S.W. about 14 miles, varying in width from 200 yards to 2 miles. (See Fig. 419.)

Menal'len, in *Pennsylvania*, a post-township of Adams co.

—A township of Fayette co.

Menam', or **Meinam',** ("mother of waters,") a large river of S. Asia, rising in the table-land of China, and which, after a S. course of 800 m., traversing the centre of Siam, enters the Gulf of Siam by 3 mouths.

Menan'der, one of the most celebrated of the Greek comic poets, was born at Athens, 342 B.C., and is said to have drowned himself on account of the success of his rival Philemon, though some accounts attribute his death to accident, B.C. 291, in the harbor of the Piræus. He composed 108 comedies; but there are only a few fragments remaining of them. *M.* was the disciple of Theophrastus, and, like him, excelled in the delineation of character. He was also the friend of Epicurus, whose philosophy he adopted. He was self-indulgent to the degree of effeminacy, and of immoral habits. The plays of Terence are, for the most part, imitated or translated from Menander.

Fig. 1761. — MENANDER.

Men'ard, in *Illinois*, a W. central co.; *area*, about 320 sq. m. *Rivers.* Sangamon river, Salt creek, and several smaller streams. *Surface*, generally level; *soil*, fertile. *Cap.* Petersburg. *Pop.* (1890) 13,120.

Menash'a, in *Wisconsin*, an important city of Winnebago co., on 3 R. R. lines, 98 m. N.W. of Milwaukee. *Pop.* (1895) 6,154.

Mend, *v. a.* [Fr. *amender;* Lat. *emendo.*] To repair, as a breach; to amend; to supply a part broken or defective in anything.—To correct; to set right; to alter for the better; to restore to a sound state. — To help; to advance; to make better; to improve. — To hasten, accelerate, or quicken; as, to *mend* one's pace.

—*v. n.* To grow; to advance to a better state; to improve.

Mend'able, *a.* Capable of being mended.

Mendacious, (*men-da'shus,*) *a.* [Lat. *mendax*, from *mentior*, to lie.] Lying; false; deceitful.

Mendac'ity, (*-dăs-*) *n.* [Lat. *mendacitas.*] Deceit; untruth; habitual falsehood; lying.

Men'delssohn, MOSES, a celebrated Jewish philosopher, commonly called the "Socrates of the Jews," was b. of an honest but poor family, at Dessau, in 1729. He was bred to merchandise, but devoted himself to literature, in which he acquired a distinguished reputation. In 1742 he settled at Berlin, where subsequently he enjoyed the friendship of Lessing. In 1755, he published his first piece, entitled *Pope ein Metaphysiker;* it was written in conjunction with Lessing. His best known work is the *Phædon*, a Discourse on the Immortality of the Soul. He also wrote *Briefe über die Empfindungen; Morgenstunden; Jerusalem*, &c. At one time he was associated with Lessing, Ramler, Abbot, and Nicolai, in conducting a periodical work, entitled *Bibliothek der Schönen Wissenschaften.* He was remarkable for the philosophical mildness of his disposition, and for the excellence of his character; and he was esteemed by persons of the most opposite opinions. D. 1786.

Men'delssohn-Bartholdy, FELIX, a celebrated musical composer, born at Berlin, 1809, was the son of a rich banker, and the grandson of the above philosopher. The precocity of his talent surpassed even that of Mozart. Before he was 8 years of age, the accuracy of his ear, the strength of his memory, and, above all, his incredible facility in playing music at sight, excited the wonder of his teachers — Zelter and Berger. In his ninth year he performed at a public concert in Berlin, to the admiration of his audience. The following year the boy-artist accompanied his parents to Paris; and when he was 12 years old, he composed his pianoforte quartette in C minor, which is still found to be full of interest and originality. His first compositions were published in 1824. These were soon followed by many others, among which was an opera, called *The Marriage of Gamacho;* which, though betraying inexperience, has much character and many beauties. Three years afterwards he made a musical tour through Italy, France, and England; and gave, in London, his first symphony, and his overture to the *Midsummer Night's Dream*, which produced an electrical effect. In 1833, he was appointed to the directorship of the concerts and theatre of Düsseldorf, where, in 1835, he produced his great oratorio of *Paulus;* and 10 years afterwards he accepted the same office at Leipsic, where he died, 1847. As a composer, *M.* travelled over a wide field of art. But his genius, as it reached maturity, became more and more profound and lofty; and his two oratorios, *Paulus*, and *Elijah*, will form his most enduring monuments. His symphonies are ranked only second to those of Haydn, Mozart, and Beethoven. *M.* was singularly happy in every character and relation of life. Born to affluence and ease, he pursued art with an ardor and activity scarcely ever paralleled; and his artist-life was an unbroken career of triumph. As a man, he enjoyed the love and esteem of every one who knew him, so that it would scarcely be too much to say, that he had not an enemy in the world.

Mende, (*mend,*) a town of France, cap. of the dept. of Lozère, on the Lot, 48 m. E.N.E. of Rodez. *Manuf.* Woollen cloth called *serges de Mende. Pop.* 7,000.

Mend'er, *n.* One who mends or repairs.

Men'dez-Pin'to, FERDINAND, a celebrated traveller, b. in Portugal of a respectable family. He departed for the Indies in 1537, and, on the voyage, the ship was taken by the Moors, who carried her to Mocha, where he was sold for a slave; but after some adventures he arrived at Ormuz, and afterwards pursued his original object. In 1558 he returned to his native country, and published a very curious relation of his voyages, which was translated into French and English. Congreve, in his *Love for Love*, called *M.* "a liar of the first magnitude," and from that time his narrative was considered as a romance; but his good faith and veracity are now generally admitted.

Mend'ham, in *New Jersey*, a post-village and township of Morris county, about 7 m. W. by S. of Morristown.

Men'dicancy, *n.* State of being mendicant; beggary: a state of begging.

Men'dicant, *a.* [Sp. *mendicante;* Lat. *mendicans*, from *mendico.*] Begging; poor to a state of beggary.

—Practising beggary; as, a *mendicant* friar.

—*n.* A beggar; one who makes it his business to beg alms.

Men'dicants, *n. pl.* (*Eccl. Hist.*) A name formerly assumed by numerous religious associations in the Roman Church, which, carrying out the principle of religious poverty and self-humiliation to its fullest extent, made it a part of their profession to denude themselves of all property, whether real or personal, and to subsist upon alms. By a decree of the 2d council of Lyon, 1274, the mendicant orders were limited to four — the DOMINICANS, FRANCISCANS, CARMELITES, and AUGUSTINIANS, AUSTIN FRIARS, or AUGUSTINES, *q. v.*

Mendica'tion, *n.* The state or condition of being a mendicant; mendicancy.

Mendicity, (*men-dis'i-ty,*) *n.* [Sp. *mendicidad;* Lat. *mendicitas.*] State of begging; the life of a beggar.

Men'dip Hills, a range in the N. of the co. of Somerset, England. Length, 25 m. Height, 1,800 feet. It is noted for its lead and calamine mines, called *grooves*, which were in operation before the dawn of history.

Men'dipite, *n.* (*Min.*) A native oxychloride of lead found in the above mountains, in white crystalline masses, sometimes with a yellowish or reddish tinge.

Men'don, in *Illinois*, a post-village and township of Adams co., abt. 116 m. W. by N. of the city of Springfield.

Mendon, in *Iowa*, a village and township of Clayton county, about 100 miles north-north-east of Iowa City.

Mendon, in *Massachusetts*, a post-village and township of Worcester county, about 35 miles S.W. of Boston.

Mendon, in *Michigan*, a post-village and township of St. Joseph county, about 140 miles W. by S. of Detroit.

Mendon, in *New York*, a post-village and township of Monroe county, about 12 miles south-south-east of Rochester.

Mendon, in *Pennsylvania*, a post-village of Westmoreland co., abt. 14 m. S.W. of Greensburg.

Mendon, in *Utah*, a post-village of Cache co., about 10 m. S.W. of Logan.

Mendon, in *Vermont*, a post-township of Rutland co.

Mendocino, (*men-do-see'no,*) in *California*, a N.W. co., bordering on the Pacific Ocean; *area*, abt. 3,600 sq. m. *Rivers.* Eel, Russian, Big, Navarro, and Garcia rivers. *Surface*, mostly mountainous, the Coast Range Mountains forming the E. boundary. *Soil*, not generally fer-

Fig. 1762.—SHORE EROSION ON THE MENDOCINO COAST.
(From Winchell's *Sketches of Creation.*)

tile. In the W. part are dense forests of red-wood, similar, it is said, to the cedar of Lebanon, some of which attain a height of 300 feet, with a diameter (at base) of 20 feet. *Cap.* Uklah. *Pop.* (1890) 17,612.

—A post-town and port of the above co., on the Pacific Ocean, at the mouth of Big river, about 130 m. N.N.W. of San Francisco. *Pop.* 900.—A township of Sonoma co.

Mendo'ta, in *Illinois*, a city of La Salle co., on Ill. Cent. and Chic., Bur. & Quincy R.Rs., 84 m. W.S.W. of Chicago. *Pop.* (1897) 4,050.

Mendota, in *Minnesota*, a post-village of Dakota co., on the Minnesota river, about 7 m. above St. Paul.

Mendota, or FOURTH LAKE, in *Wisconsin.* See FOUR LAKES.

Mendota, in *Wisconsin*, a post village of Dane co., 5 m. N. of Madison. *Pop.* (1897) 680.

Mendoza, DIEGO HURTADO, (*men-do'tha,*) a distinguished Spanish statesman, soldier, and historian, born at Granada, 1503. He was employed by Charles V., in Italy, both as a diplomatist and general, with equal success. He at last fell under the displeasure of Philip II. of Spain, and in 1567 was banished. He spent his last years in literary labors, and wrote his great work, the *Guerra de Granada contra los Moriscos*, the noble truth and fearless impartiality of which prevented its publication for many years. *M.* was author of many poems, some of which were published in 1610, the year in which his History first appeared. D. 1575.

Mendoza, in the Argentine republic, a river which rises on the E. slope of the Andes, near the volcano of Aconcagua, and flowing N. for abt. 200 m., enters Lake Guanacache in abt. Lat. 32° 5′.

—A S.W. province adjoining Chili, and lying between Lat. 32° and 34° 30′ S., and Lon. 66° and 68° W.; *area*, 54,000 sq. m. *Rivers.* Mendoza, Bevedsro, Salado, and numerous less important streams, besides several considerable lakes. *Pop.* 58,000.

—A city, cap. of the above prov., on a slope of the Paramillo range, 2,891 feet above the sea-level, and about 55 m. E.S.E. of Aconcagua volcano; Lat. 32° 53′ S., Lon. 69° 6′ W. It is compactly built, contains several fine edifices, and commands considerable trade. *Pop.* 15,000.

Me'ne, he is numbered; TE'KEL, he is weighed; UPHAR'SIN, and they are divided. (*Script.*) The Chaldee words supernaturally traced on the wall at Belshazzar's impious feast, and significant of his impending doom. (*Dan.* v.) The astrologers could not read them, perhaps because they were written in antique Hebrew characters; still less could they explain, even if they had dared to do it. Daniel, however, received skill to understand, and courage to declare their awful meaning; and the same night witnessed their fulfilment.

Meneghi nite, *n.* [After the Italian professor *Meneghini.*] (*Min.*) A double sulphide of lead and antimony, discovered in the silver-lead mines of Bothino, Tuscany.

Menehould, (St.,) (*men'hoold,*) a town of France dept. Marne, on the Aisne, 25 m. N.E. of Chalons. *Manuf.* Glass. *Pop.* 4,500.

Menelaus, (*men-e-lai'us,*) one of the Greek heroes, a king of Sparta, brother of Agamemnon, and the unfortunate husband of the lovely but faithless Helen, whose flight with Paris, the youthful envoy from Priam, led

to the Trojan war. In the tenth year of the Trojan war, Helen, by perfidiously introducing Menelaus into the chamber of Deiphobus, obtained his forgiveness, and she returned with him to Sparta, after a voyage of eight years. He died some time after his return.

Menenius Agrip'pa. See AGRIPPA.

Me'nes. [Egyptian, the conductor.] The first king of the first Egyptian dynasty, who built Memphis, made foreign conquests, introduced luxury, and was devoured by a hippopotamus. His name marks a great chronological epoch, being placed by chronologists 3643, 3892 B. C., or even 5702 B. C. Stricter chronologists make his accession 2717 B. C.

Men'gite, *n.* (*Min.*) An iron-black colored mineral, occurring in short prisms in granite veins in the Ilmen Mountains, imbedded in albite. *Comp.* Zirconia, oxide of iron, and titanic acid.

Mengre'tians, *n. pl.* (*Eccl. Hist.*) A sect of the Greek Church.

Mengs, ANTON RAPHAEL, a distinguished painter, who has been called the Raphael of Germany, B. at Aussig, Bohemia, 1728. He studied under his father, who was painter to Augustus III., king of Poland, after which he went to Rome, where he was patronized by Charles III., king of Spain, for whom he executed a number of pictures. The most celebrated of these is the *Apotheosis of Trajan*, in the royal palace of Madrid. *M.* wrote several works on his art, which were translated into English, and D. at Rome, 1779.

Meng-Tse, (*i. e.* the teacher Meng,) a Chinese philosopher, B. in the beginning of the 4th cent. B C., in the present prov. of Shan-tung. *M.* is the greatest of the early Confucians. His conversations with rulers and state functionaries, with his disciples and acquaintances, form the *Hi-tsi*, the fourth of the four Books, the best translation of which is the Latin version of Stanislas Julien, 12 vols., Paris, 1824. The name of *M.* has been Latinized by the Jesuits into *Mencius* See KUNG-TU-TSE.

Menha'den, MANHADEN, HAADHEAD, MOSSBUNKER, *n.* (*Zoöl.*) A N. American fish of the Herring family, gen. *Atausa*, differing from the common herring in having a deep notch in the centre of the upper jaw.

Me'nial, *a.* [O. Fr. *meynat*, a menial, or *mesnie*, family, household.] Belonging to a retinue or train of servants; pertaining to the service of a household. — Low, with regard to office or employment.

—*n.* One of a train of servants; a domestic servant.

Men'ilite, *n.* (*Min.*) A brown and opaque variety of Opal, found in irregular nodules, which have sometimes a slaty structure in tertiary strata near Paris.

Menin, (*men'a,*) a fortified town of Belgium, prov. of W. Flanders, on the Lys, 6½ m. S.W. of Courtrai. *Manuf.* Table-linen, lace, and silk fabrics, soap, linseed and other oils. *Pop.* 9,500.

Menin'geal, *a.* Relating to the meninges, or merely to the *dura mater*.

Meninges, (*me-nin'jeez.*) *n. pl.* [Gr. *meninges*, from *meninx.*] (*Anat.*) The three membranes which envelop the brain — the *dura mater*, *aruchnoid*, and *pia muter*.

Meningi'tis, *n.* (*Med.*) Acute inflammation of the membranes of the brain and spinal marrow, particularly those of the *dura* and *pia mater*. Some physicians profess to be able to decide which of the three membranes of the brain is the seat of the inflammation, and have given the name *arachnitis* to inflammation of the arachnoid membrane; but the symptoms are almost precisely similar, whether the whole three or only one membrane is affected; and on a broad principle they are the same as those of inflammation of the brain. — See BRAIN.

Menis'coid, *a.* [Gr. *meniskos*, a crescent, and *eidos*, form.] Concavo-convex; crescent-shaped, as a meniscus.

Menis'cus, *n.*; *pl.* MENIS'CUSES. (*Opt.*) A lens convex on one side and concave on the other.

Menisperma'ceæ, *n. pl.* [Gr. *mene*, the moon, and *sperma*, seed.] (*Bot.*) The Moon-seed family, an order of plants, alliance *Menispermales*. — DIAO. Amphitropal seeds, and a large embryo in a moderate quantity of solid albumen. — They are trailing or climbing shrubs, with alternate, simple, and exstipulate leaves, and usually dicœcious flowers. The sepals, petals, stamens, and carpels have a ternary arrangement. The carpels are distinct, and supported on a gynophore. The fruits are drupaceous, curved around a central placental process, and 1-celled; seed solitary, curved; embryo curved. The plants of this order are chiefly found in the forests of the tropical regions of America and Asia. None occur in Europe. They are remarkable for their narcotic and bitter principle. The order includes 44 genera and 302 species. — See COCCULUS, and COCCULUS INDICUS.

Menisper'males, *n. pl.* (*Bot.*) An alliance of plants, sub-class *Dictinous exogens*. — DIAO. Monodichlamydeous flowers, superior disunited carpels, and embryo surrounded by abundant albumen. — The alliance is divided into six orders, viz., MONIMIACEÆ, ATHEROSPERMACEÆ, MYRISTICACEÆ, LAURIZABALACEÆ, SCHIZANDRACEÆ, and MENISPERMACEÆ, (*q. v.*)

Menisper'mic Acid, *n.* (*Chem.*) An acid obtained from the berries of the *Cocculus Indicus* when it exists in combination with *picrotoxin*.

Menisper'mine, *n.* [Fr.; Lat. *menispermum.*] (*Chem.*) See COCCULUS INDICUS.

Men'iver, *n.* (*Zoöl.*) Same as MINEVER, *q. v.*

Men'no, in *Pennsylvania*, a post-township of Mifflin co.

Men'nonites, *n. pl.* (*Eccl. Hist.*) A sect of Anabaptists founded by Menno, surnamed Simonis, in 1536. Born at Witmarsum, in Friesland, in 1505, and commencing life as a Roman Catholic, he became a convert to the Anabaptists in 1536, and was allowed to settle in the United Provinces by William I., Prince of Orange, toward the close of the 16th century. Menno died in Holstein, Jan. 13, 1561. In 1630 and 1649, conferences of the Anabaptists of Germany, Flanders, and Friesland were held at Amsterdam, when the rigorous laws of their founder were mitigated. Persecuted in Europe since their foundation till the beginning of the present century, they were obliged to fly from one country to another; and many of them, on the invitation of William Penn, transported themselves and families to Pennsylvania as early as 1683. Those who came in that year, and in 1698, settled in Germantown, where they erected a school and meeting-house in 1708. In 1709, other families from the Palatinate emigrated to America, and settled in Pequea Valley, Lancaster co. Their religious views were at an early date, and since, misrepresented, and no small degree of prejudice was excited against them. To allay such prejudices, they had the *Christian Confession of Faith*, &c., containing the chief doctrines held by them, translated into English, and printed in Philadelphia, in 1727. In 1811, a number of *M.* separated from the main body, which they believed to have fallen off from the original faith, and founded the Reformed Mennonite Society. There is also another body of rigid *M.*, called the *Omish* or *Amish* Church, after their founder Jacob Amen, who was a Mennonite preacher in Switzerland in the 17th century; or *Hooker M.*, because they wore hooks on their clothes instead of buttons. The doctrines and usages of the *M* are generally alike with those of the other Baptist Churches; the chief difference consisting in their being formally averse to oaths, to war, and to capital punishment, and in their mode of administering baptism — not by immersion, but by sprinkling. They observe the ordinance of feet-washing, and forbid their members to be married to any except believers. The first *M.* came to America in 1683. At present (1897) they number 41,500 in the United States.

Menobran'chus, *n.* (*Zoöl.*) A genus of fishes, family *Sirenidæ*, having the head and mouth large, two spiracles on each side of the neck, and these covered with three branchial tufts; tail compressed; feet four, and four-toed. To this genus belongs the Mud-puppy of lakes Erie and Champlain, 12 inches long, and considered by fishermen as poisonous.

Menolo'gium, Menol'ogy, *n.* [Fr. *ménologe*, from Gr. *mēn*, month, and *logos.*] A register of months. (*Gr. Church.*) A calendar of the diurnal lives of the saints.

Menom'inee, in *Illinois*, a post-village and township of Jo Daviess co., about 9 m. W. N. W. of Galena.

Menom'inee, in *Michigan*, an extreme S. co. of the Upper peninsula, adjoining Wisconsin on the S.W., and washed by Green Bay on the S. E.; *area*, about 1,041 sq. m. *Surface*, generally level; *soil*, moderately fertile. Mining of iron ore and lumbering are the chief industries. *Cap.* Menominee. *Pop.* (1894) 23,736.

—A city, cap. of the above co., on Green Bay, 70 m. S. by W. of Escanaba. *Pop.* (1894) 12,582.

Menom'onie, in *Wisconsin*, a small river rising in Washington co., and flowing into the Milwaukee river at Milwaukee.—Another river, in the N.W. part of the State. See RED CEDAR RIVER.

—A city, cap. of Dunn co., on 2 R. R. lines, 25 m. W. by N. of Eau Claire; has very large lumber interests and a variety of manufacturing industries. *Pop.* (1895) 6,198.

—A township of Waukesha co.

Menorrhagia, (*-rā'ji-a.*) *n.* (*Med.*) An excessive monthly flux; an immoderate flow of the menses.

Menos'tasis, Menosta'tion, *n.* [Gr. *mēnes*, menses, and *istanai*, to stand.] (*Med.*) Suppression of the menses.

Menouf, (*me-noof',*) a town of Lower Egypt, 30 m N. W. of Cairo. *Manuf.* Mats, and there are indigo works.

Men'ow, *n.* (*Zoöl.*) Same as MINNOW, *q. v.*

Men'sa, *n.* (Lat.) A table.

A mensa et thoro. [Lat., from table and bed.] (*Law.*) A partial divorce which does not dissolve the marriage, and does not change the relation of the parties as to property; its only effect being in the facility granted to the parties to live apart until they mutually come together again, in which case no new marriage is required — the reconciliation, by itself, annulling the sentence of separation. In England this partial divorce is only granted for adultery or cruelty. In this country it is generally granted also for wilful desertion, and, in some States, for other causes.

Men'sal, *a.* [Lat. *mensalis.*] Pertaining to, or occurring at, the table.

"Conversation either mental or *mensal*." — *Richardson.*

—[From Lat. *mensis*, month.] Monthly; happening once in the month.

Mense'ful, *a.* An English provincialism for hospitable; urbane; disposed to civility.

Mense'less, *a.* Destitute of hospitality or good manners. (Prov. Eng.)

Menses, *n. pl.* (*Med.*) The Catamenia, a natural healthy secretion of the uterus, to which that organ is subject, usually from the age of puberty to the 44th or 48th year of age; though there are many cases in which, from precocity, certain habits of body, and other causes, it begins much earlier, and continues even as late as 50 years of age; in others, again, it commences early and ceases at an equal premature period. The age at which the catamenia begins and terminates varies also considerably according to the climate in which women are born and live, the period of puberty occurring much earlier in warm countries than with women of northern latitudes. The distinctive feature of this sanguineous secretion is that it does not contain fibrin, and consequently never coagulates. The purpose it serves in the system is to keep the womb in a state of active health during the most vigorous years of life. Until this periodic discharge has been established, the womb is passive, and becomes so again when the function has finally ceased, the female from that period being said to be past bearing. So necessary is the menstrual secretion to the health of the female, constitutionally and locally, that if from any cause its first appearance should be prevented, or if, after being once established, it should be suppressed or retained, the system immediately suffers, and often very seriously, till the natural drain is again established. See Harvard University prize essay, *Rest for Women in Menstruation*, by Dr. Mary P. Jacoby. N. Y., 1876.

Men'strual, *a.* [Fr. *menstruel*; Lat. *menstrualis*, from *mensis*, a month.] Monthly; happening once a month; lasting a month; as, the *menstrual* orbit of the moon. — Pertaining to a menstruum.

(*Astron.*) Forming a complete monthly cycle of changes; having reference to the moon's position with regard to the earth and sun; as, the *menstrual* argument of latitude.

Men'struant, *a.* Subject to monthly flowing.

Men'struate, *v. n.* To discharge the menses.

Menstrua'tion, *n.* The discharge or flowing of the menses; catamenia; state or period of menstruating.

Men'strous, *a.* [Lat. *menstruus*; Fr. *menstreux.*] Fluxing the catamenia, or monthly menstrual discharge. — Catamenial; having reference to women's courses.

Men'struum, *n.*; Eng. *pl.* MENSTRUUMS; Lat *pl.* MENSTRUA. [From. Lat. *mensis*, month; the old chemists supposing that the moon had great influence in the preparation of dissolvents.] (*Chem.*) A solvent; any fluid or subtilized substance which dissolves a solid body.

"All liquors are called *menstruums* which are used as dissolvents." *Quincy.*

Mensurabil'ity, *n.* Capability of being measured.

Men'surable, *a.* [Sp., from Lat. *mensura.* See MEASURE.] That may be measured; measurable.

Men'sural, *a.* [Lat. *mensuralis.*] Relating or pertaining to measure.

Mensura'tion, *n.* [Fr., from Lat. *mensura*, measure.] (*Geom.*) That art or science which treats on the measurement of the surfaces, areas, and solidity of different figures or bodies. As mensuration, properly considered, embraces geometry and trigonometry, on which subject separate articles will be found given, the present article will be only devoted to the consideration of a few simple formulas which relate more particularly to arithmetical mensuration, if the science can be so designated. Any quantity is always measured by some other quantity of the same kind, of a known magnitude, called the *measuring unit*. Thus, for example, a line is measured by a straight line of a known length, as 1 inch, 1 foot, 1 yard, and so on. In like manner a plane surface is measured by a *square*, of which the side is 1 inch, 1 link, 1 foot, &c.; and the number of such squares that any plane surface is found to contain is called the *area*, or *content*, of the surface in question. The area of a parallelogram, or rectangle (see GEOMETRY), is found by multiplying the height by the length. Thus, if we want to find the area of a piece of wood 10 inches long and 5 wide, we multiply 5 by 10, and the content will be 50 *square* inches. In the mensuration of land, the unit of measure is generally the link, in order to render the result less intricate, by means of the Imperial chain. Thus, if the content of a piece of ground 575 links long, by 425 links broad, is desired to be known, 575 is multiplied by 425, and the result is 244,375 links. But 100,000 square links are equivalent to an acre; and, consequently, dividing by that number, we find that the field contains 2·44375 acres, the decimal of which, on being reduced, will be found to contain 1 rood, 31 perches; therefore the field contains 2 acres, 1 rood, 31 perches. The area of a triangle is found by multiplying the base by half the perpendicular height, and the product will be the area. The reason of this may be very clearly thus deduced: The area of every parallelogram has been shown to be equal to its length multiplied by its breadth or height; and it is well known that every parallelogram is double a triangle of the same height or the same base; consequently, the area of a triangle is equal to half the product of its base and height. To find the area of any quadrilateral or four-sided figure, it is only necessary to divide it into two triangles, and by proceeding according to the rule last given, the result will be obtained. The area of a regular polygon is found by multiplying half the perimeter by the perpendicular, drawn from the centre to one of the sides, and the product will be the area of the polygon. The following table, which is usually given in works on this subject, will be found extremely useful, as it will save the complex calculation which would otherwise be required. In order to use it, multiply the square of a side of any regular polygon by the corresponding area in the table, and the product will be the area of the polygon in question.

Name of Polygon.	*No. of Sides*	*One-half angle of Polygon.*	*Area when the side is 1.*	*Perpendicular when the side is 1.*
Equilateral Triangle	3	30°	0·4330127	0·2886751346
Square	4	45°	1·	0·5
Pentagon	5	54°	1·7204774	0·6881909602
Hexagon	6	60°	2·5980762	0·8660254038
Heptagon	7	64 2/7°	3·6339124	1·0382606984
Octagon	8	67½°	4·8284271	1·2071067812
Nonagon	9	70°	6·1818242	1·3737387097
Decagon	10	72°	7·6942088	1·5388417686
Undecagon	11	73 7/11°	9·3656399	1·7028436194
Dodecagon	12	75°	11·1961524	1·8660254038

For example: what is the area of a pentagon whose side is 20 feet? We find from the table that the area of a pentagon whose side is 1 foot equals 1·7204774; therefore, by multiplying this number by 20^2, or 400, we find the area will be 688·1909 feet,— the answer of the question. With regard to the circle, it has been shown, in art. GEOMETRY, that the circumference is nearly equal to the diameter multiplied by 3·141159, &c.; and this must be remembered when we want to find the area or surface of a circle; the rule for obtaining which is as follows:—1. Multiply half the circumference by the radius, and the product will be the area. 2. Multiply the square of the diameter by ·7854, and the result will also be the area. 3. Multiply the square of the circumference by ·0795775, and the product will likewise be the area. By any of these rules the result arrived at will be true, and the area of the circle be obtained. The solid content of a rectangular figure is obtained by multiplying together its length, height, and breadth. Thus the solid content of a cube 3 feet long, 4 high, and 2 broad, will be 3×4×2=24 solid feet. The solidity of a pyramid or cone is found by the multiplication of the area of the base into the perpendicular height, and taking one-third of the product. The area or surface of a sphere, or solid circle, is obtained by multiplying its circumference by its diameter; thus, the surface of a sphere whose diameter is 36 inches will be 36×3·1415926=4071·504 sq. inches. The total content of a globe or sphere is found by multiplying,—1, the cube of the diameter by 0·5236; or, 2, by multiplying the surface or area by one-sixth of the diameter. Thus, the solidity of a sphere whose diameter is 36 inches, and whose area in that case has been just shown to be 4071·504 square inches, would be 4071·504×$\frac{1}{6}$36=4071·504×6=24429·024 solid inches; or, by the first rule given, will be 36^3×·523592, &c. = the same as before, 24429·024 solid inches. The method of measuring land, briefly touched upon at the commencement of this article, will be found fully given under the head of SURVEYING. In artificers' work there are many varieties of measurement used, although the usual calculations on the same are brought out by duodecimal multiplication. In order to find the solid content or squared timber, the mean breadth is multiplied by the mean thickness, and the product by the length; the result being the solid content. In round or unsquared timber, the content is obtained by multiplying the square of a quarter of the mean circumference, or of the mean quarter girth by the length. When a tree tapers regularly, according to writers on the subject, the girth may be taken at the middle for the mean girth, or it may be taken at both ends, and half the sum will be the mean girth. When a tree tapers irregularly, however, that is to say, when it is thick in some places and small in others, the girth may be taken at the ends and at equal intervals; in such cases, then, half the sum of the extreme girth, added to the intermediate girths, and then divided by the number of intervals between them, will be the *mean girth* required. When hard-wood trees are sold by the cubic foot while growing, along with the body of the tree, only such of its branches as are 4½ inches or more in quarter girth are measured; if the purchaser has to pay for the cutting down of the trees, then he is generally allowed the wood from the branches below that size to meet his expenses. With reference to masonry, brick-work is measured by the *square rod* in England, containing 272¼ square feet. When the thickness of a wall contains the length of one brick and the breadth of another, that is to say, when it is about 14 inches, it is reckoned of standard thickness, and it is paid for by the *rod* in *square* measure. Painters' work is paid for by the square yard; but in mouldings and panellings of lines and shades, by the lineal foot. The measurement of casks, or of substances liable to excise duties, is termed gauging. The content of a cask is usually calculated by the measurement of its length, and the diameter of its middle and end. The rule which is generally applied is as follows:—Multiply the length of the cask by the sum of the squares of the bung and head diameters, and twice the middle diameter, and the whole product of these numbers by ·000472. For instance, suppose the gauge of a cask whose bung and head diameters are respectively 32 and 24, the middle diameter being 30·2, and the length of the cask being 40, is required. Then proceeding according to the above formula, $40 \times [(42)^2 \times (24)^2 \times (2 \times 39·2)] \times ·000472 = 99·1$ gallons, the answer sought. It would be impossible, within the narrow limits of the present article, to dilate at length upon the subject of mensuration, or even to furnish the reader with a comprehensive *précis* of the matter embraced under this designation.

Men'tal, *a.* [Fr., from Lat. *mens, mentis;* Sansk. *mâti,* the mind.] Relating or pertaining to the mind: existing in the mind; performed in the mind; intellectual; ideal; as, the *mental* faculties, *mental* operations, *mental* arithmetic, &c.

Men'tal, *a.* [From Lat *mentum,* the chin.] Belonging or having reference to the chin; as, the *mental* region.

Men'tally, *adv.* Intellectually; in the mind; in idea; in thought or meditation.

Mentchikoff, Menzikoff, or **Menschikoff,** (*men'shi-kof,*) the name of a Russian family of which the following were the most distinguished members:

M., ALEXANDER DANILOVITCH, PRINCE, B. in Moscow, 1672, was the son of poor parents, and after being brought up without education, was apprenticed to a pastry-cook. Having the good fortune to attract the notice of Lefort, the favorite of Peter the Great, *M.* entered the Czar's service, and gained his favor by discovering a conspiracy brewing among his guards. Having been placed in the army, *M.* served in the campaign of Azoff, accompanied Peter ... his travels to Holland and England, and after Lefort's death, became his master's prime favorite and confidential adviser. The Czar, besides creating him prince and field-marshal, appointed him regent of the empire during the various absences of the former. In 1706, *M.* gained the victory of Kalish over the Swedes, and in 1709 greatly contributed to the decisive battle of Pultowa, (*q. v.*) He, however, through his excessive arrogance and cupidity, fell into disgrace, and was sentenced to death, only preserving his life by the payment of a heavy fine. After the accession of Catharine I., *M.* regained his influence at court, and, till her death, acted as the virtual ruler of the empire. Nevertheless, after the commencement of the reign of Peter II., he was overthrown and banished to Siberia. D. 1729.

M., ALEXANDER SERGEVITCH, PRINCE, great-grandson of the foregoing, was B. in 1789. Entering the imperial service in 1805, he became attached to the Russian embassy at Vienna, and subsequently, in the campaigns of 1812–15 served as aide-de-camp to the Emperor Alexander I., attaining, at the close of the war, general's rank. Under Nicholas he acted as ambassador-extraordinary in Persia. Negotiations for the legalization of a claim to a portion of the Shah's dominions which the Czar had usurped, were abruptly broken off, and *M.'s* arrest attempted. Escaping, *M.* then commenced hostilities, took Anapa in 1828, and undertook the siege of Varna, where he was severely wounded, which prevented him from further participation in active service. After this, he was appointed governor-general of Finland, admiral of the Russian navy, and minister of marine, in which capacity he successfully devoted himself to the creation of a navy for the Baltic. In 1853, being appointed ambassador to Turkey, his arrogant demands of that power brought about the Crimean war, during which, while in command of the land and sea forces, he was utterly defeated at the battle of the Alma (Sept., 1854), by the French and English allied army, and again at Inkermann, in the Nov. following. He distinguished himself, however, by his able defence of Sebastopol, (*q. v.*) Upon the death of Nicholas, and the succession of Alexander II., *M* was relieved of all his commands; he being the recognized head of the so-called *Muscovite,* or old Russian party, which advocated a line of policy inimical to the liberal measures intended by the Czar. D. 1869.

Men'tha, *n.* [*Mintha,* the daughter of Cocytus, is fabled to have been changed into one of these plants.] (*Bot.*) Mint, a genus of plants, order *Lamiaceæ.* They are mostly perennial plants, growing in wet soils. Several species are used in medicine, and as sweet herbs for flavoring, &c. Three are official, as *M. viridis,* Spearmint; *M. Piperita,* Peppermint; and *M. pulegium,* Pennyroyal,—all of which possess stimulant and carminative properties. *M. canadensis,* Horse-mint, *M. aquatica,* Bookmint; and *M. arvensis,* Cornmint, or Fieldmint, are also familiar species, the latter plant smelling like decayed cheese.

Fig. 1763.—THE PEPPERMINT. (*Mentha Piperita.*)

Men'thene, *n.* (*Chem.*) A liquid hydrocarbon obtained by distilling the crystallizable portion of peppermint oil, or *peppermint camphor,* with anhydrous phosphoric acid.

Mentieult'ural, *a.* Belonging or relating to mental culture; aiding the resources of the mind.

Mention, (*men'shon,*) *n.* [Fr.; Lat. *mentio,* from *memini,* to remember, to be mindful of.] A calling to mind; a putting in mind; a hint; a suggestion, a brief notice or remark expressed in words or writing,—employed particularly in the expression *to make mention of.*

"*Make mention of* me unto Pharaoh." — *Gen.* x. 7, 14.

—*v. a.* [Fr. *mentionner.*] To call to the mind of; to speak; to name; to utter, as a brief remark; to state, as a particular fact, or to express it in writing.

Men'tionable, *a.* That can or may be mentioned.

Mento'n, a town of France, dept. Alpes-Maritimes, on the Gulf of Genoa, 12 m. N.E of Nice, in a nook surrounded on three sides by mountains. The town presenting in its architectural aspect, nothing remarkable, has long been made famous among tourists for the picturesque beauty of its location, embowered, as it is, among lemon and orange groves. Its celebrity has been further increased, of late years, from its climate having been found to be highly efficacious to pulmonary invalids; it has, accordingly, become quite a haunt for valetudinarians. Near it are celebrated bone caves, in one of which was discovered, in 1870, a fossil human skeleton, supposed to belong to the palæolithic age. *Pop.* 10,000.

Men'tor, the fabulous friend of Ulysses, who confided to him the education of his son, while he was absent at the siege of Troy. He was celebrated for his wisdom, and, according to the Greek tradition, Minerva took his shape, in order to bring up the son of Ulysses. This last view has been adopted by Fénélon in his *Télémaque.*

Men'tor, *n.* [See above.] A wise and true counsellor, mouitor, or adviser.

Men'tor, in *Iowa,* a post-village of Bremer co., about 20 m. N.E. of Waverly.

Men'tor, in *Ohio,* a post-township of Lake county.

Men'tor, in *Wisconsin,* a village of Sheboygan co.

Mento'rial, *a.* Containing advice or counsel; conveying admonition.

Men'tum, *n.* [Lat.] (*Anat.*) The chin.

(*Zoöl.*) The anterior part of the gula of insects, immediately adjoining the labium.

Mentz, a city of Germany. See MAYENCE.

Mentz, in *New York,* a township of Cayuga county.

Mentze'lia, *n.* [In honor of *C. Mentzel,* a German physician.] (*Bot.*) A genus of plants, order *Loasaceæ.* They are branching herbs with alternate leaves. *M. Lindleyi,* the Golden Bartonia, is a handsome annual, native of California, distinguished by its large golden-yellow flowers, with innumerable thread-like, yellow stamens.

Menu'. (*Hindoo Myth.*) A deity, the supposed son of Brahma, and the first created man; he is also regarded as a legislator, and the author of a code of laws and morality written in verse in the Sanskrit language. The Hindoos ascribe the laws of Menu to the remotest age; and many of the most learned Europeans are of opinion that of all known works there is none which carries with it more convincing proofs of high antiquity and perfect integrity. The Institutes of Menu embrace all that relates to human life: the history of the creation of the world and man; the nature of God and spirits, and a complete system of morals, government, and religion. The most striking features by which they are distinguished are the rigor and purity of their morals. Many of their maxims have all the sublimity of the precepts of Christianity; to which, in fact, they bear a close resemblance, not only in the style of thought, but of expression.

Ménu, *n.* [Fr.] The *carte,* or bill of fare, for a dinner or banquet.

Menuri'dæ, *n. pl.* (*Zoöl.*) See LYRE-BIRD.

Menyanthes, (*men-e-an'thez,*) *n.* [Gr. *men,* a month; *anthos,* a flower, in allusion to the duration of the flowers.] (*Bot.*) A genus of plants, order *Gentianaceæ. M. trifoliata* is known commonly by the names Buckbean, Bog-bean, or Marsh-trefoil. The leaves and rhizome are tonic and astringent, and, in large doses, cathartic and emetic. In some parts of Germany it is employed as a substitute for hops in beer.

Menzaleh, (*men-za'le,*) an extensive lagoon of Lower Egypt, extending along the coast to the E. of the Damietta branch of the Nile. It is 60 m. in length, and 25 in breadth, and is separated from the Mediterranean by a narrow strip of land, through which, however, there are 3 openings. An extensive and thriving fishery is carried on.

Menzie'sa, *n.* [After *Menzies,* companion of Vancouver.] (*Bot.*) A genus of plants, order *Ericaceæ.* They are low, heath-like, shrubby plants, with evergreen leaves. *M. taxifolia,* the Mountain-heath is a small shrub found on the summit of the White Mountains, resembling a heath in drooping, purple flowers, and some of the fir-tribe in its leaves.

Mephitic, Mephitical, (*me-fit'ik,*) *a.* [Fr. *méphitique,* from Lat. *mephitis.*] Poisonous, pestilential, malarious; foul; possessing odors or properties injurious to life; as, *mephitic* exhalations.

Mephi'tis. (*Myth.*) A Latin goddess or angel who was invoked by the Romans as their protectress against noxious vapors.

—*n.* (*Zoöl.*) The Skunks, a genus of carnivora. See SKUNK.

Mephi'tis, Meph'itism, *n.* Foul, noisome, or offensive exhalations from putrefying substances, garbage, filth, &c.; malaria.

Mep'pel, a town of the Netherlands, prov. of Drenthe, on the Havelter, 25 m. S.W of Assen. *Manuf.* Linens, sail-cloth, and coarse woollen fabrics. It has also a great trade in cattle, and farm produce. *Pop.* 7,000.

Mequan'igo, or MILWAN'AGO, in *Wisconsin,* a village and township of Waukesha co., abt. 25 m. W of Milwaukee.

Mequinez, (*mai'ke-naith*), a city of Morocco, 70 m. E. of Sallee, and 235 m. N.N.E of Morocco, in Lat. 33° 56′ N., Lon 5° 59′ W. It is situated in a beautiful and well-watered valley, and is surrounded by walls. The principal public building is the imperial palace, a very extensive quadrangular edifice.

Mequon, (*meh-kwon',*) in *Wisconsin,* a village and township of Ozaukee county, about 13 miles N. of Milwaukee.

Mer, (*mair,*) a town of France, dept. of Loire-et-Cher, 11 m. N.E. of Blois, *pop.* 4,300.

Mer and **Ser,** two contiguous summits of the Himalayas, in the N. of the Punjab, between the Indus and the Sutlej rivers; Lat. 34° N., Lon 76° 10′ E. Mer is generally white with snow, and the other uniformly black and bare.

Mer'cantile, *a.* [Fr.; It. *mercantile, mercatantile,* from Lat. *mercator, mercatus,* to trade, to traffic. See MARKET.] Pertaining or relating to merchandise, commerce, or trade; carrying on commerce; trading; commercial; as, *mercantile* interests.

Mercap'tan, *n.* (*Chem.*) A name given to a charac-

teristic series of componnds derived from the alcohols by the substitution of sulphur for oxygen, of which ethylic mercaptan may be taken as the type.

Ethylic alcohol. C_4H_6HO. Ethylic mercaptan. $C_4H_5S.HS$.

Ethylic mercaptan is a colorless, transparent, mobile fluid, with an intensely nlliaceous smell, boiliug at 96°, and freezing at —8°. It is very inflammable, burning with a blue flame; it is sparingly soluble in water, but readily so in ether and alcohol. It forms compounds with the metals, corresponding closely to the hydrosulphates.

Mercap'tide, *n.* (*Chem.*) A compound formed of mercaptan and a metallic oxide.

Merca'tor, GERARD, a mathematician and geographer, B. in Flanders, 1512, distinguished especially for the method of laying down charts and maps which goes by his name. This plan, useful in navigation, presents the surface of the earth projected on a plane, so that all the meridians and parallels are straight lines. D. 1594.

Mer'cership, *n.* The business of a mercer.

Mer'cerville, in *Ohio*, a post-village of Gallia co., abt. 45 m. E. of Portsmouth.

Mer'cery, *n.* [Fr. *mercerie*] The goods or commodities in which a mercer deals; the trade of mercers.

Mer'chandise, *n.* [Fr. *marchandise*, from *marchand*, a merchaut.] Trade; traffic; commeree.—Goods, wares, or commodities of a merchant, the objects of commerce; whatever is usually bought or sold in trading operations.

—*v. n.* To trade; to carry on commercial operations.

Mer'chant, *n.* [Fr. *marchand*, from Lat. *mercator*, from *mercor*, *mercatus*, to trade, to traffic, from *merx*. See MARKET.] One who traffics or carries on trade with foreign countries, or who exports or imports goods and sells them by wholesale; any trader, or one who deals in the purchase and sale of goods on a large scale.

—*a.* Related to, or having connection with, trade or commerce; as, a *merchant*-ship, *merchant* seamen, the *merchant* service, &c.

Merchant-bar, certain sizes of wrought iron and steel bars.

Merchant service, the mercantile marine belonging to a country.

Merchant tailor, a tailor who deals in materials for the garments made by him.

Mer'chantable, *a.* That may be bought and sold; marketable; fit for market; such as is usually sold in market, or such as will bring the ordinary price.

Mer'chant Law, *n.* [Lat. *lex mercatoris.*] (*Law.*) In a general sense, the body of usages and customs which, among civilized countries, regulate matters relating to commerce. In this general sense of the term, the subject is very indefinite, for different countries have different customs, and the mercantile usages common to all of them, are few in number. In this country, it is applied to that system of laws which applies to mercantile contracts, and is based upon the custom of merchants. The law merchant is frequently referred to in the early English statutes as a well-known system, and distinct from the ordinary law. The principal subjects embraced within it are the laws of shipping, including that of marine insurance; the law of negotiable bills of exchange and promissory notes; and the law of sales;—all of which are treated specially in other parts of this work.

Mer'chantman, *n.; pl.* MERCHANTMEN. A ship or vessel employed in the transportation of goods; a trading-vessel, as distinguished from a ship-of-war.

Mer'chantry, *n.* The collectivo body of merchants belonging to a country.

Mer'chantville, in *New Jersey*, a post-borough of Camden co., about 4 m. E. of Camden. *Pop.* 1,400.

Mercia, (*mer'she-a,*) one of the old kingdoms of the Saxon heptarchy, comprising the modern counties of England between the Thames on the S., Yorkshire and Lancaster on the N., Wales on the W., and the kingdoms of E. Anglia and Essex on the E. Its cap. was Leicester.

Mer'ciful, *a.* Full of mercy; having or exercising mercy; disposed to pity offeuders; uuwilling to punish for injuries.

"Be *merciful*, O Lord, unto thy people." — *Deut.* xxi. 18.

—Compassionate; tender; mild; kind; unwilling to give or inflict pain; not cruel; as, a *merciful* man.

Mer'cifully, *adv.* In a merciful manuer; pityingly; compassionately; tenderly; mildly.

Mer'cifulness, *n.* State or quality of heing merciful; tenderness toward offenders; willingness to forbear punishment; readiuess to spare or forgive.

Mer'ciless, *a.* Destitute of mercy; unfeeling; pitiless; hard-hearted; cruel.

"So mean, so *merciless* a tyrant to obey." — *Dryden.*

—Severe; not sparing; relentless, as a storm or tempest.

Mer'cilessly, *adv.* In a manuer void of mercy; pitilessly; cruelly.

Mer'cilessness, *n.* Quality of heing merciless; lack of pity or mercy.

Mercu'rial, *a.* [Lat. *mercurialis.*] Formed under the influence of tho fabled deity Mercury;—hence, full of fire, spirit, or vigor; alert; active; sprightly; lively; as, a *mercurial* temperament.—Having reference to Mercury as the god of trade;—hence, money-making; acquisitive of gain; subtle.—Pertaining, or relating to, or containing quicksilver; consisting of, or comprising mercury; as, *mercurial* ointment, *mercurial* medicines or treatment.

—*n.* (*Med.*) A medicinal preparation containing mercury.

(*French Customs.*) The first Wednesday after the great vacation of the parliaments, under the old French régime. On that day they met to discuss grievances and deficiencies, and to reprimand members for misconduct. Hence, an harangue of reproof is popularly termed in French a *mercuriale*.

Mercu'rialist, *n.* One under the influence of the god Mercury, or resembling him in many-sided character.

(*Med.*) A medical practitioner accustomed to prescribe the use of mercury in excess.

Mercu'rialize, *v. a.* (*Med.*) To impregnate or affect with mercury.

(*Fine Arts.*) Among photographers, to treat with mercury, as a picture.

Mercu'rially, *adv.* In a mercurial or lively manner; with sprightliness or activity.

Mercurifica'tion, *n.* [Fr.] Act of mixing anything with quicksilver.

(*Metal.*) Act or process of extracting the mercury from metallic minerals in its fluid state.

Mercu'rify, *v. a.* To procure mercury from, as metallic minerals.

—To mercurialize; to impregnate or mix with mercury.

Mer'cury, *n.* [Lat. *Mercurius*, the Roman divinity of commerce and gain, from *merx*, *mercis*, goods, wares. See MARKET.] (*Myth.*) A Latin god, called *Hermes* by the Greeks. There were no less than five of this name, according to Cicero. Some add a sixth: but to the son of Jupiter and Maia the actions of all the others have been probably attributed. Mercury was the messenger of the gods, and Jupiter in particular; also, the patron of travellers and shepherds. He conducted the souls of the dead into the infernal regions, and not only presided over orators, merchants, and declaimers, but was also the god of thieves, pickpockets, and all dishonest persons. His name is derived from *a mercibus*, because he was the god of merchandise among the Romans. On the day of his birth, he gave proof of his craftiness in stealing away the oxen of Admetus, which Apollo tended. He gave other tokens of his thievish propensity, by taking the quiver and arrows of Apollo; and he increased his fame by robbing Neptune of his trident, Venus of her girdle, Mars of his sword, Jupiter of his sceptre, and Vulcan of many of his mechanical instruments. Jupiter then took him as his messenger, interpreter, and cup-bearer. He delivered Mars from the long confinement which he suffered from the superior power of the Aloides. He purified the Danaides of the murder of their husbands; he tied Ixion to his wheel in the infernal regions; he destroyed the hundred-eyed Argus; he sold Hercules to Omphale, the queen of Lydia; he conducted Priam to the tent of Achilles, to redeem the body of his son Hector. Mercury had many surnames and epithets. His amours were also numerous. His worship was well established, particularly in Greece, Egypt, and Italy. Some of his statues represent him (Fig. 465) wearing a round cap with two small wings, and the same appendago on each instep, and armed with a winged rod, wreathed with two snakes, called the *caduceus*.

—A news-boy; a messenger; a letter-carrier;—hence, by implication, a newspaper.

(*Bot.*). A plant of the genus *Mercurialis*, belonging to the spurge family (*Euphorbiaceæ*), growing in the Old World, especially the mercury-weed, or French mercury (*M. annua*), which was long ago used as a medicinal herb.

Mercury, *n.* [Sign: ☿—his wand.] (*Astron.*) As a member of the planetary system, Mercury is in many respects unique. He is the nearest to the sun—36,000,000 miles; has the most rapid orbital velocity—105,330 miles an hour, equal to the circumvolution of the earth every 14 minutes; he has the shortest year—only 88 of our days; is the smallest—3,000 miles in diameter; has the greatest density—over 7 times that of water, or nearly equal to lead; has the most eccentric orbit—amounting to 1·5 expressed in terms of his mean distance; therefore, dividing 36,000,000 by 1·5,

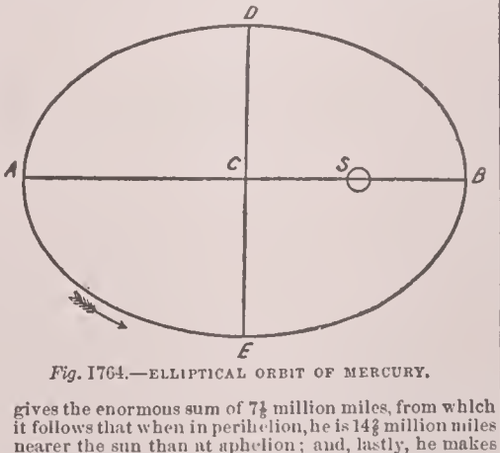


Fig. 1764.—ELLIPTICAL ORBIT OF MERCURY.

gives the enormous sum of 7⅛ million miles, from which it follows that when in perihelion, he is 14⅜ million miles nearer the sun than at aphelion; and, lastly, he makes the least elongation distance from the sun—about 28°. In at least three known particulars, he resembles the other planets, being a globe revolving around the sun in the same direction from west to east, and shines by reflected sunlight. As his diameter is but 3,000 miles, and the earth's 7,916 miles, and the volumes of globes being to each other as the cubes of their diameters, it follows that the earth is 15 times larger than Mercury; but, owing to their difference in density, the earth is only 12 times as heavy. If the laws of solar radiation and other circumstances are the same there as here, the heat must be of sufficient intensity to keep lead in a molten condition, and, when in perihelion, to melt zinc. An inhabitant of that torrid world would freeze to death if taken to Yuma, Arizona, the hottest place in the U. S. Not knowing the length of his day, nor the inclination of his equator to his orbit, only surmises can be made regarding the changes of his seasons. The eccentricity of his orbit in proportion to his distance from the sun is so enormous as to produce a set of seasons of itself, regardless of the inclination of his axis of rotation to his orbit. An inspection of the figure will illustrate the meaning of the often-used word "eccentricity." The curved line is an ellipse: a, b, its major axis; F, D, the minor; C, the center, and S, the place of the sun at one of the foci. The eccentricity is the distance from S to C, which in the case of Mercury is 7⅛ million miles. When he is at B, therefore, he is 14⅜ million miles nearer the sun than when at A. From this cause alone, there must be a succession of seasons depending exclusively on the eccentricity of his orbit, with which the inclination of equator to orbit will have nothing to do. When passing through perihelion (B), there will be summer, and, when at aphelion (A), winter, only 44 days apart. If the equator is not inclined to his orbit—which is very improbable—the seasons will be as above stated; but if inclined, another series of seasons will be produced, depending on the amount of inclination alone. The summer from one cause may agree with the summer of the other, or with its winter, in the first case

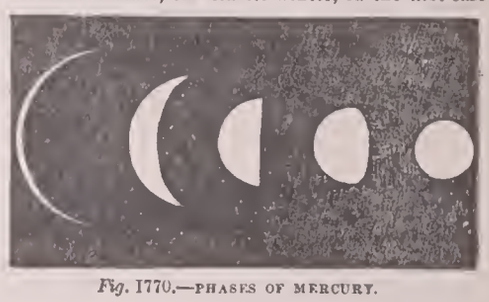


Fig. 1770.—PHASES OF MERCURY.

intensifying the heat of summer, in the latter mitigating the cold of winter. In either case there would be 4 seasons in his year, of 22 days each. Should the summer from one cause happen to agree with the spring or autumn of the other, there would be eight seasons in his year—two springs, two summers, two autumns, and two winters—of 11 days each.

The length of a day on Mercury is a subject of warm dispute among astronomers, some claiming it to be about 24 hours, while others bring forward evidence, which they claim as proof positive, that he rotates on his axis but once in 88 days. The same controversy exists as to the length of the day on Venus. (See VENUS.) The planet exhibits phases like the moon, and from a similar cause. Their appearances as seen through the telescope are represented in Fig. 1770. The full-moon phase is produced when in superior conjunction, beyond the sun; the narrow crescent when in inferior conjunction, this side of the sun. The difference in size when in those positions is very apparent. It sometimes passes across the sun's face, producing a "transit." (See TRANSIT.) It requires careful watching to see this planet with the naked eye, owing to his proximity to the sun. When man first discovered it, we have no record. The most ancient observation that history mentions bears date Nov. 15, 265 years B.C.

(*Chem.*) One of the seven metals known to the ancients, and is, with the exception of bromine, the only element fluid at ordinary temperatures. It is found in nature in the form of cinnabar, or sulphide, in the clay-slate and red-sandstone underlying the coal-measures. The most famous cinnabar mines are those of Almaden in Spain, Idria, in Transylvania, and New Almaden in California. It is also found in large quantities in China and Japan, and at Huancavelica in Peru. The extraction of the metal from the ore is effected in two ways—either by simple distillation, after having first burnt off the sulphur, or by mixing the cinnabar with iron-filings or lime, in which case the sulphur forms a fixed sulphide with the iron or calcium, and the metal distils over nearly pure. The former process is pursued at Almaden; but great waste is common, owing to the imperfect method of condensation adopted. Mercury also occurs native as an amalgan with gold and silver, as an iodide, and as horn-mercury, or subchloride. As imported into this country, it is nearly pure. The presence of foreign metals may be detected by shaking up a few drachms in a bottle, and allowing it to remain exposed to the air for a day or two. Should lead or any other metal be present, it may be detected by forming a film of oxide on the brilliant surface of the mercury. Any metallic impurity may be removed by digesting the metal in cold dilute nitric acid for several days. The economic uses of mercury are numerous. It is principally employed in extracting gold and silver from quartz and other matrices in which these metals occur. It forms with them an amalgam or pasty mass, from which it may be separated by distillation. The great increase it undergoes in volume between the freezing and boiling points of water renders it useful for thermometric purposes; and its great specific gravity has caused its employment in barometers. It is used as a developing agent in the daguerreotype. The chemist uses it, instead of water, for collecting gases which would be absorbed by the latter fluid. With many metals, it forms a pasty mass, termed an *amalgam*. This property is taken advantage of in the extraction of gold and silver from their matrices, as stated above; also, in the manufacture of mirrors and in gilding. An amalgam of 2 parts of zinc and

four parts of mercury is used to give a partial metallic surface to the rubbers of frictional electric machines. It readily unites with zinc, and is rubbed on the plates of that metal in voltaic batteries to protect them from the action of the acids in which they are immersed. The amalgams formed with other metals are unimportant. Mercury freezes into a malleable mass at —40°, and boils at about 660° Fahr. It was supposed at one time to be non-volatile at ordinary temperatures; but the experiments of Karsten prove that even at 32° the volatilization of the metal is perceptible. When pure, it is not tarnished by exposure to the air, and does not decompose water at any temperature. Heated in a current of air to 700° or 800°, it becomes gradually converted into the red oxide. Hydrochloric acid does not act upon it, either hot or cold. Sulphuric acid does not affect it in the cold; but when heated, sulphurous acid gas is formed, which passes away, leaving the subsulphate of the metal behind. Strong nitric acid dissolves it readily, nitrate of mercury and dentoxide of nitrogen being formed. In combination with sulphur, it is used in the arts as the pigment vermilion. It is extensively employed in medicine as a cathartic and alterative. By trituration with saccharine or oleaginous substances, it admits of being minutely divided, and a small portion becomes oxidized, to which the properties of mercurial ointment appear to be owing. *Equiv.* 200; *sp. gr.* at —40° F. 13·39, at 60° F. 13·59; *symbol* Hg. (hydrargyrum.—*Poisoning by M.* See PAINTERS' COLIC.

Chlorides of M. Mercury forms two chlorides,—the subchloride, or calomel, Hg_2Cl_2, and the protochloride, $HgCl_2$, or corrosive sublimate. These 2 compounds are often mentioned in old text-books as the protochloride and the bichloride of mercury respectively. In fact the popular name of corrosive sublimate is bichloride of mercury. Calomel is much used in medicine, and is generally prepared by triturating 13 parts of the metal with 17 of the chloride until no metallic globules are visible. The mixture is then sublimed, and the calomel is deposited in fibrous masses. The chloride or corrosive sublimate is made on a large scale by mixing two and a half parts of sulphate of mercury with one part of common salt, and subliming in glass vessels. Corrosive sublimate is soluble in 16 parts of cold water; and in three of hot water its solution decomposes, and calomel is deposited if exposed to the light. Ether and alcohol both dissolve it freely. It is an exceedingly powerful and acrid poison. Its antidote is white of egg, with which it forms an insoluble compound. With oxygen it forms three oxychlorides. It is used in dyeing and calico-printing, and in photography; also in medicine in certain skin-diseases.

Fulminating M. See FULMINATING MERCURY.

Iodides of M. Mercury forms three iodides,—the green, or subiodide, Hg_2I, formed by triturating 127 parts of iodine with 200 of mercury; the protiodide, HgI, made by precipitating a solution of corrosive sublimate with iodide of potassium, and an unimportant intermediate iodide. The protiodide (or biniodide, as it was formerly called) illustrates, very curiously, the difference of color resulting from difference of form. The precipitate, when first formed, is salmon-color, but gradually passes into a brilliant scarlet. It fuses at 400°, and sublimes in yellow rhombic tables By simply rubbing the yellow salt, or even by touching it with a point, it immediately becomes transformed into brilliant red octohedra with a square base.

Nitrates of M. Mercury forms several nitrates. It will be only necessary to mention two. The subnitrate, $Hg_2O.NO_5$, is prepared by acting on excess of mercury with nitric acid in the cold. It forms fine colorless crystals with two equivalents of water. If dissolved in water, it decomposes into the basic nitrate. The nitrate of mercury, $HgO.NO_5$, is prepared by dissolving mercury in excess of nitric acid by the aid of heat. It may be obtained in crystals by exposing the solution in nitric acid to a freezing mixture; but if solution in water be attempted, a basic nitrate is formed.

Oxides of M. Mercury forms two oxides, — the black, or suboxide, Hg_2O, and the red, or oxide, HgO, both of which form salts with acids. The suboxide, though a strong base when in combination, is very unstable when isolated. It is obtained by sublimating finely-levigated calomel with solution of potash or soda, and washing the black precipitate with cold water. It is decomposed by a strong light, or a gentle heat, into the red oxide and the metal. The red oxide may be made by exposing metallic mercury to a current of air at 700°, or more readily by decomposing the nitrate by heat It is thrown down as a yellow powder when potash or soda is added to a solution of corrosive sublimate. The precipitated oxide does not differ from the red form, but appears to be a merely molecular variation. This oxide, when heated, becomes converted into the metal and oxygen gas, and was used both analytically and synthetically by Lavoisier, in the determination of the composition of atmospheric air.

Sulphates of M. There are several sulphates of mercury, the most important of which is that formed by decomposing with water the sulphate of the protoxide, which gives rise to a tribasic insoluble yellow sulphate, known as *turreth-mineral*.

Sulphides of M. They are two:—the subsulphide Hg_2S, and the sulphide HgS. The first is formed as a black precipitate when a solution of an alkaline sulphide is gradually added to a solution of a subsalt of mercury. The sulphide exists as cinnabar in the mineral kingdom. It is made artificially as vermilion, by rubbing together 300 parts of mercury and 114 parts of sulphur in a mortar for two or three hours. The black sulphide obtained is thrown into a solution of 75 parts of hydrate of potash to 400 of water, and kept at a temperature of 122° Fahr., until the whole has assumed a fine red color. The sulphide exists also in a black form, obtained by precipitating a salt of mercury with sulphuretted hydrogen. It is transformed by sublimating into the red variety.

Meren'rius, *n.* (*Bot.*) A genus of plants, order EUPHORBIACEÆ.

Mer'cy, *n.* [Fr. *merci*, mercy, also thanks. The latter meaning points to Lat. *merces, mercēdis*, pay, reward; the former to Lat. *miseresco*, to feel pity, to have compassion. The distinction is preserved in Low Lat., where one *mercia* signifies a fine, and another, pity, pardon. From Lat. *miser*, wretched. See MISERABLE.] Disposition to spare and save; willingness to pardon; that benevolence, mildness, or tenderness of heart, which disposes a person to overlook injuries, or to treat an offender better than he deserves; clemency; act of sparing, or the forbearance of a violent act expected.

"Earthly power doth then show likest God's, when *mercy* seasons justice." — *Shaks.*

—An act or exercise of mercy or favor; benevolence; mildness; pity or compassion; charity, or the duties of charity and benevolence; leniency.

"That *mercy* I to others show,
That *mercy* show to me." — *Pope.*

To be at the mercy of, to be entirely in the power of; to have no other hope or safeguard but the leniency or compassion of. — *To cry mercy*, to ask pardon; to beg excuse for one's self.

"I *cry* thee *mercy* with all my heart, for suspecting a friar of the least good nature." — *Dryden.*

(*Eccl Hist.*) In 1218, the order of *Our Lady of Mercy* was established by James I. of Aragon, in the city of Barcelona, for the purpose of redeeming Christian captives in the power of the Moors. It is sometimes called *St. Eulalia*, from the name of the patron saint of the principal church in that city. It was extended to ladies in 1261. A dispute between the knights and priests of the order about the election of a master, decided in favor of the priests by Pope John XXI. or XXII (1316–34), led to the withdrawal of the knights, and the society from that time has been composed entirely of priests. — A new feminine order of *Our Lady of Mercy*, but known as *Sisters of Mercy*, was founded in Dublin, in 1827, by Miss Catharine McAuley, born in that city, in 1778, of Catholic parents, but left an orphan at an early age, and who, bred as a Protestant, embraced the Roman Catholic faith when she reached the age of discretion, and devoted her life and her large fortune to the service of the poor. This pious foundation, of which Miss McAuley was the first superior, was opposed by Pope Pius VIII., and formally confirmed by Pope Gregory XVI. in 1841. The rule is that of St. Augustine, with several modifications. The sisters take a vow for life, and bind themselves to poverty, chastity, obedience, and the service of the poor, sick, and ignorant. They wear a black robe with long loose sleeves, a white coif, and a white or black veil. Their duty, besides other charities, is the visiting of the sick and prisoners, the instruction of poor girls, the protection of virtuous women in distress, and, when their means permit, the foundation of *houses of mercy*, where destitute girls of good character are cared for until employment can be found for them. The Sisters of Mercy have no general superior. Each nunnery is independent of the other, and subject to the bishop of the diocese in which it is established. The first community in the U. States was established in Pittsburg in 1843. Since that time the order has spread rapidly over almost all the States of the Union and various parts of S. America. In this country they have the direction of several orphan asylums and hospitals.

Mer'cy-seat, *n.* (*Script.*) The propitiatory; the covering of the ark of the covenant.

Mer'din, or **Mar'din,** a city of Asiatic Turkey, at the N.W. extremity of the pashalic of Bagdad, 50 m. S.E. of Diarbekr; Lat. 37° 19′ N., Lon. 4° 20′ E. *Manuf.* Cotton fabrics and Turkey-leather. *Pop.* 11,000.

Mere, (sometimes, but inelegantly, written *meer,*) *a.* [It. *méro;* Sp. *mero;* Lat. *merus*, pure, unmixed. Etymol. unknown.] Pure; unmixed; unadulterated; whole; entire; absolute.

"The sorrows of this world, *mere* and unmixed." — *Bp. Taylor.*

—Sole; alone; this or that only; such, and no more; simple; bare; distinct from anything else.

"A *mere*, lifeless, violated form." — *Thomson.*

Mere, *n.* [A.S. *mere, mœre*, a lake, a marsh; D. *meer*, a lake; Ger. *meer;* allied to Lat. *mare*, the sea. See MARINE.] A pool; a lake; a large pond; a marsh subject to inundations.

"The Lady of the *Mere*, sole-sitting by the shores of old romance." *Wordsworth.*

Mere, *n.* A boundary; a land-mark. (R.)

Mer'edith, in *New Hampshire*, a township of Belknap co.

Meredith, in *New York*, a post-village and township of Delaware co., abt. 70 m. W. by S. of Albany.

Meredith Bridge, in *New Hampshire*, a village of Belknap co., abt. 27 m. N. by E. of Concord.

Meredith Centre, in *New Hampshire*, a post-village of Belknap co., abt. 25 m. N.E. by E of Concord.

Meredith Ridge, in *New Hampshire*, a village of Belknap co.

Meredo'sia, in *Illinois*, a post-village of Morgan co., abt. 55 m. W. of Springfield.

Mere'ly, *adv.* Only; thus, and no other way; for this, and no other purpose; solely; simply; barely; as, I said it *merely* to annoy him. — Purely; unmixedly; wholly; absolutely.

Mere'stead, *n.* [Eng. *mere*, and *stead*, place.] The land comprised within the boundaries of a farm.

Mere'-stone, *n.* A boundary-stone; a land-mark. (R.)

Meretricious, (*-trĭsh'us,*) *a.* [Lat. *meretricius*, from *meretrix*, a prostitute, from *mereo*, to earn money. See MERIT.] Pertaining, or having reference to prostitutes; such as is practised by harlots; as, "allected, *meretricious* arts." (*Roscommon.*) — Alluring by false or tinsel show; worn for disguise; having a gaudy and specious, but deceitful appearance; tawdry; showy; pretentious; gewgaw; as, *meretricious* ornaments.

Meretri'ciously, *adv.* In a meretricious manner; after the style of prostitutes; with specious but deceitful enticements.

Meretri'ciousness, *n.* State or quality of being meretricious; arts or conduct of a courtesan or strumpet.

Mergan'ser, *n.* [From Lat. *mergus*, a diver.] (*Zoöl.*) See MERGUS.

Merge, (*mėrj.*) *v. a.* [Lat. *mergo;* probably from *mare*, the sea. See MARINE.] To sink in the sea or in water; to immerse; to cause to be swallowed up; to immerge.

"While and Tory were *merged* and swallowed up in the transcendant duties of patriots." — *De Quincey.*

—*v. n.* To be sunk, swallowed up, or lost.

Mer'ger, *n.* The person who, or thing which, merges or swallows up.

(*Law.*) A swallowing up or absorption of one estate, contract, &c., in another.

Mergui, (*mer-gē',*) a seaport-town of Mergui, one of the Tenasserim Provinces of British Burmah, on an island in the delta of the Mergui River; Lat. 12° 12′ N., Lon. 98° 23′ E. It is 3 m. in circumference, and surrounded by a stockade. The harbor is secure and spacious. *Pop.* 8,000.

Mergui Archipel'ago, a group in the Indian Ocean, lying off the coast of the Tenasserim Provinces, and separated from the mainland by a strait from 15 to 30 m. broad; Lat. between 9° and 13° N., Lon. 97° to 98° E. The islands are mountainous, some of them rising to 3,000 feet above the sea. *Pop.* 18,000.

Mergul'lus, *n.* (*Zoöl.*) A genus of birds, family *Alcidæ*, distinguished by the short and thick bill, slightly lobed on its edges. It contains the Little Auk, Sea-dove, or Dovekie. *M. alle* of the N. Atlantic, 6–7 inches long, breast and upper parts brownish-black, under parts white.

Mer'gus, *n.* (*Zoöl.*) A genus of Swimming-birds, fam. *Anatidæ*, distinguished by the narrow, slender bill, longer than the head, and conspicuously serrated. The Merganser, or Goosander, *M. merganser*, is an inhabitant of the Arctic regions, breeding very far north in summer, and migrating southwards in winter; in severe seasons occasionally frequenting the lakes and rivers of Britain, but leaving that country early in the spring. Their food consists principally of fish, which they take by rapid diving; crustaceans, mollusca, and insects are also devoured by them; but they seem to be incapable of digesting vegetable matter of any kind. The male weighs about 4 pounds, and measures in length 2 feet 3 inches, and across the wings 3 feet 2 inches. The bill is 3 inches long, narrow, and finely serrated, the tip being armed with a hooked horny tip; both mandibles are black on the upper and under parts, and crimson

Fig. 1765. — THE GOOSANDER, (*Mergus merganser.*)

on the sides; the head is large, and crowned with a great quantity of long, loose feathers, which, when erected, form a crest; these feathers are of a glossy bottle-green; the cheeks and upper part of the neck are a dull black; the lower part, breast, belly, vent, and inner wing-coverts of a fine cream-color; the upper part of the back, and the lower scapulars, are black; the lower part of the back and the tail are ash-colored, the latter consisting of 18 feathers. The legs and feet are very deep orange-color. The flesh of this aquatic bird is accounted rank and fishy. — The Red-breasted Merganser, *M. serrator*, of N America and Europe, is distinguished by its conspicuous, pointed, occipital crest.

Mer'icarp, *n.* [Gr. *meros*, a part, and *karpos*, fruit.] (*Bot.*) One carpel of the fruit of an umbelliferous plant.

Merida, (*me-rē'dă*), a town of Spain, prov. of Estremadura, on the Guadiana, 29 m. E. of Badajoz, and 176 N.E. of Madrid. It is remarkable for its Roman antiquities, but the town is very much decayed. *Pop.* 5,490.

Merida, a city of Yucatan, in a mountainous region, abt. 25 m. inland from the Gulf of Mexico; Lat. 20° 50′ N., Lon. 89° 40′ W. It occupies the site of an ancient Indian city destroyed by the Spaniards, and was founded in 1542. Neither its trade nor manufactures are very extensive. *Pop.* 25,000.

Meri'da, a town of Venezuela, 85 m. N.W. of Varinas; *pop.* 5,000.

Mer'iden, in *Conn*., a flourishing city and township of New Haven co., abt. 18 m. N.E. of New Haven; contains many public institutions and handsome churches, a soldiers' monument, and fine opera house; *manuf.* chiefly silver-plated ware, hardware, cutlery, &c. *Pop.* of city (1897) 24,500.—In *Illinois*, a post-township of La Salle co.—In *Minnesota*, a post-village and twp. of Steele co., abt 22 m. S. by W. of Faribault.—In *New Hampshire*, a post-village of Sullivan co., abt. 45 m. W. N.W. of Concord.

Merid'ian, *n.* [Fr. *méridien;* Lat. *meridies*, mid-day.] (*Astron.*) A great circle of the celestial sphere passing through the poles of the world, and also the zenith and nadir, crossing the equinoctial at right angles, and dividing the sphere into two equal parts, or hemispheres, the one eastern and the other western.

(*Geog.*) A great circle supposed to pass through the poles of the earth, and any given place whose meridian it is; and it lies exactly under, or in the plane of the celestial meridian. These meridians are various, and change according to the longitude of places, so that their numbers may be said to be infinite, for all places from E. to W. have their meridians. The *first meridian* is that from which all others are reckoned, which, being totally arbitrary, has been variously chosen by different geographers; but most nations now assume the meridian of the place where they live, or the capital of their country, or its chief observatory, for a first meridian, and from thence reckon the longitude of places E. and W. Thus the Americans reckon from the meridian of Washington, and very commonly from the meridian of Greenwich; the French, from Paris; the Spanish, from Madrid, &c. In this work, the longitudes are measured from the meridian of Greenwich.

Meridian of a globe, is the brazen circle on which it turns, and by which it is supported. This is divided into 360 equal parts called degrees. On the upper semicircle of the brass meridian they are numbered from 0 to 90, or from the poles toward the equator, and are used in the elevation of the poles.

Meridian-line, an arch, or part of the meridian of the place terminated each way by the horizon. The exact determination of this line is of the greatest importance in all cases relating to astronomy, geography, dialling, &c., because on this all the other parts have their dependence. Without knowing the meridian line of a place, it would be impossible to make a dial, set a clock, or measure degrees on the earth's surface.

Magnetic meridian, is a great circle passing through the magnetic poles, to which the needle of the mariner's compass conforms itself.

Meridian altitude of the sun and stars, is their altitude when in the meridian of the place where they are observed. Or it may be defined as an arch of a great circle perpendicular to the horizon, and comprehended between the horizon and the sun or star then in the meridian of the place.

—*a.* [Lat. *meridianus.*] Being on the meridian, or at mid-day: having reference to noon.—Pertaining to the highest point, climax, or culmination; as, the *meridian* of one's fortunes.

Merid'ian, in *California*, a post-village of Sutter co., abt. 16 m. W. of Yuba city.

Meridian, in *Florida*, a post-office of Leon co.

Meridian, in *Michigan*, a post-township of Ingham co.

Meridian, in *Mississippi*, a city, cap. of Lauderdale co., on the Southern and 2 other R.Rs., 96 m. E. of Jackson; has railroad repair shops and other important industries. *Pop.* (1897) 12,500.

Meridian, formerly Cato Four Corners, in *New York*, a post-village of Cayuga co., about 16 m. N. of Auburn.

Meridian, in *Texas*, a post-village, cap. of Bosque co., about 120 m. N. of Austin. *Pop.* (1897) 1,170.

Merid'ianville, in *Alabama*, a village of Madison co., abt. 8 m. N. of Huntsville.

Merid'ional, *a.* [Fr.] Pertaining or relating to the meridian.—Southern; southerly; having a southern aspect; as, the *meridional* hemisphere.

Meridional distance. (*Naut.*) The difference of the longitude between the meridian under which a ship is at present, and any other she was under before.

Meridional'ity, *n.* State or condition of being in the meridian.

—Aspect toward the south; southing; position in the south.

Merid'ionally, *adv.* In the direction of the meridian.

"The Jews . . . place their bed from north to south, and delight to sleep *meridionally.*" — *Sir T. Browne.*

Mer'ils, *n.* See Moaris.

Merimée, Prosper, (*mer'e-mai,*) a French author and senator, b. in Paris, 1803, was educated for the profession of the law; but after the revolution of 1830, he obtained high employment under the constitutional govt. In 1831 he was appointed to an inspectorship of the antiquities of France, a post he has ever since retained. The duties of his office caused him to make several archæological tours throughout France, and the result was the publication of a number of illustrated works of considerable importance. His earliest work, *Théâtre de Clara Gazul, Comédienne Espagnole*, professing to be a translation, was published in 1825, under an assumed name, for the sake of misleading the classical critics. *La Guzla, ou Choix de Poésies Illyriques, recueillies dans la Dalmatie, la Bosnie, etc.*, in 1827, was a happy mystification, the secret of which was first divulged by Gœthe. *La Jacquerie, Scènes Féodales*, and *La Famille Carvajal*, in 1828, and 1572, *Chronique du Règne de Charles IX.*, in 1829, are historical romances, possessing considerable interest on account of their abundant material and clear style of narration. Among his other works of fiction are *La Double Méprise*, an admirable picture of manners, published in 1833, and *Colomba*, in 1840. Among the accounts of his travels are *Voyage dans l'Ouest de la France*, published in 1837; and his accounts respecting Provence, Corsica, and other parts of France. In 1844 he replaced M. Ch. Nodier in the French Academy; in 1853 was nominated a senator, and was promoted commander of the Legion of Honor, 1860. D. Sept. 23, 1870.

Meri'no Sheep, *n.* See Sheep.

Merion'eth, a marit. co. of N. Wales, England, bordering on St George's Channel, having N. the cos. of Carnarvon and Denbigh, E. Montgomery, S. Cardigan; *area*, 602 sq. m. The surface is generally mountainous, and abounds in romantic scenery. The soil is poor and suited mostly for pasturage. The rivers are the Dee, Dyfi, Maw, and Disynwy. The lakes are Llyn Tegid, and Llyn Tallyn. Agriculture is very backward, the principal dependence of the farmer being in cattle and sheep. *Prod.* Wheat, oats, barley, and potatoes. *Manuf.* Unimportant. *Chief towns.* Harlech, Dolgelly, and Bala. *Pop.* 38,963.

Merismat'ic, *a.* [Gr. *merismos*, division, from *meros*, part.] Occurring by partition into cells or segments; as, *merismatic* growth.

Mer'it, *n.* [Fr. *mérite;* Lat. *meritum*, from *mereo, meritus*, to merit, to deserve, to be worthy of.] That which one deserves; meed or reward earned; that which is deserved or merited, whether well or ill; desert; as, to judge of the *merits* of a case.—Goodness, virtue, or excellence, which entitles to regard or compensation; worth; value; as, the *merits* of a book.—State, quality, or relation of deserving well.

"Envy will *merit* as its shade pursue." — *Pope.*

—That which is earned or merited; reward deserved.

"Those laurel groves, the *merits* of thy youth."— *Prior.*

—*v. a.* [Lat. *merito*, to earn, from *mereo.*] To deserve; to earn by active service, or by any meritorious and notable performance; to have a right to claim reward or compensation in money, regard, honor, or happiness; to be justly entitled to; to deserve, in an ill sense; as, to *merit* esteem, to *merit* obloquy.—To reward. (R.)

—*v. n.* To receive desert or benefit; to gain value or profit.

Mer'itedly, *adv.* By merit or desert.

Mer'it-monger, *n.* One who depends on human merit for the reward of salvation.

Merito'rious, *a.* [Fr. *méritoire;* Lat. *meritorius.*] Having merit or desert; deserving of reward, or notice, regard, honor, or happiness; praiseworthy; valuable; estimable.

Merito'riously, *adv.* In a laudable or meritorious manner.

Merito'riousness, *n.* State or quality of being meritorious or valuable, or of deserving reward or suitable return.

Mer'itot, *n.* A kind of play indulged in by children.

Mer'iwether, in *Georgia*, a W. co.; *area*, abt. 500 sq. m. *Rivers.* Flint River, White Oak, Red Oak, Beech, Cane, and Flat Shoal creeks. *Surface*, undulating; *soil*, fertile. *Min.* Numerous medicinal springs exist, and some gold has been found. *County-seat.* Greenville.

Merk, *n.* A silver coin formerly current in Scotland, equal to about $3 and 22 cents.

Mer'kin, *n.* A swab used in cleaning the bore of a cannon.

Mer'langus, *n.* (*Zoöl.*) A gen. of fishes of the *Gadidæ* or Cod family, distinguished by 3 dorsal and 2 anal fins, and no barbels on the skin. The Pollack, *M. purpureus*, is from 18 to 36 inches long, the caudal deeply concave.

Merle, *n.* [Fr; Lat. *merula;* probably contracted from *meravolans*—*merus*, sole, single, and *volo*, to fly.] An old English name for the blackbird.

Mer'lin, Ambrose, who has the reputation of an enchanter in the romance of chivalry, was a British writer, who flourished towards the latter end of the 5th century. He is said to have lived in the court of King Arthur. The work attributed to him is a book of prophecies, which have been illustrated and compared with the English annals by T. Heywood, 1641.

Mer'lin, *n.* [From Merlin, Ambrose, *q. v.*] A necromancer; a wizard; a diviner.

—[From. Eng. *merle;* Fr. *émérillon.*] (*Zoöl.*) An European falcon. *Falco æsalon*, (Fig 1766,) and the smallest of the genus, scarcely exceeding a blackbird in size; but, though small, not inferior in courage to any of its more powerful congeners. It flies low, and with great celerity. Small birds are its natural prey; and in the palmy days of falconry it was used for taking quail and partridges, which it would strike on the head, breast, or neck, and kill with a single blow. The bill is of a bluish lead-color; head ferruginous, streaked with black; back and wings of a dark brown, tinged with bluish ash-color, streaked down the shafts with black, and edged with ferruginous spots; quill-feathers dusky, marked with reddish oval spots; the under coverts of the wings brown, beautifully marked with round white spots; the tail is 5 inches long, crossed with alternate bars of dusky reddish clay-color; the breast and belly are of a yellowish-white, with oblong brown spots pointing downwards; the legs yellow. It breeds in woods; and lays from 4 to 6 white eggs, mottled at the end with brown.

Fig. 1766. — Merlin, (*Falco æsalon.*)

Mer'ling, *n.* (*Zoöl.*) The Merlangus, *q. v.*

Mer'lon, *n.* [It. *merle;* Fr. *merlon.*] (*Fortif.*) The solid part of an embattled parapet (A A, see Fig. 1767), which is erected between two embrasures.

Fig. 1767. — Merlon.

Merlu'cius, *n.* (*Zoöl.*) The Hake, a gen. of fishes, of the *Gadidæ* or Cod family. Its generic characters are, head flattened; body elongated; the back furnished with 2 dorsal fins, the first short and the second long; one anal fin, and no barbule at the chin. The American Hake, or Whiting, *M. albidus*, is from 12 to 36 inches long, reddish-brown above, soiled white below.

Mer'maid, *n.* [Fr. *mer*, from Lat. *mare*, sea, and Eng. *maid.*] A sea-nymph; a supposed marine animal, said to resemble a woman in the upper parts of the body, and a fish in the lower part.

Mer'man, *n.; pl.* Mermen. A sea-man possessing the body of a fish from the waist downwards;—correlative to *mermaid.*

Mermentean River, (*mer-men-to',*) in *Louisiana*, formed by the union of several small branches in St. Landry parish, and flowing S.W., enters the Gulf of Mexico on the W. border, Vermilion parish.

Mer'ocele, *n.* [Gr. *meros*, thigh, and *kēle*, tumor.] (*Med.*) Hernia of the thigh.

Mer'oë, a tract of S. Nubia, lying between the Nile, and its tributary the Atbara. *Ext.* 400 m. long, and 200 broad. On the N. of this tract are the ruins of the ancient city of Meroë, 25 m. N.E. of Shendy. On its site is a modern town of the same name.

Me'rom, the most northern of the three lakes supplied by the river Jordan (Fig. 1281). It is situated in the S. part of a valley formed by the two branches of Mount Hermon. The lake is now called after the valley, the lake of Huleh. The lake proper is 4 to 5 m. long, and perhaps 4 broad, tapering towards the S. It is very shallow, and a large part of it is covered with aquatic plants. Thousands of water-fowl sport on its surface, and its waters abound in fish. On the N. lies the plain of the Huleh, which is a dead level for a distance of 6 m. or more. Near the upper end of this, the three streams which form the Jordan unite. On the W. side of the Jordan above the lake, a marsh extends up N. as far as the junction of these streams, or even farther; while on the E. side the land is tilled almost down to the lake. It is a splendid plain, and extremely fertile.

Me'rom, in *Indiana*, a post-town of Sullivan co., about 33 m. S. of Terre-Haute.

Mero'na, in *Illinois*, a village of McHenry co., abt. 50 m. N.W. of Chicago.

Mer'ope, (*Myth.*) One of the Atlantides, who married Silphus, son of Æolus, and was, like her sisters, changed into a constellation after death.—See Pleiades.

Mero'pidæ, *n. pl.* (*Zoöl.*) The Bee-eaters, a family of birds, order *Insessores.* The birds of this family have rather long, slightly arched beaks, and long pointed wings; they are mostly of a green color; resemble swallows in flight; and, like them, prey on insects, but chiefly on bees, wasps, and other hymenopterous insects. Their skin is very thick. The species of the genus *Merops* are numerous in Africa and Asia; none are known in America.

Merorganiza'tion, *n.* [Gr. *meros*, part, and Eng. *organization.*] A partial organization. (R.)

Me'ros, Me'rus, *n.* [Gr. *meros*, part.] (*Arch.*) The plain surface between the channels of a triglyph. *Weale.*

Merovæ'us, king of France, b. about 411, succeeded Clodius in 448, and defeated Attila in 451. He is said to have extended the bounds of his kingdom to Treves, which city he took and plundered. He began the race of French kings, called Merovingian. D. 457.

Mer'oxene, *n.* (*Min.*) A name given to the brilliant crystals of brownish-green Mica (*Biotite*), from Vesuvius.

Mer'rellton, in *Alabama*, a post-office of Calhoun co., on the Southern R.R.

Mer'rick, in *Nebraska*, an E. central co.; *area*, about 440 sq. m. *Rivers.* Nebraska or Platte river, and numerous less important streams. *Surface*, generally level; *soil*, fertile. *Cap.* Central City. *Pop.* (1890) 8,758.

Mer'rickville, a village of Grenville co., province of Ontario, about 26 m. E. of Perth.

Mer'rily, *adv.* With mirth, frolic, gayety, or laughter; jocundly; jovially; hilariously.

Mer'rimac, or Mer'rimack, a river of New England, rising by several branches in the N. central part of New Hampshire, and flowing a general S. by E. course into Massachusetts, it turns to the N.W. in Middlesex co., and empties into the Atlantic Ocean from Essex co. It furnishes water-power to many large manufacturing towns, as Lowell, Lawrence, and Manchester. Length, about 150 m.

Merrimac, in *Illinois*, a post-village of Monroe co.

Merrimac, in *Massachusetts*, a post-town of Essex co., on Merrimac river, 6 m. N. E. of Haverhill.

Mer'rimack, in *Florida*, a post-office of Orange co.

Merrimack, in *New Hampshire*, a S. central co.; *area*, about 920 sq. m. *Rivers.* Merrimack, Contoocook, and Suncook rivers, besides many smaller streams and several lakes. *Surface*, much diversified, Kearsarge Mountain and the Ragged Mountains rising to a considerable height. *Soil*, generally fertile. *Cap.* Concord (also the seat of the State govt.) *Pop.* (1890) 49,435.

—A town of Hillsborough co. *Pop.* (1897) 1,010.

Mer'rimack, in *Wisconsin*, a post-village and township of Sauk county, about 28 miles N.W. of Madison.

Mer'rimake, Mer'ry-make, *n.* [Eng. *merry*, and *make*.] A merry-making; a merry-meeting; a jovial or convivial festival; mirth; jocund behavior; hilarity. (R.)

"When he saw her . . pass the bounds of modest *merrimake*, Her dalliance he despised." — *Faërie Queene.*

—*v. n.* To make merry; to carouse; to be jovial.

"To moil all day, and *merrimake* at night." — *Gay.*

Mer'riment, *n.* Mirth; lively gayety; noisy sports; festivity or frolic with laughter; glee; jollity; hilarity.

Mer'riness, *n.* State or quality of being merry; mirthful disposition; merriment; gayety with noise or laughter.

Mer'ritstown, in *Pennsylvania*, a post-village of Fayette co., abt. 4 m. S. of Brownsville.

Mer'rittsville, now WELLAND, a post-village, cap. of Welland co., Ontario, about 11 m. S. of St. Catharine's.

Merrittsville, in *South Carolina*, a post-village of Greenville co., about 135 m. N.W. of Columbia.

Mer'ry, *a.* [A.S. *mirige, myrig*, merry; M. L. Ger. *moere*, loud; akin to Ir. *meireir*, merriment. See MIRTH.] Brisk; sprightly; vigorous, stirring; lively; as, "*merry* wind and weather." (*Spenser.*) — Jocund; jovial; noisily gay; hilarious; overflowing with good spirits; exhilarated to laughter; as, a *merry* company.

"I had rather have a fool to make me *merry*, than experience to make me sad." — *Shaks.*

—Cheerful; joyous; not sad or dismal. — Provocative of mirth, laughter, or mental enjoyment; facetious; comical; as, a *merry* joke or conceit.

To make merry, to junket; to revel; to carouse; to be jovial; to engage in frolic or high jinks.

—*n.* A sort of wild, red cherry.

Mer'ry-andrew, *n.* [Said to be from *Andrew* Borde, a facetious physician in the time of Henry VIII.] A buffoon; a zany; one whose business is to make sport for others; particularly a jester who attends a quack doctor or salimbanque.

Mer'ry-make, *n.* and *v. n.* Same as MERRIMAKE, *q. v.*

Mer'ry-making, *a.* Causing mirth or merriment.

Mer'ry-making, Mer'ry-meeting, *n.* An assembly met for festivity or harmony; a junket; a revel; a feast.

Mer'ry-thought, *n.* The forked bone of a fowl's breast, which boys and girls break by pulling each one side; the longer part broken off betokening priority of marriage.

"Let him not be breaking *merry-thoughts* under the table with my cousin." — *Echard.*

Mer'seburg, a town of Prussia, prov. of Saxony, on the Saale, 56 m. S.E. of Magdeburg. *Manuf.* Woollen and linen cloth, paper, and tobacco. It is celebrated for its beer. *Pop.* 14,000.

Mer'sey, a river of England, rising on the borders of the cos. of Chester, Derby, and York, and after a S.W. course of 60 m., in which it receives the waters of the Goyt, Irwell, Bollin, Weaver, and other tributaries, it empties into the Irish Sea, by a large æstuary at Liverpool. It is navigable as far as Manchester, 31 miles.

Mersion, (*mer'shun,*) *n.* [Lat. *mersio.*] Same as IMMERSION, *q. v.*

Merten'sia, *n.* (*Bot.*) A genus of plants, order *Boraginaceæ*. They are perennial herbs, with stems and leaves usually glabrous and pellucid-punctate; the radical ones many-veined; caulis sessile; raceme terminal. *M. Virginica*, the Virginian Lungwort, is a smooth, erect, and elegant plant, found from New York to Georgia, and in the Western States. Flowers in terminal clusters; corolla blue, funnel-form, sitting upon a short, 5-toothed calyx.

Mer'ton, in *Minnesota*, a post-township of Steele co.

—In *Wisconsin*, a post-township of Waukesha co.

Mertz'town, in *Penna.*, a post-village of Berks co.

Meruli'dæ, *n. pl.* (*Zoöl.*) See TURDIDÆ.

Merv, *n.* (*Geog.*) An oasis of Turkestan, lying between Bokhara and northeastern Persia, 118 miles by rail from the Amu Daria or Oxus and 512 from the Caspian Sea. The oasis is about 60 miles in length by 40 in breadth, and owes its existence largely to the Murghab river, which flows through its midst and irrigates its fields. The inhabitants are composed of the Tekke-Turcomans, and are estimated by the Russians to number 250,000, though the traveller O'Donovan estimates them at 500,000. They live scattered over the country, the town of Merv, once the capital of the Seljuk dynasty, being now greatly reduced in importance. The climate is hot and dry; the agricultural products are wheat, sugar, cotton, and silk. The men breed horses, camels, and sheep; the women weave silk and make carpets. There is an old citadel, Kaushid Kahn Kala, adjoining which is a new Russian fort with a garrison of 3,000 men. On the other side of the Murghab, opposite this fort, a new Russian town has grown up, whose trade is monopolized by a number of Armenian merchants, who settled here after the Russian conquest.—*Hist.* Merv, or Mouru, is of considerable antiquity, mention of it being made in the *Zend Avesta*. Alexander the Great built a town in the oasis, which after his period was successively held by the Parthians and the Arabs, the latter of whom made the city of Merv the capital of Khorassan. A Nestorian bishop established his seat here in the 5th century and a Greek archbishop in the 14th. In the 8th century it became the headquarters of Mokanea, the famous "veiled prophet of Khorassan." The city of Merv rose into Oriental splendor under the Seljuk Turks, whose capital it became, and particularly under Sultan Alp Arslan. In 1221 it was taken and sacked by the Mongols, after which it fell into a state of ruin. The Uzbegs held it until 1510, when it fell under the control of the Persians, who in their turn lost it in 1787, the emir of Bokhara conquering it. In 1856 it fell into the hands of Turkomans, who made it a center of nomadic raids, under which Persia suffered severely, until 1883, when they were subdued by the Russians, who have brought peace and a new prosperity to the country. The Trans-Caspian Railway, from the Caspian eastward to Samarcand, opened in 1886, made Merv its first terminus, and has greatly stimulated the trade of the oasis. Merv occupies an important strategic position at the intersection of the Bokhara-Meshhed and Khiva-Herat caravan routes.

Mesara'ic, Mesera'ic, *a.* [Fr. *mésaraïque*, from Gr. *meseraion*, mesentery.] Mesenteric; pertaining or having reference to the mesentery; as, the *mesaraic* glands.

Meshed' A'li, a town of Asiatic Turkey, 30 m. from the ruins of Babylon. The most conspicuous object is the tomb and mosque of Ali, which draws numerous pilgrims towards it. *Pop.* unknown.

Mesdames, (*mā-dăm',*) *n. pl.* of MADAME, *q. v.*

Meseems', *v. impers.*, (*imp.* MESEEMED.) Methinks; it seems or appears to me.

"Yet there, *meseems*, I hear her singing loud."—*Sidney.*

Mesembrya'ceæ, or FICOID'EÆ, *n. pl.* [Gr. *mesembria*, midday, *anthos*, flowers, — alluding to the flowers expanding at midday.] (*Bot.*) The Ice-plant or Fig-marigold family, an order of plants, alliance *Ficoidales*. — DIAG. Numerous conspicuous petals, and several consolidated carpels. — They are succulent herbs or shrubs. Sepals definite, generally more or less united to the ovary; stamens perigynous; ovary inferior or nearly superior; styles distinct; placentas axile, free, central, or parietal; fruit capsular or indehiscent; seed with a curved or spiral embryo on the outside of mealy albumen. The plants of this order are natives exclusively of warm and tropical regions. The order includes 5 genera and 375 species.

Mesembryan'themum, *n.* (*Bot.*) The typical genus of the order *Mesembryaceæ*. *M. crystallinum*, the Ice-plant, is so called from its surface being studded with little watery vesicles of an ice-like appearance. Fig-marigold is a name commonly applied to several species, highly prized for the brilliant beauty of their flowers. Some species are edible, and others yield large quantities of soda when burnt.

Mesencephʻalon, *n.* [Gr. *mesos*, the middle, and *egkephalos*, brain.] (*Anat.*) The natural primary division of the brain, which is usually encompassed by the parietal segment of the cranium, and consists of the lobe of the third ventricle, the optic lobes, with the appendages called the *conarium*, *hypophysis*, and in fishes the *hypoaria*.

Mesenter'ic, *a.* [Fr. *mésentérique*.] Pertaining or relating to the mesentery; as, the *mesenteric* glands.

Mesenteri'tis, *n.* (*Med.*) Inflammation of the mesentery.

Mes'entery, *n.* [Gr. *mesenterion* — *mesos*, middle, and *enteron*, an entrail or intestine.] (*Anat.*) A thick, fat membrane (Fig. 597), placed in the middle of the intestines. Its substance is composed of membranes, fat, vessels of all kinds, and a number of glands. In the upper part, it is connected with the three superior vertebræ of the loins; and in the lower with the intestines, and particularly with the *jejunum* and *ileum*, to which it also gives their outer coat. The uses of the *M.* are to suspend, connect together, and retain in their due place all the intestines, and to sustain the sanguiferous and lacteal vessels of the intestines.

(*Med.*) The glands of the *M.*, 100 to 150 in number, exert an organizing action on the contents of the lacteals, the chyle being more abundant in fibrin and in corpuscles after it has passed through them. Hence, it is obvious that disease of these glands must always seriously affect the process of assimilation. The most important affection of these organs is their scrofulous or tubercular degeneration, which gives rise to the disease known as *tabes mesenterica*, a disease most common in childhood, but confined to no period of life. In the great majority of cases, it is associated with, and often marked by, other results of the tubercular or scrofulous diathesis, such as pulmonary consumption, tubercular peritonitis, scrofulous disease of the spine, rickets, &c.; but sometimes the mesenteric glands seem almost exclusively affected, in which case the disease becomes sufficiently distinct to allow of easy detection. The leading symptoms are acceleration of the pulse, occasional fever (especially towards evening), loss of color and flesh, derangement of the digestive organs (constipation or diarrhœa, and occasional vomiting), a steady pain in the region of the navel (increased by pressure); but perhaps the most characteristic symptom is tumefaction and hardness of the abdomen, with general emaciation. The enlarged glands can sometimes be detected by a careful examination with the hand, especially in advanced cases. The progress of the disease is generally slow; but at length hectic fever sets in, the emaciation becomes extreme, dropsical effusion appears, and the patient dies exhausted, if not cut off by the access of some acute inflammation. — The treatment mainly consists in the administration of cod-liver oil, or, if the stomach is too irritable to bear that medicine, of iodide of potassium, combined with some bitter infusion, the bowels being at the same time carefully attended to. The application of stimulating liniments, or of iodine ointment to the abdomen, is often of great service. When the disease has advanced to a considerable extent, remedies are of little use, except to palliate some of the more urgent symptoms. — Independently of the disease that has just been noticed, inflammation of these glands is by no means uncommon, when the mucous membrane of the small intestine is ulcerated, as, for instance, in typhoid or enteric fever.

Mesera'ic, *a.* Same as MESARAIC (*q. v.*).

Mes'faith, *n.* [Fr. *mes*, for, *mis*, wrong, and Eng. *faith*.] Erroneous belief; misapplied faith; heterodoxy (R).

Mesh, *n.* [A. S. *mæscre*, a spot, blot; Ger. *masche*, a stitch in netting, a mesh; Lat. *macula*, a mesh or hole in a net. See MACULATE.] The opening space or interstice between the threads of a net; network.—The grains forming the refuse of the mash-tub after brewing; brewer's wash.

—*v. a.*—To catch in a net; to enmesh; to insnare.

Mesh'hed, Meshed, or **Mashhad** [the "place of martyrdom"]. The most important city of northeast Persia, it being the capital of Khorassan, and the center of important trade routes to Merv, Bokhara, and elsewhere. It stands on a tributary of the Hari-Rud, 200 m. N.W. of Herat, and 460 E. by N. of Teheran. As seen from a distance *M.* appears a beautiful city, above its broad sweep of walls shining the gilded dome and minarets of the mosque that covers the tomb of Imam Riza, one of the most splendid structures of the East. Imam Riza, a follower of Ali, was the 8th imam of the Shiite sect, to which body of Moslems *M.* is a sacred city. They venerate it as greatly as the Sunnite Moslems do the city of Mecca, and visit it annually to the number of 100,000 pilgrims. The city possesses another handsome mosque, and a wide, tree-shaded central street, down whose center flows a muddy current between low stone walls. There is a fixed population of about 50,000, who are engaged in the manufacture of felt-rugs, carpets, swords, turquoise jewelry, and velvet, cotton, and silk goods. Their exports include opium, woollens, cottons, dried fruits, turquoises, &c., which are sent to Russia, Afghanistan, and India. The recent trade of *M.* is, however, predominantly with Russia, through the advantage offered by the Trans-Caspian Railway *via* Merv. *M.* has a severe climate in winter, owing to its elevation, 3,055 feet. In summer the temperature ranges from 76° to 90° F. Near by are the ruins of Tus, the old capital of Khorassan, in which were buried Firdousi, the celebrated poet, Haroun-al-Raschid, the Sultan of the "Arabian Nights," and the Imam Riza.

Meshop'en, or MESHOP'PEN, in *Pennsylvania*, a small creek flowing into the N. branch of the Susquehanna river, in Wyoming co.

—A post-borough of Wyoming co.

Mesh'y, *a.* Formed like network; reticulated.

Me'sial, *a.* [From Gr. *mesos.*] Middle; medium; central.

Mesilla, (*mes-seel'ya,*) in *New Mexico*, an extreme S.W. co., adjoining Mexico on the S., and Arizona Territory on the W.; *area*, abt. 12,000 sq. m. *Rivers.* Rio Grande, Rio San Domingo, Rio de los Mimbres. *Surface*, diversified, and in the W. part mountainous; *soil*, in some parts fertile. *Min.* Copper. *Cap.* Masilla.

—A post-village, cap. of the above co., on the Rio Grande, abt. 12 m. S. of Donna Aña.

Mes'lin, *n.* See MASLIN.

Mes'mer, FRIEDRICH ANTON, a German physician, author of the famous system of animal magnetism, commonly called Mesmerism, was B. in 1734, at Merseburg, in Suabia. He first made his doctrines known to the world in 1766, by a work on planetary influence, published at Vienna, in which he contended that the heavenly bodies diffuse through the universe a subtile fluid, which acts on the nervous system of animated beings. He quitted Vienna for Paris in 1778, and soon acquired a prodigious popularity by his marvellous cures, and received large sums of money subscribed by his admirers. It must be supposed that his determination was to rise by his discovery, and to establish himself in a position which he might be able to retain as the master of a school devoted to the new art; and to effect this he allowed it to be understood that there was an esoteric doctrine of animal magnetism, with which even his most ardent disciples, Bergasse and Deslon, were not acquainted. In the same spirit, and partly, we must add, to produce a crisis favorable to his own action upon a great number of persons together, *M.* established the *baquet*, a kind of magnetic battery, around which his patients assembled; and when the crisis took place (manifested in a great variety of startling effects), the arch-magician appeared, to moderate and direct the action in each case. The scenes at these re-unions drew the attention of the French government to *M.*'s proceedings, and in 1784 a commission of savans was appointed, with instructions to examine the means employed by *M.*, and the results obtained. The members of this commission consisted of four physicians, one of whom was Dr. Guillotin, and five members of the Academy — Franklin, Leroi, Bailly, De Bory, and Lavoisier. The result of their inquiry was announced in a report drawn up by Bailly, and is well known to have been unfavorable not only to the truth of animal magnetism, but to its morality. But it must be remembered that, in the time of *M.*, public opinion was influenced widely and deeply by the philosophy of the encyclopedists, and any explanation that involved the recognition of spiritual laws would be received as empirical. Though *M.* and his disciples endeavored to keep their ground, and succeeded in establishing many societies of magnetizers, the discoverer found it necessary to quit France, and coming to England, resided there some time under a feigned name. *M.* passed the remainder of his life in comparative obscurity, and D. in his native place, 1815. — *M.* did not know the most important result of animal magnetism—somnambulism, which was first brought before the public by the Marquis de Puységur in 1785.

Mesmeree', *n.* A person subjected to the influence of mesmerism; correlative to *mesmerist*.

Mesmer'ic, Mesmer'ical, *a.* [Fr. *mesmérique*.] Relating or pertaining to mesmerism; in subjection to mesmeric influence.

Mesmerism (*mez'-mer-izm*), *n.* [From MESMER, *q. v.*] A term applied to the phenomena known also as animal magnetism, and in its scientific experimental form as hypnotism. It indicates a peculiar power, possessed by some individuals in large degree, by which they are enabled to throw others into a state of unconsciousness except in so far as themselves are concerned, the senses being sealed much more firmly than in sleep to persons in general, though fully respondent to the mesmerizer. The method by which *M.* is generally performed is as follows: The patient is placed in a sitting posture, the mesmerizer being seated before him in such a position that he can readily make movements, called *passes*, along the arms of the patient and over other parts of his body, or before his face. There are many variations of these movements, and other methods in which the attention of the patient is absorbed, and his nervous organization and consciousness in some way brought under the control of the operator, he falling into a kind of trance, which presents a number of successive stages, from that of partial sleep to that of deep insensibility. In what is known as *electro-biology* sleep is produced by making persons gaze for a time on a piece of money or other object held in the hand. The mesmeric state has many phases, the somnambulistic being apparently one of them, it being possible for susceptible individuals to enter the mesmeric state without the intervention of an operator. In ordinary *M.* the mental organism of the patient seems to fall under the sole control of the operator, who seems capable of implanting what idea he pleases in the mind of the patient, and of making him perform strange or ludicrous actions under the instigation of these ideas, while he remains deeply unconscious to the voice or presence of any other persons. The phenomena of *M.* were long regarded with incredulity by scientists, who held them to be the result of fraud and credulity. But late scientific research has fully established their authenticity, and added considerably to their range, many medical men of advanced scientific attainments having subjected these phenomena of recent years to a close and extended investigation. James Braid, a physician of Manchester, Eng., was the first to examine the mesmeric effects scientifically, and to prove that these effects depended on the physical and psychical condition of the subject, not upon any mysterious force emanating from the operator. He named the phenomena Hypnotism, and the interesting results of his experiments induced many other scientists to take up this subject. In recent years the practice of hypnotism, either real or feigned, has been followed by numerous "professors" as a means of gaining a livelihood, their exhibitions frequently attracting large audiences. For the results of this scientific study see HYPNOTISM, and PSYCHOLOGY.

Mes'merist, *n.* A professor or practitioner of mesmerism; a believer in mesmerism; a mesmerizer.

Mesmeriza'tion, *n.* Act or process of mesmerizing.

Mes'merize, *v. a.* To place into a state of mesmeric coma, or suspension of the physical powers.

Mes'merizer, *n.* A mesmerist.

Mesne, (*mēēn,*) *a.* [Norm. Fr., middle.] (*Law.*) Middle; intermediate.—*Mesne process* is defined by Wharton as "all those writs which intervene in the progress of a suit or action between its beginning and end, as contradistinguished from primary and final process."—*Mesne profits* are the profits that a man receives between disseisin and recovery of land.—In England, the word mesne is also a dignity: those persons who hold lordships or manors of some superior, and grant the same to some inferior persons, are called *mesne lords*.

Mes'oblast, *n.* [Gr. *mesos*, middle, and *blastes*, bud.] (*Physiol.*) The so-called nucleus of cells.—*Agassiz*.

Mes'ocarp, *n.* [Gr. *mesos*, and *karpos*, fruit.] (*Bot.*) That part of a pericarp which lies between the epicarp and endocarp.

Mesoco'lon, *n.* [Gr. *mesokolon*.] (*Anat.*) That part of the mesentery, which, having reached the extremity of the *ileum*, contracts and changes its name; or the portion of the meseutery to which the colon is attached. The mesentery and the mesocolon are the most important of all the productions of the *peritoneum*.

Mesogas'tric, *a.* [From Gr. *mesos*, and *gastro*, belly.] (*Anat.*) Applied to the membrane by which the stomach is attached to the abdomen.

Mes'olite, *n.* [Gr. *mesos*, and *lithos*, stone.] (*Min.*) A lime and soda Mesotype.

Mes'olobe, *n.* [Gr. *mesos*, and *lobos*, lobe.] (*Anat.*) The *corpus callosum*, a white, medullary band, perceived on separating the two hemispheres of the brain, which it connects with each other.

Mesolog'arithm, *n.* [Gr. *mesos*, and Eng. *logarithm*.] (*Math.*) A logarithm of the co-sine.

Mesophlœ'um, *n.* [Gr. *mesos*, and *phloios*, bark or rind.] (*Bot.*) The cellular layer of bark overlying the liber, and underlying the epiphlœum, *i. e.* the layer immediately beneath the epidermis.

Mesophyl'lum, *n.* [Gr. *mesos*, and *phyllon*, a leaf.] (*Bot.*) The parenchymatous tissue forming the fleshy part of a leaf between the upper and lower integuments.

Mesopota'mia. (*Anc. Geog.*) A country of Western Asia, situate between the Tigris and the Enphrates. It was called, in the Old Testament, Aram Naharaim, or "Syria between the two waters," and Padan Aram, *i. e.*, "Syria of the Plain," and is first mentioned in the Scriptures as the country where Nahor and his family settled (*Gen.* xxiv. 10). It was long part of the seat of the very ancient Babylonian dominion, and subsequently of the Mede, Persian, and Macedonian. The Romans obtained possession of *M.* in 165. Jovian surrendered it to the Persians in 363. The Carmathians (*q. v.*) overran it in 902, and the Turks conquered it between 1514–16. It is now comprised in the pashalics of Bagdad and Diarbekr. In old times it was remarkable for its fertility, and sustained a crowded population, but the neglect of irrigation has reduced it to barrenness, and it is now inhabited only by roving bands of Arabs and Kurds.

Mesopota'mia, in *Ohio*, a post-township of Trumbull co.

Mesopteryg'ions, *a.* (*Zoöl.*) An epithet sometimes applied to such fishes as have only one back-fin, which is situated in the middle of the back.

Mes'osperm, *n.* [Gr. *mesos*, and *sperma*, a seed.] (*Bot.*) The secundine, one of the membranes of a seed, and the second from the surface.

Mesotho'rax, *n.* [Gr. *mesos*, and *thorax*, the chest.] (*Zoöl.*) The posterior segment of the alitrunk, which bears the posterior pair of wings and the third or posterior pair of legs.

Mes'otype, *n.* [Gr. *mesos*, middle, and *tupos*, type.] (*Min.*) Prismatic zeolite; a mineral divided into three sub-species fibrous zeolite, natrolite, and mealy zeolite. The *mesotype* is said by some writers to be so named from its property, when transparent, of doubling images.

Mesozo'ic, *a.* [Gr. *mesos*, and *zoe*, life.] (*Geol.*) The name given by Prof. Phillips to the middle of the three great geological periods, more usually denominated SECONDARY. The mesozoic group includes: 1st, the new red sandstone or triassic; 2d, the lias; 3d, the great series of the oölites; 4th, the Wealden; and 5th, the cretaceous series.

Mes'pilus, *n.* [Gr. *mespilon*.] (*Bot.*) The Medlar, a genus of plants, order *Pomaceæ*, having a 5-cleft calyx with leafy segments, nearly round petals, a large honey-secreting disc, and 2–5 styles, united together in the flower, but widely separated on the fruit, the upper ends of the bony cells of which are exposed. The common *M.*, *M. Germanica*, a large shrub or small tree, spiny in a wild state, but destitute of spines in cultivation, is a native of S. Europe and of the temperate parts of Asia. It has lanceolate leaves, not divided nor serrated, solitary, large, white flowers at the end of small spurs, and somewhat top-shaped fruit, of the size of a small pea or larger, according to the variety. The *M.* is much cultivated in some parts of Europe, and is seen sometimes in our gardens. Its fruit is very austere, even when ripe, and is not eaten till *bletted*, when its tough pulp has become soft and vinous by incipient decay.

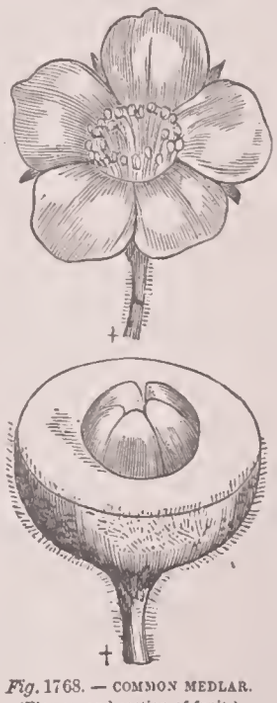


Fig. 1768. — COMMON MEDLAR. (Flower, and section of fruit.)

Mes'prise, *n.* Misadventure; lack of success. (R.)

Mesquite, Mezquite, (*mes-kēēt'*, or *mes-kē'tă*,) *n.* [Of Indian origin.] (*Bot.*) A shrub or small tree growing in Texas and Mexico, not unlike a mimosa, bearing large, edible pods (*Algaroba glandulosa* of Gray).—Also, a rich native grass in W. Texas (a species of *Aristida*);—so called from its growing in company with the tree.

Mess, *n.* [A. S. *mese*, a table; Goth. *mes*, a table, dish; Sp. *mesa*; Lat. *mesa*, *mensa*, a table; Pers *mēz*; Illud. *maez*, a dish.] A dish or given quantity of edibles prepared and set on a table at one time; a quantity of dressed food sufficient for a meal.—A number of persons who eat at the same table together; a company of persons who take their meals in common;—used especially in the military, naval, and mercantile marine services; as, the officers' *mess*, the ward-room *mess*.—A jumbled or confused mixture; a medley; a conglomeration; a potpourri; an olla podrida;—hence, any state of entanglement, confusion, difficulty, or embarrassment; a scrape; an awkward predicament; as, he has got himself into a *mess*.

—*v. n.* To partake of a mess; to eat; to feed.—To associate at the same table; to eat in company; as, the midshipmen *mess* by themselves.

—*v. a.* To serve or furnish with a mess.

Message, (*mēs'săj,*) *n.* [Fr., from L. Lat. *missaticum*, from Lat. *missus*—*mitto*, to send.] Any notice, word, communication, or piece of intelligence, written or verbal, sent from one person to another; errand; notification by messenger.—An official written communication of facts or opinions transmitted by a sovereign, ruler of a state, &c., to the house or houses of a legislature or other deliberative body; also, an official verbal communication from one branch of a legislature to the other; as, a royal *message*, a president's *message*, &c.

Mes'sala, CORVINUS, M. VALERIUS, Roman consul, orator, and historian, was the friend of Brutus and Cassius, and fought on their side at Philippi, B. C. 42. He afterwards attached himself successively to Antony and Octavius, served at the battle of Actium, 31, and the same year was chosen consul. He subdued Aquitania, of which he was made pro-consul, and was honored with a triumph. For a short time he held the office of prefect of Rome, 26, but the same year retired, continuing, however, to hold the office of augur. *M.* was the friend of Horace and Tibullus, of Mæcenas and Asinius Pollio, and other distinguished men of the age; was the zealous patron of literature and art; and one of the most eminent Roman orators. D., probably, about B. C. 3.

Messali'na, two Roman empresses of this name:—*M.*, VALERIA, who had for her fifth husband the emperor Nero, who had murdered her fourth husband, Atticus Vistimus. After the death of the emperor, in the year 68, she devoted herself to literary pursuits.—*M.*, VALERIA, daughter of Valerius Messalinus Barbatus, who became the wife of Claudius, and shared with him the imperial throne. Her licentious conduct is unparalleled in history, for she not only made her husband's palace the scene of her debaucheries, but often quitted it at night, and acted as a common prostitute. When summoned by the enraged emperor, after some fresh extravagance, in the year 48, she attempted to kill herself, but lacked courage, and her enemy Narcissus, who dreaded the result of the interview, caused her to be dispatched by a soldier.

Messe'ne. (*Anc. Geog.*) A city of Greece, and the cap. of Messenia in Peloponnesia. See MESSENIA.

Mes'senger, *n.* [Fr. *messager*, from *message*.] One who bears a message or an errand; the bearer of a written or verbal missive from one person to another, or to a public legislative body; one who carries despatches; a courier; as, a Queen's *messenger*.—He or that which foreshows or prognosticates; a harbinger; a forerunner; a herald.

(*Naut.*) A hawser wound round a ship's capstan, used for heaving in a cable.

(*Law.*) A person appointed to perform certain duties, generally of a ministerial character.—The officer who takes possession of an insolvent or bankrupt estate for the judge, commissioner, or other such officer.

Messe'nia. (*Anc. Hist. and Geog.*) The S.W. division of Peloponnesus in ancient Greece, bounded N. by Elis, from which it was separated by the river Neda, and Arcadia; E. by Laconia; and S. and W. by the sea. The earliest inhabitants of this country are said to have been the Leleges. Polycaon named the country Messene, in honor of his wife, B. C. 1499. At the Dorian conquest of the Peloponnesus, Cresphontes obtained *M.* Numbers of the inhabitants left their country and settled in various parts of Greece, Italy, &c., at the close of the second Messenian war, B. C. 668. Those that remained were reduced to the condition of helots, and the whole of Messenia was incorporated with Sparta. For nearly 300 years *M.* was in the condition of a conquered country, though the people made an abortive effort to recover their independence, B. C. 464. After the battle of Leuctra, B. C. 371, in which the Spartans were totally defeated, Epaminondas determined to restore *M.*, and he built the town of Messene (*q. v.*), B. C. 369, inviting back to their country the exiles from Italy, Sicily, and Africa. Under the protection of Thebes, *M.* maintained its independence. Its people fought with the Achæans at the battle of Sellasia, B. C. 221. The Messenians having made war against the Achæan League, were defeated, and their chief city was captured, B. C. 183. *M.*, with the rest of Greece, lost its independence, and was incorporated with the Roman empire, B. C. 146.

Mes'siad, *n.* (*Lit.*) The title of a German epic poem, by Klopstock, illustrative of the sufferings and ascension of the Messiah.

Messi'ah, *n.* (*Script.*) A Hebrew word signifying *the Anointed*; a title which the Jews gave to their expected great deliverer, whose coming they still wait for; and a name which Christians apply to Jesus Christ, in whom the prophecies relating to the Messiah were accomplished. Among the Jews, anointing was the ceremony of consecrating persons to the highest offices and dignities; kings, priests, and sometimes prophets, were anointed; thus, Aaron and his son received the sacerdotal, Elisha the prophetic, and David, Solomon, and others the royal unction. The prophecies in the Old Testament which relate to the coming of the Messiah are very numerous, some of which may be found in *Gen.* iii. 15, xlix. 10; *Isaiah*, vii. 14; *Dan.* ix. 25, &c. The ancient Hebrews being instructed by the prophets, had very clear notions of the Messiah: these, however, were changed by degrees; insomuch that when Jesus Christ appeared in Judea, they were in expectation of a temporal monarch, who should free them from their subjection to the Romans. Hence, they were greatly offended at the outward appearance, the humility, and seeming weakness of our Saviour; which prevented their acknowledging him to be the Christ they expected.

Messi'ahship, *n.* Character, state, or vocation of the Saviour.

Messian'ic, *a.* Pertaining, or having reference to the Messiah; as, the *Messianic* office.

Messi'as, *n.* (*Script.*) Same as MESSIAH, *q. v.*

Messidor', *n.* [Fr.] (*Chronology.*) In the French Republican calendar, the tenth month, commencing June 19, and ending July 18.

Messieurs, (*mĕsh'yŭrz,*) *n. pl.* [Fr., *pl.* of MONSIEUR, *q. v.*] Sirs; gentlemen;—used as the plural of *Mr.*, and written, in its abbreviated form, *Messrs.*; as, *Messrs.* Drexel & Co.

Messina, (*mes-sē'na,*) (anc. *Messana*, or *Messene,*) a city of S. Italy, in the N.E. of Sicily, on the Strait of Messina, 56½ m. N E of Catania, and 120 N E. of Palermo; Lat. 38° 11′ 10″ N., Lon. 15° 34′ 7″ E. The town runs parallel with the strait, and has, for its finest part, the Marina, a long line of buildings facing the harbor, and running parallel with it for more than a mile. A broad quay separates it from the water. The town sweeps along the swelling eminences, and gradually rises so as to present almost every public edifice in a striking point of view. The whiteness of the buildings forms a beautiful contrast to the dark-green of the forests behind.

Fig. 1769.— MESSINA.

The harbor, which is formed by a projecting tongue of land, curved in the shape of a sickle, is 4 m. in circumference, the finest in the Mediterranean, and can accommodate more than 1,000 ships. The entrance, which is 700 yards wide, is defended by the fort of Porto Reale and Fort Salvatore. *Manuf.* Damasks and satins. The trade of *M.* is very considerable. The exports consist principally of silk, oil, wine, coral, fruits, &c. The imports are cotton and woollen fabrics, hardwares, and other articles of colonial produce.

Messinese', *n. sing.* and *pl.* (*Geog.*) A native or inhabitant of Messina, Sicily;—plurally, the people of Messina. —*a.* (*Geol.*) Belonging, or having reference to Messina.

Mess'mate, *n.* [*Mess* and *mate.*] A table-companion; one who takes his meals with another or others; hence, a comrade, a chum; — used chiefly on shipboard.

Messnage, (*mes'swrj,*) *n.* [O. Fr. *mesuage*, from L. Lat. *messuagium*, from *manere*, to stay.] (*Law*) A dwelling-house with some land attaching, as garden, orchard, &c., and all other conveniences, as out-buildings, &c., belonging to it.

Mestee', Mustee', *n.* In the W. Indies, the distinctive denomination given to the offspring of a white and a quadroon.

Mestino, Mestizo, (*mes-tē'no, mes-tē'tho,*) *n.* [Sp.] In Spanish-speaking countries of America, the offspring of an Hispano-American Creole and a native Indian.

Mestre, (*mais'trai,*) a town of Italy, prov. of Venice, 5 m. W. of Venice; *pop.* 6,000.

Mesu'ma, or NESUMA, in *Nebraska*, a village of Otoe co., about 35 m. W. of Nebraska.

Mesym'nicum, *n.* Among the ancient poets, a refrain at the end of a stanza.

Met, *imp.* and *pp.* of MEET, *q. v.*

Met'a. [Gr.] A prefix in words derived from the Greek, denoting *beyond, over, behind, after, between, with,* &c.

Me'ta, a river of S. America, rises on the E slope of the N.E range of the Andes, about 40 m. S. of Bogota (U. States of Colombia), and flowing a general E.N.E. course into Venezuela, enters the Orinoco River about Lat. 6° 20′ N., Lon. 67° 45′ W. *Length*, about 500 m.

Metab'asis, *n.* [Fr. *metabase*, from Gr. *meta*, over, and *bainein*, to pass.] (*Rhet.*) Transition; a passing over.

Metabo'lian, *n.* [Gr. *metabole*, change.] (*Zoöl.*) An insect having the power of metamorphosis.

Metabol'ic, *a.* Belonging or having reference to metamorphosis; involving or inducing change.

Metacar'pal, *a.* Relating or pertaining to the metacarpus.

Metacar'pus, *n.* [Gr. *meta*, between, and *karpos*, the wrist.] (*Anat.*) That part of the hand between the wrist and the fingers. The inner part of the *M.* is called the *palm*, and the outer the *back* of the hand.

Metacen'tre, *n.* (*Hydrostatics.*) A term first applied by Bougner to a certain point of a floating body, upon the position of which the stability of the body depends. See HYDROSTATICS.

Metacetone, (*-tās'e-tōn,*) *n.* [Gr. *meta*, with, and Eng. *acetone.*] (*Chem*) One of the products formed during the distillation of a mixture of one part of starch or sugar with eight of quick-lime; it is a colorless liquid, insoluble in water, but soluble in alcohol and ether, and of an agreeable odor. *Form.* C_6H_6O. It is converted by oxidizing agents into *metacetonic* (*propionic*) acid = $C_6H_6O_3 + H_2O$

Metachlo'rite, *n.* (*Min.*) A mineral resembling chlorite, found in green aggregated crystals in the Hartz.

Metachronism, (*me-tāk'ron-izm,*) *n.* [Fr. *métachronisme*, from Gr. *meta*, after, and *chronos*, time. See CHRONIC.] An error in chronology by placing an event after its real time.

Met'acism, (*-sizm,*) *n.* [Lat. *metacismus*; Gr *metakismos.*] A corrupt pronunciation or too frequent application of the letter *m*.

Metagal'late, *n.* (*Chem.*) A salt resulting from the combination of metagallic acid and a base.

Metagal'lic Acid, *n.* (*Chem.*) When gallic acid is rapidly heated up to about 480°, carbonic acid and water are evolved, and a black product remains soluble in the alkalies, and forming insoluble compounds with many of the metallic oxides. This product has been termed *metagallic acid*.

Met'age, *n.* [From META, *q. v.*] Measurement of coal. — Dues paid for measuring.

Metagen'esis, *n.* [Gr. *meta*, beyond, and *genesis*, generation.] (*Physiol.*) The changes of form which the representative of a species undergoes in passing, by a series of successively generated individuals, from the egg to the perfect or imago state. It is contradistinguished from *metamorphosis*, in which those changes are undergone by the same individuals. The following is an example of metagenesis: The egg of the Medusa is developed into a *polype*, which, assuming a form called *Strobila*, separates into numerous individual young Medusæ. The larval polype propagates other similar polypes by gemmation, each of which becomes a *Strobila*, and is resolved into numerous Medusæ. Thus there is a successive production of procreating individuals from a single impregnated ovum of a Medusa, according to the law of Parthenogenesis.

Metagenet'ic, *a.* Pertaining or having reference to metagenesis.

Metagen'ic, *a.* [Gr. *meta*, beyond, and *genesis.*] Belonging or relating to metagenesis.

Metagram'matism, *n.* [Gr. *meta*, after, and *gramma*, letter, from *graphein*, to write.] An agrammatism. See ANAGRAM.

Metal, (*met'al*, sometimes *mēt'l,*) *n.* [Fr.; Lat. *metallum* = Gr. *metallon*. The Greek signifies a mine or quarry, that which is found in mines — metal, which signification prevails in the Latin. Probably from Gr. *metaltaō*, to search after other things (*met 'alla*), to explore carefully.] A mineral; a simple, fixed, shining, opaque body or substance, insoluble in water, fusible by heat, and having a peculiar lustre, as gold, silver, copper, iron, lead, &c. (See below, § *Chem.*) — In England, the broken stones used in the macadamization of roads. — Courage; spirit. (See METTLE, the more correct orthography.) — The weight of armament carried by ships of war, as, guns of heavy *metal*. — Glass in a fused state.

(*Chem.*) Metals may be divided into classes, according to two systems — the one having for its foundation the physical, the other the chemical properties of those bodies. Percy (*Metallurgy*, vol. i.) classifies them according to their fusibility, including, however, only the economic metals in his classification. (*a*) *Fusible below redness*, — tin, lead, &c. (*b*) *Fusible above redness, but at temperatures easily attainable in furnaces*, — copper, gold, &c. (*c*) *Fusible only at the highest heat attainable in furnaces*, — nickel, manganese, &c. (*d*) *Practically infusible in ordinary furnaces*, — platinum, iridium, &c. He also divides them into: (*a*) *Fixed metals*, — gold, copper, nickel, &c. (*b*) *Volatile metals: after fusion*, — cadmium, zinc, &c.; *without fusion, passing directly from the solid to the gaseous state*, — arsenic. The specific gravity of metals at ordinary temperatures has an exceedingly wide range, from lithium, ·596, which is brighter than any known fluid, to osmium, which is as high as 21·5. All metals bear a definite form of crystallization, which is produced principally in three ways, — by slow solidification after fusion, by condensation from vapor, and by electrotypic decomposition. Metals differ considerably in their structure, not only with regard to each other, but in relation to themselves. Some are crystalline, as zinc, antimony, and bismuth; others are granular, like pig-iron; others are fibrous, like bar-iron and copper; while some few are columnar, like grain-tin, and conchoidal, as in some brittle alloys — speculum metals, for instance. Two of the principal physical characteristics of metals are, ductility (the property of being permanently extended by traction, as in wire-drawing), and malleability (which is the property of extending in all directions under the hammer). The following tables show that these properties are distinct:

Malleability.	*Ductility.*
Gold,	Gold,
Silver,	Silver,
Copper,	Platinum,
Tin,	Iron,
Platinum,	Nickel,
Lead,	Copper,
Zinc,	Zinc,
Iron,	Tin,
Nickel.	Lead.

The power of metals for conducting electricity is shown in the following table from Matthiessen (*Phil. Trans.*, 1863):

Silver	100	at 32° Fahr.
Copper	99·95	"
Gold	77·96	"
Zinc	29·02	"
Iron	16·81	"
Tin	12·36	"
Lead	8·32	"
Antimony	4·62	"
Bismuth	1·24	"

Their power of conducting heat is exhibited in the following table, by Weidemann and Franz:

Silver	100	at 12° C.
Copper	73·6	"
Gold	53·2	"
Tin	14·5	"
Iron	11·9	"
Lead	8·5	"
Bismuth	1·8	"

The order of conductivity for heat and electricity is nearly the same. So much for the physical properties of metals. Chemically speaking, they may be divided into seven principal groups: — I. The metals of the alkalies, — potassium, sodium, lithium, rubidium, cæsium. They all have an intense affinity for oxygen, and decompose water at ordinary temperatures. They form two or more oxides, both soluble in water. Thallium is supposed by Lamy to belong to this group; but the experiments of Crookes, its discoverer, prove conclusively that it is a heavy metal belonging to the lead group. II. The metals of the alkaline earths, — barium, strontium, calcium, magnesium. These metals, with the exception of magnesium, which seems closely allied to zinc in many of its properties, decompose water at all temperatures, and form one oxide pretty soluble in water. III. Metals of the earths, — aluminium, glucinum, cerium, and several others of great rarity. These oxides are insoluble in water; and they do not decompose water at ordinary temperatures. IV. Metals analogous to tin, — zinc, cadmium, cobalt, nickel, uranium, iron, chromium, manganese. These metals, heated to dull redness, decompose the vapor of water when transmitted over them, becoming converted into oxides while hydrogen escapes. Three of them, iron, chromium, and manganese, form powerful acids. V. Metals forming powerful acids with oxygen, — tin, titanium, molybdenum, tungsten, vanadium, arsenic, antimony, tellurium, and one or two more. VI. The next group contains bismuth, copper, lead, and thallium, metals which exert no decomposing action on water, even at a full red-heat. They form strong basic oxides, and exhibit a strong tendency to form subsalts. VII. The last group contains the noble metals — mercury, silver, gold, platinum, and the heavy metals associated with it. These metals exhibit no tendency to oxidize in air, and are incapable of removing the oxygen from water, even at high temperatures.

Met'al, *v. a.* To cover or sheathe with metal; as, to *metal* a ship's bottom. — To macadamize with broken stones, as roads, &c. (Used in England.)

Met'al, in *Pennsylvania*, a township of Franklin co.; *pop.* about 1,600.

Metal'dehyde, *n.* [Gr. *meta*, beyond, and Eng. *aldehyde*] (*Chem.*) A crystalline substance into which aldehyde is partially converted when kept for any length of time, even in sealed tubes. *M.* is re-converted into aldehyde when heated to 400° F., in a sealed tube.

Metalep'sis, *n.*; *pl.* METALEPSES, *n.* [Lat., from Gr. *meta*, and *taubānein*, to take.] (*Rhet.*) The continuation of a trope in one word through a succession of significations, or the union of two or more tropes of a different kind in one word, so that several gradations or intervening senses come between the word expressed and the thing intended by it.

Metalep'tic, Metalep'tical, *a.* Having reference, or pertaining to a metalepsis; transitive. — Transverse; as, the *metaleptic* action of a muscle. — Belonging to, concerned in, or induced by metalepsy, or displacement of one substance by another.

Metalep'tically, *adv.* By transposition or substitution.

Met'alled, *a.* See METTLED.

Metal'lic, *a.* [Fr. *métallique*; Lat. *metallicus.*] Pertaining to a metal or metals; consisting of or containing metal; partaking of the characteristic properties of metals; resembling a metal; as, a *metallic* substance, *metallic* ductility, a *metallic* pencil

M. colors. A term sometimes applied to pigments of mineral origin, to distinguish them from colors derived from the animal and vegetable kingdoms. Many metals yield colored compounds capable of being employed as pigments; but chromium, copper, lead, and iron are especially distinguished for the valuable colors which they produce.

M. paper. A kind of writing-paper covered with prepared size, for being ineffaceably written upon with a pewter pencil.

Metal'lifacture, *n.* [Lat. *metallum*, and *facere, factum*, to make.] That department of practical mechanics applying to the production and fabrication of metals. (R.)

Metallif'erous, *a.* [Lat. *metallum*, and *fero*, to produce.] Producing or yielding metals; as, *metalliferous* ores.

Metal'liform, *a.* [Lat. *metallum*, and *forma*, form.] Resembling, or having the form of metallic substances.

Met'alline, *a.* Pertaining to a metal; consisting of metal; impregnated with metallic qualities; as, *metalline* waters.

Met'alling, *n.* (*Naut.*) Process or operation of sheathing with metal; as, *metalling* of a ship's bottom.

— In England, the act of forming the surface of a roadway with small, broken stones, &c.; also, the materials so employed.

Met'allist, *n.* An operator or worker in metals; one skilled in metallurgy.

Metalliza'tion, *n.* [Fr. *métallisation.*] Act or process of forming into a metal; operation of giving to a substance its proper metallic properties.

Met'allize, *v. a.* [Fr. *métalliser.*] To form into metal; to give to a substance its proper metallic properties.

Metalloch'romy, *n.* [Gr. *metallon*, metal, and *chroma*, color.] Art, process, or operation of coloring metals.

Metallog'raphist, *n.* A writer on metallurgy; one who treats of metals.

Metallog'raphy, *n.* [Gr. *metallon*, metal, and *graphein*, to describe.] A treatise on metals, or on metallic substances.

Met'alloid, Metalloid'al, *a.* [Gr. *metallon*, and *eidos*, form.] Having a form or appearance like that of a metal: belonging to the metalloids.

Met'alloid, *n.* [Fr. *metalloïde.*] (*Chem.*) A term

sometimes applied to the inflammable non-metallic bodies, such as sulphur, phosphorus, &c., or sometimes to all the non-metallic elements. The metallic bases of the fixed alkalies and alkaline earths were at one time called metalloids, in consequence probably of their low specific gravity.

Metalloid al, *a.* See METALLOID.

Metallurgic, (*-ŭr'jik,*) **Metallur'gical,** *a.* [Fr. *métallurgique.*] Pertaining, or having reference to metallurgy, or to the art or process of working metals.

Met'allurgist, *n.* One skilled in metallurgy; a worker in metals.

Met'allurgy, *n.* [Fr. *métallurgie;* from Gr. *metallon,* a metal, and *ergon,* work.] The art of separating metals from their ores, and from other compounds. As the processes vary essentially according to the metals, we refer to the name of each important metal, under which its process of extraction will be found described. See IRON, GOLD, LEAD, &c.

Metalman, (*mĕt'al-man,* or *mĕt'l-man,*) *n.; pl.* METALMEN. A worker in metals; a metallurgist; a coppersmith; a brazier.

Metamer'ic, *a.* [Gr. *meta,* and *meros,* part.] (*Chem.*) Applied to bodies of the same composition and atomic weight, but yet differing in certain of their properties. See METAMERIDES.

Metamer'erides, *n. pl.* (*Chem.*) A class of compounds which contain the same centesimal composition, but differ so completely in their physical and chemical characters as to be considered distinct; thus, acetate of methyl and formic ether, fruit, sugar, and hydrated lactic and acetic acid, have respectively the same composition in 100 parts, but are essentially different in their properties. The formulæ adopted for the first two of these will illustrate this:

Acetate of Methyl.
$C_2H_6O,C_4H_6O_3 = (C_6H_{12}O_4)$, and
Formic Ether.
$C_4H_{10}O,C_2H_2O_3 = (C_6H_{12}O_4)$

It will be seen from this that the ultimate atoms of C, H, and O are grouped together in two different ways.

Metamo'ra, in *Illinois,* a post-village, cap. of Woodford co., about 80 m. N. by E. of Springfield. *Pop.* (1897) 780.

Metamora, in *Indiana,* a post-township of Franklin co. *Pop.* (1897) 970.

Metamora, in *Michigan,* a post-village and township of Lapeer co. *Pop. of* village (1894) 333.

Metamo'ra, in *Ohio,* a post-village of Fulton co., abt. 20 m. W. by N. of Toledo.

Metamorphic, (*-môr'fik,*) *a.* [Gr. *meta,* change, and *morphē,* form.] Liable to change or transition; variable; mutable.

M. rocks, or *stratified primary rocks.* (*Geol.*) The materials of the earth's crust beneath the soil are called by geologists *rock,* whether they are hard like limestone and granite, plastic like clay, or loose like sand; and of these rocks all that are not in the condition in which they were originally accumulated, must be regarded as changed, altered, or *metamorphosed.* The latter expression is technical, and means that a definite change has taken place in the structure of the material. As, therefore, all mechanical rocks except coral limestones have originally been deposited from suspension or solution in water, and therefore in the form of mud, sand, or gravel of some kind, it becomes obvious, when we find sandstones and limestones, or compacted and bedded clays, containing bands, nodules, and crystals, that a change has passed over them. They are no longer mud, but have assumed a new existence and new conditions; in a word, they have become *metamorphic rocks.* The term is not usually so widely extended, but it is clear that no line can be drawn. Some rocks are so little altered that we can hardly recognize the change, some are so much changed that we can hardly trace the original texture. Very extensive metamorphoses can take place without obliterating the traces of organic origin. More commonly, only those rocks are spoken of as metamorphic which show the last stage of a transition to crystalline structure, and to the condition called *plutonic* or *igneous.* Such are marbles, quartzites, slates, micaceous and other schists, and gneiss; all of these being rocks in which the evidences of original aqueous origin are nearly or entirely lost. Regarded in this light, metamorphic rocks form a class of rocks distinct from aqueous, from volcanic or recent igneous, and from plutonic or ancient igneous. So many doubtful rocks have, however, on further examination, turned out to be metamorphic, that possibly all rocks not actually showing marks of igneous agency may be found to belong to this important and large group.

Metamor'phism, *n.* (*Geol.*) The state or quality of being metamorphic.

Metamor'phist, *n.* (*Theol.*) A believer in the transformation of Christ's body into the Deity at the Ascension.

Metamorphize, (*-môr'fīz,*) *v. a.* See METAMORPHOSE, *q. v.*

Metamor'phose, *v. a.* [Fr. *métamorphoser;* Gr. *metamorpho—omai,* to be transformed — *meta,* denoting change, and *morph-ē,* form, shape.] To change into a different form; to transform; to transmute; to transubstantiate; and, colloquially, to transmogrify.

"And earth was *metamorphosed* into man. — *Dryden.*

—*n.* Same as METAMORPHOSIS, *q. v.*

Metamor'phoser, *n.* One who transforms or metamorphoses.

Metamor'phosic, (*-fo-sik.*) *a.* Changing the shape or form; transmuting or transforming.

Metamor'phosis, Metamor'phose, *n.; pl.* METAMORPHOSES. [Gr. *metamorphōsis.*] Transformation; change of form or shape. — The ancients held two kinds of *M.,* — the one *real,* the other *apparent.* The *M.* of Jupiter into a bull, and of Minerva into an old woman, were only apparent; while the transformations of Lycaon into a wolf, and of Arachne into a spider, were held to be real metamorphoses. The idea of *M.* presents a great charm to the active imagination of nations in the first stages of their history; and early man, unable, from his limited knowledge, to refer the changes of nature to their proper causes, allowed his imagination to ascribe these mysteries to *M.* Most of the ancient metamorphoses include some allegorical meaning. Ovid's collection of narratives respecting the change wrought by the power of the gods of Greece and Rome, is a history of transformations poetically related. In Natural History, the word *M.* is occasionally applied to any change in the organization of matter; as, for instance, the transformation of food or rain into animal or vegetable organic substances; but the term is more strictly applied to those sudden changes in the form of things which are so obvious and interesting to even the unscientific observer; as the change of the pupa into a butterfly, to quote an instance from the insect world. See INSECT.

Meta'pa, a town of Guatemala, of Central America, on a lake of the same name, abt. 20 m. S.S.E. of the city of Guatemala; *pop.* 9,000.

Metaphor, (*mĕt'a-for,*) *n.* [Fr. *métaphore;* Gr. *metaphora — meta,* over, and *pherō,* to carry. See BEAR.] (*Rhet.*) A figure which consists in the application of a word in some other than its ordinary use, on account of some applicability or resemblance between the two objects; thus, if we call a hero a *lion,* a shrewd, crafty fellow a *fox,* a minister *a pillar of the state,* &c., we speak *metaphorically.* Brevity and power are the characteristic excellencies of the metaphor; novelty shows the original wit; but metaphors indulged in merely for the sake of unexpected contrast, frequently prove more allied to the ridiculous than the sublime, and ought to be but rarely used.

Metaphor'ic, Metaphor'ical, *a.* [Fr. *métaphorique.*] Pertaining or having reference to metaphor; comprising, or characterized by metaphor; figurative; tropical; not literal; as, a *metaphorical* mode of expression.

Metaphor'ically, *adv.* In a metaphorical or figurative manner; not literally.

Metaphor'icalness, *n.* State or quality of being metaphorical.

Met'aphorist, *n.* One who makes or indulges in metaphors.

Metaphosphor'ic Acid, *n.* (*Chem.*) A term by which some chemists designate the protohydrated phosphoric acid = HO,PO_5. The salts of this acid are *monobasic.*

Met'aphrase, (*-frāz.*) *n.* [Gr. *metaphrasis—meta,* denoting change, and *phrasis,* a speaking, a phrase, from *phrazō,* to speak. See PHRASE.] A translation from one language into another, phrase for phrase, or word for word; a literal or verbal translation.

"This translation is not so loose as paraphrase, nor so close as *metaphrase.*" — *Dryden.*

—A phrase capping another by way of rejoinder; a repartee.

"The manly art of phrase and *metaphrase.*" — *E. B. Browning.*

Metaph'rasis, *n.* Metaphrase.

Met'aphrast, *n.* One who translates from one language into another literally, or word for word.

Metaphras'tic, Metaphras'tical, *a.* Literal in translation.

Metaphysic, Metaphysical, (*fiz'ik,*) *a.* [Fr. *métaphysique.*] Pertaining or having reference to metaphysics. — According to the laws, rules, or principles of metaphysics; as, *metaphysical* deduction.

Metaphys'ically, *adv.* In the manner of metaphysical science.

Metaphysician, (*-fi-zĭsh'an.*) *n.* [Fr. *métaphysicien.*] One who is versed in metaphysics, or metaphysical science.

Metaph'ysis, *n.* [Gr. *meta,* and *physis,* growth.] Transformation; change of form or shape.

Metaphysics, (*met-a-fiz'iks,*) *n. sing.* [Gr. *metata physika,* a word probably manufactured by Andronicus Rhodicus, the first editor of Aristotle.] (*Philos.*) When taken in its widest signification, this term is applied to the philosophy of mind in general. Considered in its more special senses, it is synonymous with (1) Psychology, or that branch of science which deals particularly with the manifestations or phenomena of mind; and (2) with Ontology, as it is called; or with the rational inferences to be derived from those phenomena. Thus, the term is properly applied to two sets of mental manifestations, — to phenomenal psychology on the one hand, and to inferential psychology on the other. In the former department, the phenomena of facts of consciousness may be studied in themselves simply as such and such mental appearances, or they may be studied in their necessary and universal manifestations as such and such laws of mind. In the latter, again, or the science of being, as it has been called, the facts of consciousness, as such, simply form the groundwork of legitimate conclusions respecting the existence of something out of and beyond their own immediate phenomena. The one, indeed, classifies mental modes and their laws, the other investigates, so far as this can be done, the existences of self, the world, and Deity. It must be distinctly understood, from first to last, that the science of being, properly so called, can make no pretensions to a deductive *à priori* knowledge of its objects. The human mind can and does logically know nothing of things in themselves; mind, or matter, or Deity, *per se,* can only be known, if known at all, by man, from the phenomena or manifestations which each respectively casts on the mirror of the human consciousness. It is simply by the effects revealed to us by such objects that their existence can approximatively be concluded. If certain appearances come to light in the soil of the mind, certain inferences are, and even must be, made from those appearances respecting the existences that are implied by them. In a word, no rational induction of the mental phenomena, legitimately considered and followed out, can help landing the investigator in the heart of conclusions, or at least surmises, respecting the existence of the soul, of the universe, and of God. So much for the science of being, or metaphysics proper. To take up now psychology proper. It was customary in Europe, previous to the time of Kant, to resolve all the phenomena of the human mind either into Understanding and Will, or, which was hardly a preferable arrangement of them, to classify them into the Intellectual and Active powers. The former terminology was inherited by Locke from the Middle Ages; the latter, Reid and Stewart did nothing to purify. Kant was the first to arrange the phenomena of consciousness into Cognition or Knowledge, Feeling and Desire, and Will. This threefold classification was considered so happy by philosophers, that every one of any distinction immediately adopted it as soon as it came to his knowledge. Consciousness, it must be remarked, is by no means one of those faculties. It is, properly, the mind itself in such or such a state or condition of activity or passivity. Consciousness belongs equally to each and to all of the above threefold set of phenomena. If I know, I must be conscious of knowing; if I feel, I must be conscious of feeling; if I will, I must be conscious of willing. Thus, consciousness is the condition of all mental energy. A philosophy of consciousness is all but a philosophy of the mind, and mind and consciousness are often used synonymously. The following is Sir William Hamilton's distribution of consciousness or mind: 1. *Facts.* Phenomena, Empirical Psychology; and under these he would consider the Cognitions, Feelings, and Conative Powers of Will and Desire. 2. *Laws.* Nomology, Rational Psychology; and under these he would consider the laws of our Cognitions (or Logic), the laws of our Feelings or Æsthetics (or the Beautiful, &c.), and the laws of our Conations or Moral Philosophy (or Ethics), and Political Philosophy. 3. *Results.* Ontology, Inferential Psychology; and under these he would consider the Being of God, and the Immortality of the Soul, &c. As these subjects have been, or are to be, taken up in this book, the only subject that now remains is the facts of consciousness themselves. Consciousness in itself, and in its spheres of application, has a double potency, a twofold region over which it rules. There is an internal and an external consciousness, — the one taking cognizance of all our mental states, properly so called, the other taking cognizance, through the senses, of the outer world, and the peculiar forms of external perception. Sensation proper is the consciousness which we have of certain affections of our bodily organism, and usually ascribes to the outer world the source or cause of those affections. Perception proper, again, is the consciousness which we have of our bodily organism, — as extended, figured, and so forth, and in and through this consciousness, the immediate apprehension of an external material world. Thus, sensation is the consciousness which we have of the secondary qualities of matter, as they are called, namely, color, taste, flavor, savor, and sound; and perception is the consciousness which we possess of the primary qualities of matter; viz., extensibility, divisibility, size, density or rarity, shape, situation, and so forth. Sensation and perception co-exist in an inverse ratio, as Sir William Hamilton has shown, in each of the five senses. In the senses of smell and taste, for example, the sensational or subjective element is so obtrusive as to be universally regarded as quite special. Again, those of hearing, sight, and touch are nearly as universally, though not quite so correctly, regarded as objective or perceptional. In other terms, the senses of smell and taste are usually regarded as vehicles of pleasure and pain, while the senses of hearing, sight, and touch are viewed as informing us respecting the material attributes of sound, color, and resistance. Yet the latter quality — that of resistance — belongs more peculiarly and obtrusively to the locomotive faculty, as it has been called, or the power which the living body possesses of removal from one position or state to another. It is this faculty which first informs us immediately of the existence of an extra-organic world. The external world, previous to the exercise of this power, is wholly intro-organic; but as soon as the will chooses to exert its energy, we are immediately conscious of something offering a resistance to it, and to the locomotive power at one and the same time. In addition to the five senses there is sometimes recognized a muscular sense, or the peculiar consciousness we experience on the movement of a limb. Such are the feelings of lassitude, of fatigue, of ennui, of restlessness. This sense, it is obvious, can give us no information of anything save the special states of our own nervous organism. There is a seventh sense, the *tactus venereus,* as Julius Scaliger called it, which is obtrusively subjective. In addition to the primary and original powers possessed by the senses, there is a secondary or acquired power, which some of them obtain by the education of experience. Such are the knowledge of distance and of solidity, which every one of us at first sight ascribes to the sense of sight, and which is no less demonstrably certain to be derived originally from the sense of touch. It is only by a series of oft-repeated judgments respecting the color and the comparative size of objects, that we

learn to ascribe to each something like its proper distance and size, and this always at first in conjunction with the sense of touch. It has been already observed that consciousness properly belongs to whatever occupies the regards of the mind, be it an external object or an internal one,—a thought, a feeling, or a volition. Consciousness is in every mind occasionally clear or indistinct, according to the degree of attention which is given to the objects of consciousness. Are the objects of consciousness indistinct? This arises, *cæteris paribus*, from the degree of attention being obstructed and faint which is brought to bear on those objects. Are the objects of consciousness clear? This arises from the degree of attention given to them being intense and free. It is impossible here to pursue the subject of indistinct or unconscious states of mind, but those who are curious will find much interesting speculation on an obscure subject in the "petites perceptions" of Leibnitz, and the "latent modifications" of Sir William Hamilton. Attention then may be defined as consciousness in pursuit of a definite object, or consciousness intensified. And it is to be observed that attention often exists to a high degree where volition has no place whatever. Such, for example, as when one is excited by some violent passion, it is notorious that the will, exert itself how it may, cannot withdraw the mind from fixing its most earnest attention on the object of admiration or dislike, until the passion has in some degree cooled. Of course, where the will and the attention go together, or where the will and the desire point in the same direction, it is then that we may be said really to be conscious of the objects which occupy us. Attention, then, being necessary to every act of consciousness, and particularly to every clear and distinct act, these two powers taken together constitute the acquisitive power of the mind. But if the mind were destitute of any power of retaining its acquired perceptions, all knowledge, and even all consciousness, save of the most transitory kind, would be utterly impossible. So also would it be if the mind were destitute of any power of reproducing its ideas, and of representing them when they were summoned before its bar. Thus we have, by the combination of retention and recollection, the faculty of *memory*, as ordinarily understood. And it may be observed, that it is very probable that no object which has once occupied the distinct consciousness of any mind can ever be entirely effaced. We cannot often recollect at the moment something that we are assured our memory has got stored away in some out-of-the-way recess, and the chances are that we shall stumble over this very thing that we are in search of,—it may be days, months, or years after. It is the recollective power that we all are more or less deficient in much more than the retentive. Again, if I try, through my memory, to recall some event or scene in which I am interested, the mind must have some *where* or place to put that which is summoned before its consciousness. It must either hold it in the grasp of the pure intellect, or, if being picturable, it must be handed over to the *imagination*. If the former, it belongs properly to the intuitive and symbolical knowledge of logic; if the latter, it is properly the work of fancy. Dr. Mansel, of Oxford, combines both powers under the general head of representative consciousness, without apparently discriminating very sharply in this relation the conceptive power of the mind from the power of forming pictures. (For conception, judgment, and reasoning, see Logic.) As closely connected with the phenomena of memory and imagination, we have the laws of *mental suggestion* or association, not only as lying very near the foundation of those faculties, but ruling in a large measure the entire territories of the mind; for suggestion holds sway over all its phenomena, except those that come under the category of necessary truths. A syllogism affords a convenient example in logic; and the relations of parent and child, of greater and less, and of cause and effect, are instances in metaphysics. There is, probably, no subject that has called forth more of the attention of the highest minds in speculative philosophy than this very one of suggestion. Without going into the history of the subject, it can only be observed that probably the subject has been treated best by Aristotle, Hobbes, Hume, and Sir Wm. Hamilton. The views of the latter respecting the phenomena of association are that they resolve themselves into the special laws of—1, repetition; 2, indirect remembrance; and 3, preference. This appears to be the most complete analysis which those laws have yet received. 1. The law of repetition runs thus: Thoughts co-identical in mode, but differing in time, tend to suggest each other. 2. The law of indirect remembrance is that thoughts once co-identical in time, are—differing as they may among themselves—again suggestive of each other, and that in the mutual order which they originally held. 3. The law of preference is this, that thoughts are suggested, not merely by a general relation between each other, but in proportion to the interest these thoughts have to the individual mind. (See Association. For analysis of the passions, emotions, desires, the moral faculty, and the will, the reader is referred to the article Ethics.) There are certain facts of consciousness of a necessary character, that, though at first mainly derived through experience, yet, when once acquired, possess an irresistible truth. These are what are called *à priori* truths in the Kantian and modern philosophy, as contrasted with those other branches of knowledge which we derive wholly through experience, and which receive the name of *à posteriori*. Such are, to take the easiest instance, the truths of arithmetic, geometry, logic, &c. No conceivable power can make us, as we are at present constituted,—and this is all that psychology troubles itself about,—think of two and two as being anything else than four, or that two straight lines, by any possibility, can inclose a space, or that the same individual can be both tall and short at the same time, judged by a single standard of height. It is quite the reverse with such a truth as that day and night succeed each other every twenty-four hours; for we have only to go to Lapland to find that truth no longer holding. The former are necessary or *à priori* truths, the latter is a contingent or *à posteriori* one. Now, the laws of association, which have just been considered, while they can readily afford explanations of the contingent facts of consciousness, can give no clue at all to an explanation of those necessary ones. One is not a whit surer that two and two make four, after the hundredth experiment, than he was after the first; which is not the case where suggestion holds sway. Do I know any better after having examined a thousand objects, that the qualities of each and all of them express to consciousness as many distinct substances, than I did after examining the first object? Do I know any better after observing a thousand changes, that each and all of them imply a cause, than I did after witnessing the first change with intelligence? Can any knowledge of the fact that ingratitude is at all times worthy of condemnation be said to be improved by my years? Are not each and all of those truths incontestable once and forever? Those judgments which seem to possess this quality of necessity, which no theory of the laws of suggestion can explain, are reducible to three heads:—1. Logical judgments, springing from the laws of identity, contradiction, and excluded middle, are wholly of this class. Such are the truths of arithmetic and geometry; as, the sums of equals are themselves equal, and two straight lines cannot inclose a space. Dr. Mansel, in his "Metaphysics," ranks the latter judgment under the head of mathematical judgments, as distinguished from logical ones; but there appears to be no necessity for this, as the judgment is wholly explicable on the logical principle of contradiction. Mathematical judgments are only logical ones applied to continuous or discrete quantity. 2. Metaphysical judgments expressing an apparently necessary relation between what is known and what is unknown; as that every quality implies a substance in which it inheres, and that every change implies some cause. Such are the laws, when carried into their highest development, on which hang entirely our beliefs of the permanent existence and identity of the human self, of the permanence and reality of the outer world, and of the perpetual existence of a Maker of both the outer world and the inner. 3. Moral judgments, or such as state the immutable obligation of certain courses of conduct,—as, Be just, be kind, be courageous, be honest, be grateful,—are, so far as we can see—and that is all that psychology has to do with—altogether incontestable. There is no man in his senses who would impose on his fellow the general obligation "be unjust," however many men our law courts may find to transgress the general obligation in special instances. If the mind possesses necessary and universal truths, a question of some interest here arises. Can we hereby transcend the experience of consciousness, transcend, indeed, the bonds of all possible experience? Necessity not being a result of experience, arising, indeed, from the application of certain native principles of the mind to the facts or phenomena of consciousness, at first sight would seem to warrant a belief that by those very principles of universality and necessity which have just been evolved, it is possible for thought to contemplate in their realities those truths which transcend experience. Let us reflect. We have never seen a perfect geometrical surface, or that *pons asinorum* of schoolboys, a perfect point or line. Yet how readily we can abstract from the wood or paper, on which such objects are usually presented to us, the material element which clogs the apprehension, and seize upon the pure point, line, surface, which lurk behind. Now, no one requires to be told that for the exercise of such abstraction, the necessary conception of pure space is essential. What does this show us? It shows that there must always be a basis for the necessary truth to work upon, and that it is wholly a mental element which is gained by the application of such truths. We have experience of nothing but finite and relative objects, as we had experience just now only of material surfaces. Have we any faculty or faculties which will enable us to transcend those limited objects, and enable us to contemplate infinitude and absolute existence? If we weigh those necessary truths one by one, we shall find no warrant for maintaining that logic can give us such powers; and the question is, can metaphysics or ethics do so? But when we put logic out of court, we put *comprehensions*, clear and distinct, out of court along with it. What then remains? Nothing but *belief*. Logic deals wholly with the comprehensible; ontology deals wholly with belief. We cannot comprehend things in themselves, yet we all *believe* in them. Experience rules logic; ontology rules the highest beliefs we possess.

Met'aplasm, *n.* [Gr. *metaplasmos*, from *plasso*, I form.] (*Gram.*) A general term, comprehending all those figures of diction which consist in alterations of the letters or syllables of a word; taking place in three ways,—by augmentation, diminution, or immutation. 1. Augmentation in the beginning, *prosthesis*; in the middle, *epenthesis*; at the end, *paragoge*; to which may be added *diæresis*, adding to the number of syllables by the resolution of a diphthong. 2. Diminution, at the beginning, *aphæresis*; in the middle, *syncope*; at the end, *apocope*; by contraction of two vowels, *synæresis*. 3. Immutation, *antithesis*, signifying the change of one letter for another; *metathesis*, transposition of the order of letters.

Metapoph'ysis, *n.* [Gr. *meta*, and *apophusis*, a process.] (*Anat.*) The exogenous process commonly situated between the diapophysis and anterior zygapophyses; in the human skeleton it is best developed in the last dorsal and first lumbar vertebræ; the metapophyses are developed more, and from more numerous vertebræ, in most of the inferior mammalia, arriving at their maximum of length in the armadillos, in which they equal the neural spines in length in the posterior dorsal and lumbar vertebræ. They relate in these singular quadrupeds to the support of the carapace, the neural spines representing the *king-posts*, and the metapophyses the *tie-beams*, in the architecture of a roof.

Metasta'sio, Pietro Antonio Domenico Buonaventura, (*mai-tas-ta'se-o,*) an eminent Italian poet, b. at Assisi, 1698, was the son of a common soldier, named Trapassi. When he was only 10 years of age, his talents of extemporizing in verse attracted the notice of the celebrated Gravina, who took him under his protection, called him (by a translation of his name into Greek) *M*, paid great attention to his education, and on his death, in 1717, left him his whole estate. The young poet, being thus placed in an easy condition, devoted himself to his favorite study, and, under the guidance of the celebrated singer, Maria Romanina (afterwards Bulgarelli), created the modern Italian opera. Charles VI. invited him to Vienna, in 1729, and appointed him poet-laureate, with a pension of 4,000 guilders. Thenceforward no gala took place at court which was not graced by his verses. The Empress Maria Theresa bestowed upon him magnificent presents, as also did Ferdinand VI., king of Spain. Thus honored and beloved, his life presented a calm uniformity for half a century, during which period he retained the favor of the imperial family undiminished, his extraordinary talents being admirably seconded by the tenor of his private character, and his constant observance of the conventional proprieties of high life. He composed no less than 26 operas and 8 sacred dramas, besides innumerable minor pieces. The poetical characteristics of *M* are sweetness, correctness, purity, gentle pathos, and elevated sentiment. D. 1782.

Metas'tasis, *n.*; *pl.* Metastases. [Gr., change of position.] (*Med.*) The transference or translation of a disease from one part of the body to another; as when a cutaneous eruption is suddenly checked by exposure to cold, and the disease attacks a deep-seated part; or, in gout, where the disease suddenly shifts from the foot to the stomach, or some other internal part.

Metastat'ic, *a.* Occasioned by metastasis; as, a *metastatic* tumor.

Metatar'sal, *a.* Belonging to the metatarsus; as, *metatarsal* bones.

Metatar'sus, *n.* [Lat., from Gr. *meta*, and *tarsos*, the flat part of the foot; Fr. *métatarse*.] (*Anat.*) The upper part of the foot, from the toes to the instep.

Metatartar'ic Acid, *n.* (*Chem.*) One of the two acids produced when tartaric acid is heated at about 340° F. It has the same formula as tartaric acid, but cannot be crystallized.

Metath'esis, *n.*; *pl.* Metatheses. [Fr. *métathése*; Gr. *metathêsis*—*meta*, over, and *tithemi*, to place, set. See Thesis.] (*Gram.*) The transposition of the letters of a word, a process not unfrequently exhibited in the words of kindred languages, as in the German *ross*, English *horse*.

Metatho'rax, *n.* [Fr., from Gr. *meta*, beyond, and *thorax*, the chest.] (*Zoöl.*) The final or posterior segment of the insectile thorax.

Met'atome, *n.* [Gr. *meta*, and *tomê*, an incision.] (*Arch.*) The interstice from one dentil to another.

Meta'yer, *n.* [Fr., from L. Lat. *medietarius*—Lat. *medius*, middle.] In France and Italy, a farmer or agriculturist who is supplied with stock, implements, &c., from the proprietor of the land, indemnifying him therefor with half the produce.

Met'calf, in *Kentucky*, a S. co.; *area*, abt. 400 sq. m. *Rivers*, S. and E. forks of Little Barren River, and several smaller streams. *Surface*, diversified; *soil*, fertile. *Cap.* Edmonton.

Met'calf Station, in *Massachusetts*, a village of Middlesex co., abt. 25 m. W.S.W. of Boston.

Mete, (*meet.*) *v. a.* [A. S. *metan, ametan*; D. *meten*; Ger. *messen*.] To measure; to determine or define quantity, dimensions, or capacity, by any rule, regulation, or standard.

—*n.* [A. S. *met*; Lat. *meta*.] Limit; boundary; confine—generally in the plural.

Me'tea, in *Indiana*, a post-village of Cass co., abt. 10 m. N. by E. of Logansport.

Mete'deconk, or Metetecunk, in *New Jersey*, a small river rising in Monmouth co., and flowing E. through Ocean co. into Barnegat Inlet.

Metel'lus, Q. Cæcilius, surnamed *Macedonicus*, Roman consul, was b. of a distinguished plebeian family, and while prætor, a. c. 148, defeated and took prisoner Andriscus, the pretender to the throne of Macedonia. He then commanded against the Achæans, and had nearly closed the war before the arrival of Mummius. On his return to Rome he had a triumph, received the surname Macedonicus, and, in 143, was chosen consul. The same year he was sent to Spain as pro-consul, and carried on the Celtiberian War, which was finished by Q. Pompeius. He was afterwards censor, and d. full of honors, 115.

Metellus, *Q. Cæcilius*, surnamed *Numidicus*, Roman consul, was nephew of the preceding, and educated at Athens. After holding various public offices, he was chosen consul, b. c. 110, and was charged with the conduct of the war against Jugurtha, king of Numidia. He had virtually brought it to a close, when, by an

intrigue of his ambitious legate, Cnius Marius, he was superseded in command by the latter. He was well received at Rome, 107, both by senato and people, and received a triumph. He became one of the firmest supporters ot the nristocratic party, was censor in 102, and, through the influence of Marius, was exiled two years later. To prevent civil strifo and bloodshed on his account, he quietly left Rome and went to Rhodes, whence he was recalled witbiu a year. His eloquence is highly spoken of.

METELLUS, *Q. Cæcilius*, surnamed *Pius*, Roman consul, son of the preceding, contributed by his earnest persuasions to the recall of his father from exile, B.C. 99, and thus acquired his honorable surname. He served in the Social and Samnite Wars, and joined the party of Sulla against Marius, winning several great victories. He was chosen consul in 80, and then for some years commanded against Sertoriuo in Spain, Pompey being associated with him from 76. After the death of Sertorius, *M.* returned to Rome, and, with Pompey, had the honor of a triumph. *M.* was pontifex maximus, and D. probably in 63.

Metempsychose, (*-tĕm'sĭ-kōz,*) *v. a.* To translate, transfer, or remove from one body to another, as the soul.

Metempsychosis, (*-tem-sĭ-kō'sis,*) *n.* [Gr., from *meta*, denoting change, *empsycho-ō*, to animate — *en*, in, and *psych-ē*, life, soul.] See TRANSMIGRATION OF SOULS.

Metempto'sis, *n.* [Fr. *métemptose*, from Gr. *meta*, beyond, after, and *piptein*, to fall.] (*Chron.*) See PROLEMPTOSIS.

Meteor (*mē'tē-ŏr*), *n.* [Fr. *météore;* Gr. *meteōros*— *meta*, denoting direction, and *aiōra*, a flying, being suspended, or hovering in the air, from *aeirō*, to lift, heave, raise up.] Any phenomenon of a transitory nature, which has its origin in the atmospbere.—Meteors are of various kinds. Some are produced simply by a disturbance of the equilibrium of the atmospheric fluid, and aro called *aërial meteors.* (See WINDS; WHIRLWINDS.) A second class arise from the deposition of the aqueous particles which the atmosphere holds in a state of invisible vapor, and which are precipitated in consequence of a diminution of temperature, sometimes in a liquid and sometimes in a solid form. Theso are called *aqueous meteors.* (See DEW; FOGS; HAIL; RAIN; SNOW; VAPORS, &c.) A third class of meteors, or atmospherical phenomena, are caused either by the action of the precipitated aqueous particles dispersed in the atmospbere on the rays of light, or by the unequal heating of the air, owing to which the rays of light are under certain circumstances irregularly refracted. (Seo FATA MORGANA; HALO; MIRAGE; PARHELION; RAINBOW.) A fourth class comprehends those which present the phenomena distinctive of combustion or incandescence. (See AEROLITE; AURORA BOREALIS; LIGHTNING; SHOOTING STARS, &c.)—In a more restricted sense and in common language, the word denotes those fiery, luminous bodies of the fourth class which nppear suddenly in the higher regions of the atmosphere. Among these may be mentioned the *aërolites* and *falling stars*, already considered, and the *bolis* or *fire-ball*, a luminous meteor of great splendor, moving with immense velocity, but of small magnitude. The meteor is generally accompanied by a tail, and disappears in scintillations, attended sometimes by an explosion, occasionally leaving a luminous track behind after it has become invisible. Many extraordinary meteors have been seen and recorded; one of the most remarkable is that described by Blagden, in the *Philosophical Transactions.* It occurred on the 18th of Aug., 1783, about 9 P.M., and was visible over a wide extent of Europe, from the north of Ireland to Rome, frequently changing its form and color. It crossed the zenith at Edinburgh, and then appeared round and of a greenish color, casting a shade upon the ground of a greenish tint; a tail of considerable length attending it. At Greenwich it appeared like two bright balls, followed by a number of others, connected together by a luminous body, and finally terminating in a blaze, tapering to a point; the colors of the balls were different. The height of this meteor was estimated to be far above the surface of our atmosphere, its speed was not less than 1,000 yards per minute, and its diameter was computed at 2,800 yards. Cavollo described this meteor as seen at Windsor, where its explosion was heard like a peal of thunder, ten minutes after its rupture was observed. On the evening of July 2, 1860, a meteor, coming from N.W., passed from Minnesota to Nantucket, being last seen far out in the ocean. There is no record of its ever having fallen to the earth. The present writer did not see the meteor itself, but he saw the inside of a church lighted by it to the brilliance of noon-day. First appearing as a single body, it was observed to separate into two balls, which kept along together, emitting sparks and what appeared to be flame. All the observers had the impression that its elevation was only a few hundred feet.

Shooting stars, whether they appear sporadically or in showers, have no connection whatever with the fall of meteoric stones. During the three great star showers of 1799, 1833, and 1866, when the sky was filled with them for eight hours, there is not a single record of an aërolite falling to the earth, nor even being seen crossing the sky. Aërolites are small, solid, massive bodies, composed mostly of iron, while a shooting star is a minute particle, probably not much, if any, larger than a grain of wheat Before entering our atmosphere they are dark bodies, invisible, of course, by daylight and also by night, being eclipsed in the earth's shadow. In this invisible condition they are called *meteoroids.* Each is a microscopic world, and revolves around the sun with as much dignity as does a planet. It is only when their orbits cross the earth's and plunge into its atmosphere that they become incandescent, by friction with it and arrested motion. Only while being burned up are they visible; and this requires only from one to two seconds. Not one has ever been known to reach the earth; consequently nothing is known as to their chemical composition. Their existence in the planetary spaces will be explained under STAR SHOWERS (*q. v.*). There are two varieties of aërolites—the *iron* and the *stone*, the former containing about 95 per cent. of metallic matter, mostly iron, while the latter contain 95 per cent. of stone. They go through the same fiery ordeal as the meteoroids, but owing to their size and solidity, and the short time they are exposed to the terrible heat, the surface only is melted, and a black crust formed. The melted surface is driven off by friction with the atmosphere, forming the sparks which are always seen following in their wake. Bolides move in all directions, as often retrograde as direct. If in the latter direction, their velocity is not greatly different from that of the earth; but if retrograde, they and the atmosphere meet with a velocity equal to the sum of both. In either case their velocities are enormously increased by the earth's attraction.

Meteoric astronomy is a branch of science only 50 years old. During that time old theories have been discarded, and new and more reasonable ones substituted; yet we have much to learn, and perhaps unlearn, before crude theories will be transformed into facts. As to the source whence meteoric stones come we are profoundly ignorant. One theory is that they—perhaps ages ago—were ejected from the sun. Others claim to present reasonable evidence that they were ejected from the moon; and still others argue that they were thrown to a great height by terrestrial volcanoes when the earth was young, and ever since have been revolving around the earth as satellites. The theory of solar origin has the most facts to support it, one being that more fall by day than by night, which should be the case if ejected from the sun. It is, however, useless to discuss a subject of which we known absolutely nothing. It is not likely that nature will ever yield up this mystery to the mandates of science.

Meteor'ic, Meteor'ical, *a.* [Fr. *météorique.*] Pertaining or having reference to meteors; consisting of meteors.—Produced by, or proceeding from, a meteor; as, *meteoric* stones.—Acted upon by the weather.—Coruscant; luminously dazzling or splendid; as, *meteoric* eloquence.

Meteoric iron, iron mixed with nickel, as found in the meteoric stones or aërolites.

Meteoric stone. See AEROLITE; also SECTION II.

Me'teorism, *n.* (*Med.*) Distention of the abdomen induced by flatulence.

Meteorograph'ic, *a.* Relating or pertaining to meteorography.

Meteorog'raphy, *n.* [Gr. *meteōros*, a meteor, and *graphein*, to depict.] The recording of meteorological phenomena.

Meteor'olite, Me'teorite, *n.* [Fr. *météorolithe*, from Gr. *meteōros*, and *lithos*, stone.] A meteoric stone; an aërolite.

Meteorolog'ic, Meteorolog'ical, *a.* [Gr. *meteōrologikos.*] Pertaining or having reference to meteors, meteorology, or atmospheric phenomena.

Meteorol'ogist, *n.* [Fr. *météorologiste.*] One versed or skilled in meteorology.

Meteorol'ogy, *n.* See SECTION II.

Meteor'omancy, *n.* [Gr. *meteōros*, and *manteia*, divination.] A kind of divination by meteorology, practised by the ancient Romans.

Meteoros'copy, *n.* [Gr. *meteōron*, and *skopein*, to observe.] That branch of astronomy which treats of the distances of the fixed stars, &c.

Me'teorous, *a.* Having the nature of a meteor.

"The cherubim descended . . . gliding *meteorous.*"—*Milton.*

Me'ter, *n.* [From METE, *q.v.*] An instrument or apparatus that measures: as, a water-*meter*, a gas-*meter*, a coal-*meter.*

Me'ter, *n.* See METRE.

Me'terage, *n.* Act or operation of measuring.

Metheg'lin, *n.* [W. *meddyglyn.*] Same as MEAD, *q. v.*

Methinks', *v. impers.* (*imp.* METHOUGHT.) [*Me* and *think.*] I think; it seems to me; it appears to me; meseems; — principally used in composition.

"*Methought* I heard a voice cry, 'Sleep no more.'"—*Shak.*

Meth'od, *n.* [Fr. *méthode;* Lat. *methodus;* Gr. *methodos* — *meta*, after, and *hŏdos*, a way, path, road; perhaps akin to Hind. *jadu*, a way, Sansk. *ju*, to go.] A suitable and convenient arrangement of things, proceedings, or ideas; natural or regular disposition of separate things or parts; orderly course of procedure or process; characteristic mode or regular manner of doing anything. — Classification; arrangement; systematic or formal course; orderly manner; clear and lucid exhibition or development.

"All *method* is a rational progress . . . toward an end."
Sir W. Hamilton.

Method is usually described as the fourth part of logic, and "may be called, in general, the art of disposing well a series of many thoughts, either for the discovering truth when we are ignorant of it, or for proving it to others when it is already known. Thus there are two kinds of method, — one for discovering truth, which is called *analysis*, or the method of resolution, and which may also be called the method of invention; and the other for explaining it to others when we have found it, which is called *synthesis*, or the method of composition, and which may be also called the method of doctrine." (*Nat. Hist.*) Classification or distribution of natural objects in harmony with their ruling characteristics; as, the Linnæan *method.*

Method'ic, *n.* The science and governing principle of method.

Method'ic, Method'ical, *a.* [Fr. *méthodique.*] Having method or systematic order; arranged in convenient form; disposed in a fitting and natural manner; conformed to rule; regular; orderly; formal; systematic; as, to conduct business in a *methodical* manner.

"Let me appear *methodical* in what I say."—*Addison.*

Method'ically, *adv.* In a methodical manner; according to convenient, natural, or systematic rule or order.

Meth'odism, *n.* (*Eccl.*) The religious doctrines and worship practised by the Methodists.

Meth'odist, *n.* One of a former school of physicians, practising by theory.—A person remarkable for exact piety, regularity or austerity of life.—One of the Christian sect of the METHODISTS, *q. v.*

Methodis'tic, *a.* Characterized by the strictness and austerity of Methodists; after the manner of Methodists.

Methodis'tic, Methodis'tical, *a* Pertaining or having reference to method, or to Methodists.

Methodis'tically, *adv.* After the manner of Methodists.

Meth'odism, *n.* (*Eccl.*) Methodism is the name applied generically to the broad evangelical movement beginning in England during the first half of the 18th century and still in progress among all, especially among Protestant, bodies of Christians. More specifically, it applies to those denominations of the Christian Church which have received their organic impulse from this general movement. Methodism had its historic origin in 1729 in the voluntary association of some of the students of Oxford University, since known as the "Holy Club," the chief of whom were John and Charles Wesley, and later George Whitefield, all three being presbyters of the Church of England. These young men made special efforts, and joined in special studies of the New Testament, in order to a more systematic and thorough performance of their religious duties. The resulting regularity of their labors and conduct led to the application to them of the name of "Methodists," which clung to them ever since and has clung to their followers. The Holy Club, sometimes called the Oxford Methodists, continued its existence with varying degrees of activity until 1738, when, through the departure of the Wesley brothers to America, it was gradually dissolved. The spirited sermons of George Whitefield and, on their return in 1739, of the Wesleys excited a deep interest in many parts of Great Britain. Opposition arose to their plain and earnest manner of preaching. One after another the churches of the establishment were closed against them, and, excluded from the pulpits of the Anglican Church, they began to preach in other buildings, and later in the open air. They formed their adherents, already numbering hundreds, into "societies" for purposes of worship and religious instruction, holding their meetings, however, at first at hours not interfering with attendance upon the public services of the Established church, where they were all expected to receive the sacraments. John Wesley, in consultation with his brother Charles, prepared for these societies a code of rules, which have ever since been the constitutional basis of all Methodist bodies, and are here given in full as found in the Discipline of the Methodist Episcopal Church:

"THE NATURE, DESIGN, AND GENERAL RULES OF OUR UNITED SOCIETIES.—In the latter end of the year 1739, 8 or 10 persons who appeared to be deeply convinced of sin, and earnestly groaning for redemption, came to Mr. Wesley in London. They desired, as did 2 or 3 more the next day, that he would spend some time with them in prayer, and advise them how to flee from the wrath to come, which they saw continually hanging over their heads. That he might have more time for this great work, he appointed a day when they might all come together; which from thenceforward they did every week, namely, on *Thursday*, in the evening. To these, and as many more as desired to join with them (for their number increased daily), he gave those advices from time to time which he judged most needful for them; and they always concluded their meeting with prayer suited to their several necessities. This was the rise of the United Society, first in Europe, and then in America. Such a society is no other than 'a company of men having the form and seeking the power of godliness, united in order to pray together, to receive the word of exhortation, and to watch over one another in love, that they may help each other to work out their salvation.' That it may the more easily be discerned whether they are indeed working out their own salvation, each society is divided into smaller companies, called classes, according to their respective places of abode. There are about 12 persons in a class, one of whom is styled the leader. It is his duty: To see each person in his class once a week at least, in order (1) to inquire how his soul prospers, (2) to advise, reprove, comfort, or exhort, as occasion may require, and (3) to receive what he is willing to give toward the relief of the preachers, church, and poor. To meet the ministers and the stewards of the society once a week, in order (1) to inform the minister of any that are sick, or of any that walk disorderly and will not be reproved, and (2) to pay the stewards what he has received of his class in the week preceding. There is only one condition previously required of those who desire admission into these societies—'a desire to flee from the wrath to come, and to be saved from their sins.' But wherever this is really fixed in the soul it will be shown by its fruits.

"It is therefore expected of all who continue therein that they shall continue to evidence their desire of salvation—

"First: By doing no harm, by avoiding evil of every kind, especially that which is most generally practiced; such as the taking of the name of God in vain; the profaning the day of the Lord, either by doing ordinary work therein or by buying and selling; drunkenness, buying or selling spirituous liquors, or drinking them, unless in cases of extreme necessity; slave-holding, buying or selling slaves; fighting, quarrelling, brawling, brother going to law with brother; returning evil for evil, or railing for railing; the using many words in buying or selling; the buying or selling goods that have not paid the duty; the giving or taking things on usury—that is, unlawful interest; uncharitable or unprofitable conversation, particularly speaking evil of magistrates or of ministers; doing to others as we would not they should do unto us; doing what we know is not for the glory of God; as, the putting on of gold and costly apparel; the taking such diversions as cannot be used in the name of the Lord Jesus; the singing those songs, or reading those books, which do not tend to the knowledge or love of God; softness and needless self-indulgence; laying up treasure upon earth; borrowing without a probability of paying, or taking up goods without a probability of paying for them.

"It is expected of all who continue in these societies that they shall continue to evidence their desire of salvation—

"Second: By doing good; by being in every kind merciful after their power; as they have opportunity, doing good of every possible sort, and, as far as possible, to all men; to their bodies of the ability which God giveth, by giving food to the hungry, by clothing the naked, by visiting or helping them that are sick or in prison; to their souls, by instructing, reproving, or exhorting all we have any intercourse with; trampling under foot that enthusiastic doctrine that we are not to do good unless *our hearts be free to it;* by doing good especially to them that are of the household of faith or groaning so to be; employing them preferably to others; buying one of another; helping each other in business; and so much the more because the world will love its own and them *only;* by all possible diligence and frugality, that the Gospel be not blamed; by running with patience the race which is set before them, denying themselves, and taking up their cross daily; submitting to bear the reproach of Christ, to be as the filth and offscouring of the world, and looking that men should say all manner of evil of them *falsely*, for the Lord's sake.

"It is expected of all who desire to continue in these societies that they shall continue to evidence their desire of salvation—

"Third: By attending upon all the ordinances of God: such are the public worship of God; the ministry of the Word, either read or expounded; the Supper of the Lord; family and private prayer; searching the Scriptures; fasting or abstinence.

"These are the general rules of our societies; all of which we are taught of God to observe, even his written Word, which is the only rule, and the sufficient rule, both of our faith and practice. And all these we know his Spirit writes on truly awakened hearts. If there be any among us who observes them not, who habitually breaks any of them, let it be known unto them who watch over that soul as they who must give an account. We will admonish him of the error of his ways. We will bear with him for a season. But if then he repent not, he hath no more place among us. We have delivered our own souls."

A distinguishing feature of the above General Rules is their practical nature and the absence of all dogmatic or doctrinal statements as conditions of membership. Some of the phraseology of this statesman-like document appears a little quaint after the lapse of a century and a half, but the principles embodied therein still form the common platform of universal Methodism, and probably contain the germ of the union or federation yet to be accomplished by all Protestants, and, it may be hoped, all Christian bodies. The term "societies" is a testimony to the original and long-cherished design of Wesley to develop a spiritual body in the national Church—an *ecclesiola in ecclesia*—which design he was compelled slowly and reluctantly to abandon, and to organize his societies at a later date into a distinct ecclesiastical body. The societies outgrow the ability of the ordained clergy to minister to them, and lay helpers, first called "exhorters" and then "local preachers," were summoned to assist in the conduct of public worship and in preaching. Thomas Maxfield was the first local preacher. The preaching places became so numerous that the preachers, both regular and local, were obliged to travel from one appointment to another. This was the beginning of the itinerancy—a system of travelling preachers. Circuits were thus established under the charge of some one minister, assisted by one or more others, who followed one another in succession at stated intervals. Several of these circuits were grouped together under the special care of some appointed or selected preacher. And thus came the "district," with its "chairman," in the Wesleyan and non-Episcopal Churches, and its "presiding elder" in the Episcopal bodies.

The first "Conference" or consultation between Wesley and his co-workers, was held in London in 1744, and thereafter yearly, and became the "annual conference." The officer having supervision of several circuits met the preachers, stewards, and other officials of each four times a year in the "quarterly conference." In the development of this system in other countries of wider territorial extent, notably in the United States, many annual conferences have been constituted. To provide for legislation and uniform administration in these broader fields, the "general conference," a delegated body, meeting as a rule quadrennially, has been found necessary.

For some years members were divided into small groups called "bands," which held their own meetings, each sex by itself. These "bands," however, were generally supplanted by the "classes" described in the General Rules. "Love feasts" became a fixed feature of Methodism, being the stated gatherings of all the members of a given society or circuit, for the purpose of mutual edification through the relation of Christian experience. In imitation of the primitive *agape*, bread and water are partaken of by all at the love feast. "Watchnight" is also one of the common observances of Methodists, and is usually kept on New Year's Eve, with a variety of forms of worship, concluding at midnight usually with silent prayer and a hymn of consecration. The prayer-meeting, commonly held in the midweek, is an established custom among all Methodists. All the people are at liberty to take some distinct part in its varied and simple exercises of prayer, song, and testimony.

Doctrines.—While Methodism puts its first emphasis on the spirit of the heart and life and on practical conduct, it yet has its theological framework, and is tenacious of the doctrinal beliefs of its adherents. Whitefield held strongly to Calvin's system, particularly to his view of election, and John and Charles Wesley were as firmly attached to the Arminian doctrine of free grace and an unlimited atonement. This doctrinal divergence of the tenders resulted in the division of the British Methodists into the Calvinistic and Wesleyan bodies—both, however, retaining the essential unity of the Spirit which marks their common aim for the attainment of the highest type of the Christian life. The doctrinal standards of the Wesleyan bodies are the Thirty-nine Articles of the Church of England, modified in those parts which would bear a Calvinistic or sacramentarian interpretation. These modifications are to be found (1) in the "minutes" of the earlier conferences, where, together with practical measures, points of theology were discussed and defined; (2) in Wesley's sermons and Notes on the New Testament; and (3) in the abridgment of the Thirty-nine Articles prepared by Wesley, and adopted at the organization in America of the Methodist Episcopal Church in 1784, to which one other (the 23d) was added, recognizing the new civil government of the United States, thus making twenty-five articles of religion, which may be said to indicate more nearly than any other single document the theology of all Methodism.

The following is an abbreviated statement of these Articles of Religion: (1) There is but one God, infinite in power, wisdom, and goodness. In unity of this Godhead are three coequal persons—the Father, the Son, and the Holy Ghost. (2) The Son took man's nature in the womb of the blessed Virgin, so that Godhead and manhood were joined in one person; whereof is one Christ, very God and very man, who suffered to reconcile his Father to us and to be a sacrifice, not only for original guilt, but also for the actual sins of men. (3) Christ rose from the dead, and with his perfect human nature ascended into heaven, whence he will return to judge all men at the last day. (4) The Holy Ghost is of one substance, majesty, and glory with the Father and Son. (5) Whatsoever is not read in nor may be proved by the Holy Scriptures is not to be required to be believed or held as necessary to salvation. We understand these to be those books of the Old and New Testament whose authority has never been doubted in the Church. (6) The Old Testament is not contrary to the New. Although the law given from God by Moses as touching ceremonies and rites doth not bind Christians, nor ought the civil precepts thereof of necessity to be received in any commonwealth, yet no Christian is free from the obedience of the commandments which are called moral. (7) Original sin standeth not in the following of Adam, but is the corruption of the nature of every man that naturally is engendered of the offspring of Adam, whereby man is very far gone from original righteousness, and of his own nature continually inclined to evil. (8) Man cannot, by his own natural strength and works, turn and prepare himself to faith and calling upon God; wherefore we have no power to do good works without the grace of Christ going before and working with us. (9) We are accounted righteous before God only for the merit of Jesus Christ by faith, and not for our own works. (10) Good works, while they cannot put away our sins, are yet pleasing to God in Christ and spring out of true faith, which may thereby be known as a tree by its fruit. (11) Voluntary works, claimed to be more than our bounden duty, over and above God's commandments, cannot be taught without arrogancy and impiety. (12) After we have received the Holy Ghost in justification, it is possible that we may depart from grace given and fall into sin, and, by the grace of God, rise again and amend our lives. (13) The visible Church of Christ is a congregation of faithful men in which the pure word of God is preached, and the sacraments duly administered according to Christ's ordinance, in all those things that of necessity are requisite to the same. (14) The Romish doctrine concerning purgatory, pardon, worshipping, and adoration, as well of images as of relics, and also invocation of saints, is a fond thing, vainly invented and grounded upon no warrant of Scripture, but repugnant to the word of God. (15) It is plainly repugnant to the word of God and the custom of the primitive church to have public prayer in the church or to administer the sacraments in a tongue not understood by the people. (16) There are two sacraments ordained of Christ—baptism and the supper of the Lord—which are not merely badges of Christian men's profession, but certain signs of grace and of God's good-will toward us, by which he works within us, and not only quickens, but also strengthens and confirms our faith in him. These five commonly called sacraments—confirmation, penance, orders, matrimony, and extreme unction—are not to be counted for sacraments of the Gospel, because they have not any visible sign or ceremony ordained of God; but they are either a corrupt following of the Apostles or states of life allowed in the Scriptures. The sacraments were not ordained of Christ to be gazed upon or to be carried about, but that we should duly use them. They have a wholesome effect only in such as worthily receive them. (17) Baptism is not only a sign of profession whereby Christians are distinguished from others, but it is also a sign of regeneration or the new birth. The baptism of young children is to be retained in the Church. (18) The Supper of the Lord is not only a sign of the love that Christians ought to bear one another, but a sacrament of our redemption by Christ's death. It is, when received with faith, a partaking of the body and the blood of Christ. Transubstantiation; or the change of the substance of bread and wine, cannot be proved by, but is repugnant to, the plain words of the Scripture. Only after a spiritual manner is the body of Christ given, and taken and eaten, by faith, in the Supper. The sacrament of the Lord's Supper was not by Christ's ordinance reserved, carried about, lifted up, or worshipped. (19) The cup of the Lord is not to be denied to the lay people; for both parts of the Lord's Supper, by Christ's ordinance, ought to be administered to all Christians alike. (20) The offering of Christ, once made, is the perfect redemption, propitiation, and satisfaction for all the sins of the whole world, both original and actual; and there is none other. The sacrifice of masses, wherein it is claimed that Christ is offered for the remission of sin for the living and the dead, is a blasphemous fable and dangerous deceit. (21) Ministers of Christ may marry at their own discretion, as they shall judge the same to serve best to godliness. (22) Rites and ceremonies need not in all places be the same, but may be changed by every particular church according to the diversity of countries, times, and men's manners, so that nothing be ordained against God's word and all things be done to edification. (23) The President, the Congress, the General assemblies, the Governors, and the councils of state, *as the delegates of the people*, are the rulers of the United States of America, according to the division of power made to them by the Constitution of the United States, and by the Constitutions of the respective States. And the said States are a sovereign and independent nation, and ought not to be subject to any foreign jurisdiction. (24) The riches and goods of Christians are not common, as touching the right, title, and possession of the same, as some do falsely boast. Notwithstanding, every man ought, of such things as he possesseth, liberally to give alms to the poor, according to his ability. (25) As we confess that vain and rash swearing is forbidden Christian men by our Lord Jesus Christ and James, his Apostle, so we judge that the Christian religion doth not prohibit, but that a man may swear when the magistrate requireth, in a cause of faith and charity, so it be done, according to the Prophet's teaching, in justice, judgment, and truth.

British Methodism.—The *Wesleyan Methodists* are the parent body, and historically form the nucleus whence the various members of the Methodist family in all parts of the world have been evolved. Until the time of John Wesley's death (1791) his own personal supervision and control constituted the central factor of its polity. His practical foresight provided before his decease for the crisis that he saw would come immediately upon his removal. He drew up a "Deed of Declaration" to which, after some delays in chancery, a permanent legal footing was awarded in 1794. This measure constituted the "conference" of 100 travelling preachers, often called "the legal hundred," who have power to fill vacancies in their own number. This body, while possessing sole legal authority for the government of the connection, practically admits the entire body of travelling preachers to a share in the election of its president and in the discussions which shape its policy, and welcomes through its various committees a large degree of influence from the laymen in the preparation and final disposition of the business connected with its many activities. Prior to the annual session of the conference the appointments of the preachers for the ensuing year are made in a tentative plan, which is submitted to the societies and the preachers; after a week is revised and resubmitted as before, and is subject during the session of the Conference to another revision. The final settlement of the appointments rests with the Conference, and is reached at the close of the session by a vote of the entire body confirming the plan. The pastoral limit of service in one church or circuit is three years. The Wesleyans have an extensive system of missions operative at present in France, Switzerland, Austria, Spain, Italy, Malta, Egypt, Ceylon, India, China, South and West Africa, Honduras, the Bahamas, and West Indies. Out of these missions have been developed affiliated or subordinate conferences in Ireland, France, South Africa, and the West Indies, and bodies ecclesiastically independent in some of the Polynesian Islands,

and in Australia. The union of all the Methodist Churches of Australia seems now (1897) likely to be accomplished in the near future, the popular vote in all having largely favored the proposition. The Wesleyans have in 1897 in all about 3,800 travelling preachers, 28,500 lay preachers, 760,000 members, 16,900 churches, 12,800 Sunday-schools, with 160,000 officers and teachers, and 1,300,000 pupils.

The *Calvinistic Methodists* are: (1) Those who adhered to Whitefield in his teaching on election, and are sometimes called *Whitefield Methodists*. They do not now exist as a denomination, the individual societies having long since been virtually merged with the Independent churches. (2) The *Lady Huntingdon Connection*, so named from the patronage and leadership of Selina, Countess of Huntingdon, who devoted her large estate and her personal labors to the organization of churches, the building of chapels, and the establishment of a theological school at Trevecca, since removed, and now known as Cheshunt College. Their government is congregational, and their doctrines essentially those of the Church of England, whose liturgy they use. Though having in 1850 over 100 chapels, they have declined in members, until now (1897) they have about 30 chapels and about 50 preachers, with a membership whose numbers it is difficult to report, as the body has also gradually been absorbed by the Congregational churches. (3) The *Welsh Calvinistic Methodists*, whose origin was parallel with that of the Wesleyans, their leaders being Howell Harris, who formed his first "societies" in 1735, Griffith Jones, and later Thomas Charles. They are both in doctrine and polity Presbyterian. They number in Wales more than 200,000 members, with 700 ministers, and in the U. S. they have about 13,000.

The *Methodist New Connection* was formed in 1797 under the leadership of Alexander Kilham, a minister of much talent, on the ground that the government of the Church should be shared by the clergy with the laity. Equal lay and ministerial representation in its conference is its distinctive feature. Through its missions it has been established in several countries outside of England. At present (1897) they have about 38,000 members, 200 travelling and 1,200 lay preachers, 550 churches, 500 Sunday-schools, with 85,000 pupils and 11,000 teachers.

The *Primitive Methodists* were organized in 1810 on the issue that had arisen concerning the holding of camp-meetings, which were defended by Hugh Bourne, an influential layman, and William Clowes, a powerful local preacher. They also advocate and practice more of the early simplicity in manner of life, give the laymen a large share in the government of the Church, and grant licenses to women to preach. They have labored with special success among the submerged classes, and are the most numerous of the bodies that have separated from the Wesleyans. They comprise in 1897 about 203,000 members (of whom 6,500 are in the U. S.), 1,200 ministers, 17,000 lay preachers, 5,900 churches, 4,500 Sunday-schools, with 470,000 pupils, and 62,000 teachers.

The *Bible Christians* were organized in 1815 by William O'Bryan, a zealous local preacher, who had gathered converts by his own labors in neglected districts. They admit women to the ministry. They now (1897) number 300 travelling and 1,950 lay preachers, 34,500 members, and have 1,000 churches, and 550 Sunday-schools, with 57,500 pupils and 9,300 teachers.

The *Primitive Wesleyans of Ireland* grew out of the question whether the Wesleyan preachers should administer the sacraments to their people. The Irish Conference voted in 1816 to avail themselves of this privilege, which had been conceded by the British Conference 21 years before (1795). Adam Averell, with about 25 other ministers, voted against the proposition, and maintained that the sacraments should be administered by the clergy of the Established Church. He led about 10,000 members into the formation of the Primitive Wesleyans of Ireland, who maintained their separate organization until 1878, when they reunited with the Wesleyans.

The *United Free Gospel Churches* is the name taken in 1843 by the union of several independent and local associations, one of which had been formed as early as 1797. They are on the congregational basis. Previous to their union they were called in various localities Independent Methodists, Christian Brethren, Christian Lay Church, Benevolent Methodist, and Free Gospel Church. They number in 1897 about 8,800 members, with 400 ministers (who are unsalaried), and have about 25,500 Sunday-school pupils.

The *United Methodist Free Churches* is the title adopted in 1857 by three bodies which were then united. These were (1) the Protestant Methodists, who to the number of a thousand or more, had separated from the Wesleyans at Leeds, in 1828, as a protest against the innovation of placing an organ in a chapel. (2) The Wesleyan Methodist Association, which had, in 1835, under the leadership of Dr. Samuel Warren, grown out of opposition to theological schools. The Protestant Methodists of Leeds had joined them in 1836. (3) The Reformed Methodists, who had organized in 1850 on the ground of alleged unjust and illegal proceedings by the Wesleyan Conference of 1849 in the expulsion of three and the public reproof of three others of its members for supposed coöperation with the publication of pamphlets containing criticisms on the acts of the Conference. About 100,000 members withdrew from the Wesleyans and joined them. The *United Methodist Free Churches* admit the laity to a share in legislation, and give the local church or circuit power over its internal matters. They have (1897) 1,600 churches, 90,000 members, 205,000 Sunday-school pupils, 425 travelling and 3,500 lay preachers.

The *Wesleyan Reform Union* was formed in 1859 by those of the Reformed Methodists who were not willing to join the *United Methodist Free Churches*. They comprise, in 1897, 7,400 members, 550 unsalaried and 16 salaried preachers, 193 churches, and 20,800 Sunday-school pupils.

American Methodism.—While achieving a notable success in the land of its birth, both through its own distinctive organizations and through its general influence upon all other denominations and upon the people of the United Kingdom, Methodism has been a potent and a prominent factor in the new civilization of America, in whose broader fields and less rigid ecclesiastical and political conditions it has wrought its greatest results, and has become the largest body of Protestants. From 1766 to 1784 the Methodism of America comprised simply the English Wesleyans who as immigrants had found their homes in the New World and had succeeded in winning converts and forming societies. Philip Embury, a carpenter and local preacher in New York city, preached in his own hired room, to five persons, the first Methodist sermon, and formed the first Methodist society in America in 1766. The congregation increased; a sail-loft was used for a year or two for meetings, and the first "meeting-house" was erected on the site now occupied by the famous John Street Church. To Robert Strawbridge, an Irish local preacher, must be awarded the honor of preaching, forming societies, and building a church at Sam's Creek, Maryland, at about the same time that Embury began his labors, some even claiming priority for the former, though his work had less of continuity and the data for the claim are somewhat unsatisfactory. Capt. Thomas Webb (1767), Joseph Pilmoor and Richard Boardman (1769), Richard Wright and Francis Asbury (1771), Thomas Rankin and George Shadford (1773), all from England, in succession gave great help to the new cause. At the first conference, held in Philadelphia in 1773, there were in all the societies 1,160 members and 10 preachers. Asbury remained at his post during the war of the Revolution, and in 1784 the roll of the Methodists in America had grown to about 15,000, with 84 preachers travelling 46 circuits. Mr. Wesley this year ordained Richard Whatcoat and Thomas Vasey as presbyters, consecrated Dr. Thomas Coke as a bishop, and gave them authority to organize the societies in America into a distinct church. This was done in Baltimore at the "Christmas Conference," the new organization taking the name of *The Methodist Episcopal Church in the United States of America*. On Wesley's advice, Asbury was ordained and set apart as bishop; the ritual, compiled from the book of Common Prayer, consisting substantially as at present found in the Discipline, was adopted; the supreme power of legislation was lodged in the entire body of travelling preachers; and the chief power of administration put into the hands of the bishops. The preachers met annually, though, owing to the wide extent of the field, not all in one place, in conferences presided over by the bishop. In 1792 the first General Conference was held, to which all the travelling preachers were summoned, and this body has since that date met every four years. It was in 1808 made a delegated body and met as such first in 1812, and so remains, the present ratio being one for every forty-five. Lay delegates were first admitted in 1872, and every annual conference is entitled to two lay delegates, except that where there is only one clerical there is but one lay delegate.

Conferences.—The General Conference possesses supreme legislative, administrative, and judicial powers, under constitutional limitations known as the "restrictive rules," 6 in number; it elects bishops, editors of church publications, publishing agents of the "book concerns," and secretaries of the missionary and other benevolent societies; hears and decides appeals and questions of law that have come regularly before it from judicial or annual conferences; reviews the administration of the bishops; and fixes the boundaries of the annual conferences. The judicial conference, composed of the 7 triers of appeals from each of 3 contiguous annual conferences, hears and decides appeals from the decisions of an annual conference. The annual conference, composed of all the travelling preachers within specified boundaries, and holding its sessions for about one week, examines candidates for the ministry; elects to deacon's and elder's orders; admits, advances, tries, suspends, expels, acquits, or locates its members; approves deaconesses; hears and decides appeals from quarterly conference; tabulates the financial and numerical statistics; considers measures for rendering effective the provisions of the discipline; and closes its sessions with the reading of the annual appointments made by the bishop, the term of pastors being limited to 5 years, and that of presiding elders to 6. The district conference, held twice a year in those districts which have by a majority of the quarterly conferences requested the presiding elder to convene it, is composed of the preachers, travelling and local, exhorters, district stewards, one Sunday-school superintendent, and one Epworth League president from each charge in the district, takes oversight of the affairs of the district: gives and continues license to preach; renews licenses to exhort; and examines and recommends candidates for orders and for reception on trial in the annual conference. The quarterly conference of a circuit or station is composed of all the travelling and local preachers, exhorters, stewards (who are nominated by the pastor elected by the quarterly conference, and have charge of the funds for the current expenses), trustees (who are elected in some States by the congregation and in others by the quarterly conference, and have charge, in trust, of the real estate of the church), one Sunday-school superintendent and one Epworth League president; meets four times a year; has the supervision of the religious and financial affairs of the charge; and (where the district conference does not exist) gives and renews license to preach. The leaders' and stewards' meeting, at which the pastor presides, looks after the sick and destitute, the classes, the membership, both probationary and full, and the financial support of the pastor; and recommends for license to exhort and preach. The official board (where the quarterly conference pleases to have such), composed of the members of the quarterly conference, holds meetings at its own pleasure; is presided over by the pastor; and attends to certain duties of the leaders' and stewards' meeting and such other business as may be committed to it by the quarterly conference.

The *Epworth League*, formed at Cleveland, O., 1889, is the name of the organization of the young people of the Methodist Episcopal Church, the Methodist Episcopal Church, South, and the Methodist Church, Canada, for the purposes of spiritual, intellectual, and social activity and culture. Its total membership in the 3 churches is about 1,700,000. (See Epworth League.)

The *Book Concern* is the publishing agency established at Philadelphia in 1789, and removed to New York in 1804. The Western branch, at Cincinnati, was established in 1820. The New York house has depositories in Boston, Pittsburg, Detroit, and San Francisco, and the Western at Chicago and St. Louis. The first book-steward was John Dickins, from whose loan of $600 in 1789 the capital of the two houses has become more than $3,000,000. The annual sales amount to about $2,000,000. About $100,000 is distributed annually from the profits for the support of the superannuated preachers, and the widows and orphans of deceased preachers. The official periodicals number 28, and the unofficial about 25, several being in the German and Scandinavian languages.

Education.—The church, through its board of education, incorporated in 1869, has supervision over 54 colleges and universities, 7 colleges and seminaries exclusively for women, 60 classical seminaries, 76 foreign mission colleges and schools, 4 missionary institutes and Bible-training schools, and 20 theological institutions. The American University, Washington, D. C., chartered by Congress in 1893, having a site of 90 acres, and now in course of erection and endowment, is for post-graduate and professional studies and original research, and is under the patronage of this Church. The total value of the sites and buildings of these schools is $17,000,000, and their endowments amount to $14,000,000. By means of the children's day collections, taken annually on the second Sunday in June, aid is given by loans to about 1,700 students in the various church schools.

Benevolences.—The Missionary Society, organized in 1819, carries on active operations in both the home and in the following foreign fields: Mexico, South America, Norway, Sweden, Denmark, Finland, Germany, Switzerland, Bulgaria, Italy, West and Central Africa, India, China, Korea, Japan, and Malaysia. The Woman's Foreign Missionary Society, organized in 1869, vigorously supplements the work of the parent society by special labors among the women of the various fields, and supports 170 Missionaries, of whom 22 are medical. The Woman's Home Missionary Society, founded in 1880, gives special attention to the needs of the neglected classes and regions of the United States and Territories.

Deaconesses.—This class of Christian women, first recognized in 1888, and now numbering about 600, of whom 150 are in foreign fields, do voluntary works of mercy of various kinds—nursing, teaching, visiting, and holding evangelistic meetings. The Board of Church Extension, organized as the Church Extension Society in 1865, and its present title adopted in 1872, has by loan and gift aided in the erection of about 10,000 churches and parsonages. Its loan fund is now more than $1,000,000. The Freedmen's Aid and Southern Educational Society, formed in 1866, has done its chief work in caring for the education of the colored, and later of the needy white, people of the Southern States, where it maintains 18 schools of the higher education for the former and 21 for the latter. The church also maintains a very helpful Sunday-school Union, formed on its present basis in 1840, and a prolific Tract Society, organized in 1852. Hospitals have, since 1885, been springing up in the large cities, until now (1897) there are 10 in operation, and several others are projected.

General Statistics.—In 1897 there are 146 annual conferences (including 21 missions and mission conferences); 21 bishops; 2,850,000 members; 14,686 local and 17,234 travelling preachers; 25,849 churches and 10,069 parsonages, valued at about $127,000,000; 30,849 Sunday-schools, with 355,899 officers and teachers, and 2,667,241 pupils. For missionary and other benevolences the annual contributions of the church now exceed $2,000,000, and for all other purposes are about $24,000,000.

The *United Brethren in Christ*, frequently called *German Methodists*, are wholly distinct from the Moravians, or United Fratrum, although using the same name. Their founder was Philip William Otterbein, a minister of the German Reformed Church, and a warm friend of Asbury. Their first conference was held in 1789, and their present name was adopted in 1800. Their polity and doctrine are quite similar to the Methodists. In 1889 they divided on the question of the confession and constitution then amended. They report

in 1897 about 275,000 members (41,000 being old constitution), 2,400 ministers (700 old constitution), 600 local preachers, and 5,040 churches (855 old constitution).

The *Evangelical Association*, also sometimes called *German Methodists* and *Albrights*, from Jacob Albright, their founder, was organized in 1800. Albright was a member of the Methodist Episcopal Church, though of Lutheran parentage. Their polity and theology are Methodist. They elect bishops quadrennially and their presiding elders annually. They number 110,000 members, 860 travelling and 500 local preachers, 1,650 churches, and 2,100 Sunday-schools. They divided over internal difficulties in 1891, the withdrawing body taking the name of the United Evangelical Church, which reports in 1897 a membership of 55,000, 408 travelling and 200 local preachers, 521 churches, and 750 Sunday-schools.

The *African Methodist Episcopal Church* was organized in Philadelphia in 1816 by colored members of the Methodist Episcopal Church, led by Richard Allen, for the purpose of larger liberty and independence in church affairs. Their government and doctrines are the same as those of the parent body. They have (1897) about 615,000 members, 4,700 travelling preachers, 15,900 local preachers and exhorters, 4,850 churches, and 1,650 parsonages, valued (including schools) at $9,400,000. Recent overtures for union with the following body, like similar ones made about the time of organization, seem to be destined to failure or postponement.

The African Methodist Episcopal Zion Church originated in New York city. Its organization was effected in 1820, its chief promoters being the members of the Zion Methodist Episcopal Church, which, as early as 1796, had formed a separate society, and had erected an edifice for colored Methodists in 1800. Until 1880 they elected their bishops quadrennially, and until 1888 they observed no formal consecration to that office; but since these dates, as in the parent church, the bishops are elected for life, and inducted into office by the laying on of hands. In 1897, they have 3,600 travelling and 6,800 local preachers, 495,000 members, 1,620 churches, 240,000 Sunday-school pupils, and property valued at $5,000,000.

The *Methodist Protestant Church* was organized in Baltimore in 1830. Its distinguishing features are the participation of laymen in its government, both in the annual and general conference, and the substitution of an annual presidency for the episcopacy. The slavery issue caused a division of the body in 1858, the Northern wing taking, in 1866, the title of the Methodist Church. The two wings were reunited in 1877. They abolished the order of deacon in 1874. They have abandoned the time-limit of the pastorate. They number, in 1897, about 187,000 members, 2,100 travelling and 1,400 local preachers, 2,275 churches, and 1,950 Sunday-schools, with 112,000 pupils.

The *Wesleyan Methodist Church of America* was formed at Utica, N. Y., in 1843. It consisted at first of ministers and members of the Methodist Episcopal Church and the Methodist Protestant Church, chiefly from Michigan and New England, who claimed that greater severity should be used against slavery and the use of intoxicants. Lay representation, presidents, chairmen of districts, and abstinence from membership in oath-bound secret societies are also distinctive features. They report (1897) about 18,500 members, 570 churches, 300 travelling and 300 local preachers.

The *Methodist Episcopal Church, South*, was formed at Louisville, Ky., in May, 1845, by delegates from 14 annual conferences in the slave-holding States of the South and Southwest. The claim for the necessity of a distinct and separate ecclesiastical organization was based upon the attitude assumed by the general conference of 1844 on the question of slave-holding, particularly as related to the episcopacy in the case of Bishop James O. Andrew. Their first general conference was held at Petersburg, Va., in 1846. Their doctrines are identical with those of the Methodist Episcopal Church and their polity nearly so, the greatest difference being perhaps that their bishops have a limited veto power on legislation deemed by them to be unconstitutional. They have abandoned probationary membership. Since the Civil War they have grown rapidly, and extended into several States where slavery never existed. They have a very prosperous publishing house at Nashville, a vigorous and ably conducted church literature, both periodical and general. They have successful missions in Mexico, Brazil, Japan, China, Korea, and particularly among the American Indians. They maintain higher education in over 50 colleges and universities, the leading one being Vanderbilt University, at Nashville. They have also 150 other schools. They have, in 1897, 1,500,000 members, 137,000 churches, 3,500 parsonages, 5,900 travelling and 7,000 local preachers, 15,000 Sunday-schools, with over 100,000 teachers and officers and 800,000 pupils.

The *Free Methodist Church* was organized in 1860 at Pekio, Niagara co., N. Y. They elect a superintendent quadrennially, have district chairmen, lay representation, and insist on plainness of dress, free pews, and abstinence from tobacco and membership in secret societies. To the Articles of Religion they added one on sanctification and one on rewards and punishments. They number, in 1897, about 27,000 members, 860 travelling and 650 local preachers, 720 churches, and 975 Sunday-schools, with 12,500 teachers and officers and 77,000 pupils.

The *Colored Methodist Episcopal Church in America* was formed at Jackson, Miss., in 1870. It is modelled after the Methodist Episcopal Church, South, under whose patronage it was organized with the special purpose of caring for the Negro members of that church, while giving them the advantage of a distinct organization. They report, 1897, 1,320 travelling and 2,800 local preachers, 175,000 members, 4,030 churches, 4,040 Sunday-schools, with 80,500 pupils and 8,000 officers and teachers.

A TABULAR VIEW OF METHODISM IN 1897.

Denominations.	*Travelling Preachers.*	*Local Preachers.*	*Members.*
BRITISH METHODISM—1897.			
Wesleyans	3,800	28,500	760,000
Welsh Calvinistic	700	350	200,000
Primitive Methodist	1,200	17,000	196,500
United Methodist Free Churches	425	3,500	90,000
Methodist New Connection	200	1,200	38,000
Bible Christians	300	1,950	34,500
United Free Gospel Church	.....	400	8,800
Wesleyan Reform Union	16	550	7,400
Total,	6,641	53,450	1,335,200
AMERICAN METHODISM—1897.			
Methodist Episcopal	17,234	14,686	2,850,000
Methodist Episcopal, South	5,900	7,000	1,500,000
African Methodist Episcopal	4,700	10,000	615,000
African Methodist Episcopal, Zion	3,600	6,800	495,000
United Brethren in Christ	2,400	700	275,000
Methodist Church, Canada	2,075	2,375	275,000
Methodist Protestant	2,100	1,400	187,000
Colored Methodist Episcopal	1,320	2,800	175,000
Evangelical Association	860	500	110,000
United Evangelical	408	200	55,000
Free Methodist	860	650	27,000
Wesleyan Methodist	300	300	18,500
Congregational Methodist	210	50	15,000
Welsh Calvinistic	100	25	13,000
African Union Methodist Protestant	80	130	7,000
Primitive Methodist	70	150	6,500
Evangelist Missionary	87	.....	4,600
Union American Methodist Episcopal	65	50	3,000
British Methodist Episcopal (Canada)	25	20	3,000
Independent Methodist	8	30	2,600
Zion Union Apostolic	30	.....	2,400
Total,	42,432	47,666	6,639,600
British Methodism	6,641	53,450	1,335,200
American Methodism	42,432	47,666	6,639,600
Grand Total,	49,073	101,116	7,974,800
Add Travelling Preachers	.....	.....	49,073
	.....	.....	8,023,873

The *Methodist Church, Canada*, is the title adopted by various Methodist bodies of the Dominion at a united general conference held at Belleville, in 1883. The four branches there joined in one were the Methodist Church of Canada, the Methodist Episcopal Church in Canada, the Primitive Methodist Church, and the Bible Christians. They have a general superintendent and district chairmen, and resemble quite closely the Wesleyans of England. They number (1897) 2,075 travelling and 2,375 local preachers, 275,000 members, 3,350 Sunday-schools, with 25,800 officers and teachers and 265,000 pupils; and 1,720 Epworth Leagues and other young people's societies.

Minor bodies of American Methodism are: *Congregational Methodists*, 15,000; *Welsh Calvinistic*, 13,000; *African Union Methodist Protestant*, 7,000; *Primitive Methodist*, 6,500; *Evangelist Missionary*, 4,600; *Union American Methodist Episcopal*, 3,000; *British Methodist Episcopal* (colored), in Canada, 3,000; *Independent Methodist*, 2,600; *Zion Union Apostolic*, 2,400.

According to official statistics, or careful estimates based on such, the Methodists of the whole world, with all their missionary and affiliated organizations, in 1897, number (1) British: 1,335,200 members, and 6,461 travelling and 53,450 local preachers; and (2) American: 6,639,600 members, and 42,432 travelling and 47,666 local preachers, or a total of 7,974,800 members, 49,073 travelling and 101,116 local preachers. The last named are usually counted with the membership. The grand total of ministers and members is 8,023,873.

JOHN F. HURST.

Meton'ic Cy'cle, *n.* (*Calendar.*) The cycle of the moon, a period of 19 solar years, after which the new and full moon fall on the same days of the year as they did 19 years before. This cycle was the invention of Meton, a celebrated Athenian philosopher, who flourished about 432 B. C. The Metonic cycle contained 6,940 days, which exceeds the true length of 19 solar years by nine and a half hours nearly. On the other hand, it exceeds the length of 235 lunations, or synodic revolutions of the moon, by seven hours and a half only. The framers of the ecclesiastical calendar altered the distribution of the lunar months when they adopted this cycle, in order to accommodate them to the Julian intercalation. By this alteration every three periods of 6,940 days were followed by one of 6,939. Consequently, the mean length of the cycle was 6,939¾ days, which coincides exactly with 19 Julian years. In the ecclesiastical calendar, the number of the year in the cycle is called the *golden number*. The cycle is supposed to commence with the year in which the new moon falls on the 1st of January.

Metonymic, Metonymical, (*mĕt-o-nĭm'ik,*) *a.* Employed by way of metonymy, by placing one word before another.

Metonym'ically, *adv.* By metonymy; in a metonymical manner.

Meton'ymy, *n.* [Gr. *metōnymia* — *meta*, denoting change, and *onoma*, a name. See ONOMATOPOETIC.] (*Rhet.*) A trope or figure of speech in which one word is substituted for another, preserving the sense of analogy; as, he died by *steel*, that is, he died by the *sword*; we read *Byron*, i. e. his *books* or *writings*; a person of warm *heart*, that is, of warm *affections*, &c.

Met'ope, *n.* [Gr. *meta*, between; *ope*, an aperture.] (*Arch.*) The square piece or interval between the triglyphs in the Doric frieze. In its original Greek meaning, the word signified the distance between one aperture or hole and another, or between one triglyph and another, the triglyphs being supposed to be solives or joists that fill the apertures. The ancients were in the habit of ornamenting the metopes with carved works or with paintings representing the heads of oxen, (Fig. 1771), vessels, and other objects used in sacrificing. The metope is omitted in the Ionic and Corinthian orders, probably on account of the difficulty experienced in disposing the triglyphs or metopes in symmetrical proportion.

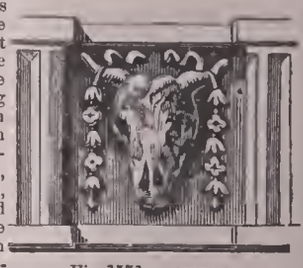


Fig. 1771. — METOPE.

Metoposcop'ic, Metoposcop'ical, *a.* Belonging, or relating to metoposcopy.

Metopos'copist, *n.* A physiognomist; one versed in metoposcopy.

Metopos'copy, *n.* [Gr. *metōposkopos*, from *metōpon*, the brow, and *skopein*, to observe.] The study of physiognomy; the art of reading the characters of persons by their countenances.

Me'tre. (sometimes written METER.) *n.* [A. S. *meter*; Fr. *mètre*; Gr. *metron*, measure. See METE.] (*Prosody.*) Poetical measure; rhythm; arrangement of poetical feet, or of long or short syllables in verse.

"And stretched *metre* of an antique song."—*Shaks.*

In the classic languages, metre depended upon the way in which long and short syllables were made to succeed one another. English metre depends, not upon the distinction of long and short, but upon that of *accented* and *unaccented* syllables. Thus, in the lines,

The cu'r|few to'lls | the kne'll | of pa'rt|ing da'y—
Wa'rriors and | chi'efs, should the | sha'ft or the | swo'rd—

the accents occur at regular intervals; and the groups of syllables thus formed constitute each a metre, or measure. The groups of long and short syllables com-

posing the metres of classic verse, were called *feet*, each foot having a distinctive name. The same names are sometimes applied to English measures, an accented syllable in English being held to be equivalent to a long syllable in Latin or Greek, and an unaccented syllable to a short. Every metre in English contains one accented syllable, and either one or two unaccented syllables. As the accent may be on the first, second, or third syllable of the group, there thus arise five distinct measures, two dissyllabic and three trisyllabic, as seen in the words — 1, fe'lly (corresponding to the classic *Trochee*); 2, reca'll (*Iambus*); 3, te'rribly (*Dactyle*); 4, confu'sion (*Amphibrachys*); 5, absentee' (*Anapæst*).

—The French unit of length equal to 3·28 feet, or 39·37 English inches = 39·36 American; being the standard of French linear admeasurement.

Met'ric, *a.* Noting a measurement of volumes; as, the *metric* method of analysis.

Met'ric, Met'rical, *a.* [Lat. *metricus.*] Pertaining, or having reference to measure, or to just and natural combination or arrangement of long and short syllables. — Comprising or consisting of verses; according to poetical measure; as, a *metrical* romance.

Met'rically, *adv.* In a metrical manner; by poetic measure.

Met'ric Sys'tem, *n.* A system of weights and measures adopted first in France, and now slowly superseding the systems in use in other countries. It was authorized to be used in the U. States, and its use introduced into some departments of public service, in 1866, by Act of Congress. The two most important points of this system are: 1st, that it is a *decimal system*; and 2d, that the units of length, superficies, solidity, and weight, are all correlated, two data only being used, the *mètre* and the weight of a cube of water, the side of which is the hundredth part of a mètre. The system was suggested as long ago as 1528 by Jean Fernal, a physician of Henry II. of France; but the suggestion took a practical turn in 1790, when Prince Talleyrand distributed among the members of the Constituent Assembly of France a proposal, founded upon the excessive diversity and confusion of the weights and measures then prevailing all over that country, as now over our own, for the foundation of a new system upon the principle of a single and universal standard. A committee of the Academy of Sciences, consisting of five of the most eminent mathematicians of Europe—Borda, Lagrange, Laplace, Monge, and Condorcet — were subsequently appointed, under a decree of the Constituent Assembly, to report upon the selection of a natural standard; and the committee proposed, in their report, that the ten-millionth part of the quarter of the meridian of Paris should be taken as the standard unit of linear measure. Delambre and Méchain were appointed to measure an arc of the meridian between Dunkerque and Barcelona, as Cassini had been appointed to do in 1669. They commenced their labors at the most agitated period of the French Revolution. At every station of their progress in the field-survey they were arrested by the suspicions and alarms of the people, who took them for spies or engineers of the invading enemies of France. The result was a wonderful approximation to the true length, and one in the highest degree "creditable to the French astronomers and geometricians, who carried on their operations under every difficulty, and at the hazard of their lives, in the midst of the greatest political convulsion of modern times." By means of the arc of the meridian measured between Dunkerque and Barcelona, and of the arc measured in Peru, in 1736, by Bouguer and La Condamine, the length of the quarter of the meridian, or the distance from the pole to the equator, was calculated. This length was partitioned into ten millions of equal parts, and one of these parts was taken for the unit of length, and called a mètre, from the Greek word *μέτρον* (*a measure*). Two important principles form the basis of the metric system: 1. That the unit of linear measure, applied to matter, in its three forms of extension — viz., length, breadth, and thickness — should be the standard of all measures of length, surface, and solidity. 2. That the cubic contents of the linear measure, in distilled water, at a temperature of great contraction, should furnish at once the standard weight and measure of capacity. Thus: 1. The *unit of length* was the *mètre*, as we have seen, the 10,000,000th part of a quadrant of the earth's surface. From this we derive: 2. The *unit of superficies* — the *are*, a square décamètre. 3. The *unit of capacity* — the *litre*, a cubic décimètre. 4. The *unit of weight* — the gramme, the weight of a cubic décimètre of water. These four units are subdivided into tenth, hundredth, and thousandth parts, which are denominated by the syllables derived from the Latin *deci*, *centi*, and *milli*; the multiples are similarly by tens, hundreds, thousands, tens of thousands, &c., distinguished by the prefixes, borrowed from the Greek, of *deca*, *hecto*, *kilo*, and *myria*. The subjoined scale shows the whole metric system at a glance.

Measures of				Proportions.
Length.	*Surface.*	*Capacity.*	*Weight.*	
Millimètre.			Milligram.	1,000th part.
Centimètre.	Centiare.	Centilitre.	Centigram.	100th part.
Décimètre.	(Not used)	Declilitre.	Decigram.	10th part.
Metre.	Are.	Decalitre.	Gram.	One.
Décamètre.	Decare.	Litre.	Décagram.	10 times.
Hectometre.	Hectare.	Hectolitre.	Hectogram.	100 times.
Kilomètre.		Kilolitre.	Kilogram.	1,000 times.
Myriamètre.			Myriagram.	10,000 times.
			Quintal.	100 000 times.
			Ton.	1,000,000 times.

The whole of the multiples and sub-divisions of the metric system are decimal, and the reduction from one denomination to the other is performed by multiplying by 10 or its multiples, or dividing by them. There is no necessity to alter the figures, but merely to read them differently by placing the decimal point so many places to the right or left of its place in any given number, according to the terms of the required denomination. For example, if we desire to represent 52749· metres in decimetres, we write 527490·; if we wish to reduce it to centimetres, we write 5274900·. For the higher denominations we write 5·2749 decametres, or 527·49 hectometres, &c. For measure of capacity and weight the reduction is carried on in precisely the same manner as in that of the metre and its multiples. — No system of metrology hitherto invented can be compared with this of the French in a scientific point of view; while its convenience for the purposes of commerce is now so generally admitted by those who have made themselves intimately acquainted with its workings, that its universal adoption by all civilized nations cannot be much longer delayed.

TABLES OF CONVERSION OF METRICAL INTO ENGLISH MEASURES.

Length.

	English Inches.	*English Feet = 12 Inches.*
Millimètre	0·03937	0·00·2809
Centimètre	0·39371	0·0328090
Décimètre	3·93708	0·3280899
Mètre	39·37079	3·2808992
Décamètre	393·70790	32·8089920
Hectomètre	3937·07900	328·0899200
Kilomètre	39370·79000	3280·8992000
Myriamètre	393707·90000	32808·9920000

1 Inch = 2·539954 Centimètres.
1 Foot = 3·0479449 Décimètres.
1 Yard = 0·91438348 Mètre.
1 Mile = 1·6093149 Kilomètre.

Surface.

	In English Square Feet.	*In English Sq. Yards = 9 Sq. Feet.*
Centiare, or square mètre	10·7642993	1·1960333
Are, or 100 square mètres	1076·4299342	119·6033260
Hectare, or 10,000 square mètres	107642·9934183	11960·3326020

1 Square Inch = 6·4513669 Square Centimètres.
1 Square Foot = 9·2899683 Square Décimètres.
1 Square Yard = 0·83609715 Square Mètre or Centiare.
1 Acre ..... = 0·404671021 Hectare.

Capacity.

	In Cubic Inches.	*In Cubic Ft. = 1·728 Cubic Inches*
Millilitre, or cubic centim.	0·061027	0·0000353
Centilitre, or 10 cubic centim.	0·610271	0.0003532
Décilitre, or 100 cubic centim.	6·102705	0·0035317
Litre, or cubic décimètre	61·027052	0·0353166
Décalitre, or centistère	610·270515	0·3531658
Hectolitre, or décistère	6102·705152	3·5316581
Kilolitre, or stère, or cubic m.	61027·051519	35·3165817
Myrialitre, or décastère	610270·515194	353·1658074

1 Cubic Inch = 16·3861759 Cubic Centimètres.
1 Cubic Foot = 28·3153119 Cubic Décimètres.
1 Gallon ..... = 4·543457969 Litres.

Weight.

	In English Grains.	*In Troy ozs. = 480 Grains.*
Milligramme	0·015432	0·000032
Centigramme	0·154323	0·000322
Décigramme	1·543235	0·003215
Gramme	15·432319	0·032151
Décagramme	154·323488	0·321507
Hectogramme	1543·234880	3·215073
Kilogramme	15432·348800	32·150727
Myriagramme	154323·488000	321·507267

1 Grain = 0·064798950 Gramme.
1 Pound Avoirdupois = 0·45359265 Kilogramme.
1 Troy Ounce = 31·103496 Grammes.
1 Cwt. = 50·80237689 Kilogrammes.

Met'rifier, *n.* A versifier; one who writes in poetical metre. (R.)

Met'ritis, *n.* (*Med.*) An acute inflammation of the uterus.

Met'rochrome, *n.* [Gr. *metron*, measure, and *chroma*, color.] An instrument used for measuring colors.

Met'rograph, *n.* [Gr. *metron*, and *grapheio*, to describe.] An instrument employed for registering the speed of a railroad train, together with the hour of its arrival at, and departure from, each station.

Metrol'ogy, *n.* [Fr *métrologie*, from Gr. *metron*, measure, and *logos*, treatise.] A treatise on measures, or the art of mensuration.

Metroma'nia, *n.* [Gr *metron*, and *mania*, madness.] Poetical dementia, manifested in an uncontrollable impulse to write verses.

Met'ronome, *n.* [Fr.; from Gr. *metron*, measure, and *nemein*, to allot.] (*Mus.*) An instrument invented by Mælzel, and used to measure time, and to indicate the velocity with which a composition ought to be played. It has a small pendulum, which being set in motion by clock-work, beats, audibly, a certain number of times in a minute; and this number may be altered by moving a sliding weight, and adjusted to varying degrees of quickness or slowness as required. It is now customary to mark, at the beginning of a piece of music, the number of beats per minute intended by the composer, thus ♩ = 60, means that when the metronome is adjusted to 60, it will beat the time of minims for that piece, giving 60 minims in a minute.

Metron'omy, *n.* Measurement of time by an instrument.

Metronym'ic, *a.* [From Gr. *mêter*, mother, and *onoma*, name.] Derived from maternal nomenclature; as, a *metronymic* name.

—*n.* An appellation derived from one's mother's name, or from that of an ancestress; — correlative to *patronymic*.

Metrop'olis, *n.* [Lat., from Gr. *mêtropolis* — *meter*, *mêtros*, mother, and *polis*, city. See MOTHER and POLITY.] The mother city; the chief city or capital of an empire, kingdom, state, or country.

Metrop'olis City, In *Illinois*, a city, cap. of Massac co., on Ohio river and the St. L., Alt. & T. H. R. Rs., 38 m. above Cairo. *Pop.* 4,000.

Metropol'itan, *a* [Fr. *métropolitain*; Lat. *mêtropolitanus.*] Pertaining or having reference to a metropolis; dwelling in the capital or chief city.

—*n.* (*Eccl.*) The bishop who is chief over the other bishops of a province; in the Latin Church, an archbishop; in the Greek Church, a bishop having his see in a civil metropolis.

Metropolit'ical, *a.* Belonging or relating to a metropolis, or capital city; pertaining to a metropolitan, or to his episcopal see.

Me'troscope. An instrument to sound the fœtal heart.

Metroside'ros, *n.* [Gr. *meton*, the heart of a tree; *sideros*, iron.] (*Bot.*) An extensive genus of plants, order *Myrtaceæ*. One or two New Zealand species are remarkable for their hard close-grained timber, often called Iron-wood. That of the Rata, *M. robusta*, is used for ship-building, and by the natives for making war-clubs, paddles, &c.; that of the Kawa, *M. tomentosa*, called Fire-tree by the colonists on account of the brilliancy of its flowers, is used for similar purposes; and that of the Aka, *M. scandens*, is called New Zealand Lignum-vitæ, on account of its hardness.

Met'ternich, CLEMENT, (PRINCE VON,) one of the most eminent statesmen of modern times, was B. at Coblentz, in 1773. Educated at Strasburg, he early acquired information regarding public affairs by travels in Germany, Holland, and Great Britain; and having soon afterwards entered the diplomatic service, acted as secretary at the Congress of Rastadt, in 1799, where his abilities at once attracted notice, and led to his being appointed secretary of the Austrian embassy at St. Petersburg, in 1802, and Austrian ambassador, in succession, at the courts of Dresden, in 1803, and Berlin, in 1805. After the peace of Presburg, he was appointed ambassador to Paris, in 1806; and in that delicate situation, though representing a vanquished monarch, he succeeded in conciliating all who came in contact with him, by the urbanity of his manners, and the skill with which he maintained his difficult and important position. In 1809 he was appointed chancellor of state, upon the resignation of Count Stadion, under whose auspices he had risen to eminence, and whose known hostility to France compelled his retirement after the peace of Schönbrunn; and for nearly forty years from that period, he exercised, almost without control, the highest authority in the Austrian empire. One of his first aims after entering on his high office was to bring about a marriage between Napoleon and an Austrian archduchess, as a means of purchasing a respite for the empire. The negotiations for this purpose he conducted with Champagny, and after Napoleon was divorced from Josephine, *M.* escorted Maria Louisa to Paris. But this expedient of a humiliating sacrifice could not be permanent; and in 1813, after the great French disasters in Russia, war, at the instigation of *M.*, was again formally declared by Austria against France. In the autumn of that year the Grand Alliance was signed at Tœplitz, and on the field of Leipsic *M.* was raised to the dignity of a prince of the empire. In the subsequent treaties and conferences the newly created prince took a very prominent part, and he signed the treaty of Paris on behalf of Austria. In 1815 he presided over the Congress of Vienna, and took a prominent part in the various congresses that were held in succession at Paris, Aix-la-Chapelle, Carlsbad, Laybach, and Verona; inculcating on all occasions, as far as in him lay, the principles of the divine right of kings, and repressing every aspiration of the people after civil, political, and religious liberty. In 1848 he was compelled to flee from Vienna; but he returned in 1851, and though he never again assumed office, his counsels are said to have swayed the emperor down to the moment of his death. D. 1859.

Mettle, (*mĕt'l,*) *n.* [Corrupted from *metal*, but written so when the metaphorical sense is used.] Substance; material; element. — Spirit; constitutional ardor; courageous or excitable temperament; pluck; spunk; dash; vim; as, a man of *mettle*.

Met'tled, *a.* Possessing or exhibiting mettle; full of fire or ardor; high-spirited; courageous, as a horse.

Mettlesome, (*mĕt'l-sum,*) *a.* Full of spirit; brisk; ardent; fiery; impetuous; excitable; exhibiting constitutional ardor.

Met'tlesomely, *adv.* With high spirit; in a mettlesome, excitable manner.

Met'tlesomeness, *n.* State or quality of being mettlesome or high-spirited.

Metuchen, (*me-tuch'en.*) in *New Jersey*, a post-village of Middlesex co., abt. 7 m. N.E. of New Brunswick.

Metz, a former city of France, cap. of dept. Moselle, at the junction of the Moselle and Seille, 80 m. W.N.W. of

Strasburg, and 180 E.N.E. of Paris. *M.* is strongly fortified, and contains many fine public buildings. The most remarkable are the Cathedral, a Gothic edifice, the church of *Notre-Dame-de-la-Ronde*, and the *Hôtel du Gouvernement*. The principal school of artillery and engineering in France was established here, besides numerous colleges, seminaries, public libraries, and scientific and literary societies. This city, after resisting a long siege by the German army in 1870, capitulated with Marshal Bazaine's forces which had garrisoned it. It has since belonged to Germany, and is included in the Reichsland of Alsace-Lorraine.

Metzenseifen, (Upper and **Lower,)** (*met-zen-si'-fen,*) two adjoining towns of Austria, in Hungary, 16 m. W. of Kaschau In the neighborhood are iron mines and works. *Pop.* 5,500.

Metz'ingen, a town of Würtemberg, on the Neckar, 18 m. S E. of Stuttgart *Manuf.* Woollen goods. *Pop.* 4,500.

Meu'dou, a town and parish of France, 5 m. W. of Paris. It contains an imperial palace and park. *Pop.* 4,000.

Meulebeke, (*me(r)l'bek,*) a town of Belgium, prov. of W. Flanders, 10 m. N. of Courtrai; *pop.* 9,300.

Meu'len, ANTOINE FRANÇOIS VAN DER, n. at Brussels, in 1634 By his talents as a painter of battle-pieces, he was recommended to Louis XIV., who always took him on his expeditions, and pointed out the subjects which he desired him to represent The painter had thus unusual opportunities of perfecting himself in this department of his art. Van der Meulen was the disciple of Sneyers, and the master of Huchtenburg. He was admitted into the Academy of Paintings at Paris in 1673. D. 1690.

Me'ung, or **Me'hun,** a town of France, dept. of Loiret, on the Loire, 12 m. W.S.W. of Orleans; *pop.* 5,000.

Meu'rim, a river of Brazil. See MIARIM.

Meurs, (*moirs,*) a town of Rhenish Prussia, on the Elder, 16 m. N.N.E. of Düsseldorf; *pop.* 4,000.

Meurthe, a river of France, rising in the dept. of Vosges, and after a N.W. course of 70 m., flowing into the Moselle about 5 m. below Nancy.

Meurthe-et-Moselle, (*murt,*) a N.E. dept. of France, formerly part of prov. of Lorraine, bordering on Belginm, Luxemburg, the German prov. of Alsace-Lorraine, and the departments of the Vosges and Meuse. *Area,* 2,025 sq. m. The surface is undulating, and in the N.E. covered with extensive marshes. The rivers are the Moselle, Seille, Meurthe, and Mortagnes There are also numerous small lakes. The soil is fertile, but agriculture is rather backward. *Prod.* Corn, wine, and timber. *Min* Marble, alabaster, lithographic stones, and rock-salt. *Manuf* Glass, porcelain, paper, linen, woollen and cotton fabrics. The chief towns are Nancy (the capital), Lunéville, Toul, and Brieg.

Meuse, or **Maese,** a river of W. Europe, flowing through the N E. part of France, Belgium, and S. Holland. It rises in the dept. of Haute-Marne, in France, 10 m. N E. of Langres, in Lat. 48° N., Lon. 5° 20′ E., and after a N.E. course of 400 m., nearly half of which is in France, It enters the North Sea by 3 months, the Meuse on the N., the Flakkee in the middle, and the Grevelingen on the S. It is navigable three-fourths of its length, as far as Verdun, dept. of the Meuse.

Meuse, (*müz,*) a dept. of the N.E. of France, formerly part of the prov. of Lorraine, between Lat. 48° 25′ and 49° 35′ N., and Lon. 5° and 8° E ; having N. the grand-duchy of Luxembourg and the depts Ardennes and Moselle, E. Moselle and Meurthe, S. Vosges and Haute-Marne, W. Marne and Ardennes; *area,* about 2,370 sq. m. The surface is generally hilly, and it is traversed by the mountains of Vosges and Faucilles, which separate the basins of the Meuse and Seine. The soil is generally poor, except in the valleys of the principal rivers, which are very fertile and well cultivated. *Rivers.* The Meuse, Chiers, Aisne, Ornain, Aire, and Sanlx. *Prod.* Wheat, fruit, and timber. *Min.* Iron, slate, and building-stone. *Manuf.* Cutlery, paper, glass, &c. The chief towns are Bar-le-Duc (the cap.), Comuercy, Montmedy, and Verdun. *Pop.* 301,653.

Meu'te, *n.* A mew for hawks. See MEW.

Mew. (*mū,*) *n.* [A.S *mœw ;* D. *meeuw ;* Ger. *möve ;* Dan. *maage.*] (*Zool.*) A sea-fowl; a gull; —so named from its cry. See LARIDÆ.

Mew, (*mū,*) *v. a.* [Fr. *muer,* from Lat. *mutare.*] To moult, as a bird its feathere; — hence, to put on a new appearauce.

"I see her as an eagle *mewing* her mighty youth." — *Milton.*

—To shut up; to immure; to inclose: to incarcerate; to confine, as in a cage, corral, or enclosed place.

—*n.* [Fr. *mue,* moulting.] A cage for hawks or other birds, while mewing; hence, any place of incarceration or confinement; —generally in the plural.

"Captiv'd eternally in iron *mews.*' — *Spenser.*

—*pl.* Stables for horses; as, the Queen's *Mews,* London.

Mew, *n.* The cry uttered by a cat.

Mew, Me'aw, *v. n.* [W. *mewian.*] To cry as a cat; to miaul.

"The cat will *mew,* the dog will bare his day." — *Shaks.*

Mewl, Me'awl, *v. n.* [Fr. *miauler ;* It. *imagolare ;* formed from the sonud.] To squall; to cry from distress or uneasiness, as a child.

"The infant, *mewling* and puking in the nurse's arms." — *Shaks.*

Mewl'er, *n.* A squalling child; one who mewls.

Mews, *n. pl.* See MEW.

Mexcouc', a town of Mexico, abt. 8 m. S. of the city of Mexico.

Mex'ican, *n.* (*Geog.*) A native or Inhabitant of Mexico.

—*a.* (*Geog.*) Pertaining, or having reference to Mexico, or its people.

Mexican Antiquities. (*Archæol.*) The early condition of Mexico has been partly ascertained by means of Mexican pictures, most of which were destroyed by the Spaniards. These pictures contain chronological histories, and copies of many of them were made by the Mexicans shortly before they were destroyed. The most celebrated of these was in the possession of Signenza y Gongora, professor of mathematics in the University of Mexico in 1698. Although the original is lost, a genuine copy remains, of which Humboldt gives a description. It commences with the deluge of Coxcox, or the fourth destruction of the world, according to the Aztec cosmogony. Coxcox and his wife having been saved from drowning, the gift of speech was bestowed on their descendants, and 15 families settled in Mexico. Another Mexican author, who wrote shortly after the conquest, divides the history of the world into four great parts, — the age of giants, which lasted 5,206 years; the age of fire, 4,804 years; the age of winds, 5,010; and the age of water, 4,008 years. The Mexican paintings were executed on skins, cotton, cloth, and the leaves of the magney or agave. When the Spaniards arrived in Mexico, civilization had so far advanced, that, among the Aztecs, the right of private property was understood, cities were built, professions and distinctions of rank existed, the arts were cultivated with considerable success, &c. The *teocalis,* or pyramids, are among the most remarkable objects of Mexican architecture. The pyramid of Cholula is 177 feet high, and comprises a square of 1,440 feet. It is built of unburnt brick and clay, and is supposed to have been built by the Toltecs, who preceded the Aztecs. The object of these pyramids is unknown; they are generally truncated, and the larger ones are often surrounded by a number of smaller ones, which are supposed to have been tombs. In the cathedral at Mexico is fixed a circular stone, marked with hieroglyphical figures, long incorrectly called a "calendar stone." Not far from it is a stone altar, where human sacrifices were offered up. A large idol is also preserved in the Dominican convent, representing a huge serpent devouring a human being. The pyramids of Papantla, near Vera Cruz, are built of large masses of porphyry, and many remarkable antiquities have been discovered at Yucatan.

Fig. 1772.—MEXICAN IDOL.

Mex'ico, [Sp. *Mejico.*] a republic (and sometime empire) of N. America, lying between the 15th and 33d parallels of N. Lat., and 97° and 113° W. Lon., being bounded N.E. and N. by the S.W. States of the American Union; E. by the Gulf of Mexico and Texas; S. by Guatemala; and W. and S W. by the Pacific Ocean. The line dividing *M.* from Texas commences with the Rio Grande del Norte, which it follows up to the 32d deg. of Lat. and the 105th of Lon., whence it stretches N.W. till it joins the Gila, an affluent of the Colorado, and then W. till it reaches the Pacific in abt. 32½° Lat. The line of demarcation on the side of Guatemala is very irregular, running along the N. boundary of British Honduras, Vera Paz, and Guatemala, till it meets the Pacific on the S.E. sido of the Gulf of Tehuantepec. Its extreme length from N.W. to S.E. is estimated at 2,000 m., its greatest breadth, abt. 800. At the Isthmus of Tehuantepec its minimum width is 30 m.; *area,* 761,640 sq. m. *Pol. Div.* M comprises 27 states, 2 territories, and 1 federal district, with populations (1895) as follows:

States.	*Pop.*	*States.*	*Pop.*
Valle de Mexico,	484 608	Morelos,	159 800
Aguas Calientes,	103,645	Nuevo Leon,	309 607
Baja, Lower California (territory),	42 287	Oaxaca,	882.529
Campeche,	96 458	Puebla,	979.723
Chiapas,	313 678	Queretaro,	227.233
Chihuahua	266 831	San Luis Potosi,	570 814
Cohahuila,	235.638	Sinaloa,	256 414
Colima,	55.677	Sonora,	191 281
Durango,	294 366	Tabasco,	134 794
Guanajuato,	1,047 238	Tamaulipas,	204 206
Guerrero,	417 621	Tepic (territory),	144 308
Hidalgo,	548 039	Tlascala,	166 803
Jalisco,	1,107 863	Vera Cruz,	855.975
Mexico,	838 737	Yucatan,	297.507
Michoacan,	889.795	Zacatecas,	452,720

Total population, 12,570,195.

Gen. Desc. Of this great tract of country, the portion lying S. of the Tropic of Cancer, and comprising a large part of the long and narrow isthmus that connects the American peninsulas, and separates the Atlantic from the Pacific Ocean, is by far the most populous and rich, both in mineral and vegetable productions. The regions N. of the tropic become less populous in proceeding northward; and many districts are almost unknown, being inhabited only by wild Indian tribes, baffling all the attempts of their nominal masters to civilize or subdue them.—*Surface, &c.* The surface of *M.* is extremely varied; and to this circumstance, nearly as much as to the difference of Lat. in so extensive a country, may be attributed that singular variety of climate by which it is distinguished from most other regions. The *Cordillera,* or chain of mountains generally regarded as a continuation of the great Andean system, that enters the country on the S., where it borders with Guatemala, diverges, as it proceeds N., into two great arms, like the upper part of the letter V, following the line of the coasts on either side. The most W. of these chains, called the *Sierra Madre,* running parallel to the shores of the Pacific Ocean, has some very high summits, and preserves its mountainous character till it joins, on the U.S. frontier, with the Oregon or Rocky Mountain chain. The other, or E. arm of the Cordillera, begins to subside after reaching the latitude of the 22d deg. of Lat., and ultimately becomes depressed, abt. the 26th or 27th deg. of Lat., into the vast plains of Texas. The whole of the vast tract of country between these two great sierras, comprising abt. three-fifths of the entire superficies of the republic, consists of a central table-land, called the *plateau of Anahuac,* elevated from 6,000 to upwards of 8,000 feet above sea-level. Hence, though a portion of this plateau be within the limits of the torrid zone, it enjoys a temperate climate; inclining, indeed, more to cold than to excess of heat. Some very high mountains are dispersed over the surface of the central table-land; and it is also traversed in parts by well-defined ridges, which divide it into extensive sub-plateaux. But the surface is interrupted by few transverse valleys; and in some directions it is quite unbroken, either by depressions or by elevations. Thus, it is mentioned by Humboldt, that carriages proceed from the city of Mexico, in the centre of the grand plateau, to Santa Fé, in the U.S. territory of New Mexico, a distance of 1,400 m., without any important deviation from an apparent level. The most remarkable tract in this elevated region is the plain of Tenochtitlan (in which is the cap.), surrounded by ridges of porphyritic and basaltic rocks running S.S.E. and N.N.W. It is of an oval form, 55 m. long by 37 broad, and occupies an area of 1,700 sq. m.; of which abt. 160 sq. m. form a water area. Its S.E side is that most elevated, and here are seen towering above the plain, and capped with eternal snow, the volcanic peaks of Popocatapetl (17,798 feet), Iztaccihuatl (15,700 feet), Orizava (18,314 feet), and the Cofre de Perote (13,416 feet) above the level of the sea. Besides these volcanoes, those of Tuxtla, Jorullo, and Colima, in the table-land, are at present in a state of activity; several others are now extinct. Jorullo, which stands W. of the city of Mexico, first broke out in 1759, when a tract of ground, from 3 to 4 m. square, swelled up like an inflated bladder, emitting flames and fragments of rocks through a thousand apertures. These active volcanoes seem to be connected with others parallel to them, and are, obviously, of similar origin. Earthquakes are frequent, but they seldom do much mischief.—*Rivers and Lakes. M.* suffers serious disadvantages from the want of water; and the rivers, as compared with the extent of territory, are few and unimportant. The Rio Grande del Norte, indeed, has a course of more than 1,300 m., and the Colorado runs abt. 700 m into the Gulf of Mexico. The Rio Grande de Santiago, called by the natives *Tolotollan,* rises in the centre of *M.*, and after traversing the lake Chapala, empties into the Pacific at San Blas. The Balsas, or Zacatula, and the Yopez, are the only other rivers on the W. side of the plateau, while on the E. are the Tula and Tampico and the Tabasco, flowing into the Mexican Gulf; but they have bars at their months, which prevent the entrance of large vessels. The lakes are numerous and extensive; the principal being those of Chapala, in Jalisco, said to cover an area of 1,300 sq. m.; Pascuara in Michigan, Mextitlan, Cuyman, and Parras, the two last being in the tract called the *Bolson de Mapimi.* The waters of the central valley are deposited in 5 principal lakes situated on different levels; that of Tezcuco, covering 70 square miles, being the least elevated. Others are St. Christoval, Tonanitla, and Zampango. These lakes are fed by small rivers, and having no natural outlet, are drained by the Desague of Huehuetoca, an artificial canal cut through the rock, 12 miles in length, 150 feet deep, and 300 feet wide; having its embouchure in the river Panuco connecting direct with the Gulf of Mexico. This great work, completed in 1789, at a cost of $6,460,000, was undertaken to obviate the frequent inundations, some of which did great damage to the capital. The waters of Lake Tezcuco are salt, those of the rest are fresh; but from those to the south, sulphuretted hydrogen gas is frequently disengaged, the smell of which is often perceptible at the city of Mexico. — *Geol. and Min.* The geological formation of the Mexican Cordilleras consists mainly of porphyry, greenstone, amygdaloid, basalt, obsidian, and other rocks of igneous origin; the whole supposed to rest on a substratum of granite. The latter, indeed, appears on the surface in the mountain-chain skirting the Pacific; and the port of Acapulco is in itself a natural excavation in that species of rock. The great central plateau of Anahuac, between Lat. 14° and 20° N., is a mass of porphyry, characterized by the constant presence of hornblende, and the entire absence of quartz; and in it are contained large and valuable deposits of gold and silver. These ores, however, are found in various strata; in the mines of Comanja, rich argentiferous veins occur

in sienite; in those of Guanaxnato, which are the richest in *M.*, the metal lies in a primitive clay-slnte passing into talc-slate; and those of Real del Cardonal, Xacala, and Lomo del Toro, are found in a bed of transition limestoue. Humboldt says, that there were at the time of his visit 3,000 mines of gold and silver; but the anarchy, nisrnle, and ignorance which long prevailed In the country have greatly diminished their importance as a source of national wealth, though they are now being again developed. Excellent iron is found in great abundance In Guadalaxara, Mechoacan, and Zacatecas; but no mines of that metal were worked before 1825. Copper is raised in Mechoacan and Guanaxuato, and large quantities of copper money have been coined in the mint in the city of Mexico. Tin is obtained partly from mines, but principally from washings in the ravines or gulches. The lead mines, though rich, are quite neglected Zinc, antimony, and arsenic have been found; but neither cobalt nor manganese. A quicksilver mine is wrought in the state of Querétaro, and a rich silver lode has been discovered in Tamaulipas. Carbonate of soda, used for smelting the silver ore, is found in great abundance crystallized on the surfaco of several lakes; and petroleum springs on the Tuxtla River furnish a copious supply of that mineral oil.—*Clim. and Meteorol. M.* is divided, as respects climate, into the *tierras calientes*, or hot regions, the *tierras templadas*, or temperate regions, and the *tierras frias*, or cold regions. The first, or the "tierras calientes," include the lowlands, or those under 2,000 ft. of elevation, on its E. and W. coasts, comprisIng the greater part of the states of Tamaulipas, Vera Cruz, and the peninsula of Yucatan, on the former. The hot regions on the W. coast are less extensive, the E. arm of the Cordillera approaching nearer to the sea. The mean temp. of this region, or at least of its intertropical portion, may be estimated at abt. 77° Fahr. It is especially suited to the growth and cultivation of sugar, indigo, cotton, and bananas, which flourish luxuriautly. This region labors

Fig. 1773. — ACAPULCO.

under the serious disadvantage of being nearly inaccessible by sea for half the year, and of being extremely unhealthy during the other half. The winter on the E coast extends from Oct. to the vernal equinox, and during this season, in the Mexican Gulf, N. or N.W. winds (*nortés*) are extremely prevalent, blowing with more or less violence. During the whole of this season the navigation of the gulf is exceedingly dangerous: but on shore the heat is moderate, and the coast free from fever, and tolerably healthy. During the half of the year from the vernal equinox to Oct., however, when the N. winds are comparatively rare, and the ports are easily accessible, the heat is oppressive, a great quantity of rain falls, and the coast becomes the seat of pestilential fevers. A European, or a citizen of the temperate States of the American Union, arriving for the first time at Vera Cruz, or any other part of the coast between the tropics, in Aug., Sept., or Oct., has but little chance of escaping the *vomito prieto*, or yellow fever; and individuals who have merely landed at the port, and proceeded on immediately for Jalapa, have, notwithstanding, caught the infection. The scourge, however, does not extend its ravages beyond the low grounds near the seaboard; and at the height of 2,000 to 2,500 feet above sea-level it is wholly unknown. The port of Acapulco (Fig. 1773), and the low W. coast-line, are also extremely hot and unhealthy; and, owing to the prevalence of strong gales approaching to hurricanes, during July, Aug., Sept., and Oct., the navigation is then extremely dangerous. The "tierras templadas," or temperate regions, which are of comparatively limited extent, occupy the slope of the mountain-chains, or barriers, which bound on either side the central table-land. They extend from about 2,500 to 5,000 feet of altitude. The mean heat of the year is from 68° to 70° Fahr., and the extremes of heat and cold are here equally unknown. The Mexican oak, and most of the fruits and cerealia of the U. States and Europe, flourish in this genial climate. The cities of Jalapa on the E., and of Chilpanzingo, on the S.W. slope, are in this region, and are famous for their salubrity and for their pomological wealth. The frequency of fogs, and the consequent atmospheric humidity, is the greatest drawback to this intermediary climate; but this, howsoever injurious in some respects, produces great beauty and vigor of vegetation. The "tierras frias," or cold regions, include all the vast plains from 5,000 ft. upwards above sea-level. In the city of Mexico, at an elevation of 1,400 feet, the thermometer has sometimes fallen below the freezing-point. This, however, is a rare occurrence, and the winters are, in general, as mild as those of S. Italy. In the coldest season the mean diurnal heat varies from 55° to 70° Fahr; while in summer the thermometer seldom rises in the shade above 75°. The mean temp. of the table-land generally may be taken at about 62°. Under the parallel of *M.*, the limit of perpetual snow varies from abt. 12,000 to near 15,000 ft. Vegetation in the central plateau is not, owing to the rarefied air, nearly so vigorous as on the "tierras calientes," or along the coasts. In the tropical and central regions of the country, and as far N. as Lat. 28°, there are only two seasons: the *rainy*, lasting from July to the middle of Sept., and the *dry* season, continuing from Oct. to the end of May. The climate of the table-land is, on the whole, favorable to human life.—*Zoöl.* The zoölogy of *M.* is but imperfectly known The domestic animals introduced by the Spaniards have so much increased, that vast herds range wild through these thinly inhabited regions. The wool of the sheep is of inferior quality; but this is attributable more to neglect and mismanagement than to nature: mules are much used in the mining-districts. Carnivorous animals are not numerous. Bees abound in the low country of Yucatan.—*Soil, Veg., and Agric. M.*, not only from its extent through 21° of Lat., but also from the varying elevation of its surface, and consequent diversity of climate, produces most of the plants peculiar to the tropics, as well as those of the temperate regions of North America and Europe. "Indeed," says Humboldt, "there is scarcely a plant in the rest of the world which is not susceptible of cultivation in one or other part of Mexico; nor would it be an easy matter for the botanist to obtain even a tolerable acquaintance with the multitudinous flora scattered over the mountains, or crowded together in the vast forests at the foot of the Cordilleras." The soil, also, is, in most parts, extraordinarily fertile; and wherever water can be procured for irrigation, the most abundant crops may be raised with very little labor. All the more useful plants are distributed through the zones into which the country is divided. The banana, which flourishes up to the point where the mean temp is 75° Fahr., bears the same relation to the Mexicans that the various cereals bear to the inhabitants of Europe and the U. States, and the different kinds of rice to the Hindoos and Chinese. The culture of maize is little less important in the "tierres calientes" than that of the banana; and cassava, or manioc, is grown at as high an elevation as 9,000 ft. Maize, indeed, forms the staple food of the people, as well as of most domestic animals. The cerealia proper, such as wheat and barley, succeed best in the temperate regions. The Mexican wheat is large, white, and nutritive, and succeeds well on good and well-irrigated soils. Oats are little cultivated. Rye and barley have a more extended growth than wheat, and yield abundant harvests. Yams, potatoes, capsicums, beans, pulse, and other garden vegetables common to Europe and the U States, thrive well; while finer pine-apples, pomegranates, guavas, and alligator-pears are not met with elsewhere in the world. The Maguey, or, as Humboldt calls it, the "Mexican vine," is extensively cultivated for the production of the beverage called *pulque*, distilled from its sap; from this liquor, again, a kind of brandy, called *mezcal* (a favorite Mexican tipple), is extracted. Sugar, manilla, and coffee are also extensively raised, as, also, tobacco, which latter product forms a govt. monopoly, yet, nevertheless, is of inferior quality, and is not grown in sufficient quantity to answer the home demand. Agriculture in *M.* is, on the whole, grossly neglected, and, where carried on,

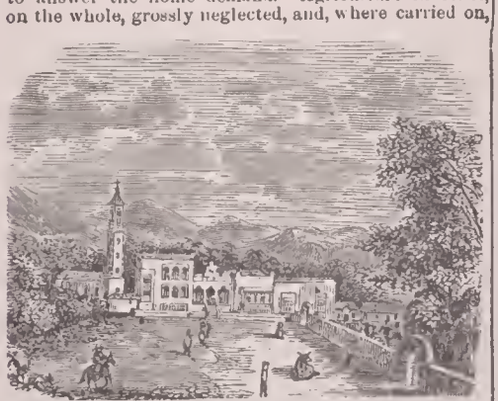


Fig. 1774. — HACIENDA, (Mexican plantation.)

is performed with the rudest implements under a system of blind and reckless ignorance—*Mining Industry.* The mining products of *M.*, so far as hitherto known, are richer than those of any other country, not excepting Peru; and it is supposed that still richer mines of silver and gold are likely to be discovered. The quantity of silver annually extracted is estimated at 500 tons, and that of gold at a ton and a half. The existence of many rich silver mines was known to the ancient Mexicans long before the advent of the Spaniards, and they were acquainted with the process of smelting the ores extracted therefrom. It was also here that a Spaniard, named Medina, discovered the process of amalgamatiou by means of mercury in 1559. Before the Spanish conquest, great quantities of the precious metals had been extracted from the Mexican soil, and mining continued actively before the introduction of mechanical appliances into the country, which may be said to have commenced with the present century. Silver was long the great staple of Mexican export trade, and it is reported that, from 1796 to the year 1810, not less than $22,000,000 were annually shipped to the mother country, Spain. The records show an output of silver, from 1521 to 1891, of $3,570,370,247, and of gold of $276,970,173. The average yield in silver and gold from the chief mining districts amounts to, approximatively, $40,000,000. The Mexican silver ore is, however, poorer than that of Europe, 1,600 oz. of ore yielding only about 4 oz. of silver. The *Mineria*, or school of mines, in the City of Mexico, containing an extensive collection of minerals, has never ceased to enjoy the support of all succeeding governments.—*Manuf. and Com.* The manufactures of *M.* are comparatively unimportant. Except those of tobacco, cocoa, sugar, and indigo, none are exported, and but few can fully meet the home demand. *M.* is favorably situated for commerce; but her trade labors under serious drawbacks. Though washed by two oceans, her coasts are often inaccessible. On the E. coast, or that on the Gulf of Mexico, there is not a single good harbor; while in the interior, owing to the paucity of good roads, the transport of goods is alike difficult and expensive. Besides Vera Cruz, the only important harbor is Tampico. The mean annual value was estimated in 1880 at: exports, $30,000,000; imports, $27,000,000. By 1896 these had increased to: exports, $105,016,902; imports, $42,253,938.—*Chief cities and towns.* Mexico (the capital), Vera Cruz, Tampico, Mazatlan, Monterey, Jalapa, Puebla, Guadalaxara, San Luis Potosi, Chihuahua, Acapulco, Durango, Queretaro, Sisal, &c. In 1869 *M.* had 2,000 m. of telegraph and 240 of railway. By 1897 these had increased to 40,054 of telegraph and 6,989 of railway. In 1888 a continuous line of railway was opened from New York to the City of Mexico. These railways have largely been built by U. S. engineers and capital.—*Govt.* The constitution of *M.*, in force up to the conquest of the country by the French expedition, suspended by the latter in 1863, but reëstablished in 1867, bears date Feb. 5, 1857. It is closely modelled on that of the United States. By the terms thereof, Mexico is declared a federative republic, divided into 19 states (since increased to 27), each of which is permitted to manage its own local affairs, while the whole are connected together in one body politic by fundamental and constituent laws. The powers of the supreme government are divided into 3 branches—legislative, executive, and judiciary. The legislative is vested in a Congress, consisting of a house of representatives and a senate, while the executive is vested in a president. Representatives, elected by each State at the rate of 1 member for 40,000 inhabitants, retain their place for 2 years. The qualifications requisite are, 25 years' age, and 8 years' residence in the state. The senate consists of 2 members for each state, of at least 30 years of age, who are elected by a plurality of votes in the state congress. The members of both houses receive salaries of $3,000 a year. The president is elected by electors popularly chosen in a general election, and by the original constitution cannot serve two terms in succession, but this prohibition has been set aside by the latest amendment to the constitution. In case of his permanent disability or his death a pro-temporary president is elected by congress, to serve until the people shall elect a new president. Congress is required to meet annually from Sept. 16 to Dec. 15, and from April 1 to May 31, and a permanent committee of both houses sits during the recesses. The legislatures of each of the states are similar to that of the republic, and these states possess similar powers of self-government to those of the States of the U. S.—*Finances. M.* has an external debt, contracted in London, of $82,500,000, and the total debt of the country, in American money, aggregates $213,600,000. The revenue for the year ending June 30, 1897, was estimated at $47,220,000; the expenditures, at $47,554,926. The finances were long in a disorganized condition, and for a long time (from 1861 to 1886) no interest was paid on the foreign debt, but under the present improved administration the government is making every effort to meet its obligations, and confidence in its integrity has increased, while the individual states succeed, as a rule, in keeping expenditure within income. The interest on the foreign debt has been punctually paid since 1886, and in 1889 the various debts were converted and redeemed at 40 per cent.—*Army and Navy.* The army consisted in 1897 of 22,964 infantry, 8,454 cavalry, and other branches bringing it to a total of 37,103. By the addition of the reserve it can be increased to 160,000. The navy consists of 2 unarmored gun-ships, each of 450 tons and 600 horse-power, 1 training ship of 1,221 tons, and 3 small gunboats.—*Relig. and Educ.* The Roman Catholic is the prevailing religion, but all others are tolerated, Protestants having recently established mission churches and schools. In 1897 there were 12,801 schools, with 743,405 pupils; and in the City of Mexico there are a university, various colleges and seminaries, schools of medicine, agriculture, &c.—*Inhab.* Census of 1895 gives the population of *M.* as 12,570,195, and comprises 5 different classes:—1. The whites are the upper classes of the country, and generally called *Creoles*, being the direct descendants of the Spaniards. 2. Those who consider themselves whites: these

are the progeny of Hispano-Indian parents, and chiefly follow the military profession, or hold offices under government. 3. The *Indians*, reduced to a state of abject misery and servitude, living in villages, and coustituting the agricultural class. They speak the Aztec or old Mexican tongue. 4. The *Mestizos*, or mixed races, distinguished by various names; the issue of an Indian and a negro being called a *zambo;* white and

Fig. 1775. — HACIENDADO, (Mexican land-owner.)

negress, a *mulatto;* white and female mulatto, a *terzeron;* of the latter and a white, a *quadroon;* and so on to the 8th or 10th shade of color. 5. The Europeans and foreigners; among whom the Spaniards predominate under the nickname of *Gachupinos*. The constitution of 1824 admitted persons of all shades of color to the equal enjoyment of civil rights. — *Hist.* The first settlers in *M.* are believed to have been the Toltecs, a tribe of Indians from the Rocky Mountains, who fixed themselves, after several migrations, near the present city of Mexico, and flourished there for nearly four centuries. They imparted some degree of civilization to the barbarous Chichemecas, who succeeded them, and who were in their turn displaced by the Aztecans, or Aztecs. (See AZTECS.) Montezuma I., the greatest sovereign of this race, extended the Aztec dominions on one side to the Gulf of Mexico, and on the other to the Pacific Ocean; but it must be stated at the same time, that many tribes within this tract yielded only a reluctant obedience. We have in other portions of this work alluded to the conquest of *M.* by the Spaniards in 1519 (see CORTEZ, and MONTEZUMA), hence, a repetition is needless in this place. Under Spanish rule, *M.* became a subordinate kingdom, governed by a viceroy with almost regal powers, checked only by the *residencia*, or court of investigation, and by the *audiencia*, or court of final appeal. Under the new system, all places of honor and profit were retained in the hands of the Spanish element of population, to the exclusion of the natives, who were considered, *de facto*, bondsmen to the Spanish crown. Native manufactures were also discouraged, and only a partial agricultural industry permitted. This system was maintained nearly 3 centuries, during which *M.* continued to be a blank in the history of nations, and known only by the issue of the precious metals to the mother-country. In 1808, however, the abdication of Charles VI. of Spain gave a blow to the royal authority, which proved fatal. An open insurrection broke out in 1810, headed by two priests, Hidalgo and Morelos, and under the auspices of the latter the first national congress assembled in 1813. One of its earliest acts was a declaration of the independence of the country. For several years following, the history of the revolution was only that of a sanguinary guerrilla warfare. At length, in 1821, Iturbide (*q. v.*) succeeded in placing himself at the head of a constitutional monarchy. On his expulsion, the congress re-assembling formed a provisional govt., modelled on that of the U. States, but the stability of which proved fallacious. After this period, the history of *M.* forms but a record of anarchy and convulsion, occasioned by the struggles for supremacy of the various conflicting political parties. Revolution after revolution — president after president — followed in constant succession. In 1836 Texas declared its independence, — becoming eventually incorporated with the U. States, — which *M.*, in 1845, was compelled to recognize. In the same year, disputes having arisen with the American govt., the troops of

Fig. 1776.
INDIANS OF THE STATE OF SONORA.
(From a photograph after nature.)

the latter power entered Mexican territory, provoking a declaration of war from the Mexican govt., at that time presided over by Gen. Santa Anna (*q. v.*). On May 8, 1846, occurred the battle of Palo Alto, in which the Mexicans were badly defeated by the American army under Gen. Taylor. On the same day, they were also defeated at Matamoras. Sept. 24, Monterey was taken by U. States troops. Jan 28, 1847, Gen. Taylor again defeated the Mexicans in the battle of Buena Vista. April 18, Santa Anna was repulsed at Cerro Gordo by Gen. Scott; and Aug. 20, the Mexicans were further vanquished at Contreras. Sept. 15, Gen. Scott, at the head of an American force, entered the city of Mexico, and, finally, after being beaten in nearly every action of the war, *M.* signed preliminaries of peace with the United States, at Guadalupe-Hidalgo, February 2, 1848. By this treaty the United States acquired California and New Mexico. Left to themselves, the Mexicans soon fell into their old habits of anarchy. This course of revolution and counter-revolution continued until 1861, when a convention was formed between England, France, and Spain, for intervention in *M.* to enforce various pecuniary claims held by their subjects against the Mexican govt. Upon the failure of an ultimatum sent to President Juarez, an allied force was dispatched to *M.* On the defection of her English and Spanish allies, France occupied the country, and caused the Archduke Maximilian of Austria to be proclaimed Emperor. The ultimate results of the French intervention will be found noticed under art. JUAREZ, and MAXIMILIAN. For a number of years after the suppression of the foreign occupation, and the execution of Maximilian, Juarez ruled with practically absolute power, putting down a succession of revolutionary attempts to overthrow his authority. He died in 1872, Tejada, the chief justice, assuming the presidency; succeeded in 1876, after a revolution, by Porfirio Diaz, who has proven himself the wisest and ablest of Mexican rulers. His term ended, under the Mexican constitution, in 1880, but he was re-elected in 1884, and again in 1888, the constitution having been amended to permit him to succeed himself. He was elected to a 4th term in 1892, and to a 5th in 1896. Juarez was a full-blooded Indian, and Diaz is half Indian, yet he has proved a ruler of exceptional ability, and under him the position of the republic in security and resources has steadily improved.

MEXICO, a State of the above republic, bounded N. by the State of Queretaro, N.E. by Vera Cruz, E. by Puebla, S.W. by Guerrero, and W. by Michoacan; between Lat. 18° 30′ and 21° 57′ N., and Lon. 98° and 101° W. The soil is extremely fertile, chiefly in the great valley of Mexico, which is about 200 m. in circumference. *Min.* Silver, iron, lead, and carbonate of soda. *Towns.* Mexico, the Federal capital; Toluca, the State capital; Lerma, Chalco, San Augustine, and Cuernavaca. Around the City of Mexico is a small territory under the exclusive jurisdiction of Congress. *Area*, 9,247 sq. m. *Pop.* (1897) 869,500.

MEXICO, a city, and the cap. of the Mexican republic, is situated on a plain surrounded by mountains, and more than 7,000 feet above the level of the sea; and lies in Lat. 19° 27′ 5″ N., and Lon. 99° 5′ W. When Cortez emerged from the mountain-gorge, and looked down on the empire city of Tenochtitlan — Mexico — he beheld a magnificent lake extending for miles, while from islands seeming to float on the sparkling bosom of the water, rose temples, palaces, obelisks, streets, mansions, and all the belongings of a vast capital, while broad highways, like Roman roads, connected this second Venice with the adjacent shore; and green islands, some like moving gardens, rich in all hues of flowers, or like nodding orchards with fruit of all colors and size, with huts and villages, parents and children, sailed slowly toward the great mart with fruits and flowers, fish, vegetables, and game. That city, with its splendid temples and palaces, with its countless throng of citizens, and all the pageantry which to the sober Spaniard made the reality look like a dream, was in a few months

Fig. 1777. — CITY OF MEXICO.

annihilated by the furious soldiery of Cortez, urged to the work of extermination by the bigotry of their priests. Even the splendid lake of Tezeuco has become changed; and though the new city of Mexico is built on the site of the Aztecs' capital, the water has shrunk three miles from its walls; and, instead of floating islands carrying their produce to the imperial city, barges, boats, and crafts of every rig, bear their commodities to the Mexican market by means of canals cut from the lake to the city, and carried by intersecting branches to almost every street in the capital. Modern Mexico is the oldest city in America, and is laid out in parallel lines, with intersecting streets at right angles, and has many truly magnificent buildings, vast in dimensions and faultless in architectural beauty; of these the most remarkable are the Cathedral, Convent of St. Francis, the Treasury, hospitals, the School of Mines, and the University. The city has many scientific and philosophical institutions, and municipal and national establishments, giving to it a very stately appearance; while the magnificent scenery that surrounds it adds tenfold to the charm and beauty of the picture. Beyond the walls that encompass the city, lies the placid lake spreading for miles; cultivated fields, nodding groves, and vineyards, meet the eye at every turn; while the towering Cordilleras, crowned with eternal snow, and on their acclivities presenting every variety of color, and three volcanoes, like flaming watch-towers, rising at different points, complete a panorama that can hardly be surpassed in the world for beauty and magnificence. Gold and silver lace, with some woollen and cotton fabrics, are the chief manufactures. *Pop.* (1897) estimated 365,500.

Mex'ico, in *Indiana*, a post-village of Miami co., about 5 m. N.N.W. of Peru.

Mex'ico, in *Maine*, a post-town and township of Oxford co.

Mex'ico, in *New York*, a post-village and township of Oswego co., about 35 m. N. of the city of Syracuse. *Pop.* of village (1897) 1,410.

Mex'ico, in *Ohio*, a post-village of Wyandot co., about 75 m. N. by W. of Columbus.

Mex'ico, in *Pennsylvania*, a post-village of Juniata co., about 42 m. N.W. of Harrisburg.

Mex'ico, in *Missouri*, a city, cap. of Audrian co., on the Chicago & Alton and Wabash R.Rs., 50 m. N. by E. of Jefferson City. *Pop.* (1897) 5,400.

Mex'ico, (Gulf of,) a large inland sea connected by the Florida Channel with the N. Atlantic Ocean, and by the Channel of Yucatan with the Caribbean Sea, situate between Lat. 18° and 31° N., and between 81° and 98° W. Lon. Length, E. to W., 1,200 m.; average breadth, 650 m.; *area*, about 800 000 sq m. This large body of water, which is of an irregular circular shape, is, unlike the Caribbean Sea, almost clear of shoals, keys, or islands, none being found except on the coasts of Yucatan and Florida. Along the Mexican coast its soundings are very regular, with 100 fathoms at a distance of 30 m. from the shore. On the N. side, and especially opposite the delta of the Mississippi, the depth is considerably diminished, and at its E. extremity the navigation is rendered intricate and dangerous by the Tortugas Bank, Florida Reefs, and various other keys, shoals, and islets, including the Great Bahama Bank, which almost surrounds the N. coast of Cuba. The E. trade-winds prevail from April to Oct., this being usually the wet season; the *nortes* (northers) begin in Oct., but are not violent till the middle of Nov., from which time till the end of Feb. they blow with great fury, and are objects of much dread to navigators. These gales last for 4 or 5, and occasionally even 10 days; but their extreme power is usually spent in the first 48 hours. At these times the larger vessels, which cannot enter the shallow harbors of the Mexican coast, are obliged to slip their anchors, and keep as far as possible off shore. Examples are not wanting, also, of "nortes" happening between May and Aug., at which time they are particularly violent. Luckily, however, the hurricanes and tornadoes of the gulf are by no means so fierce and destructive as those in the Caribbean Sea. The principal current of the gulf, and the only one worth mention, is that which sets W.N.W. between Cape San Antonio and Cape Catoche; this runs from 12 to 30 m. a day, and is perceptible even during the "nortes," except close along the shores of Mexico. At the N.W. extremity of the gulf its course gradually changes, till, at the mouth of the Mississippi, it turns E., and afterwards S.E., as it again rushes out into the Atlantic Ocean at the rate of 80 m. every 24 hours. (See GULF-STREAM.) The tides of the gulf are of no great importance; they nowhere exceed 3 or 4 ft., and their average rise is not more than 2 ft. The color of the water is a deep indigo, darker or more intense than that of the ocean; phosphorescent lights shine in it with great brilliancy, and between the shores of Yucatan and Louisiana great quantities of *fucus natans* occur in parallel lines from S.S.E. to N.N.W., and are carried out in large masses through the Florida Channel.

Mex'ique. The French name for MEXICO, *q. v.*

Mexlitlan, (*meks-leet'lan,*) a town of Mexico, abt. 100 m. N.E. of the city of Mexico.

Meyerbeer, GIACOMO, (*mi'er-bair,*) the greatest musical composer of our time, after Rossini, b. at Berlin, 1794. His genius showed itself so early that at 6 years of age he played at a concert, and at 9 was one of the best pianists in Berlin. He was taught afterwards by Clementi and the Abbé Vogler at Darmstadt. He subsequently visited Italy, and fell under the influence of Rossini, in imitation of whose style he composed several operas. The first work which made him a man of mark was the *Crociato in Egitto*, in which he adopted an eclectic style in which the German and Italian were blended. It was produced at Venice in 1824, and at Paris two years later. *M.* became the favorite composer of the Parisian public, whose taste he satisfied by the popular works which followed the *Crociato*, and which

MEXICO

SCALE OF MILES

0 50 100 200

SECTION BETWEEN MEXICO & VERA CRUZ

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Capital of the Republic ⊛ Capitals of States ⊙

Railroads ——— Submarine Telegraph Lines ———

Hammond's 8 x 11 Map of Mexico

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Longitude West from Greenwich

MEXICO.

Area sq. m. 767,005
Pop. 1900. 13,605,919

STATES AND TERRITORIES.

AguascalientesH5
Area sq. m. 2,950
Pop. 1900. 102,416

Colima.... ....G 7
Area sq. m 2,272
Pop. 1900..65,115

Coahuila.....H 3
Area sq.m.63,569
Pop. 1900. 296,938

Chihuahua... F 2
Area sq.m.87,802
Pop. 1900. 327,784

Campeche .... O 7
Area sq.m.18,087
Pop. 1900.. 86,542

Chiapas .....N 8
Area sq m.27,222
Pop. 1900 360,799

Durango .... G 4
Area sq m.38,009
Pop. 1900 370,294

Federal District K 7
Area sq. m ..463
Pop. 1900 .541,516

Guerrero .....J 8
Area sq.m.24,996
Pop. 1900.479,205

Guanajuato .. J 6
Area sq.m 11,370
Pop. 1900, 1,061,724

Hidalgo.....K 6
Area sq. m. 8,917
Pop. 1900. 605,051

Jallsco .....G 6
Area sq.m.31,846
Pop. 1900, 1,153,891

Lower California (Ter.) B 1
Area sq.m.58,328
Pop. 1900.. 47,624

Mexico..... K 7
Area sq. m. 9.247
Pop. 1900 .934,463

Michoacan ....J 7
Area sq.m 22,874
Pop. 1900 .930,033

Morelos .....K 7
Area sq. m. 2,773
Pop. 1900 160,115

Nuevo Leon...K 4
Area sq.m.23,592
Pop. 1900.327,937

Oaxaca ..... L 8
Area sq.m.35,382
Pop. 1900 .948,633

Puebla .. ..L 7
Area sq m.12,204
Pop.1900.1,021,133

Queretaro ... .J 6
Area sq m. .3,556
Pop. 1900 .232,389

San Luis Potosl J5
Area sq.m.25,316
Pop. 1900 .575,432

Sinaloa.....F 4
Area sq.m.33,671
Pop. 1900 .296,701

Sonora .....D 2
Area sq.m.76,900
Pop. 1900 .221,632

Tiaxcala . ....K 7
Area sq.m..1,595
Pop. 1900 .172,315

Tahasco ..... N 7
Area sq.m.10,072
Pop 1900 .159,834

Tepic (Ter.) . G 5
Area sq.m.11,275
Pop. 1900 .150,098

Tamaulapas.. K 5
Area sq.m.32,128
Pop. 1900 .218,948

Vera Cruz ...L 6
Area sq.m.29,201
Pop. 1900 .981,030

Yucatan .....P 7
Area sq.m.35,203
Pop. 1900 .314,087

Zacatecas.... H 5
Area sq.m 24,757
Pop. 1900 .462,190

CITIES-TOWNS

Pop. Thousands.

344 Mexico....K 7
101 Guadalajara H 6
93 Puebla .... K 7
63 Leon .....J 6
62 Monterey...J 4
61 San Luis Potosi... J 5
43 Merida .....P 6
41 GuanajuatoJ 6
37 Pachuca.. K 6
37 Morelia .....J 7
35 Oaxaca..... L 8
35 Aguascalientes H 6
33 Queretaro..J 6
32 Orizaba ... L 7
32 Zacatecas..H 5
30 Chihuahua.F 2
29 Vera Cruz..L 7
25 Toluca.....J 7
25 Celaya.....J 6
23 Saltillo .....J 4
18 Campeche .O 7
18 Jalapa.....L 7
14 Tepic .....G 6
13 Durango...G 4
13 Fresnillo...H 5
11 San Cristobal N 8

Michael=Angelo

1475–1564

are now well known throughout the world. *Robert le Diable* was produced at the opera of Paris in 1831; *Les Huguenots*, in 1833; *Le Prophète*, 1849; *L'Etoile du Nord*, 1854; and *Dinorah*, or *The Pardon of Ploermel*, in 1859. He left the manuscript of another great opera, *L'Africaine*, which was produced in Paris in 1865. Besides his operas, *M.* wrote a Stabat, a Miserere, a Te Deum, an

Fig. 1778. – MEYERBEER.

oratorio, cantatas, and many songs. He had, says a contemporary critic, the instinct of the stage, and knew well how to gratify and retain his public. He was supreme in the French Opera for more than 30 years, was associate of the Institute, and officer of the Legion of Honor, member of the Academy of Fine Arts at Berlin, and chapel-master to the king of Prussia. D. at Paris, May 1, 1864. His remains were removed with great ceremony to Berlin.

Mey'erstown, or MYERSTOWN, in *Pennsylvania*, a post-village of Lebanon co., abt. 31 m. E. of Harrisburg.

Meze'reon, *n.* (*Bot.*) See DAPHNE.

Mezières, (*mez'e-air,*) a town of France, dept. of Ardennes, on the Meuse, 80 m. N.W. of Metz. It is walled and strongly fortified. *Pop.* 6,000. In 1521, the Chevalier Bayard successfully held this place against 40,000 Spaniards, and in 1815 it withstood a siege of 42 days from the Prussians.

Mez'nzoth, *n.* A name given to a certain kind of vellum or parchment, anciently fixed on the door-posts of a house.

Mez'zanine, *n.* [Fr.; It. *mezzanino*, from *mezzo*, middle, half.] (*Arch.*) A low, intermediate story between two higher ones. — A low window of a breadth superior to its height.

Mezza-voce, (*mĕt'za-vō'cha.*) *a.* [It., from *mezza*, fem. of *mezzo*, middle, and *voce* = Lat. *vox*, voice.] (*Mus.*) With a medium depth or fulness of sound.

Mezzo, (*mĕt'zo,*) *a.* [It., from Lat. *medius*, half, middle.] (*Mus.*) Medium; middle; mean; not extreme.

Mez'zo-relievo, (*-lēē'vo.*) *a.* [See MEZZO, and RELIEVO.] (*Sculp.*) A term given to the projection of figures between alto- and basso-relievo; demi-relievo.

Mez'zo-sopra'no, *a.* [It., half soprano.] (*Mus.*) Having a mean or middle compass, between the soprano and contralto; — said of the voice of a female singer. — The C clef, when placed on the second line of the staff, in order to accommodate the mezzo-soprano voice, is termed the *mezzo-soprano clef*.

—*n.* (*Mus.*) A female voice possessing the mediary register of tone between the soprano and contralto.

—A person possessing such a voice.

Mezzofan'ti, GIUSEPPE, CARDINAL, a celebrated linguist, B. at Bologna, 1774. He first discovered his extraordinary power of acquiring foreign languages while attending the wounded soldiers of Napoleon's armies in the hospital of Bologna, of which he was chaplain. There he remained till 1831, having been appointed professor of Greek and Oriental languages in the university, and, also, one of the librarians. After the troubles which arose out of the French occupation of Ancona, he was sent with a deputation to Rome, where he attracted the notice, and secured the regard of Pope Gregory XVI. In 1833 he succeeded the famous Angelo Mai as prefect of the Vatican — was made a cardinal on the 13th of February, 1838 — and died on the 16th of March, 1849 — his death being hastened by the shock of the revolution, and the exile of his protector, the Pope. Byron says of Mezzofanti, "He is a walking Polyglott, and ought to have existed at the time of the Tower of Babel as universal interpreter. I tried him in all the tongues of which I knew a single oath, and, egad! he astounded me — even to my English." In fact, there was scarcely any European dialect that he did not speak. *M.* was a phenomenon of peculiar genius, who diligently and successfully cultivated linguistic science to an extent without a precedent and likely to remain without a parallel. But, notwithstanding his ability to express himself in 46 different languages, and his reputed acquaintance with 64 others, *M.* left no works, philological or otherwise; and, in fact, such an accumulation of words on the brain was of little use for the progress of science. D. 1849.

Mez'zotint, Mezzotin'to, *n.* [It., from *mezzo*, and *tinto*, tint.] (*Fine Arts.*) A kind of engraving on copper, nearly resembling painting in Indian ink, and effected by scraping and burnishing the copper. See ENGRAVING.

Mez'zotinter, *n.* An engraver in mezzotint.

Mezzotin'to, *v. a.* (*imp.* and *pp.* MEZZOTINTOED.) To engrave in mezzotinto; to depict by mezzotint.

Mhorr, (*mōr,*) *n.* (*Zoöl.*) Same as MOHR, *q. v.*

Mi, (*mē.*) (*Mus.*) The syllable applied by Guido to the third note of six hexachords. It is expressed in the natural hexachord by the letter E, and is the third note of the major scale.

Mia'ko, a city of Japan. See MEACO.

Miami, (*me-ah'mee,*) in *Florida*, a post-village of Dade co., on Key Biscayne Bay, at Cape Florida.

Mia'mi, in *Indiana*, a N. central co.; *area*, abt. 384 sq. m. *Rivers.* Wabash and Eel rivers. *Surface*, diversified; *soil*, fertile. *Cap.* Peru.

—A township of Cass co.—A post-village of Miami co., abt. 10 m. S. of Peru.

Mia'mi, in *Kansas*, an E. co., adjoining Missouri; *area*, about 576 sq. m. *Rivers.* Osage, or Marais des Cygnes River, and Bull, Mound, and Wea creeks. *Surface*, undulating; *soil*, very fertile. *Min.* Coal and salt. *Cap.* Paola.

—A township of the above co.

Mia'mi, in *Minnesota*, a village of Goodhue co., abt. 16 m. N.E. of Faribault.

Mia'mi, in *Missouri*, a post-village and township of Saline county, about 45 miles N.W. of the town of Booneville.

Mia'mi, in *Ohio*, a river rising in Hardin co., and flowing a general S.W. and S. course through Logan, Shelby, Miami, Montgomery, Butler, and Hamilton cos., enters the Ohio River at the extremity of the State.

—A W. co.; *area*, abt. 400 sq. m. *Rivers.* Miami River, and several less important streams. *Surface*, level or undulating, *soil*, fertile. *Cap.* Troy.

—A township of Clermont co.

—A township of Greene co.

—A post-township of Hamilton co.

—A township of Logan co.

—A township of Montgomery co.

Mia'mi, (Little,) in *Ohio*. See LITTLE MIAMI.

Mia'mi City, in *Ohio*, a post-village of Montgomery co., abt. 1 m. S.W. of Dayton.

Mia'misburg, in *Ohio*, a post-village of Montgomery county, on the Miami River, about 10 miles below Dayton.

Mia'misville, in *Ohio*, a post-village of Clermont co., abt. 17 m. E.N.E. of Cincinnati.

Mia'mitown, in *Ohio*, a village of Hamilton co., abt. 14 m. W.N.W. of Cincinnati.

Miar'gyrite, *n.* [Gr. *meiōn*, less, and *argyros*, silver.] (*Min.*) A sulphide of antimony and silver.

Mi'arim, or MEARIM, sometimes MARANHÃO, a river of Brazil, rises in the S.W. part of the prov. of Maranhão, and flowing N.E. enters the Atlantic Ocean through the Bay of Sao Marco. *Length*, about 350 m.

MIARIM, a town of Brazil, on the above river, abt. 75 m. S. of Maranhão.

Mi'asm, Mias'ma, *n.; pl.* MIASMATA, *n.* [Gr. *miasma*, from *miainō*, to stain, to dye; akin to Sansk. *mala*, clay, dirt, *malina*, defiled with clay.] Infecting substances floating in the air; the effluvia of any putrefying bodies, rising and floating in the atmosphere; deadly exhalation; malaria. — See MALARIA.

Mias'mal, *a.* Containing miasma.

Miasmat'ic, Miasmat'ical, *a.* [Fr. *miasmatique.*] Pertaining, or having reference to miasma; partaking of the qualities of noxious effluvia or malarious exhalations.

Miaul, (*mē'oul,*) *v. n.* [Fr. *miauler.*] To mew; to squall; to cry as a cat.

Mia'va, a town of Austria, in N.W. Hungary, on the Miava, a tributary of the Morava, 48 m. N.N.E. of Presburg. *Manuf.* Woollens and linens. *Pop.* 11,000.

Mi'ca, *n.* [Lat., a grain, a particle, from *mico*, to shine or glitter.] (*Min.*) A mineral having a somewhat metallic lustre, and capable of being split into thin plates. It enters into the composition of most of the primary rocks. It also occurs in shales, sandstones, and other sedimentary deposits, being derived from the broken-down granite rocks. It consists chemically of the silicates of potash and alumina, more or less colored by peroxide of iron. The alumina is often partly replaced by lithia, magnesia and lime. Mica is used in the manufacture of parts of doors for stoves, &c. It is largely found in New Hampshire, and is an important article of export to Europe.

Mica slate, or *Mica schist*, a very abundant metamorphic rock, slaty, and essentially composed of mica and quartz. Mica sometimes forms the whole mass. Garnets are sometimes imbedded as crystals in it, and form an integral part of the rock, which is then called *garnet schist.* Argillaceous matter is occasionally mixed with the mass, which thus assumes a slaty appearance. The group of schistose rocks containing mica is large and widely distributed wherever metamorphic rocks are found. Such rocks may belong to any geological period, but they have been formed at a great depth beneath the surface, and under enormous pressure. They are most usual in mountain districts, but abound also in all places where an axis of elevation has brought up granite or porphyritic rock.

Mica'ceo-calca'reous, *a.* (*Geol.*) Consisting of mica and lime.

Micaceous, (*-kā'shus.*) *a.* [Fr. *micacé.*] Resembling mica; pertaining to, or consisting of mica; chipping into laminæ like mica.

Mi'cah, (Book of.) (*Script.*) One of the books of the minor prophets in the Old Testament, bearing the name of its author, Micah, who, as we are told, prophesied during the reigns of Jotham, Ahaz, and Hezekiah, and was consequently a contemporary of Isaiah (B. C. 759–699). The book may be divided into three parts. It commences with a majestic exordium, in which is introduced a sublime theophany, the Lord descending from his dwelling-place to judge the nations of the earth, who approach to receive judgment; then follows a prophecy that Samaria shall fall, and that Judah also shall suffer injury and be carried into captivity, followed by a promise of the reunion of the whole people (ch. i.-ii.) In the second part the destruction of Jerusalem is foretold, the return of the Jews from Babylon, and the glories of the future Zion, with the advent of the Messiah (iii.-v.) The third part consists of a dialogue between the Lord and his people, in which he reproves them for their sins, and threatens them with punishments, ending with the promise of a return from their captivity. The style and ideas of Micah are not unlike those of Isaiah. He is clear and distinct, powerful and animated, rising in many cases to vehemence and sublimity. Micah is the only prophet that pointed out Bethlehem as the birthplace of the future Messiah.

Micanopy, in *Florida*, a post-village of Alachua co., abt. 66 m. S.W. of St. Augustine.

Mice, *n. pl.* of MOUSE, *q. v.*

Mich, MICHE, MEACH, or MEECH, *v. n.* [O. Fr. *muchier.*] To carry on clandestine amours or intrigues; to filch in a secret manner; to act privily or sneakingly. (R.)

Michael, (*mī'kel.*) (*Script.*) The name given to one of the chief angels, who, in Dan. x. 13–21, is described as having special charge of the Israelites as a nation; and in Jude 9, as disputing with Satan about the body of Moses, in which dispute, instead of bringing against the arch-enemy any railing accusation, he only said, "The Lord rebuke thee, O Satan!" Again, in Rev. xii. 7–9, Michael and his angels are represented as warring with Satan and his angels in the upper regions, from which the latter are cast down upon the earth. This is all the reference to Michael which we find in the Bible.

Michael I., emperor of Constantinople, successor of Nicephorus, 811, abdicated, on occasion of a military sedition, in favor of Leo the Armenian, 813. D. 846. — MICHAEL II., succeeded Leo the Armenian, 820: D. 829. — MICHAEL III., succeeded, in the third year of his age, 842, under the guardianship of his mother, Theodora. In 859 he was persuaded by his uncle, Bardas, to assume the power himself, and his mother shortly after died of grief in a convent. In 866 he put Bardas to death, and made Basil, the Macedonian, his associate in the empire, who killed him, 867. — MICHAEL IV., was raised to the throne by Zoe, after she had poisoned her husband, Romanus Argyrus, 1034: D. 1041. — MICHAEL V., nephew of the preceding, occupied the throne a few months after his death, and was dethroned by Zoe and Theodora, 1042. — MICHAEL VI., succeeded Theodora 1056, and was dethroned by his officers, who elevated Isaac Comnenus to the imperial dignity, 1057. — MICHAEL VII., son of Constantine Ducas and Eudoxia, succeeded his father, 1067; and being dethroned by Nicephorus Botoniates in 1078, retired to a monastery, and died Archbishop of Ephesus. — MICHAEL VIII., surnamed *Palæologus*, regent of the empire during the minority of John Lascaris, whom he deprived of his eyes and throne in 1260, and in the following year took Constantinople. He was excommunicated by Pope Martin IV., as the supporter of heresy and schism. D. 1288. He is not to be confounded with Michael Palæologus, who was crowned emperor in 1214, and governed the empire under his father, Andronicus the Elder. D. 1220.

Michael, the *first* of the name, grand-duke of Russia, reigned 1175. The *second*, grand-duke of Kiev, killed by the Tartars, 1245. The *third* (or the second), grand-duke of Russia, succeeded 1304; put to death by the Tartars, 1317. The *fourth*, first czar of Russia, of the house of Romanoff, called MICHAEL FEODOROVITCH, B. 1598, elected 1613, D. 1645. He was succeeded by his son Alexis.

Michael, king of Poland, elected in 1667: D. 1673.

Michael-Angelo Buonarotti, (*an'jai-lo bo-na-rot'te,*) a great Italian painter, sculptor, architect, and poet, was B. at Castel Caprese, in Tuscany, March 6, 1475. His family, whose original surname was Canossa, had held a high position in Florence for more than two centuries. His passion for drawing showed itself at a very early age, and he became the pupil of Domenico Ghirlandajo. At seventeen he attracted the notice of Lorenzo de Medici, who employed him in his palace. He was present at the death of Lorenzo, and afterwards took refuge at Venice and Bologna, but returned to Florence in 1494. He soon after went to Rome, whither his renown as sculptor of the "Sleeping Cupid" had preceded him. He there executed his famous *Pietà*, or Virgin weeping over the dead Christ. For the next 30 years he lived mostly at Florence, but was frequently called to Rome. About 1505 he drew his design for the decoration of the council-hall of Florence, the "Cartoon of Pisa," as it is called. From 1508 till 1512 he was engaged on the ceiling of the Sistine chapel, his frescoes representing the creation, and the principal events of Sacred History. In 1530 the great artist took a leading part in the defence of Florence against Charles V., dividing his time between the works of the fort San Miniato, and his tasks as sculptor. Three years later he began painting his great fresco in the Sistine chapel, "The Last Judgment," which occupied him eight years. It is nearly 50 feet in height, and about 43 in breadth. During this period he enjoyed the friendship of Vittoria Colonna. In 1546 he was named architect of St. Peter's, and planned and built the dome. He remained in that post under five popes, and until his death. He had commenced, about 1505, a mausoleum for Pope Julius II., which he worked on at various times, but which the peremptory calls of successive popes did not allow him to finish. *M.* is one of the greatest artists of that great

period of art in which he lived: the age of Leonardo da Vinci Rafaelle, Titian, Bramante, Ghiberti, and Brunelleschi; indeed, one of the greatest of all time. He was a profound anatomist, and his mastery of the human figure in its finest details is unsurpassed by any artist. He was also a poet, and the few poems he has left are

Fig. 1779. — MICHAEL-ANGELO.

sufficient to show what celebrity he could have reached in that sphere. As in his face, so in the whole man and his deeds, there is visible a vast power, with calmness and sadness. He was greatly loved, and also feared. He never married, but is said to have been once in love. He D. at Rome, February 18, 1564, and was buried at Florence. The best and most compact biography, of late date, is that contained in Springer's *Raffael und Michelangelo*. Hermann Grimm's *Leben Michaelangelos* is also of value.

Michael, (Mount St.) a granite rock in Mount's Bay, Cornwall, England, opposite Marazion. It is the *Ocrium* of Ptolemy, whence tin was shipped in ancient times.

Mi'chaelite, *n.* (*Min*.) A white, fibrous, and pearly variety of opal, found in the island of St. Michael, in the Azores.

Michaelmas, (*mik'l-mas,*) *n.* The feast of St. Michael, held on the 29th of September, — hence, a colloquialism for autumn.

Mi'chael, (St.,) the largest island of the Azores, belonging to Portugal, in the Atlantic Ocean; Lat. 37° 44′ N., Lon. 25° 30′ W. *Area*, 224 sq. m. *Prod.* Maize, wheat, fruit, and wine. Its oranges are famous. *Manuf.* Druggets and coarse pottery. *Pop.* 81,000.

Mi'chael, St., (Order of.) (*Her.*) A French order of knighthood, instituted by Louis XI. in 1469, in honor of St. Michael, (Fr. *St. Michel.*) It was for some time in high repute; but under Catharine de Medici, who lavished it indiscriminately, it came to be held of no account.

Mi'chaelsville, or MICHAELVILLE, in *Maryland*, a post-post-village of Harford co.

Mi'chal. (*Script.*) The younger of Saul's two daughters, in love with David, and whom Saul reluctantly gave to him in marriage, (1 *Sam.* xiv. 49; xviii. 20–29.) She saved her husband's life from assassins sent by her father, by a stratagem which gave him time to escape, (1 *Sam.* xix. 14, 15.) Her father then gave her in marriage to Phalti, (1 *Sam.* xxv. 44,) from whom David some years after recovered her, (2 *Sam.* iii. 12–21.) When David brought the ark of God to Jerusalem, she conceived and expressed great disgust at his pious joy, and the affections of the king remained alienated from her till her death, (2 *Sam.* vi. 16–23.)

Mich'aud, JOSEPH FRANÇOIS, a French historian and literateur, was B. in 1767. He studied at the college of Bourges, and went to Paris soon after the beginning of the revolution, espousing the royalist side, and narrowly escaped death during the Reign of Terror. In 1813 he was received into the French Academy, became a member of the Chamber of Deputies in 1815, and about the same time was named reader to the king. He lost the latter office in 1827, in consequence of his opposition to the proposed law of the press. The great work on which *M.*'s reputation rests is his *Histoire des Croisades*, in 10 vols. 8vo. His *Correspondance de L'Orient* was the fruit of a visit to the East in 1829. In conjunction with Poujoulat he edited a *Nouvelle Collection de Mémoires relatifs à L'Histoire de France.* D. 1839.

Mich'er, *n.* One who practises secret vices; a thief; a sneak. (R.)

Michelet (*me'she-lai*), JULES, a French historian, born at Paris, 1798. Having devoted himself with brilliant success to historical studies under Villemain and Leclerc, he became at 25 a professor of History in the Collége Rollin, and in 1821, after a sharp competition, was called to a chair in the Collége Sainte-Barbe, where he taught the ancient languages and philosophy until 1826. He lectured also at the École Normal, and after the 1830 revolution he was appointed chief of the historical section of the archives of the realm, and M. Guizot being unable, on account of his political duties, to continue his lectures on history in the faculty of Literature, the Sorbonne named *M.* as his substitute. He also became tutor to the Princess Clementine. In 1838 he succeeded M. Dunon in the chair of History in the Collége de France, and was elected a member of the Institute. He had already made his name known by the publication of admirable hand-books on French and modern history, and had begun the great work of his life, the monumental production which was to give him an exalted place among modern historians, his *History of France.* This work, begun in 1833 and completed in 1867, occupied over thirty years of his life. In 1845–46 considerable attention was directed toward three works from his pen, entitled *The People, Des Jesuits*, and *Priests, Women, and Families.* These works made so sharp an attack upon the ecclesiastical party that Guizot, then prime minister, interdicted his lectures. Various other works came from his facile pen, among them, *Memoires de Luther* and *Procès de Templiers.* In 1847 he began another great historical work, his *History of the Revolution*, which was completed in seven volumes, occupying him till 1853. It is a work of much eloquence and enthusiasm, but lacks the qualities of a genuinely good history. Michelet meanwhile lost his office under the government by refusing to take the oath of allegiance to Louis Napoleon, and thenceforth lived mostly in Brittany and the Riviera, engaged actively in literary work. He now wrote a series of works of a novel kind, scientific in subject, but with more of rhapsody than science in substance. These were: *L'Oiseau; L'Insecte; La Mer*, and *La Montagne.* Another series of great interest were: *L'Amour; La Femme; La Sorcière*, and *La Bible de l'Humanité*: also, *Nos Fils*, a plea for compulsory education. In the last years of his life he returned to his historical labors. He had now brought down the history of France to the close of the Revolution, and sought to complete his task, but died by the time he had brought it down to Waterloo. His death took place Feb. 9, 1871. *M.* was a man of active imagination, and his histories are a series of vivid tableaux, yet they are instinct with life, and some of the episodes of French history are treated by him with unsurpassed vividness and vigor.

Miches'sebee, in *Michigan*, a small river flowing into the Shiawassee in Saginaw co.

Michet'tre, in *Indiana*, a township of Martin co. *Pop.* about 915.

Michi'cott, in *Wisconsin.* See MISHICOTT.

Michigan, (*mish'e gan.*) one of the N.W. States of the American Union, consisting of two distinct peninsulas, comprised between Lat. 41° 30′ and 47° 20′ N., and Lon. 82° 25′ and 90° 30′ W. The upper peninsula is for the most part inclosed between Lake Superior to the N., Lake Michigan to the S.E., and Wisconsin to the S. and W. The lower peninsula, forming the larger of the two divisions of the State, is bounded N. and N.E. by Lake Huron, E. and S.E. by Upper Canada and Lake Eric, S. by the States of Ohio and Indiana, S.W. by Illinois, W. by Wisconsin, and N.W. by the upper portion of the State. The latter, or N. division, included between lakes Michigan and Superior, has a length of 316 miles, with a width varying from 36 to 120; while the major, or S. division, is 416 miles long, and from 50 to 300 wide. The State possesses an aggregate lake-shore line of 1,400 miles; the united area being 56,243 sq. m., or 35,995,520 acres.—*Gen. Desc.*

The N. peninsula is more bold, rugged, and picturesque than the S. or peninsula proper; which, on the other hand, is richer in agricultural productiveness, and is in a much more advanced state of settlement. The E. portion of the former rises gradually from the lake-shore into an elevated plateau, and swells westwardly into hills, which finally enlarge into the Porcupine Mountains (the dividing ridge between lakes Superior and Michigan), the highest peaks of which attain an altitude of 1,800 to 2,000 feet above sea-level. The shores of Lake Superior abound in striking and romantic scenery, prominent among which are the Pictured Rocks, masses of parti-colored sandstone, worn by attrition of the waves into fantastic shapes, resembling ruined castles and temples. They are situate 60 miles from the Sault Ste. Marie. The S. peninsula is, on the whole, mostly level, or more undulating in character, although its shores are in some parts rocky and broken, and, along Lake Huron, high and precipitous. The central region consists of a table-land, little elevated above the level of the surrounding lakes, to which it slopes in every direction. Its surface is also diversified by beautiful prairie lawns or parks, commonly called *oak-openings*, being stretches of level country, with a scattered growth of trees, intersected with prairies and heavy timber. The soil is excellent, especially in the middle and S. sections of the lower peninsula, being generally free from encumbering rocks, and composed of a deep, dark, rich sandy loam, often mingled with gravel and clay. The surface and soil of the upper peninsula are various, a considerable portion consisting of sterile sand-ridges and marshy tracts; while the other, or hilly tracts, are generally covered with dense pine forests. The surface is mostly rugged, broken, rocky, and in a measure barren, but in its eastern half hopeful beginnings of agriculture have been made. Formerly it was principally inhabited by Indians, the fur trades and fisheries being its principal resources. Both peninsulas contain extensive tracts of heavy timber, furnishing large quantities of lumber and fuel for domestic use and for exportation, the trees embracing white-pine, spruce, hemlock, birch, every variety of oak, walnut, hickory, maple, and ash. Many varieties of woods suitable for fine cabinet-work are found within the limits of the State; and its pine forests are noted as the source of excellent building material, supplying a large portion of the neighboring States. Fewer prairies exist in this than in any other State of the N.W. region; and the largest is only a few miles in circuit. They are principally found in the S. and S.W., and are divided into the *wet* and *dry.* The dry prairies have a rich soil, from 1 to 4 feet deep, are easily cultivated, and yield abundant crops. The wet afford early pasturage, and hay for wintering crops, and with little labor may be converted into excellent artificial meadows. The riparian system of *M.* is not important, the principal rivers of the S. peninsula, flowing E. into lakes Huron and Erie, being the Au Sable, Saginaw, Huron, and Raisin; those flowing W. into Lake Michigan, the Manistee, Muskegon, Grand, Kalamazoo, and St. Joseph. The principal stream of the upper peninsula is the Menomonee, emptying into Green Bay. Small lakes are innumerously dotted over the face of both divisions of the State. Several small islands belong to *M.*, the most important being Isle Royale and Grand Island, in Lake Superior, and those of St. Jaines, Beaver, Mackinaw, Bois Blanc, and Drummond, near the Straits of Mackinaw. These waters abound in fish of various kinds, such as whitefish, siskiwit, trout, bass, herring, and maskinonge, and give rise to an extensive piscatorial industry, the value of which is becoming enhanced year by year. The interests of the trade are protected by enactments inhibiting seine-fishing. — *Clim.* The climate is less severe than in the same parallels in the neighboring British provinces, being equalized and ameliorated by the immense bodies of fresh water on the border. The winters are long, and often severe; but the atmosphere is more humid, and the climate, upon the whole, milder than that of the States more to the E. The average annual temperature is admirably suited to wheat throughout the State, while in the S. part even good crops of maize are raised, as well as vast quantities of grapes, peaches, and the more delicate fruits. The colder and less genial climate of the N. portion, though admitting good crops of winter grain, is, however, not favorable to the cultivation of Indian corn.—*Min. & Geol.* The geology of the upper peninsula is somewhat complicated. Beginning with its southern shore, we find a broad belt, extending from Drummond Island to the Big Bay of Voquet, of members of the Niagara group of the Silurian rocks; immediately N. of them, and extending about the same distance from E. to W., is a narrow belt of the next lower member of the Silurian, the Hudson River group, followed in turn by a somewhat broader one of Trenton limestone; to this succeeds a narrow belt of Cretaceous rocks, and thence to White Fish Bay and Lake Superior, the Potsdam sandstone, the lowest member of the Silurian. From the extreme end of Keeweenaw Point, we find the copper-bearing strata, extending westward to the Minnesota line. These strata are Eozoic, and are, perhaps, more fully charged with copper ores of great richness than any other copper-bearing rocks in the world. The lower peninsula is composed wholly of the groups of the Appalachian series, the coal measures, the highest member of the series, occupying the central portion of the peninsula, and covering an area of 5,000 sq. m. The coal fields proper extend from about the middle of Saginaw Bay to the line of the Michigan Central Railroad. Though occupying the highest portion of the peninsula, the coal is found at such depth as to require constant pumping to keep the mines free from water. The coal is bituminous and of fair quality, though not the best, and coal of economic value in workable shape is not abundant. Salt is another product of the coal-measures, and immense quantities are mined, of excellent quality, in the neighborhood of Saginaw Bay. In Bay, Saginaw, and Kent counties, outside the coal-fields, the underlying carboniferous limestone crops out, yielding at some points plaster of paris and gypseous shales. Around these appear the Portage and Chimney groups, principally slate and sandstone. The principal value of these is to give fertility to the soil; they contain no minerals of importance. The products of copper and iron from the ores, and of salt from the salt-springs of the Saginaw region, has placed *M.* in the first rank of mining States, and her other productions of the quarry and mine, such as the slates from the upper peninsula, coal, gypsum, grindstones, petroleum, building-stone, &c., though important in themselves, are hardly to be considered in connection with these greater interests. In the last census year the output of iron ore was 5,829,828 long tons, chiefly the product of Marquette co. The mines occur in three ranges of the Lake Superior region, the Marquette, Menominee, and Gogebic. Marquette took the lead as a shipping port until 1889, when it was surpassed by Escanaba, from which nearly half the ore was shipped. Most of this ore is smelted in Pennsylvania, only a small percentage being smelted in the State. This is done with charcoal, *M.* smelting

Fig. 1780. — SEAL OF THE STATE.

MICHIGAN

SCALE OF MILES
0 10 20 30 40 50

State Capital ☆ County Seats ○
Places of 50,000 and over ..... DETROIT
" " 10,000 to 50,000 ..... Bay City
" " 5,000 to 10,000 ..... Ionia
" " 3,000 to 5,000 ..... Charlotte

602 feet above mean sea level

581 feet above mean sea level

LAKE SUPERIOR
LAKE MICHIGAN
LAKE HURON
LAKE ERIE
GREEN BAY
DOMINION OF CANADA
INTERNATIONAL BOUNDARY LINE
To Duluth
To Ashland and Duluth
To Michipicoten River
Michipicoten Island
Keweenaw Point
Caribou Island
Isle Royal (To Keweenaw Co.)
Manitoulin Island
Cockburn I.
Great Duck I.
Lake St. Clair
Lake George
Lake Winnebago
Saginaw Bay
Grand Traverse Bay
Little Traverse Bay
Thunder Bay
Sturgeon Bay
Point au Sable
Point Sable
Whitefish Point
Whitefish Bay
Pancake Bay
Batchawana B.
Goulais Bay
Parisienne I.
Pt. aux Pins
Root R.
Gros Cap
Pt. aux Barques
Port Austin
Pointe aux Barques
Grindstone City
Gravelly Point
White Stone Pt.
Au Gres
Point au Gres
Au Sable Pt.
Tawas Point
Thunder Bay I.
Middle I.
Presque Isle
Alpena
Ossineke
Black River
Alcona
Harrisville
Greenbush
Cedar L.
Au Sable R.
Mio
Flat Rock
Glennie
Tawas City
Alabaster
Oscoda
Au Sable
Lincoln
Curran
Lincoln Jc.
Hale Lake
Tucker
Wilber
Fairview
Mackinaw City
Mackinac I.
Bois Blanc I.
Round I.
Boynton
Cheboygan
Grace
Hammonds B.
Forty Mile Pt.
Rogers
Ocqueoc
Hagensville
Millersburg
Belle
False Presque I.
Presque Isle
Hammond
Beaver I.
Garden I.
High I.
Hog I.
St. James
Temperance I.
Straits of Mackinac
Mackinac I.
St. Ignace
Pt. Larabee
Freedom
South Channel
Bliss
Carplake
Averill
Douglas L.
Mullet L.
Burt L.
Crooked L.
Indian River
Wolverine
Trowbridge
Vanderbilt
Gaylord
Elmira
Otsego L.
Sallings
Waters
Hetherton
Atlanta
Vienna
Bear Lake
Lowell
Hardy
Hubbard Lake
Redoak
Fairview
Curran
Lincoln
Harrisville
Greenbush
Mudlake
Killmaster
Glennie
Tawas City
Alabaster
Oscoda
Au Sable
Lincoln Jc.
Hale Lake
Tucker
Wilber
Fairview
Mackinaw City
Mackinac I.
Bois Blanc I.
Round I.
Boynton
Cheboygan
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Hammonds B.
Forty Mile Pt.
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Hagensville
Millersburg
Belle
False Presque I.
Presque Isle
Hammond
Beaver I.
Garden I.
High I.
Hog I.
St. James
Temperance I.
Straits of Mackinac
Mackinac I.
St. Ignace
Pt. Larabee
Freedom
South Channel
Bliss
Carplake
Averill
Douglas L.
Mullet L.
Burt L.
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Indian River
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Elmira
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Sallings
Waters
Hetherton
Atlanta
Vienna
Bear Lake
Lowell
Hardy
Hubbard Lake
Redoak
Fairview
Curran
Lincoln
Harrisville
Greenbush
Mudlake
Killmaster
Glennie
Tawas City
Alabaster
Oscoda
Au Sable
Lincoln Jc.
Hale Lake
Tucker
Wilber
Fairview

Hammond's 8 x 11 Map of Michigan.
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MICHIGAN.

Land surface, Sq. m. 57,430
Water surface, Sq. m. 1,485
Pop. 1900..2,420,982
White...2,398,563
African...15,816
Indian.....6,354
Chinese.....240
Japanese ...9
Native-born, 1,879,329
Foreign-born, 541,653
Males...1,248,905
Females 1,172,077

COUNTIES.

Alcona .....K 7
Alger ..... G 3
Allegan G11
Alpena ..... K 7
Antrim.....H 7
Arenac.....K 8
Baraga.....D 2
Barry.....H11
Bay ..... J 9
Benzie.....F 7
Berrien.....F13
Branch H13
Calhoun H12
Cass F13
Charlevoix ...H 6
Cheboygan ... 1 6
Chippewa .... K 3
Clare ..... I 9
Clinton.....I 11
Crawford.....I 7
Delta .....G 3
Dickinson .... E 3
Eaton.....I 11
Emmet .....H 5
Genesee.....K10
Gladwin .....J 8
Gogebic ..... A 3
Grand Traverse ... G 7
Gratiot .....I 10
Hillsdale.....I 13
Houghton.....C 2
Huron .....L 9
Ingham J11
Ionia H11
Iosco.....K 8
Iron..... C 3
Isabella ..... I 9
Jackson J12
Kalamazoo.... G12
Kalkaska .....H 7
Kent G10
Keweenaw....D 1
Lake..... G 9
Lapeer..... L10
Leelanau .... G 7
Lenawee..... J13
Livingston... K11
Luce..... I 3
Mackinac .....J 3
Macomb M11
Manistee..... F 8
Marquette ....E 3
Mason .....F 8
Mecosta ..... II 9
Menominee ...E 4
Midland ..... J 9
Missaukee ....H 8
Monroe K13
Montcalm H10
Montmorency.J 6
Muskegon F10
Newaygo ..... G 9
Oakland.....L11
Oceana .....F 9
Ogemaw.....J 8
Ontonagon ... B 2
Osceola .....H 8
Oscoda ..... J 7
Otsego ..... I 7
Ottawa F11
Presque Isle...J 6
Roscommon...I 8
Saginaw J10
St. Clair M11
St. Joseph G13
Sanilac M10
Schoolcraft...H 3
Shiawassee....J10
Tuscola..... L10
Van Buren....F12
Washtenaw ...K12
Wayne L12
Wexford.....G 8

CITIES-TOWNS

Pop.	Thousands.
285	Detroit....L12
87	Grand Rapids...G11
42	Saginaw... K10
27	Bay City...K 9
25	Jackson.... J12
24	Kalamazoo G12
20	Muskegon..F10
19	Pt. Huron M11
18	Battlecreek H12
16	Lansing... I 11
14	Anu Arbor K12
14	Maulstee ...F 8
13	Ishpeming E 3
13	W. Bay City K 9
13	Flint.....K10
12	Menominee E 5
11	Alpena..... L 6
10	Sault Ste. Marie..L 3
10	Marquette..F 2
9	Pontiac.. ..L11
9	Ironwood ...A 3
9	Adrian.....J13
9	Escanaba....F 4
9	Traverse Cy.G 7
9	Iron Mt.....D 4
8	Owosso J11
7	Ypsilanti ... K12
7	Ludington..F 9
6	Negaunee... E 3
6	Mt. Clemens M11
6	Cheboygan. J 5
6	Coldwater.. H13
5	Cadillac.....H 8
5	Lauriuni ... D 1
5	Petosky .... H 6
5	Ionia..... J11
5	Wyandotte..L12
5	St. Joseph...E12
5	Monroe ...L13
4	Grand Haven F10
4	Big Rapids..H 9
4	Delray.....L12
4	Albion..... J12
4	Marshall.....J12
4	Niles.....F13
4	Norway..... E 4
4	Hillsdale.....I13
4	Manistique..H4
4	Charlotte....I 11
4	Hancock .. C 1
4	South Haven F12
3	Bessemer .A 3
3	Marine City M11
3	Mt. Pleasant I 9
3	Three Rivers G13
3	St. Johns... I 10
3	Edmore.....H10
3	Greenville..H10
3	Gladstone.. F 4
3	Houghton...C 1
3	Lapeer... .. L10
3	Belding. ...H10
3	Crystal Falls D 3
3	Hastings....H11
2	Oxford..... G 4
2	Allegan..... G11
2	Lake Linden C 1
2	St. Clair M11
2	Howell.....K11
2	Sturgis.....H13
2	Fenton.....K11
2	Hudson J13
2	Tecumseh...K12
2	Midland.....J 9
2	St. Ignace..K 4
2	Grand Ledge I 11
2	Durand K11
2	Eatou Rapids I 11
2	Decatur,.... F12
2	Charlevoix..H 6
2	Otsego G12
2	Reed City...G 9
2	Alma ..... I 10
2	Ithaca .....I 10
2	Munising... G 3
2	Caro.....L10
1	St. Louis ....I 10
1	Portland....H11
1	Vassar K10
1	Northville .. L12
1	River Rouge L12
1	Lowell.... .H11
1	East Tarvas L 8
1	Buchanan.. F13
1	Harbor Springs H 6
1	Essexville...K 9
1	Chelsea.....J12
1	Romeo L11
1	Quincy..... J13
1	Gaylord.....I 6
1	Rochester...L11
1	Union City..H12
1	Corunna. ...J11
1	Iron River.. C 3
1	Whitehall... F10
1	Plymouth .. K12
1	Paw Paw... G12
1	Frankfort...F 7
1	Holly K11
1	West Branch J 8
1	Howard City H10
1	Wayne L12
1	Morenci.....K13
1	Fremont....G10
1	Cassopolis...F13
1	Clare. . ....I 9
1	Zecland..... F11
1	Holland..... F11
1	Plainwell... G12
1	St. Charles...J10
1	Central Lake H 6
1	Kalkaska....II 7
1	Ovid.....J10
1	Calvin G12
1	Blissfield....K13
1	Chesaning...J10
1	Schewaing.. L 9
1	Bad Axe....M 9
1	Stanton.....H10
1	Tawas City..K 8
1	Constantine G13
1	Mancelona..H 7
1	Algonac M11
1	Manchester..K12
1	E. Jordan...H 6
1	Onaway.....J 6
1	Wakefield .. A 3
1	Baraga..... C 2
1	Bronson.....H13
1	Oxford..... L11
1	Newaygo... G10
1	Birmingham L11
1	Trenton.....L12
1	Nashville...H11
1	Bellaire.....H 7
1	Harbor Beach.....M 9
1	Milan.....K12
1	Hart..... F 9
1	Richmond..M11
1	Sparta.....G10
1	Yale.....M10
1	Imlay City..L11
1	Dundee..... K13
1	Au Sable ... L 8
1	Leslie.....J12
1	Williamston J11
1	Cass City... L 9
1	Oscoda..... L 8
1	Milford..... K11
1	Homer.....J12
1	Reading.....I13
1	Shelby .....F 9
1	Hartford ...F12
1	Bellevue.... H12
1	Pentwater.. F 9
1	Clinton.....K12
1	Lake Odessa H11
1	Marcellus... G12
1	Bangor.....F12
1	Newberry....I 3
1	Coleman ....I 9
1	Muskegon Heights..F10

Pop.	Hundreds.
9	Montague... F10
9	Marlette.... M10
9	Three Oaks..E13
9	Vicksburg.. G12
9	Parma..... I 12
9	Cedar Sprs..G10
9	Fowlerville K11
9	Lawton.....G12
9	Lakeview...H10
9	New Baltimore M11
9	Boyne.....H 6
9	Carson Cy.. I 10
9	Dexter... ..K12
9	Flushing ...K10
8	Manton..... H 8
8	Thompsonville G 7
8	Detour .....M 4
8	Armada.....M11
8	Schoolcraft G12
8	Dearborn....L12
8	Luther .....G 8
8	Middleville..H11
8	Standish ..K 9
8	Mayville.....L10
8	Lake City...H 8
8	Berrien Sprs.F12
8	Olivet..... I 12
7	Brighton.. .K11
7	Palmer.....E 3
7	Mendon H12
7	Gladwin..... I 9
7	Saranac.... H11
7	Orion L11
7	Davison.....K10
7	Burroak.... H13
7	Marion .. ..H 8
7	Pinconning K 9
7	Almont L11
7	Watervliet..F12
7	Rockford... G10
7	McBain ..H 8
7	Saugatuck.. F11
7	White Pigeon G13
6	Springlake..F10
6	Stambaugh C 3
6	Laingsburg J11
6	Galesburg.. H12
6	Grasslake....J12
6	Harrison.....I 8
6	Centerville.. G13
6	Litchfield ..I 12
6	Perry.....J11
6	Clio.....K10
6	S. Frankfort F 7

about one-third of all the charcoal iron of the U. S. The iron product is about 40 per cent. of all produced in the U. S., and in this metal *M.* leads any similar locality in the world. In its copper output *M.* yields one-third that of the U. S. and about one-ninth that of the whole world. The copper mines are situated on the peninsula terminating in Keweenaw Point, Lake Superior. In 1891 the product was 109,370,000 lbs.; in 1893, 113,462,129. Of this more than half was yielded by the Calumet and Hecla mines. The Lake Superior region has yielded in all more than 2,000,000,000 lbs.of copper. The metal is found as native copper, and is separated from its matrix by crushing and washing. The quality of the metal is unsurpassed, and for certain purposes it is unequalled. The mines were worked by the Mound-Builder Indians in prehistoric times, and seem practically inexhaustible. Salt is another abundant product, there being more than 250 wells, which yielded in 1890 3,837,632 barrels, nearly half the whole U. S product. The best qualities of *M.* salt sell promptly for dairy and table use, and are especially adapted for the wants of fish and meat packers. The inferior grades are sold for salting stock and hides, and similar purposes, while there is a growing market for refuse salt as a fertilizer. Gypsum is found in immense deposits at Grand Rapids, in the lower peninsula, over an area of 10 to 12 sq. m., and is extensively mined, about one-third of the product being made into plaster of Paris, and the remainder sold as land plaster. In the southeast section of the State glass-sand of fine quality is found in unlimited abundance, and in both peninsulas building stones abound. In the upper there are found statuary and other marbles, and various ornamental stones, including agate, jasper, chalcedony, and others. Lime, brick, and tiles are made in many parts of the State Mineral springs are numerous, 19 of them being popular resorts, while the waters of 4 springs have a commercial value.—*Lumbering.* In addition to its mineral wealth, *M.* has a vast natural product in lumber, which forms the second great industrial interest of the State. The forests of northern *M.* are largely of pine, much of which, as the cork pine, is of superior quality and greatly in demand, the product for many years past having been enormous. When lumbering began here the forest wealth was estimated at the immense total of 150,000,000,000 feet. Ample facilities for marketing it existed in the rivers and lakes, and it has been cut so rapidly and wastefully that nine-tenths of the original supply is gone. In 1890 *M.* produced 19.75 per cent. of all the U. S. lumber, its yield about equalling those of Wisconsin and Minnesota combined. In the census year the product of lumber exceeded 4,000,000,000 feet, in addition to over 2,500,000,000 shingles. At this rate of cutting, combined with the neglect of reforestry, the pine forests of *M.* are rapidly disappearing, and threaten to become extinct in the near future. There is still a great wealth in hardwood forest trees, whose abundance has made the manufacture of furniture a very important branch of industry, about $10,000,000 being invested in this business, about half of which is in the factories of Grand Rapids.—*Manufactures.* In addition to the furniture factories, the principal manufacturing interests of *M.* are grist-mills, foundries and machine shops, iron and steel works, and agricultural implement factories.—*Fisheries.* The abundance of lake water within the State limits makes its fisheries of great importance, over 40,000 men being employed in this industry. In 1891 the yield aggregated 33,714,866 lbs., two-thirds of which was trout and white-fish from Lakes Michigan, Superior, and Huron. —*Commerce.* The situation of *M.* on the frontier and on the lakes, which separate her from the Dominion of Canada, gives this State a very large foreign commerce, and a still larger coasting trade. Along the shores of the State are 1,490 miles of lake navigation, which is greatly promoted by three ship canals—one through the shallows at the head of Lake St. Clair, another at the Sault Ste. Marie, near the head of St. Mary's river, and a third, the Portage Lake canal, on the Keweenaw peninsula. These add greatly to the development of the commercial facilities of the State, giving it communication with the Atlantic. The exports to Canada include iron ore, salt, building stone, lumber, grain, fish, meats, fruits, carriages, railroad cars, &c. Detroit is the leading port of entry, and had in 1890 an import trade of over $3,000,000, and an export of $6,000,000. There are other ports of entry at Grand Haven, Port Huron, Marquette, and Escanaba. There are over 8,000 miles of railroad, extending to every part of the State, and adding greatly to its commercial facilities.—*Agric.* The soil of the southern peninsula of *M.* was long supposed too swampy, and its climate too deadly from the excess of malaria, to make it habitable; and yet this region has proved to be the garden of the Northwest. The swampy lands were readily drained, the forests of pine, spruce, hemlock, and tamarack proved to be themselves sources of wealth, and the soil of the lower peninsula was found to possess remarkable fertility, its readily disintegrating limestones fertilizing the soil so constantly that little or no manures were required for years. The soil of the upper peninsula, though much of it covered with dense, heavy forests, is more sterile, but will yield fair crops with diligent cultivation, while its immense mineral wealth renders it desirable for a residence independent of the qualities of the soil. The timber of this region is mostly white pine, spruce, hemlock, birch, aspen, oak, elm, maple, and ash. Indian corn will not always ripen, in consequence of the shortness of the season, but wheat, rye, barley, and oats do well. Most of the larger fruits require a longer season than they find here, though the small fruits generally do well. In the southern peninsula Indian corn and all the cereals grow very abundantly, and the State is one of the great grain-growing States. The southwestern part is also noted as a fruit region, supplying peaches, pears, and apples to the whole Northwest; the upper portion of this southern peninsula is remarkable for its fine forests, and its pine, spruce, hemlock, and cedar lumber is largely exported. The oak openings and prairies, when not under cultivation, have a great profusion of wild flowers, including many genera and species not elsewhere found in as high latitudes. Wheat forms the leading cereal, the average yield per acre being 19½ bushels. The next most important grain crops are corn, oats, and barley. In the fruit belt, a narrow strip on the west shore of Lake Michigan of some 200 miles in length, great quantities of apples, peaches, grapes, plums, and other fruits are produced. Of domestic animals sheep are kept in greatest abundance, and *M.* is the fourth State in the Union for its wool clip, the product being about 12,000,000 lbs. annually. In the year 1895, 1,154,379 acres were devoted to wheat, with a yield of 15,237,603 bushels; 994,090 to corn, yielding 33,600,242 bushels; and 973,439 to oats, yielding 23,265,192 bushels. In the 1890 census returns *M.* is credited with 172,344 farms with 14,785,636 acres, of which 9,865,350 are improved. The land, fences, and buildings were estimated to be worth $556,190,670; implements and machinery, $22,182,600; live stock, $69,564,985, and the value of products at $83,651,390.—*Political Divisions and Government.* The State is divided into 85 counties, as follows:

Alcona,	Dickinson,	Keeweenaw,	Newaygo,
Alger,	Eaton,	Lake,	Oakland,
Allegan,	Emmet,	Lapeer,	Oceana,
Alpena,	Genesee,	Leelenaw,	Ogemaw,
Antrim,	Gladwin,	Lenawee,	Ontonagon,
Arena,	Gogebic,	Livingston,	Osceola,
Baraga,	Grand Traverse,	Luce,	Oscoda,
Barry,	Gratiot,	Mackinac,	Otsego,
Bay,	Hillsdale,	Macomb,	Ottawa.
Benzie,	Houghton,	Manistee,	Presque Isle,
Berrien,	Huron,	Manitou,	Roscommon,
Branch,	Ingham,	Marquette,	Saginaw,
Calhoun,	Ionia,	Mason,	Saint Clair,
Cass,	Iosco,	Mecosta,	Saint Joseph,
Charlevoix,	Iron,	Menominee,	Sanilac,
Cheboygan,	Isabella,	Midland,	Schoolcraft,
Chippewa,	Isle Royal,	Missaukee,	Shiawasse,
Clare,	Jackson,	Monroe,	Tuscola,
Clinton,	Kalamazoo,	Montcalm,	Van Buren,
Crawford,	Kalkaska,	Montmorenci,	Washtenaw,
Delta,	Kent,	Muskegou,	Wayne, Wexford.

—*Cities and Towns.* Detroit, Lansing (State cap.), Grand Rapids, Muskegon, Ann Arbor, Flint, East Saginaw, Port Huron, Kalamazoo, Saginaw City, Niles, Jackson, Ypsilanti, Adrian, Marquette, Battle Creek, &c.—*Government.* The State is governed under a Constitution bearing date Aug. 5, 1850, which provides for a legislature vested in a Senate of 32 members and a House of Representatives numbering 66 members, all elected from districts for 2 years and receiving pay at the rate of $3 per diem for 40 days. The electoral franchise belongs to every citizen who has been resident in the State 3 months, and in the district 10 days immediately preceding an election; such person is also entitled to hold office. The general election takes place biennially, on the Tuesday following the first Monday in November. The executive power is in the hands of a governor and lieutenant-governor, who are chosen by the people, and retain office for 2 years. Both functionaries must be not less than 30 years of age, and have been each a citizen of the Republic for 5 years and of the State for 2 years next preceding. The governor receives $1,000 salary, while the lieutenant-governor, in his capacity as *ex-officio* president of the Senate, receives, during its sessions, an allowance of $3 per day. The subordinate State officers are also popularly elected for 2 years, on the following scale of emolument: secretary of State, $800 and fees; deputy secretary of State, $700; auditor-general, $1,000; State treasurer, $1,000; attorney-general, $800; superintendent of public instruction, $1,000, and commissioner of land-office, $800. The judiciary comprise a Supreme Court, circuit courts, county probate courts, and justices' courts; municipal courts are also held in Detroit and other cities. The Supreme Court consists of a chief-justice and 3 puisne judges, who are nominated by the governor, with the sanction of the Senate, and whose tenure of office is 7 years, receiving individually a salary of $2,500 per annum. The circuit court has a salaried judge at $1,500 in each of the 10 circuits into which the lower or S. peninsula is divided, and in each of which sittings are held twice a year. The upper section of the State possesses a district court, whose presiding officer receives a remuneration of $1,000 per annum. *M.* sends 2 Senators and 12 Representatives to the National Congress, and has 14 electoral votes.—*Education.* The educational interests of the people, both elementry and higher, have been carefully attended to, and it is stated that only 4 per cent. of the population are illiterate. In 1894, out of 618,500 children of school age, 468,979 were enrolled in the public schools, under 16,190 teachers. The higher education is provided for by the University of Michigan at Ann Arbor and 9 denominational colleges, in addition to which there is a State Normal School at Ypsilanti, a mining school at Marquette, a school for the blind and a reform school for boys at Lansing, a deaf and dumb institution at Flint, an industrial home for girls at Adrian, and a school for neglected and dependent children at Coldwater. Of the other State charities may be named 4 asylums for the insane, and 1 for insane criminals, and a Soldiers' Home at Grand Rapids. There are State prisons at Jackson and Marquette, and houses of correction at Detroit, Marquette, and Ionia.—*Hist.* The term Michigan is to be derived from the Chippewa language, and to signify "great lake." This region was first visited by Jean Nicolet in 1634, at the Sault de Ste. Marie, at which locality Father Marquette made the first permanent white settlement in 1668 for a Jesuit missionary station. French settlements were also made at Michilimackinac (Mackinaw) and Green Bay, and Detroit became the seat in 1701 of a French colony under Cadillac. The country passed to the English at the end of the French and Indian War, and during the war of the Indians under Pontiac for the extermination of the whites the garrison of Michilimackinac was butchered and Detroit suffered a long siege. The country was held by the English after the close of the Revolutionary War, not being delivered to the Americans until 1796. *M.* then became a portion of the Northwestern Territory, and in 1802, on the admission of Ohio as a State into the Union, it was annexed to the Territory of Indiana. On Jan. 11, 1803, it was set aside as a separate Territory, under the governorship of General W. Hull. It suffered severely during the War of 1812, Detroit and Michillimackinac being captured by the British, and the Territory held until the successes of the American forces in 1813. In 1816, the first land surveys were commenced, and 2 years after public lands were placed on the market for purchase. In 1818, all the region lying N. of Illinois and Indiana was incorporated with *M.* In 1819, the Territory was authorized to send a delegate to Congress. In 1823, the legislative power was transferred, by Act of Congress, from the governor and judiciary (in whom it had hitherto rested) to a council of 9 persons selected by the President from 18 nominees by the body of the citizens at large; and the judicial term was reduced to 4 years. In 1825, the council was increased to 13 members, selected as before. *M.* was admitted into the Union as a State Jan. 26, 1837. *Pop.* (1900) 2,420,982. Detroit, the oldest town of importance, has remained the principal city from the beginning, it having, in 1900, a population of 285,704. Grand Rapids, with 87,565, is second, and Saginaw, with 42,345, is third in dimensions.

Mich'igan, in *Indiana*, a township of Clinton co. —A township of Laporte co.

Mich'igan Bar, in *California*, a post-village of Sacramento co.

Mich'igan Bluff, in *California*, a post-town of Placer co., about 25 m. S. E. of Nevada City.

Mich'igan Center, in *Michigan*, a post-village of Jackson co., about 70 m. W. of Detroit.

Mich'igan City, in *Indiana*, a post-town of Laporte co., about 40 m. E.S.E. of Chicago, Illinois. It is conveniently located on Lake Michigan, having an extensive lake commerce, and is also reached by the Michigan Central, Louis., New Albany & Chicago and Lake Erie & Western R.Rs. Here are important manufacturing interests, including car works, large lumber mills, chair factories, hosiery mills, &c. Large quantities of lumber are shipped annually. The Northern State Prison of Indiana is here located. *Pop.* (1897) 12,800.

Mich'igan, (Lake,) one of the five great lakes of the N. American continent, in the basin of the St. Lawrence, being the third in point of size, and intermediate in position between lakes Superior and Huron, with which last it communicates, at its N.W. extremity, by the Strait of Mackinaw, or Michilimackinac. Unlike the other great lakes, it is wholly surrounded (except at the above strait) by U. S. territory; having N. and E. the State of Michigan, S. Indiana, and W. Illinois and Wisconsin. Its shape is an elongated oval. Its W. shore extends along the meridian of 88° W. Lon., thus giving it a width of from 80 to 100 m.; its length is about 360 m., and it has an area of about 26,000 sq. m. Its mean depth is estimated at 900 ft., or about the same as that of lakes Superior and Huron: while it is elevated 600 ft. above the tide level, being 14 ft. under the level of Lake Superior, and 4 ft. above that of Lake Huron. In general, this lake is remarkable for the absence of bays, harbors and islands; on its N.W. side, however, is Green Bay, an inlet of about 25 m. in width, accessible to vessels of 200 tons, near which are the Manitou and Beaver islands. Lake *M.* receives numerous, but, comparatively, unimportant rivers on every side. It is the centre of a vast commerce, being connected by R. R. with Lake Erie, New York city, and other important points, and by R. R. and canal with the Mississippi and New Orleans. Chicago and Milwaukee are on its shores, and many lesser, though equally enterprising places, rapidly springing up; its waters are clear and salubrious; it abounds with fish; and it is navigated by vast numbers of steamers and vessels.

Mich'igantown, in *Ind.*, a p. v. of Clinton co.

Michilimack'inac, in *Michigan*. See MACKINAW.

Mich'ing, *a.* Skulking; sneaking; acting in a contemptible, mean or cowardly manner. (Used as a colloquialism.)

Michipico'ten Bay, an inlet of Lake Superior, in Upper Canada; Lat. 47° 55′ N., Lon. 85° 30′ W.

Mich'mash, (*Script.*) A town of the tribe of Benjamin. 9 m. N. by E. of Jerusalem, (*Neh.* vii. 31; xi. 31.)

Mich'oacan, A S. W. State of Mexico, bordering on the Pacific, bet. Lat. 18° and 21° N., and Lon. 100° and 104° W., area abt. 22,993 sq. m., surface diversified.—*Rivers,* numerous, but small.—*Soil,* fertile, producing maize, wheat, cotton, sugar, &c. *Cap.* Morelia.

Mick'iewicz, ADAM, a celebrated Polish poet, was B. of noble family, in Lithuania, in 1798. He was educated at the university of Wilna, and published his first poems while professor of classical literature at Kowno, in 1822. These poems excited enthusiastic admiration

among his countrymen, who only loved the author the more when, in the following year, his known patriotism and friendship with some leading patriots led to his arrest and imprisonment. Sentence of exile for life, as a member of secret societies, was passed on him in 1824. Four years later he published his poem *Wallenrod*, and soon after went to Italy, visiting Gœthe on his way. He subsequently lived at Dresden and at Paris, where, in 1840, he was appointed professor of Slavonic literature at the College of France. The fanaticism and extravagance in which he had for some time indulged in his lectures necessitated his dismissal from the professorship in 1844. The most admired poems of *M.* are the *Grazyna*, *Ancestors*, *Sir Thaddeus*, and *Wallenrod*. His works have passed through many editions, and have been translated into French. The *Wallenrod* has been translated also into English. D. at Constantinople, 1855.

Mickle, (*mik'l,*) **Muckle,** *a.* [Scot. *meikle, muckle,* allied to Latin, *magnus.*] Much; great; extensive;—retained in the Scottish language.

"Mony a little maks a *muckle.*" — *Scots Proverb.*

Mi'co, *n.* [Sp.] (*Zoöl.*) A small monkey, *Simia argentata* (Linn.), which has the body covered with long, silvery-white hair, while the tail is of a dark chestnut, and the face and ears of a bright vermilion color.

Mi'crobe, *n.* Fr. [Gr. *mikros,* little]. A word first employed by Sèdillot, an eminent surgeon, at the Paris Academy of Sciences, in 1878, to designate the very minute microscopic plants which the germ theory of disease was then bringing under close investigation. These forms are now usually known as bacteria (*q. v.*).

Microcœus, (*Mi'kro-kok'us,*) [Gr. *Micros,* little]. *n.* A minute organism of a spherical shape, belonging to Bacteria.

Microcephalous, (*-sĕf'a-lus,*) *a.* [Gr. *mikros,* small, and *kephalē,* head.] Small-headed; possessing an imperfectly developed cranium.

Mi'crocosm, (*-kŏzm,*) *n.* [Gr. *mikros,* little, and *kosmos,* world.] Literally, the little world, a term often metaphorically applied to man. Astrologers used to maintain that the organization of man accurately corresponded to the organization of the universe, which they called the *macrocosm*, or great world. The different parts and limbs of man were made to correspond to the different parts of the universe, and engravings are to be found in works of the time in which man is represented as standing in the centre of the universe, surrounded by lines indicating the various connections of the heavenly bodies with his limbs.

Microcos'mic, Microcos'mical, *a.* Pertaining to the microcosm.

Microcosmic salt. (*Chem.*) The ammonio-phosphate of soda; it is obtained among the products of the evaporation of urine, and was formerly used as a blowpipe flux.

Microcous'tic *n.* [Fr. *microcoustique;* Gr. *mikros,* and *akoustikos,* pertaining to the sense of hearing. See Acoustics.] An instrument to assist the ear in its perception of minor sounds.

—*a.* Serving to intensify the faculty of hearing faint sounds.

Mi'crodon, *n.* [Gr. *mikros,* and *odous, odontos,* tooth.] (*Zoöl.*) A genus of extinct fishes belonging to the thick-toothed or Pycnodont family, in the ichthyological system of Agassiz.

Mi'cro-geolog'ical, *a.* Pertaining or having reference to micro-geology.

Mi'cro-geol'ogy, *n.* That branch of geological science which is demonstrated by microscopic application.

Micrograph'ic, *a.* Belonging or having reference to micrography.

Microg'raphy, *n.* [Gr. *mikros,* and *graphō,* to describe.] The description of objects too small to be discerned without the aid of a microscope.

Mi'crolite, *n.* [Gr. *mikros,* little, and *lithos,* stone.] (*Min.*) A name for the columbate of lime found at Chesterfield, Mass.

Microl'ogy, *n.* [Gr. *mikros,* and *logos,* treatise.] That branch of optical science which relates to microscopic objects; — hence, by analogy, unmerited devotion to matters of insignificant moment.

Micrometer, *n.* [Gr. *mikros,* and *metron,* measure.] (*Optics.*) The magnifying power of any optical instrument is the ratio of the magnitude of the image to the magnitude of the object. The magnifying power in a compound microscope is the product of the respective magnifying powers of the object-glass and of the eye-piece; that is, if the first of these magnifies 20 times, and the other 10, the total magnifying power is 200. The magnifying power depends on the greater or less convexity of the object-glass and of the eye-piece, as well as on the distance between these two glasses, together with the distance of the object from the object-glass. A magnifying power of 1,500 and even upwards has been obtained; but the image then loses in sharpness what it gains in extent. To obtain precise and well-illuminated images, the magnifying power ought not to exceed 500 to 600 diameters, which gives a superficial enlargement 250,000 to 360,000 times that of the object. The magnifying power is determined experimentally by means of the *micrometer;* this is a small glass plate, on which, by means of a diamond, a series of lines is drawn at a distance from each other of 1-10th or 1-100th of a millimeter. The *M.* is placed in front of the object-glass, and then, instead of viewing directly the rays emerging from the eye-piece, O, they are received on a piece of glass, A (Fig. 1781), inclined at an angle of 45° and the eye is placed above so as to see the image of the micrometer lines which is formed by reflection on a screen, E, on which is a scale divided into millimeters. By counting the number of divisions of this scale corresponding to a certain number of lines of the image, the magnifying power may be deduced. Thus, if the image occupies a space of 45 millimeters on the scale, and contains 15 lines of the *M.*, the distance between each of which shall be assumed at 1-100th millimeter, the absolute magnitude of the object will be 15 ÷ 100th millimeter; and as the image occupies a space of 45 millimeters, the magnification will be the quotient of 45 by 15-100th or 300. The eye in this experiment ought to be at such a distance from the screen, E, that the screen is distinctly visible; this distance varies with different observers, but is usually 10 to 12 inches. The magnifying power of the microscope can also be determined by means of the *camera lucida.* When once the magnifying power is known, the absolute magnitude of objects placed before the microscope is easily deduced. For, as the magnifying power is nothing more than the quotient of the size of the image by the size of the object, it follows that the size of the image divided by the magnifying power gives the size of the object; it is in this manner that the diameter of all microscopic objects is determined. — There are numerous other kinds of *M.*, depending on different principles, but applied to telescopes and microscopes for the same purpose.

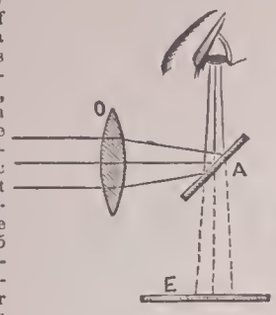


Fig. 1781. — MICROMETER.

Micrometrical, *a.* [Fr. *micrométrique.*] Pertaining, or having reference to, or made by, the micrometer.

Micrometrically, *adv.* By means of a micrometer.

Microm'etry, *n.* The art of measuring minutiæ by means of a micrometer.

Mi'crophane, *n.* [Gr. *mikros,* and *phonē,* sound.] Same as Microcoustic, *q. v.*

Microphonics, (*-fŏn'iks,*) *n. sing.* The science having reference to the augmentation of power of weak or minor sounds.

Microph'onous, *a.* Microcoustic.

Microph'ony, *n.* [Gr. *mikros,* and *phonē.*] Feebleness of vocal sound.

Microphthalmy, (*-krŏf'-,*) *n.* [Gr. *mikros,* and *ophthalmos,* eye.] An unnatural smallness of the eye, arising from disease or imperfect development of the organ.

Microphyllous, (*-krŏf'il-lus,*) *a.* [Gr. *mikros,* and *phyllon,* leaf.] (*Bot.*) Small-leaved: — said of plants.

Mic'ropyle, *n.* [Fr.; from Gr. *mikros,* and *pyle,* orifice.] (*Bot.*) A perforation through the skin of a seed, over against the apex of the nucleus.

Microscope, (*mi'kros-kōp,*) *n.* [Fr.; Gr. *mikros,* and *skopeo,* to view. See Scope.] (*Optics.*) An instrument designed to obtain a magnified image of an object whose real dimensions are too small to admit of its being seen distinctly by the naked eye. — *The simple microscope,* or *magnifying glass,* is merely a convex lens of short focal length, by means of which we look at objects placed between the lens and its principal focus. Let A B (Fig. 1782) be the object to be observed, placed between the lens and its principal focus, F. Draw the secondary axes A O and B O, and also from A and B rays parallel to the axis of the lens, F O. Now these rays, on passing out of the lens, tend to pass through the second principal focus, F', consequently they are divergent with reference to secondary axes, and, therefore, when produced, will cut those axes in A' and B' respectively. These points are the principal foci of A and B respectively. The lens, therefore, produces at A' B' an erect and magnified virtual image of the object A B. The position and magnitude of this image depend on the distance of the object from the focus. Thus, if A B is moved to *a b* nearer the lens, the secondary axes will contain a greater angle, and the image will be found at *a' b'*, and will be found much smaller, and nearer the eye. On the other hand, if the object is moved farther from the lens, the angle between the secondary axes is diminished, and their intersection with the prolongation of the refracted rays taking place beyond A' B', the image is formed farther from the lens, and is larger. In a simple microscope, both chromatic aberration and spherical aberration increase with the degree of magnification. We have already seen that the former can be corrected by using achromatic lenses, and the latter by using diaphragms which allow the passage of such rays only as are nearly parallel to the axes, the spherical aberration of these rays being nearly insensible. Spherical aberration may be still further corrected by using two plano-convex lenses instead of one very convergent lens. When this is done, the plane face of each lens is turned towards the object. (Fig. 1783.) Although each lens is less convex than the simple lens, which they replace, yet their

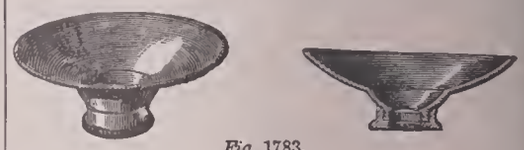


Fig. 1783.

joint magnifying power is as great, and with a less amount of spherical aberration, since the first lens draws towards the axis the rays which fall on the second lens. This combination of lenses is known as *Wollaston's doublet.* There are many forms of the simple microscope. One of the best is that presented in Fig. 1784. On an horizontal support, E, which can be raised and lowered by a rack and pinion, there is a black *eye-piece, m,* in the centre of which is fitted a small convex lens. Below this is the *stage,* which is fixed, and on which the object is placed between glass plates. In order to illuminate the object powerfully, diffused light is reflected from a concave glass mirror, M, so that the reflected rays fall upon the object. In using this microscope, the eye is placed very near the lens, which is lowered or raised until the position is found at which the object appears in its greatest distinctness. — *Conditions of distinctness of the images.* In order that the objects looked at through a microscope should be seen with distinctness, they must have a strong light thrown upon them; but this is by no means enough. It is necessary that the image be formed at a determinate distance from the eye. In fact, there is for each person a *distance of most distinct vision* — a distance, that is to say, at which an object must be placed from an observer's eye, in order to be seen with greatest distinctness. This distance is different for different observers, but ordinarily is between 10 and 12 inches. It is, therefore, at this distance from the eye that the image ought to be formed. Moreover, this is why each observer has *to focus* the instrument, that is, to adapt the microscope to his own distance of most distinct vision. This is effected by slightly varying the distance from the lens to the object, for we have seen above that a slight displacement of the object causes a great displacement of the image. With a common magnifying glass, such as is held in the hand, the adjustment is effected by merely moving it nearer to or further from the object. In the microscope the adjustment is effected by means of a rack and pinion, which, in the case of the instrument shown in Fig. 1784, moves the instrument, but moves the object in the case of the instrument depicted in Fig. 1786. — The *Compound microscope,* in its simplest form, consists of two condensing lenses; one, with a short focus, is called the *object-glass,* or *objective,* because it is turned towards the object; the other is less condensing, and is called the *eye-piece,* or *power,* because it is close to the observer's eye. Fig. 1785 represents the path of the luminous rays, and the formation of the image, in the simplest form of a compound microscope. An object, A B, being placed very near the principal focus of the object-glass, M, but a little farther from the glass, a real image, *a b,* inverted and somewhat magnified, is formed on the other side of the object-glass. Now the distance of the two lenses, M and N, is such that the position of the image, *a b,* is between the eye-

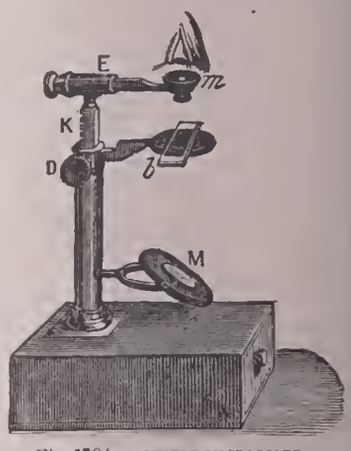


Fig. 1784. — SIMPLE MICROSCOPE.

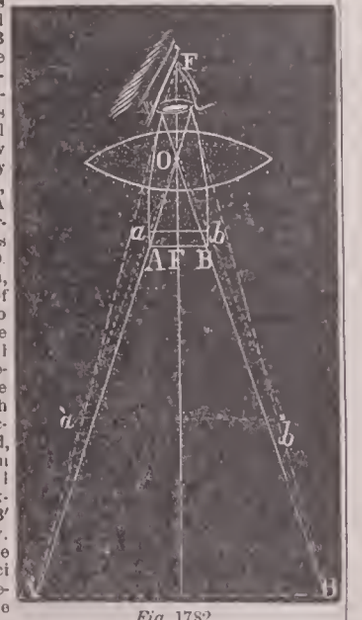


Fig. 1782.

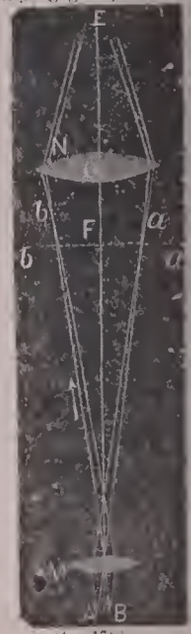


Fig. 1785.

piece, N, and its focus, F. From this it follows that for the eye at E, looking at the image through the eye-piece, this glass produces the same effect as a simple microscope, and instead of this image, *a b*, another image, *a' b'*, is seen, which is virtual, and still more magnified. This second image, although erect as regards the first, is inverted in reference to the object. It may thus be said that the compound microscope is nothing more than a simple microscope applied not to the object, but to its image already magnified by the first lens.—*Hist.* The discovery of the principle of the microscope appears to have been made in very ancient times, a convex lens of rock crystal having been found by Layard in the ruins of Nineveh, while the fine gem-cutting of the early civilizations could not have been done without some method of magnifying. Hollow spheres of glass filled with water were probably among the ancient expedients for this purpose. From a passage in Aristophanes, who lived five centuries before Christ, it would seem that "burning-glasses" were sold at the shops of the grocers of Athens. Several other circumstances tend to show that magnifying glasses were used by the ancient

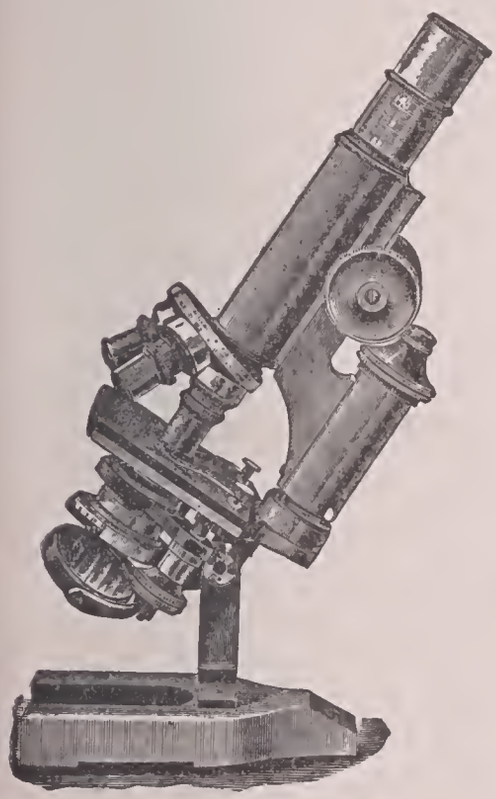


Fig. 1786.—A MODERN MICROSCOPE.

Greeks and Romans. Ptolemy, the celebrated astronomer of Alexandria, who flourished in the latter part of the first century, was evidently acquainted with the existence of magnifying-glasses, and he makes use of the word *refraction* in his work on optics. It is not, however, a difficult matter to fix the period when the microscope began to be generally known, and used for the purpose of examining minute objects. Zacharias Jansen and his son are said to have made microscopes before the year 1590; and in 1685, Stellnti published a description of the parts of a bee which he had examined through a microscope. Soon after the invention of the microscope, the field it presented to observation was cultivated by men of the first rank in science, who enriched almost every branch of natural history with the discoveries they made by means of this instrument. Among them may be named Swammerden and Leeuwenhœck, whose discoveries, made with the aid of a single lens, were of much scientific value. Leeuwenhœck's researches were made with the use of a single lens enclosed between two plates, each of which was pierced with a hole. But the results thus obtained have been far surpassed by those due to the compound microscope, whose power of magnification is immensely greater, and which has been remarkably improved within the 19th century. The chromatic coloring and distortion of objects due to the use of a single lens was overcome by the use of the achromatic double lens, discovered by Hall in 1729, and applied to the microscope by Amici, Lister, and others. Lister, in 1829, employed a plano-convex lens of flint glass and a double convex one of crown glass, cemented together by Canada balsam. This improvement greatly added to the efficiency of the microscope, and the progress since that date has been mainly in the production of lenses of finer workmanship and higher power, devices for increased illumination, and improved mechanical construction. American microscopists and instrument makers have played an important part in the development of this instrument. In 1840, when the Wilkes' exploring expedition sailed, its scientists could not find a microscope suitable for their work on sale in the U. S., and the first American microscope is said to have been made by C. A. Spencer, of Canastota, N. Y., in 1847. In 1851 he produced a $\frac{1}{16}$ objective of larger aperture than had been made before. Since then the progress in the microscope has in considerable measure been due to American mechanics, many of the finer adjustments and improved apparatus being invented by them, while they have produced lenses of unsurpassed excellence.—*Construction.* Microscopes should be capable of adjustment in either the vertical or inclined position, or the horizontal position where desirable. Many of the more costly instruments are now made for binocular vision (*Fig.* 1786), and with provision to produce the stereoscopic effect, giving the object the appearance of solidity. This effect, however, cannot be used where high powers are required, and is of little value in minute biological research. Objectives, or object glasses, are named according to their magnifying power, from 1-inch or larger to $\frac{1}{2}$-in., $\frac{1}{4}$-in., and so on to $\frac{1}{16}$-in., which is about the highest power in use. Lenses of very high power are so small that only a very minute pencil of light can pass, so that their great magnification is often useless from lack of illumination. Various devices have been produced to overcome this difficulty by increasing the intensity of the illumination, and with considerable success, though this natural defect tends to limit the width of effective magnification. The best instruments are supplied with 6 or 7 object glasses, varying in magnifying power from 20 to 2,500 diameters; 3 eye-pieces are also supplied, of different powers, the degree of magnification depending on both these glasses. The stage for holding the object is capable of rapid adjustment by means of a rack and pinion, and of fine adjustment by aid of a delicate screw. It is frequently made movable, both laterally and circularly. Below it rests on what is termed a substage, into which can be fitted the polariscope, bull's-eye condenser, and other accessories for improving or modifying the illumination; and beneath this again a concave mirror adapted to reflect and concentrate light upon the object from some source of illumination. The micrometer attachment for the measurement of objects is usually a ruled-glass scale, whose rulings may amount to as many as 100,000 to the inch. Preparations for the microscope are preserved on glass slips, and covered by a piece of very thin glass cemented in place. These are minute objects, or thin sections of animal or vegetable substance, which may be cut with the microtome to the thinness of .001 of an inch or even less. Rock structure may also be studied by the use of thin sections ground down until almost transparent. For transparent objects only the mirror illumination is necessary. In the case of opaque objects the light is concentrated upon them by means of a bull's-eye lens called a condenser.

Microscop'ic, Microscop'ical, *a.* Relating to a microscope; made by means of a microscope; as *microscopical* observations.—Resembling a microscope; partaking of the characteristics of a microscope; capable of seeing small or minute objects.—Minute; so small as to be discernible only by means of a microscope.

Microscop'ically, *adv.* By the microscope; with minute investigation.

Microscop'ist, *n.* One skilled in the use of the microscope.

Micros'copy, *n.* Use of the microscope; minute observations by the aid of a microscope.

Mi'crotome, *n.* [Gr. *mikros*, and *temnein*, to cut.] An instrument for dividing into minute sections for microscopical investigation.

Micturition (*-rish'un*), *n.* [From Lat. *micturire*, to seek to discharge water.] (*Med.*) A too copious discharge of urine, arising from disease of the kidneys or bladder; act of making water freely.

Mid, *a.* [A. S. *midd.* See MIDDLE.] Middle; at equal distance from extremes; intervening;—frequently used in composition as a compound with its relative noun; as *mid*-day, *mid*-air, *mid*-ocean, *mid*-channel, &c.

Mid'-air, *n.* The middle of the sky; as, floating in *mid-air.*

Mid'-course, *n.* The middle of the way; a medium course.

Mid'-day, *n.* [A. S. *middäg.*] The middle of the day; noon.

—*a.* Having reference or pertaining to noon; meridional; as, the *mid-day* sun, *mid-day* heats, &c.

Midden, (*mid'dn,*) *n.* [A.S. *midding*] A manure-heap; a dunghill; a place for the deposit of night-soil. (Sometimes called *midding.*)

Mid'den, *n.* An English provincialism for the common crow.

Mid'ding, *n.* See MIDDEN.

Middle, (*mid'dl,*) *a.* [A.S. *middel;* O. Ger. *mittil;* Icel. *medal.* See MEAN.] Central; situated in the centre; equally surrounded on all sides; equi-distant from the extremes; medial; mid; mean.

> "On his bold visage *middle* age
> Had slightly pressed its signet sage." — *Scott.*

—Intermediate; intervening; coming between.

> "Will, seeking good, finds many *middle* ends." — *Sir J. Davies.*

(NOTE. *Middle* is employed occasionally in the formation of compound terms; as, *middle*-aged, *middle*-sized, *middle*-man, &c.)

M. deck. (*Naut.*) That deck of a three-decked vessel situated between the upper and lower decks.

M passage. (*Naut.*) In the parlance of slave-traders, a term denoting that part of the Atlantic Ocean lying between Africa and the W. Indies; as, "the horrors of the *middle passage.*"

M. post. (*Arch.*) Same as KING-POST, *q. v.*

M. term. (*Logic.*) That term of a categorical syllogism with which the two extremes of the conclusion are separately compared.

M rail. (*Arch.*) The rail of a door which is upon a level with the hand when hanging freely. The lock of the door is generally fixed in this rail.

M. tint. (*Paint.*) A mixed tint for deadening the effect of bright colors.

M. voice. (*Gram.*) See VOICE.

Mid'dle, *n.* The centre or central part; the point or part equally distant from the extremities, limits, or boundary; the time that passes, or events that happen between the midst;—hence, the waist; the central region of the body.

> "In the dead vast and *middle* of the night." — *Shaks.*

Middle, in *New Jersey,* a township of Cape May county.

Middle, in *Indiana,* a township of Hendricks county.

Middle-age, *a.* Having reference or belonging to the Middle Ages; mediæval. — The middle part of life.

Middle-aged, (*-ājd,*) *a.* Placed about the medium period of life; being about the middle of the ordinary age of man, or from 40 to 50.

> "I found you a very young man, and left you a *middle-aged* one; you knew me a *middle-aged* man, and now I am an old one." *Swift.*

Mid'dle Ages, *n. pl.* (*Hist.*) That period in the history of Europe which begins with the final destruction of the Roman empire, and is considered, by some, to end with the taking of Constantinople; by others, with the Reformation, the discovery of America, or the invention of printing. According to Hallam, who has written a history of this period, it extends from the invasion of France by Clovis, A. D. 486, to that of Naples by Charles VIII., 1495. In any case, it comprises a period of about ten centuries. In general, it was that period in the history of Europe in which the feudal system was established and developed down to the most prominent events which led to its overthrow. The first centuries of this period are often called the Dark Ages, a name not inappropriate when we consider the condition of the barbarous tribes by whom the Roman institutions were overthrown. The acquisitions of civilization were ruthlessly trampled under foot by barbarous warriors, and the civil development of society, which had been the work of ages, received a severe check. It is more than doubtful, however, whether civilization has in the long run been a loser by this state of things. The civilization of Rome was degenerate and rotten to an enormous extent, while those rude and ruthless barbarians afforded materials for carrying on a more healthy and permanent state of advancement. "The first moiety of these ten ages," says Hallam, "is almost absolutely barren, and presents little but a catalogue of evils. The subversion of the Roman empire and devastation of its provinces by barbarous nations, either immediately preceded, or were coincident with, the commencement of the middle period. We begin in darkness and calamity; and though the shadows grow fainter as we advance, yet we love to break off our pursuit as the morning breathes upon us and the twilight reddens into the lustre of day. No circumstance is so prominent, on the first survey of society during the earlier centuries of this period, as the depth of ignorance in which it was immersed; and from this, more than any single cause, the moral and social evils which those ages experienced appear to have been derived and perpetuated." When Latin ceased to be a living language, the whole treasury of knowledge was locked up from the eyes of the people. The schools were confined to cathedrals and monasteries, and exclusively designed for the purposes of religion; so that for centuries it was rare for a layman, of whatever rank, to know how to sign his name. Even the clergy were, for a long period, not very materially superior as a body to the uninstructed laity. Whatever of learning existed, however, was to be found within the pale of the Church, which, indeed, was pretty extensive, and comprehended many who did not exercise the offices of religious ministry. In the 6th century the best writers in Latin were scarcely read; and perhaps from the middle of this age to the 11th there was, in a general view of literature, little difference to be discerned. With such a state of society, it cannot be doubted that morality was at a very low ebb. The seeds of social virtues must have existed even during the darkest time of this period; but history, which reflects only the more prominent features of society, affords us but little evidence of it. These remarks apply more particularly to the dark ages of the period, which may be considered to come down to the end of the 11th century. In the course of the 12th century a considerable change took place. Polite literature, as well as the more abstruse science of antiquity, became the subject of cultivation; and several writers of that age, in different parts of Europe, are distinguished, more or less, for elegance, though not absolute purity of Latin style, and for their acquaintance with those ancients who are its principal models. In the 13th century there seems to have been some decline of classical literature, in consequence, probably, of the scholastic philosophy which was then in its greatest vigor; at least we do not find as many good writers as in the preceding age. But about the middle of the 14th century, or perhaps a little sooner, an ardent zeal for the restoration of ancient learning began to manifest itself. The copying of books rose to be a branch of trade, and their price was consequently reduced. A search now began to be made for ancient manuscripts, in which Petrarch particularly distinguished himself. In the succeeding century the search was carried on with unabated vigor, and the whole lives of Italian scholars were devoted to the recovery

of manuscripts and the revival of philology. The discovery of an unknown manuscript, says Tiraboschi, was regarded almost as the conquest of a kingdom. During the 14th and 15th centuries, colleges began to be established in Germany, England, and other parts of Europe; libraries became more numerous, and books, after the happy invention of paper, though still very scarce, might be copied at less expense. Last of all, the invention of printing, about the middle of the 15th century, was the great means of dispelling the ignorance and darkness of the Middle Ages, and of introducing the dawn of civilization of modern times. During this latter period, the moral character of society was much improved, owing, in no small degree, to the advance of chivalry; commerce and the manufactures made great progress; the use of the popular languages became more general, and greater freedom of thought in religious matters began to manifest itself.

Mid'dleborough, in *Massachusetts*, a post-village and township of Plymouth co.

Mid'dlebourne, in *Ohio*, a post-village of Guernsey co., abt. 91 m. E. by N. of Columbus.

Middlebourne, in *W. Virginia*, a post-vill., cap. of Tyler co., abt. 45 m. S. by W. of Wheeling.

Mid'dle Branch, in *Minnesota*, a village of Chicago co., abt. 33 m. N. by E. of St. Paul.

Mid'dlebrook, in *Missouri*, a post-village of Iron co., abt. 4 m. N. of Pilot Knob.

Middlebrook, in *Virginia*, a post-village of Augusta co., abt. 10 m. S.W. of Staunton.

Mid'dleburg, a town of Holland, cap. of the prov. of Zealand, in the island of Walcheren, 4 m. N.E. of Flushing, and 47 S.W. of Rotterdam. It is circular in form, about 3 m. in circumference, and surrounded by a broad canal. Though 4 m. from the sea, it has quays of con-

Fig. 1787. — TOWN-HALL. (MIDDLEBURG.)

siderable extent, and formerly possessed an extensive trade, especially with the E. and W. Indies. The principal among its public buildings are the Town-hall (Fig. 1787), and Oost-kerk, or East-church, a Gothic structure. *Manuf.* Glass, paper, powder, and starch. The climate is generally unhealthy. *Pop.* 16,151.

Mid'dleburg, in *Kentucky*, a post-village of Casey co., abt. 22 m. S. by W. of Danville.

—A village of Lewis co.

Middleburg, in *Maryland*, a post-village of Carroll co., abt. 65 m. N.W. of Annapolis.

Middleburg, in *Michigan*, a village of Ottawa co., abt. 14 m. W. by N. of Grand Rapids.

Middleburg, in *Missouri*, a village of Carroll co.

Middleburg, in *New York*, a post-village and township of Schoharie county, about 35 miles west of Albany.

Middleburg, in *Ohio*, a post-township of Cuyahoga co.—A village of Logan county, about 40 m. N.W. of Columbus.—A village of Noble county, about 20 m. N. by E. of Marietta.

Middleburg, in *Pennsylvania*, a village of Franklin co., about 63 m. S.W. of Harrisburg.—A post-village, cap. of Snyder co., abt. 60 m. N. of Harrisburg. It is also called SWINEFORDSTOWN.—A village of Tioga co.

Middleburg, in *Tennessee*, a post-village of Hardeman co., abt. 180 m. S.W. of Nashville.

Middleburg, in *Virginia*, a post-borough of Loudoun co., abt. 143 m. N. of Richmond.

Mid'dlebury, in *Connecticut*, a post-township of New Haven co.

Middlebury, in *Indiana*, a village of Clay co., abt. 70 m. S.W. of Indianapolis.—A post-village and township of Elkhart county, about 14 miles E.N.E. of Elkhart.

Middlebury, in *Michigan*, a township of Shiawassee co.

Middlebury, in *Missouri*, a post-village of Mercer co., abt. 45 m. N.N.W. of Laclede.

Middlebury, in *New York*, a village and township of Wyoming county, 43 miles east of the city of Buffalo.

Middlebury, in *Ohio*, a township of Knox county.

—A village of Logan co., abt. 45 m. N.W. of Columbus.

—A post-village and township of Summit co., abt. 2 m. E. of Akron.

Middlebury, in *Pennsylvania*, a township of Tioga co.

Middlebury, in *Vermont*, a post-village and township, cap. of Addison county, about 30 miles S.S.E. of Burlington.

Mid'dlebush, in *New Jersey*, a post-village of Somerset co., abt. 25 m. N.N.E. of Trenton.

Mid'dle Creek, in *Kansas*, a township of Miami co.

Middle Creek, in *Missouri*, a vill. of Washington co.

Middle Creek, in *North Carolina*, enters the Yadkin River from Davie co.

—A post-village of Wake co.

Middle Creek, in *Pennsylvania*, enters the Susquehanna River from Union co.

—A post-township of Snyder co.

—A post-township of Somerset co.

—A village of Union co.

Mid'dlefield, in *Iowa*, a township of Buchanan co.

Middlefield, in *Massachusetts*, a post-township of Hampshire co.

Middlefield, in *New York*, a post-township of Otsego co.

Middlefield, in *Ohio*, a post-township of Geauga co.

Middlefield Centre, in *New York*, a post-village of Otsego co., abt. 6 m. N.E. of Cooperstown.

Mid'dleford, in *Delaware*, a post-village of Sussex co.

Middle Fork, in *Illinois*, a township of Vermilion co.

Middle Fork, in *Iowa*, a township of Ringgold county.

Mid'dle Granville, in *New York*, a post-village of Washington co., abt. 65 m. N.N.E. of Albany.

Mid'dle Grove, in *Missouri*, a post-village of Monroe co., abt. 17 m. W.S.W. of Paris.

Mid'dle Haddam, in *Connecticut*, a post-village of Middlesex co., abt. 20 m. E.S.E. of Hartford.

Mid'dle Island, in *New York*, a post-village of Suffolk co.

Mid'dle Island Creek, in *W. Virginia*, rises in the N. central part of the State, and flowing generally N.W., enters the Ohio River from Pleasants co.

Mid'dle Park, in *Colorado*. See THREE PARKS.

Mid'dle Paxon, in *Pennsylvania*, a township of Dauphin co.

Mid'dleport, in *Illinois*, a village, former cap. of Iroquois co., about 150 m. E.N.E. of Springfield.

Middleport, in *New York*, a post-village of Niagara co., on the N.Y. Central R.R., about 35 m. N.E. of Buffalo. *Pop.* (1897) 1,310.

Middleport, in *Ohio*, a post-village of Meigs co., on the Ohio river, 2 m. below Pomeroy. *Pop.* (1897) 3,400.

Middleport, in *Pennsylvania*, a post-borough of Schuylkill co., about 8 m. N.E. of Pottsville.

Mid'dle River, in *Iowa*, enters the Des Moines River in Polk co.

Middle River, in *Virginia*, rising in Augusta co., and flowing E. into Rockingham co., unites with the North River to form the Shenandoah River.

Middle-ground, *n.* (*Painting.*) A term used, not to express the middle of a picture, but generally perspectively so; — sometimes it is the highest part of a painting, and sometimes the second degree of shade. Pictures are divided into three parts: *fore-ground*, *middle ground*, and *back-ground*.

Mid'dle-man, *n.*; *pl.* MIDDLEMEN, *n.* An agent transacting business between two parties; a broker; a factor; specifically, in Ireland, a person who leases land in large tracts of the proprietors, in order to sub-let it in small lots or patches to the peasantry. — A commoner; one of intermediate rank; a person belonging to the middle classes of society.

(*Mil.*) The central soldier in a file of infantry.

Mid'dlemost, Mid'most, *a.* Being in the middle, or nearest the centre of a number of things that are near the middle.

"Ere night's *midmost*, stillest hour was past." — *Byron.*

Middlesborough, (*mid'dels-bro,*) a town of England, co. of York, on the Tees, 16 m. N.E. of Darlington, and 215 N. of London. It was founded in 1830, for the shipment of coal, but is rapidly becoming a centre for the iron manufacture. *Manuf.* Rope and sail-cloth; there are also chemical, brass, engine, and bottle works. *Pop.* 39,563.

Mid'dlesex, a co. of England, comprising the greater part of London, the British metropolis, having N. the co. of Hertford, E. the river Lea which divides it from Essex, S. the Thames which separates it from Surrey and Kent, and W. Buckingham. *Area*, 281 sq. m. The surface is various; the ground rises gradually from the Thames towards the N., the principal eminences being, Hampstead, Highgate, and Muswell Hills; and a yet higher and more extensive ridge runs N.E. in Edgeware and Barnet, to the forest-scenery of Enfield Chase. The tracts along the Thames comprise rich, fertile soil, but the higher grounds are mostly gravelly and unfertile. *Rivers* The Thames, Lea, Colne, and Brent. It is also intersected by the Grand-Junction Canal. *Prod.* Hay, fruit, and vegetables for the London markets. *Cap.* Brentford. *Pop.* (excluding London) (1897) 3,501,200.

Middlesex, a S.W. co. of province of Ontario; *area*, about 1,039 sq. m. *Rivers.* Thames and Sydenham rivers. *Pop.* (1897) about 112,200.

Middlesex, in *Connecticut*, a S. by E. co., bordering on Long Island Sound; *area*, about 390 sq. m. *Rivers.* Connecticut and Hammonasset rivers, and numerous smaller streams. *Surface*, mostly hilly; *soil*, generally fertile. *Cups.* Middletown and Haddam. *Pop.* (1890) 39,524.

Middlesex, in *Massachusetts*, a N.E. central co., adjoining New Hampshire; *area*, about 827 sq. m. *Rivers.* Charles, Nashua, Merrimac, and Concord rivers, besides many less important streams, and several small lakes. *Surface*, uneven, but nowhere rising to any great elevation; *soil*, in some parts fertile. *Cups.* Cambridge and Lowell. *Pop.* (1895) 499,248.

Middlesex, in *Michigan*, a village of Oceana co., about 24 m. N. of Clay Bank.

Middlesex, in *New Jersey*, a N.E. central co., bordering on Raritan Bay and Staten Island Sound; *area*, about 310 sq. m. *Rivers.* Millstone, Rahway, Raritan, and South rivers. *Surface*, nearly level; *soil*, generally fertile. *Cap.* New Brunswick. *Pop.* (1895) 70,058.

Middlesex, in *New York*, a post-town and township of Yates co. *Pop.* (1897) 1,450.

Middlesex, in *Pennsylvania*, a village and township of Butler co., about 20 m. N. of Pittsburg.

—A post-township of Cumberland co.

—A village of Mercer co., about 12 m. S.W. of Mercer.

Middlesex, in *Vermont*, a post-town and township of Washington co. *Pop.* (1897) 920.

Middlesex, in *Virginia*, an E. co., bordering on Chesapeake Bay; *area*, about 135 sq. m. *Rivers.* Rappahannock and Piankatank rivers. *Surface*, level; *soil*, in some places fertile. *Cap.* Saluda. *Pop.* (1890) 7,458.

Mid'dlesex Village, in *Massachusetts*, a post-village of Middlesex co. Now part of LOWELL.

Mid'dle-sized, *a.* Being of medium or average size; as, a *middle*-sized individual.

Mid'dle Smith'field, in *Pennsylvania*, a township of Monroe co.

Mid'dle States. See UNITED STATES.

Mid'dleton, a town of England, co. of Lancaster, 5 m. N.E. of Manchester, and 165 N.W. of London. *Manuf.* Cotton and silk goods. *Pop.* 10,500.

Mid'dleton, a town of Ireland, co. of Cork, prov. of Munster, at the confluence of the Carra and Middleton rivers, at the N.E. extremity of Cork harbor, 14 m. E. of Cork. *Pop.* 3,378.

Mid'dleton, a village of Ireland, in Ulster, about 7 m. S.W. of Armagh.

Mid'dleton, in *Illinois*, a village of Marion co., abt. 9 m. E. of Salem. — A village of Wayne co., abt. 35 m. E.S.E. of Centralia.

Mid'dleton, in *Iowa*, a village of Des Moines co., abt. 8 m. W. by N. of Burlington.

Mid'dleton, in *Massachusetts*, a post-township of Essex co.

—A vill. of Duke's co., on the island of Martha's Vineyard.

Mid'dleton, in *Michigan*, a prosperous post-village of Gratiot co.

Mid'dleton, in *Mississippi*, a village of Carroll co., abt. 95 m. N. of Jackson.

Mid'dleton, in *New Hampshire*, a post-township of Strafford co.

Mid'dleton, or MIDDLETOWN, in *Ohio*, a village of Champaign co., abt. 12 m. N.E. of Urbana. — A village of Jackson co., abt. 84 m. S.S.E. of Columbus. — A village of Perry co., abt. 45 m. E.S.E. of Columbus. — A township of Wood co.

Mid'dleton, in *Oregon*, a village of Douglas co., on the Umpqua River, about 10 m. above its mouth.

Mid'dleton, in *Pennsylvania*, a village of Alleghany co., on the Ohio River, abt. 12 m. below Pittsburgh.

Mid'dleton, in *Tennessee*, a village of Rutherford co., abt. 40 m. S.E. of Nashville.

Mid'dleton, in *Wisconsin*, a post-township of Dane co.

Mid'dletown, in *California*, a thriving post-village of Lake co.

Mid'dletown, in *Connecticut*, a city, port of entry, and semi cap. of Middlesex co., on the Connecticut river, about 24 m. N.E. of New Haven; Lat. 41° 33′ 8″ N., Lon. 72° 39′ W. The city is finely located, generally well built, and contains some fine public and private edifices. The inhabitants are extensively engaged in ship-building and the manufacture of castings, guns, screws, leather, Britannia ware, &c. *Pop.* (1897) 9,050.

Mid'dletown, in *Delaware*, a post-town of New Castle co., 25 m. S.S.W. of Wilmington. *Pop.* (1897) 1,600.

Mid'dletown, in *Illinois*, a post-village and former township of Logan co., about 22 m. N. by E. of Springfield.

—A village of McDonough co., about 10 m. S.S.W. of Macomb.

Mid'dletown, in *Indiana*, a village of Allen co., about 11 m. S. by E. of Fort Wayne.

—A post-town of Henry co., about 20 m. N.E. of Indianapolis. *Pop.* (1897) 960.

—A village of Montgomery co., abt. 55 m. W.N.W. of Indianapolis.

—A village of Owen co., abt. 33 m. E.S.E. of Terre Haute.

—A village of Shelby co., abt. 7 m. S.E. of Shelbyville.

—A village of Vigo co., abt. 14 m. S.S.W. of Terre Haute.

Mid'dletown, in *Iowa*, a post-village of Des Moines co., about 9 m. W. of Burlington.

Mid'dletown, in *Kansas*, a village of Franklin co., about 38 m. S. by W. Lawrence.

Mid'dletown, in *Kentucky*, a post-village of Jefferson co., about 14 m. E. of Louisville.

Mid'dletown, in *Maryland*, a post-village of Frederick co., abt. 9 m. W. by N. of Frederick City.

Mid'dletown, in *Missouri*, a post-village of Montgomery co., abt. 65 m. N.E. of Jefferson co.

Mid'dletown, in *N. Carolina*, a post-village of Hyde co., on Middle Creek, abt. 1 m. above Pamlico Sound.

Mid'dletown, in *New Jersey*, a post-village and township of Monmouth county, about 17 miles N.E. of Freehold.

Mid'dletown, in *New York*, a city of Orange co., on the Erie and 2 other R. Rs., 24 m. W.S.W. of Newburgh; has various manufactures and a fine local trade. *Pop.* (1897) 13,400.

Mid'dletown, in *Ohio*, a city of Butler co., on several R. R. lines, 34 m. N. of Cincinnati; a thriving manufacturing place. *Pop.* (1897) 10,000.

—A village of Columbiana co., about 7 m. N.E. of New

Lisbon.—A village of Holmes co., about 98 m. N.E. of Columbus.

Mid'dletown, in *Pennsylvania*, a village of Adams co., abt. 7 m. N. of Gettysburg.—A village of Armstrong co., abt. 45 m. N.E. of Pittsburg.—A township of Bucks co.—A post-borough of Dauphin co., abt. 9 m. N.E. of Harrisburg.—A township of Delaware county.—A village of Mercer county, about 16 miles N. by E. of Mercer.—A township of Susquehanna county.—A village of Westmoreland county, about 174 miles W. of Harrisburg.

Mid'dletown, in *Rhode Island*, a township of Newport co.

Mid'dletown, in *Tennessee*, a village of Sullivan co.—A village of Warren co.

Mid'dletown, in *Vermont*, a post-village and township of Rutland county, abt. 65 miles S. by W. of Montpelier.

Mid'dletown, in *Virginia*, a post-town of Frederick co., about 13 m. S.S.W. of Winchester.

Mid'dletown Point, in *New Jersey*, a village of Monmouth co., about 36 m. E.N.E. of Trenton.

Mid'dle Vil'lage, in *New York*, a post-village of Queen's co.

Mid'dleville, in *Michigan*, a post-village of Barry co., abt 54 m. W. of Lansing.

Mid'dleville, in *Minnesota*, a village and township of Wright county, about 42 miles W. by N. of St. Anthony.

Mid'dleville, in *New York*, a post-village of Herkimer co., abt. 14 m. E.N.E. of Utica.

Mid'dlewny, in *W. Virginia*, a post-village of Jefferson co., abt. 7 m. S.W. of Charleston.

Mid'dlewich, a town of England, co. of Chester, at the confluence of the Dane and Croke, 18 miles E. of Chester, and 151 m. N.W. of London. *Manuf.* Silk and cotton goods, and salt. *Pop.* 4,500.

Mid'dle Wood'berry, in *Pennsylvania*, a township of Bedford co.

Mid'dle Yu'ba Riv'er, in *California*, rises on the W. slope of the Sierra Nevada, and flowing a general S.W. course, enters the Yuba River in Yuba co.

Mid'dling, *a.* [A. S. *midlene.*] Of middle rank, state, size, quantity, or quality; about equi-distant from the extremes; medium; moderate; mediocre; average.

Mid'dlingly, *adv.* Lukewarmly; indifferently; passively; ordinarily.

Mid'dlings, *n. pl.* The coarser parts of flour;—also, the medium kinds of cotton.

Mid'feather, (*-fĕth'r,*) *n.* (*Mach.*) A vertical water-vacuum in the fire-box of a steam-engine.

Midge, (*mij,*) *n.* [A. S. *micge, mycg;* D. *mug;* Ger. *mücke;* Lat. *musca;* Gr. *muia.*] (*Zool.*) The common name of many insects belonging to the *Tipulariæ*, or Crane-fly family. They frequent marshy situations, and have a good many points of resemblance to the gnat. The proboscis is short and thick, and ends in two large fleshy lips; the antennæ are longer than the head, and are simple, being rarely pectinate; the palpi are longer than the proboscis, the eyes acute, and the ocelli wanting. The body and legs are long and slender, the wings narrow and elongated, and the halteres, or balancers, are naked, and proportionally longer than those of the diptera. In their flight, midges can be seen continually moving about in the air during the autumn; and they ascend and descend in a vertical line, with a humming, buzzing noise.

—A very diminutive person.

Mid'-heaven, *n.* The middle of the sky or heaven. (*Astron.*) The point of the ecliptic which is at the meridian at any time.

Mid'ianites, *n. pl.* (*Script.*) A nomadic race in Arabia, which descended from Midian, the fourth son of Abraham and Keturah. (*Gen.* xxv. 2) They occupied the greater part of the country between the N. side of the Arabian Gulf and Arabia Felix as far as the plains of Moab. Others, more civilized (if not, indeed, of Cushite origin), dwelt in the vicinity of the Sinaitic peninsula, and carried on a trade, particularly with Egypt. To the latter, we may presume, belonged Jethro, priest or "sheik" of Midian, the father-in-law of Moses. The *M.* were very troublesome neighbors to the Israelites, till Gideon's victory over them. Their national god was Baal-Peor.

Mid'land, *a.* Being in the inner or interior country; inland; distant from the coast or seaboard; as, a *midland* county.—Encircled by the land; mediterranean; as, a *midland* sea.

Mid'land, in *Michigan*, a central co. of the lower peninsula; *area*, about 530 sq. m. *Rivers.* Tittibawassee, Salt, Chippewa, and Pine rivers. *Surface*, nearly level; *soil*, fertile. *Cap.* Midland. *Pop.* (1894) 13,223.

—A city, cap. of the above co., 20 m. N.W. of Saginaw, on the F. & P. M. R. R. *Pop.* (1894) 2,484.

Mid'land, in *Virginia*, a post-village of Fauquier co., on the Southern Railroad.

Mid'-lent, *n.* The middle part of Lent.

Mid'-life, *n.* The middle period of the ordinary age of man.

Mid-Lo'thian. See EDINBURGH.

Mid'night, (*-nīt,*) *n.* The middle hour of the night; twelve o'clock at night.

—*a.* Being in the middle of the night.

"Hath thy toil
O'er books consumed the *midnight* oil?"—*Gray.*

—Dark as midnight; very dark.

Midnapore, (*mid-na-por',*) a dist. of Hindostan, presidency of Bengal, between Lat. 21° 40′ and 23° N., Lon. 86° and 88° E. *Area*, 4,015 sq. m. The surface is hilly in the W., and in other parts level. A considerable portion consists of jungle. The soil is generally fertile. The principal river is the Hooghly. *Prod.* Rice, indigo, sugar, lac, &c. *Manuf.* Cotton cloth, ganzes, metal and shell ornaments. The chief towns are Midnapore, the capital (pop. unknown), Jellasore, and Pipley. *Pop.* 535,000.

Mid'rib, *n.* (*Bot.*) The middle or main rib of a leaf.

Mid'riff, *n.* [A. S. *midrif, midhrife*—*mīdd,* mid, and *hrife,* the bowels, the belly.] (*Anat.*) The mid-belly, or diaphragm.—See DIAPHRAGM

Mid'ship, *a.* (*Naut.*) Being in, or having reference to, the middle of a ship; as, the *midship* frame.

Midship-beam. (*Naut.*) The beam holding together the central timbers of a vessel.—*Midship-bend.* The broadest frame in a ship;—sometimes called the *dead-flat.*

Mid'shipman, *n.*; *pl.* MIDSHIPMEN. (*Nav.*) A kind of naval cadet on board a vessel of war, appointed as a junior officer from the first class of volunteers.

Passed midshipman. One who, having passed his examination, is a candidate for promotion to a lieutenancy.

Mid'ships, *adv.* (*Naut.*) Same as AMIDSHIPS, *q. v.*

—*n. pl.* (*Naut.*) The timbers at the broadest part of a ship.

Midst, *n.* [Contracted from *middest*, the superlative of *mid.*] The very middle; the central part.

"You that can read it in the *midst* of doubt,
And in the *midst* of frowns can find it out."—*Dryden.*

—*adv.* In the middle.

"Him first, Him last, Him *midst*, and without end."—*Milton.*

Mid'stream, *n.* The middle of a river or channel.

Mid'summer, *n.* The middle of the summer season; the summer solstice, about the 21st of June.

Midsummer-day. The festival of St. John the Baptist, held on the 24th of June.

Mid'ville, in *Georgia*, a post-village of Burke co., abt. 95 m. N.W. of Savannah.

Mid'wald, *n.* A species of bee-eating bird.

Mid'way, *n.* The middle of the way or distance; equidistant from two extremes.

—*a.* Being in the middle of the way or distance.

"The choughs and crows that wing the *midway* air."—*Shaks.*

—*adv.* In the middle of the way or distance; half-way.

Mid'way, in *Georgia*, a village of Baldwin co., abt. 1 m. S. of Milledgeville.

Midway, in *Indiana*, a post-village of Spencer co., abt. 27 m. E. by N. of Evansville.

Midway, in *Kentucky*, a post-village of Woodford co., abt. 14 m. E. by S. of Frankfort.

Midway, in *Mississippi*, a village of Madison co.

Midway, in *Missouri*, a village of Cooper co., abt. 30 m. N.W. of Jefferson City.

Midway, in *Ohio*, a village of Clark co., abt. 50 m. W. of Columbus.

—A village of Madison co.

Midway, in *Pennsylvania*, a village of Chester co., abt. 40 m. W. of Philadelphia.

—A post-office of Washington co.

Midway, in *S. Carolina*, a post-village of Barnwell dist., abt. 72 m. W.S.W. of Charleston.

Midway, in *Tennessee*, a village of Monroe co., abt. 165 m. E.S.E. of Nashville.

Midway, a rocky island in the Pacific Ocean, about equally distant from the coasts of California and Japan, being 2,800 m. W. of San Francisco. It is only three quarters of a mile wide, and a mile and a half long, but has a natural harbor defended by a coral reef 20 feet wide, inside of which the water is as calm as that of a lake, while outside the sea often rages furiously. In 1869 an appropriation of $50,000 was contained in the regular naval appropriation bill of Congress for deepening the entrance to the harbor of that island, so as to afford a safe road-way and port of refuge and resort for the naval and merchant-vessels of the U. States.

Mid'wife, *n.*; *pl.* MIDWIVES. [A. S. *midd* = Ger. *mit*, Goth. *mith*, from Sansk. *meth*, to be joined with, and *wife.* See WIFE.] A woman who is present with, or attends and assists other women in, childbirth; a female obstetrician: an accoucheuse.

—*v. n.* To act as an accoucheuse.

—*v. a.* To aid in women's labor or parturition.

Mid'wifery, *n.* The art, act, or operation of assisting women in labor; obstetrics.—Aid rendered at childbirth;—hence, help to, or coöperation in, production.

Mien, (*mēn,*) *n.* [Fr. *mine*: Icel. *mynd*, effigy, image; Armor. *mîn, mîn*, mien; akin to Heb. *temūna*, appearance, form, shape, from obs. *min*, to wear an appearance.] Form of the countenance; look, aspect; air; bearing; demeanor; deportment; manner; the whole external appearance, with corresponding carriage of body.

"In her is seen Clorinda's spirit, and her lofty *mien.*"—*Waller.*

Mier, in *Indiana*, a post-village of Grant co., abt. 20 m. S.E. of Peru.

Mieroslows'ki, LOUIS, a celebrated Polish general and author, b. at Nemours, France, his mother being French, in 1814. His father, who had served under Marshal Davoust, returned to Poland after the treaty of 1815, taking with him his son, who was educated at the military school of Kalitz, and received in 1830 a commission as ensign of foot-chasseurs. He took an active part in the revolution of that year, fighting in all the principal engagements, till the defeat of his countrymen compelled him to seek an asylum in France. In 1844 he joined the Secret Democratic Society of Poland, engaged in organizing an insurrection, and having betaken himself to the post indicated by it in 1846, was arrested at Posen, and after a dignified and vigorous defence, was condemned to death at Berlin. A rising having taken place at Berlin during the revolution of 1848, he was, with his companions, liberated; whereupon he placed himself at the head of the peasants of Posen, the whole of which duchy was in arms; but this revolt was suppressed, and he was again thrown into prison. On being released, he put himself at the head of the Sicilian revolution; and having been severely wounded in the defence of Catania, he was compelled to leave the island. Invited by the provisional government of the grand-duchy of Baden to take the command of their army against the Prussians, he obeyed the call, and with a very inferior force for some time held the troops of Gens. Peucker and Hirschfeld in check. Having been deserted by his cavalry, he fell back on Rastadt, and after a few reverses, laid down his arms. From that period till the outbreak in Poland in 1863, he lived in retirement in Paris, occupying himself with the study of history, politics, and the art of war. At an early stage of the insurrection he was offered the dictatorship, with the personal command of a portion of the Polish army. But the appointment was not approved by the nobility, who were dissatisfied with his strong democratic bias, and he was therefore obliged to give way to Langiewicz. He wrote *Histoire de la Révolution de Pologne* (1835); *Histoire de la Révolution de 1830–31* (1842); *Analyse Critique de la Campagne de 1831* (1845); and a pamphlet *D'bat entre la Révolution et la Contre-Révolution* (1847). Died Nov. 13, 1878.

Miff, *n.* [Prov. Ger. *muff*, sulkiness.] A fit of the sulks; a moderate show of resentment expressed by the demeanor. (Used colloquially.)

"Mrs. Codlins left her husband's presence in a *miff.*"—*Planché.*

Miffed, (*mift,*) *a.* Sulky; testifying a slight degree of resentment or spleen.

Mifflin, THOMAS, an American major-general and statesman, b. in Philadelphia, 1744. In 1772 he entered public life as a representative from Philadelphia in the colonial assembly, and was a delegate to the first continental Congress, 1774. At the first outbreak of hostilities in Massachusetts, he enrolled himself in the military service; was made colonel and first aide-de-camp of Washington in 1775; adjutant-general in 1776; and major-general in 1777. On the failure of the "Conway cabal," of which he was an active member, he resigned his commission, and, in 1783, was elected to Congress, of which body he became president the same year. In 1785, he became speaker of the Pennsylvania legislature; and in 1787 was a member of the convention which framed the Federal Constitution. In 1788 he succeeded Franklin as president of the Supreme Executive Council of Pennsylvania; and in 1790 was chosen governor of Pennsylvania, which office he held for nine years. D. 1800.

Mifflin, in *Indiana*, a post-village of Crawford co., abt. 45 m. W. of New Albany.

Mifflin, in *Ohio*, a post-township of Ashland county.

—A township of Franklin co.
—, " Pike co.
—, " Richland co.
—, " Wyandot co.

Mifflin, in *Pennsylvania*, a S. central co.; *area*, abt. 370 sq. m. *Rivers.* Juniata River, and Kishicoquillas, Jack's, and Licking creeks. *Surface*, mountainous; *soil*, in some parts fertile. *Min.* Iron in abundance. *Cap.* Lewistown.

—A township of Alleghany co.
—, " Columbia co.
—, " Cumberland co.
—, " Dauphin co.
—, " Lycoming co.

Mifflin, in *Tennessee*, a post-village of Chester co., 10 m. N. of Henderson.

Mifflin, in *Wisconsin*, a post-village and township of Iowa county, situated about 11 miles west of Mineral point.

Mifflinburg, or YOUNGMANSTOWN, in *Pennsylvania*, a post-borough of Union county, abt. 68 m. N.N.W. of Harrisburg.

Mifflin Cross Roads, in *Pennsylvania*, a village of Cumberland co.

Mifflintown, in *Pennsylvania*, a post-borough, cap. of Juniata county, about 50 miles W.N.W. of Harrisburg.

Mifflinville, in *Pennsylvania*, a post-village of Columbia co., abt. 88 m. N.N.E. of Harrisburg.

Might, (*mīt,*) *imp.* of MAY, *q. v.*

Might, *n.* [A. S. *miht, meht*; Ger. *macht*; O. Ger. *maht.* See MAY.] Ability; strength: force; power; primarily and chiefly, bodily strength or physical power; military force; valor, with bodily strength; martial prowess; strength or application of means, or resources; power of affection; mental capacity; strength of light; splendor; effulgence.

"Old Tubal Calu was a man of *might.*"—*Mackay.*

With might and main, with all available strength, with the utmost bodily exertion.

"*With might and main* they chas'd the murd'rous fox."—*Dryden.*

Mightily, (*mīt'i-ly,*) *adv.* With great power, force, or strength; vigorously; vehemently; with great earnestness or energy; with great strength of argument; powerfully; with great or irresistible force; with strong resources or means of defence; efficaciously.—In a great degree; very much; greatly. (Used as a colloquialism.)

"I was *mightily* pleased with a story applicable to this piece of philosophy."—*Spectator.*

Mightiness, *n.* Quality of being mighty; power; greatness; height of dignity or majestic strength.

"See how soon the *mightiness* meets misery."—*Shaks.*

—Highness; excellency;—used generally with a personal pronoun, as a compellation of dignity.

"Will it please your *mightiness* to wash your hands?"—*Shaks.*

Mighty, (*mīt'e,*) *a.* [A. S. *mihtig;* O. Ger. *mahtig.*] Having great bodily strength or physical power; very strong or vigorous; valiant; bold; very powerful; potent; forcible; efficacious.

"The pen is *mightier* than the sword." — *Bulwer-Lytton.*

—Very great or strong in numbers; important; momentous; of notable size, strength, or quality; great in power, bulk, or extent; eminent in intellect or acquirements. — Wonderful; performed with great might or power; expressing, exhibiting, or implying great force and efficacy.

"Hear ye not the hum of *mighty* workings?"—*Keats.*

—Great; grand; fine; very estimable or excellent; (colloquial and vulgar;) as, he makes a *mighty* fuss about it.

—*adv.* In a great degree; exceedingly: very; —(used colloquially;) as, she considers herself *mighty* pretty.

Miguard, PIERRE, surnamed *the Roman*, a French historical and portrait painter, B. at Troyes, in Champagne, 1610. He studied at Rome, and, during his residence there of 22 years, enjoyed great favor from the popes. At length Louis XIV. sent for him to Paris, appointed him his principal painter, and director of the porcelain and tapestry manufactories of Sevres and the Gobelins, and ennobled him. *M.* was on terms of intimacy with the principal French wits, and was beloved by them for his social disposition. D. 1695.

Miguet, FRANÇOIS AUGUSTE ALEXIS, (*meen'yat,*) a French historian, B. at Aix (Provence), 1796, was educated for the legal profession at Aix, but removed to Paris, where he lodged with M. Thiers, and in 1824 produced, when only 28 years of age, his *History of the French Revolution from* 1789 *to* 1814. He was afterwards extensively employed as a journalist, and was associated with Armand Carrel and Thiers in conducting the "National." After the revolution of 1830, he was appointed director of the archives in the foreign ministerial department, which office he vacated in 1848. His principal works are, *History of Mary Stuart; Charles V.; Negotiations relative to the Spanish Succession under Louis XIV.;* and several treatises on Moral and Political Science. D. 1884.

Mignonnette, (*mīn'yon-ĕt,*) *n.* [Fr., from *mignon, mignonne*, a darling, a minion, a favorite, from Lat. *minor*, less.] (*Bot.*) See RESEDA.

Mi'grant, *a.* Migratory; passing from one place to another.

—*n.* A bird or any other animal of migratory habits.

Mi'grate, *v. n.* [Lat. *migro, migratus;* Heb. *magur*, pl. *megurim*, journeyings, wanderings, from *yur*, to sojourn, to live as not at home.] To pass or remove from one country or from one State to another, with a view to a residence; to pass or remove from one region or district to another, for a temporary abode; to change one's home or place of residence. — To pass from a colder to a warmer climate to hibernate, — said of birds.

Migration, (*-grā'shun,*) *n.* [Fr.; Lat. *migratio.*] Act of migrating or removing from one country, region, or state to another for the purpose of residence. — Change of place or habitation; removal; as, the annual *migration* of birds.

Mi'gratory, *a.* [Fr. *migratoire.*] Removing or accustomed to change one's habitation from one country or state to another, for permanent residence. — Roving; wandering; rambling; occasionally making change of pasturage; as, *migratory* hordes of Mongols. — Passing from one climate to another to hibernate, as birds.

Miguel, MARIA EVARISTO, DOM, Duke of Braganza, and so-called king of Portugal, B. 1802, was son of John VI. At 6 years of age he emigrated with the royal family to Brazil, and when his father succeeded to the throne in 1821, *M.* rebelled three times against him, and was banished. On the death of John, in 1826, *M.* was made regent, and offered the hand of Maria da Gloria, the legitimate heir to the throne, then on her way to Portugal. Notwithstanding his oath to the constitution, he caused himself to be proclaimed king, and forbade the entrance of Maria into the country. After holding the throne for some time, and plunging the country into confusion and misery, a revolution ensued, and Dom Pedro came from Brazil to support the claims of his daughter Maria, in which he was aided by France. Dom *M.* was, after several defeats, compelled to sign, in 1834, a capitulation at Evora, and to depart from Portugal. D. 1866.

Mij'iritch, or **Miz'hiritch,** a town of Russia, govt. of Kharkov, 19 m. N.W. of Kharkov; *pop.* 7,000.

Mika'do. See JAPAN.

Mika'nia, *n.* [In honor of Professor *Mikan* of Prague.] (*Bot.*) A genus of plants, order *Asteraceæ*. They are mostly climbing herbs, with opposite leaves. *M. scandens*, the Climbing Boneset, is found in wet thickets from Massachusetts to Georgia, and is distinguished by its short, nearly naked branches, each bearing a small corymb of whitish or pink-colored flowers.

Mikhailovka, (*mik-hai-lov'ka,*) a town of Russia, govt. of Koorsk, on the Khorak, 10 m. W. of Novoi-Oskol. *Manuf.* Linen, wax, and leather. *Pop.* 6,000.

Mi'lam. in *Texas*, an E. central co; *area*, abt. 600 sq. m. *Rivers.* Brazos and Little rivers, and Bushy Creek. *Surface*, mostly level; *soil*, fertile. *County-seat.* Cameron.

—A post-vill., cap., of Sabine co., abt. 330 m. E.N.E. of Austin.

Milan, (*me'lan,*) a city of N. Italy, cap. of the prov. of Milan, and the former cap. of Lombardy, 150 m. W. of Venice, and 79 m. E.N.E. of Turin; Lat 45° 2′ 1″ N., Lon. 9° 11′ 20″ E. *M.*, one of the finest and the most pleasing cities of Europe, is circular in form, and surrounded by a wall 10 m. in circuit, but, like most of old cities, it is irregularly laid out. The most remarkable among its public buildings are the Cathedral, an imposing Gothic structure, inferior only to that of St. Peter's at Rome, or St. Paul's of London, being 485 feet long, 252 feet broad, and height of dome 355 feet, adorned with upwards of 4,500 statues; the church of St. Ambrose, in which the German emperors usually received the Lombard crown; the *Palazzo del Corte*, or royal palace, and the *Teatro della Scala.* It has, besides, numerous private palaces. The city is entered by ten gates, of which the *Porta Orientale* is the richest and most remarkable, surpassed only by the *Arcadella Pace*, a triumphal arch on the road leading from Milan to Simplon. In the *Piazza di Castello* is an arena built by Napoleon I. in 1806, on the model of the amphitheatre at Rome. The principal among the institutions of *M.* are the Brera Palace, formerly a Jesuitical college, at present known as the Palace of Arts and Sciences, which has a library of 150,000 vols., besides several rare collections, and the Ambrosian College, containing a library of 95,000 vols., and 15,000 MSS. Attached to the latter is also a gallery of paintings, containing several fine works by Titian, Da Vinci, Luini, Albano, &c., and sketches by Rafaelle, Pietro de Cortona, and Caravaggio. *Manuf.* Velvets, silks, ribbons, laces, carpets, glass, paper, &c. *M.* is the centre of the silk-trade of N. Italy, and, besides an extensive trade in rice and Parmesan cheese, is, next to Venice, the largest book-mart in Italy. *M.* (anc. *Mediolanum*), supposed to have been founded by the Gauls, was annexed to the Roman dominions by Scipio Nascica, B. C. 191. In the 4th cent., it held the rank of sixth city of the Roman empire, and is one of the few in Italy which have survived the devastations of the Middle Ages, and brought down its celebrity to modern times. Its history is identified with that of LOMBARDY (*q. v.*). *Pop.* (1897) about 300,000.

Mil'an, in *Illinois*, a post-town of Rock Island co. *Pop.* (1897) 1,080.

Milan, in *Indiana*, a township of Allen co.

—A post-town of Ripley co., about 70 m. S.E. of Indianapolis.

Milan, in *Michigan*, a post-village of Washtenaw co., 16 m. S. of Ann Arbor. *Pop.* (1894) 964.

—A township of Monroe co.

Milan, in *Missouri*, a post-town, cap. of Sullivan co., about 21 m. N. of La Clede. *Pop.* (1897) 1,330.

Milan, in *New Hampshire*, a post-town of Coos co.

Milan, in *New York*, a village of Cayuga co., abt 21 m. S. by E. of Auburn.

—A post-township of Dutchess co.

Milan, in *Ohio*, a post-village and township of Erie co., abt. 103 m. N. by E. of Columbus.

Milan, in *Pennsylvania*, a post-village of Bradford co., on the Susquehanna River, abt. 12 m. above Towanda.

Milanese', *n. sing.* and *pl.* (*Geog.*) A native or inhabitant of Milan, Italy; — plurally, the collective people of Milan, Italy.

—*a.* (*Geog.*) Having reference, or pertaining to Milan, or to its inhabitants.

Milazzo, or **Melazzo,** (*me-lat'so,*) a town of Italy, in Sicily, prov. of Messina, 18 m. from Messina, 25 m. S.W. of Cape Faro. It is principally distinguished for its fortifications, being so strong by nature and art, that it may be considered as the "Gibraltar" of Sicily. The citadel is situated on a high promontory 320 feet above the sea. Beneath it is a spacious grotto, called the *Cave of Ulysses. Pop.* 13,000. — THE GULF OF *M.* extends 16 m. E. of the town, and has been the theatre of some important naval conflicts, both in ancient and modern times.

Mil'bridge, in *Maine*, a township of Washington co.

Milch, *a.* [A. S. *melce*, milk. See MILK.] Furnishing or yielding milk — said of certain mammiferous beasts; as, a *milch* cow, a *milch* goat. — Soft; tender; compassionate; merciful.

Mild, *a.* [A. S., D., Fris., Ger., Swed., and Dan. *mild*; Icel. *mildr.* From the root of MELT, *q. v.*] Melting; soft; gently and agreeably affecting the senses; not violent; as, a *mild* temperature, a *mild* air, a *mild* light. — Not acrid, pungent, corrosive, or drastic; mollifying; lenitive; assuasive; not sharp, acid, tart, sour, or bitter; moderately sweet or pleasant to the taste; mellow; demulcent; as, a *mild* aperient, *mild* ale, a *mild* cataplasm, &c. — Tender and gentle in temper or disposition; kind; compassionate; melting with tenderness or sympathy; pitiful; merciful; clement; indulgent; not harsh, severe, or cruel. — Placid; gentle; meek and benevolent of aspect; not exhibiting sternness, harshness, or severity; as, a *mild* manner, a *mild* physiognomy.

(NOTE. *Mild* is frequently employed in the construction of self-explanatory compound words: as, *mild*-featured, *mild*-spoken, *mild*-tempered, &c.)

Mildew, (*mil'dū,*) *n.* [A. S. *mildeaw;* Ger. *mehlthau*, rust on corn.] (*Agric.* and *Hort.*) The name given to a particular mouldy appearance on the leaves of plants, produced by innumerable minute fungi, which, if not checked in their growth, occasion the decay and death of the parts on which they grow, and sometimes of the entire plant. It is common on wheat and on the hop, and in gardens on the leaves of the peach, the nectarine, and other fruit-trees. The causes favorable to the production of mildew are a rich soil and a moist atmosphere, without a free circulation of air or sunshine; or sometimes an excessive dryness, which checks the action of the natural functions of the vegetable organs. In agriculture, this parasitical disease is generally considered irremediable; but in gardening it may be checked by the application of sulphur, in the form of powder, to the leaves covered by the fungi, this being found to destroy them without greatly injuring the leaf.

—*v. a.* To taint with mildew.

—*v. n.* To become tainted with mildew.

Mild'ly, *adv.* Meltingly; gently; tenderly; compassionately; softly; not sternly, harshly, roughly, or violently.

Mild'ness, *n.* State or quality of being mild; softness; gentleness; tenderness; mercy; clemency; compassion; as, *mildness* of temper or disposition. — The quality that soothes or affects the senses pleasantly; agreeableness of condition; temperateness; moderate state; — opposed to *harshness;* as, the *mildness* of the weather, *mildness* of a liquor, &c.

Mile, *n.* [A. S. *mil, mila;* Lat. *mille*, a thousand, *mille passuum*, a thousand paces, a mile. Among the Romans, a measure of a thousand paces, each five feet.] A measure of length, equal to 8 furlongs, 320 rods, 1,760 yards, or 5,280 feet. The following table, given on the authority of Kelly's *Cambist*, shows the length of the modern mile, and also the league, of various countries, and their relation to the English statute mile:

	Yards.	*Stat. m.*
Modern Roman mile	1,628	·925
English statute mile	1,760	1·000
Tuscan mile	1,808	1.027
Ancient Scottish mile	1,984	1·127
Irish mile	2,240	1·273
French posting league (4 kilom.)	4,374	2·485
Spanish judicial league	4,635	2·634
Portuguese league	6,760	3·841
German short mile	6,859	3·897
Flanders league	6,864	3·900
Spanish common league	7,416	4·214
Prussian mile	8,237	4·680
Danish mile	8,244	4·684
Dantzic mile	8,475	4·815
Hungarian mile	9,113	5·178
Swiss mile	9,153	5·201
German long mile	10,126	5·753
Hanoverian mile	11,559	6·568
Swedish mile	11,700	6·648

According to the same authority, the Arabian mile is 2,148 yards, the Persian parsang 6,086 yards, the Russian verst 1,167 yards, and the Turkish berri 1,826 yards. The English geographical mile is 1-60th of a degree of latitude, or about 2,025 yards. The geographical league of England and France is 3 such miles, or 6,075 yards; and the German geographical mile is equal to 4 English geographical miles, or 8,100 yards.

Mile'age, (sometimes MILAGE,) *n.* Fees paid for travelling, as so much per mile; specifically, in the U. States, an allowance made to members of Congress to defray the cost of their journeys to and from Washington.

Constructive mileage, in the U. States, an allowance made for supposed journeys to and from the national capital, as when an extra session is called, &c.

Mile Creek, in *Kansas*, a township of Washington co.

Mile'-post, Mile'-stone, *n.* A post or stone set at the roadside to mark the distance or space of a mile.

Mile'-run, *n.* In railroad accounts, a unit of work; — otherwise called *train-mile.*

Miles, in *Pennsylvania*, a township of Centre county.

Miles'burg, in *Pennsylvania*, a post-borough of Centre co., abt. 87 m. N.W. of Harrisburg.

Milesian, (*mī-lē'zhan,*) *n.* (*Anc. Geog.*) A native or inhabitant of the former city of Miletus, Asia Minor. — A native or inhabitant of Ireland, so styled from their reputed descent from Milesius, a king of Spain, whose sons subjugated the island, 1300 B. C; as, a hot-headed *Milesian.*

—*a.* (*Anc. Geog.*) Belonging, or having reference to the ancient city of Miletus, or its inhabitants.

(*Irish Hist.*) Traditionally descended from King Milesius, or relating to his reputed descendants; as, the *Milesian* race.

Miles River, in *Maryland*, flows into Chesapeake Bay from Talbot co.

Miles'town, in *Pennsylvania*, a former village of Philadelphia co., now included within the chartered limits of the city of Philadelphia, about 7 m. N. of the State-House.

Mile'tus. (*Anc. Geog.*) An ancient city of Asia Minor, on the confines of Caria, south of the mouth of the river Meander. This city, supposed to have been peopled by Carians at an early period, passed through the hands of several tribes, and was seized by the Ionians, who massacred all the women. Gold coins are said to have been struck here B. C. 800. The inhabitants carried on a war against the Lydians, B. C. 623–612. They rose against the Persians B. C. 500, and after sustaining several defeats, their city was taken B. C. 494, and the inhabitants were carried to Ampe, on the banks of the Tigris. *M.* regained its independence after the battle of Mycale, B. C. 479, and soon after joined the Athenians. Alexander III. (the Great) took the city by assault, B. C. 334. It was visited by the apostle Paul (*Acts* XX. 17), who summoned the elders of the Church of Ephesus to meet him here in April, A. D. 56, and was an early see of the Christian Church. It was destroyed by the Turks.

Mil'foil, *n.* [Lat. *millefolium*, a thousand leaves — *mille*, a thousand, and *folium*, a leaf. See FOIL.] (*Bot.*) One of the English names of the Yarrow (*Achillea millefolium*), a bitter European herb, whose leaves have been used medicinally.

Mil'ford, in England. See MILFORD HAVEN.

Mil'ford, in *Connecticut*, a post-village and township of New Haven county, about 10 miles S.W. of New Haven.

Mil'ford, in *Delaware*, a hundred of Kent county.

—A post-borough of Kent county, about 21 m. S.S.E. of Dover.

Mil'ford, in *Illinois*, a post-village and township of Iroquois county, about 140 miles E.N.E. of Springfield.

Mil'ford, in *Illinois*, a village of Kendall co., abt. 51 m. S.W. of Chicago.
—A village of Winnebago co., about 90 miles W.N.W. of Chicago.
Mil'ford, in *Indiana*, a village of Decatur co., abt. 8 m. W. of Greensburg.
—A post-village of Kosciusco co., abt. 126 m. N. by E. of Indianapolis.
—A township of La Grange co.
—A village of Warren co., abt. 14 m. N. of Williamsport.
Mil'ford, in *Iowa*, a village of Appanoose co., abt. 7 m. S.E. of Centreville.
—A village of Clarke co., abt. 50 m. S.S.W. of Des Moines.
—A township of Crawford co.
—A township of Story co.
Mil'ford, in *Kentucky*, a post-village of Bracken co., abt. 20 m. W.S.W. of Marysville.
Mil'ford, in *Maine*, a post-township of Milford county.
Mil'ford, in *Massachusetts*, a post-village and township of Worcester county, about 34 miles S.W. of Boston.
Mil'ford, in *Michigan*, a post-village and township of Oakland county, about 33 miles north-west of Detroit
Mil'ford, in *Minnesota*, a post-township of Brown co.
Mil'ford, in *New Hampshire*, a post-village and township of Hillsborough county, about 29 miles S. by W. of Concord.
Mil'ford, in *New Jersey*, a post-village of Hunterdon co., on the Delaware River, 20 m. above Lambertville.
—A village of Mercer co., abt. 16 m. E. of Trenton.
Mil'ford, in *New York*, a post-village and township of Otsego co., abt. 70 m. W. of Albany.
Mil'ford, in *Ohio*, a township of Butler co.
—A p.-v. of Clermont co., abt. 14 m. E.N.E. of Cincinnati.
—A township of Defiance co.
—A township of Knox co.
Mil'ford, in *Pennsylvania*, a township of Bucks co.
—A township of Juniata co.
—A post-borough and township, cap. of Pike co., abt 160 m. E.N.E. of Harrisburg.
—A village and townehip of Somerset co., abt. 7 m. S.W. of Somerset.
Mil'ford, in *Texas*, a post-village of Ellis co., abt. 150 m. N.N.E. of Austin.
Mil'ford, in *Virginia*, a post-village of Caroline co., abt. 38 m. N. of Richmond.
Milford, in *Wisconsin*, a post-village and township of Jefferson co.
Milford, in *W. Virginia*, a village of Harrison co., abt. 7 m. S. by W. of Clarksburg. — A village of Preston co., between Brandonville and Fishing Creek.
Milford Centre, in *New York*, a village of Otsego co., abt. 15 m. S. of Cooperstown.
Milford Centre, in *Ohio*, a post-village of Union co., abt. 30 m. N.W. of Columbus.
Mil'ford Ha'ven, an extensive basin or inlet of the sea, in S. Wales, co. of Pembroke; St. Ann's Head, at its N.E. extremity, being in Lat. 51° 41′ N., Lon. 5° 10′ 25″ W. It is 15 m. long, and 2 m. in average breadth, and is one of the most capacious as well as safest harbors in the British dominions. The entrance is abont 1½ m. wide, and may be entered without a pilot by night as well as by day. The English govt. has a great naval dockyard here.
Mil'hau, or **Mil'lau,** a town of France, dept. of Aveyrou, on the Tarne, 30 m. S.E. of Rodez. *Manuf.* Silk twist, chamois-leather, and leather gloves
Milia'ria, *n.* [Lat., from *milium*, millet-seed.] (*Med.*) A disease attended by an eruption resembling millet-seed; miliary fever.
Miliary, (*mil'ya-rī,*) *a.* [Fr. *miliare*; Lat. *miliarius*, pertaining to *milium*, millet.] (*Med.*) Accompanied with an eruption resembling millet-seeds; as, *miliary* fever.
Miliary glands. (*Physiol.*) The serbaceous glands of the cuticle of the body.
Milio'la, *n.* [From Lat. *milium*, millet.] (*Pal.*) An extinct mollusc, or zoöphyte, which has left its small foraminiferous multilocular shell in great numbers in the strata of many quarries in the neighborhood of Paris.
Mil'iolite, *n.* [From Lat. *milium*, millet, and Gr. *lithos*, stone.] (*Pal.*) A fossil shell of the genus *Miliola*.
Mil'itant, *a.* [Lat. *militans*, from *milito*, to serve as a soldier, from *miles*, *militis*, a soldier.] Serving as a soldier; combating; fighting; engaged in warfare.
"Against foul fiends they aid us *militant*."—*Spenser.*
Church militant, a term applied to the Christian Church on earth, which is supposed to be engaged in a continual contest against error, atheism, and infidelity, as well as against more material enemies;—it is thus distinguished from the *Church triumphant* in heaven.
Mil'itantly, *adv.* In a militant manner. (R.)
Mil'itarily, *adv.* In a military or soldier-like manner.
Mil'itary, *a.* [Fr. *militaire*, from Lat. *militaris*—*miles*, *militis*, a soldier.] Pertaining or having reference to soldiers, to arms, or to warlike operations; having concern with martial affairs; as, a *military* parade or review, *military* discipline, &c.
"In coats of mail and *military* pride."—*Milton.*
—Engaged in martial service; bred, trained, or accustomed to the use of arms; as, a *military* man.—Warlike; martial; becoming or befitting a soldier; as, *military* courage or virtue.—Derived from martial service; resulting from, or obtained by service as a soldier; as, *military* glory or renown.—Performed, effected, or made by soldiere: as, "*military* election or recognition." (*Bacon.*)—Conformable to the articlee of war; according to the rules and regulations, or manners and customs of armies or militia; as, the course of action taken by the commanding officer was not *military*.
—*n.* The whole body of troops; soldiers taken collectively; an army; soldiery; militia; as, the *military* were called out.
Mil'itary, in *Iowa*, a twp. of Winneshiek co.
Mil'itary Front'ier, a long narrow tract of country, belonging to Austria, extending from the Adriatic through Illyria, Croatia, Slavonia, Hungary, and Transylvania, and forming the defensive barrier of Austria on the Turkish frontier; *area*, 12,453 sq. miles. *Pop.* 1,111,014.
Military Schools, establishments in which soldiers are instructed, or youths educated for the army. The *soldier schools* of Prussia belong to the first of these classes, and are the most remarkable; they are established in every regimeut or batallion, and in them the privates are taught the rudimentary branches of education, and sometimes singing. Military schools of a similar kind exist in the British, Austrian, and other European armies. Institutions of the second class, inteuded for the educatiou of officers, have been in existence since the days of antiquity, and now form an indispeusable part of the military system of all great nations. Louis XV. founded the first military school in France in 1751; it had 500 pupils, all of whom were young noblemen. In 1803, Bonaparte founded the celebrated school of St. Cyr, which still retains the principal features of its first organization. Before the Seven Years' war, the French had established artillery schools in every town where a regiment of that arm was garrisoned. In Prussia, the education of officers is provided for by high schools for each arm in every division of the army; and by the Royal Military School, founded by Frederick the Great, to which the most deserving young officers are admitted from the line. In this country, the well-known military academy of West Point, founded in 1802, stands in the first rank of the institutions of ite kind. Cadets are admitted on the recommendation of members of Congress and the President. The number of cadets is limited to 250. The education and subsistence are gratuitous, but the graduates are expected to spend eight years in the public service.
Mil'itate, *v.n.* [Lat. *milito*, *militatus*. See MILITANT.] To oppose; to contend hostilely or inconsistently; to be or to act in opposition;—preceding *against* and *with*.
"These . . great names *militate against* each other."—*Burke.*
Militia, (*mi-lish'ya,*) *n.* [Lat., from *militis*, soldier.] A force of irregular infantry and artillery in a state enrolled for discipline, but not engaged in active service except in cases of emergency, and in such cases employed exclusively in home-service; the national citizen-soldiery, as distinguished from the regular forces, or *standing army*. In France, they bear the denomination of *Garde Nationale* (National Guards); in Germany, that of *Landsturm*. In the U. S., *M.* was established by Act of Congress, 1792, providing that all able-bodied white male citizens between the ages of 18 and 45, except officers of government, members of Congress, mariners in service, and certain others, shall be enrolled and arranged into brigades, regiments, companies, &c., according to the regulations of the legislatures of the different States. They were to furnish themselves with muskets, ball-cartridges, &c., at their own expense, but the general government was to provide ordnance and field-artillery. Various alterations have been made in the general law from time to time, and many sorts of persons have been exempted from militia duty by statute; but its fundamental provisions, requiring the appearance under arms at specific times of all citizens between certain ages, remain unchanged. The un-uniformed *M.* are, in general, subject to no military duty whatever, except in case of insurrection, war, invasion, or to prevent invasion. In most of the States, however, compulsory enrolment has gradually given place to the volunteer system. In time of rebellion, insurrection, or invasion, the President of the U. States has power to call out the *M.* of such States as he may deem expedient, and to keep them under arms 6 months; but the call must be made through the several governors, who are to judge whether it is justified by the condition of affairs, and may refuse to sanction it if they think proper.
Mili'tiaman, *n.*; *pl.* MILITIAMEN. One who serves in the militia; a private citizen-soldier.
Mil'ium, *n.* [Celtic *mil*, a pebble, allnding to its hard turgid fruit.] (*Bot.*) A genus of plants, order *Gramineæ*. They are chiefly perennial herbe. The most familiar species are *M. effusum*, the Spreading Millet Grass, found in woods from Pennsylvania to Canada, and *M. pungens*, the Dwarf Millet Grass, growing throughout the N. States generally.
Milk, *n.* [A.S. *melce*; Ger. *milch*.] (*Chem.*) An opaque whitish secretion peculiar to the females of the class *Mammalia*, or those animals which feed their young from their teats. Milk differs as procured from various animals, but its general characteristics are the same in all. The most familiar variety is that of the cow. Milk may be looked upon as a serous fluid, holding in suspension minute white globules, composed of casein and fatty matter. When examined microscopically, these globules are found to have a diameter of ·00039 inch., and to disappear on the addition of a solution of potash. (*Raspail.*) According to the researches of Professor Nasse, of Marburg, milk is thus constituted:—1st, Smooth, homogeneous, transparent oil-globules, and large oil-globules, also, the common milk-globules; 2d, cream globules, distinguished by their facette-like appearance: 3d, granulated yellow corpuscles; 4th, the lamella of the epithelium; 5th, the more or less turbid medium in which the four preceding kinds of corpuscles are suspended. When milk is allowed to stand for some time, it undergoes spontaneous changes, a thick yellowish substance, called *cream*, collects on the surface, and the milk beneath becomes thinner, and of a pale-bluish color. Butter, buttermilk, and cream-cheese, are made from cream by processes which will be found described under the articles on BUTTER and CREAM. Milk from which butter has been taken also undergoes spontaneous changes: it becomes much sourer, and congeals into a mass of the consistency of jelly. The fermentation of this coagulated mass is hastened by heat; and when certain substances are added, it very rapidly takes place. Thus, acids and spirits of wine *curdle* it, as it is called; but the most powerful coagulator in use is a decoction from the stomach of animals, especially that of a calf, called *rennet*. After being thus treated, if the whole is put into a bag and squeezed, a thin fluid is forced out, and a tough whitish matter is left behind; the latter substance is called *curd*, and the former *whey*. See CHEESE. According to Berzelius, the specific gravity of milk is 1·033; that of cream, 1·204; and their composition is:

Skimmed Milk.	
Water,	928·75
Caseous matter, or curd, with a trace of butter,	28·00
Sugar of milk,	35·00
Hydrochlorate and phosphate of potash,	1·95
Lactic acid, acetate of potash, and a trace of lactate of iron,	6·00
Earthy phosphates,	·30
	1000·00

Cream.	
Water,	920·00
Curd,	35·00
Butter,	45·00
	1000·00

The etatements respecting the composition of human milk are much at variance, owing, probably, to the difficulty of obtaining it in sufficient quantity for analysis, and also from its mutability in regard to the relative proportione of the component parts. Its specific gravity, however, appears to vary between 1·020 and 1·025; and its solid contents, according to Meggenhofer, vary between 11 and 12·5 per cent. The milk of cows and other animals is very much used as food, and is very important as a constituent of diet even among adults. It is also valuable as a food for invalids, especially those who have a consumptive tendency. In eome cases of poison ing by metallic salts, such as corrosive sublimate, sulpbate of copper, &c., milk is used as an antidote. A very important industry has been established with the object of condensing and preserving milk. The first efforts were directed to the preparation of "desiccated milk." The milk was evaporated to a low temperature, and a little sugar added when the process of evaporation was nearly completed; the residue was pulverized, and conetituted a yellowish-white powder, which dissolved for the greater part in hot water. The solution reeembled milk, and auewered very well when fresh milk could not be obtained, as on shipboard. It could be preserved with care in closed bottles for several months. It was found necessary to remove a portion of the cream before evaporation, ae otherwise the product soon acquired a taete and emell of rancid butter. Its imperfect solubility in water, and its deficiency in the agreeable taste of fresh milk, prevented ite extensive intruduction. The condensation of milk did not become a euccese till the introduction of the vacuum-pan, which makes it possible to boil it down very rapidly at a very low temperature—below 160° F.—thus preserving ite flavor unimpaired. This is an American industry, and hae been introduced into Europe by American companies. Coudensed milk ie now manufactured in the United Statee, Switzerland, Germany, England, and Ireland.
(*Med.*) Milk, as an article of diet, is of the utmost importauce to the youug, and often of great service to the invalid and convalescent; though in some conetitutions inadmissible, on account of the quantity of oil or butter it contains. Much of this objection, however, may always be overcome by taking the precaution of skimming off a portion of its cream before using it as food. In all cases where it is necessary to feed the patient with a good sustaining food, without the risk of inflammatory action or excitement succeeding, a milk diet is the best regimen that can be adopted, especially in all diseases affecting the respiratory organs, or inflammations of the etomach, bowels, bladder, or kidneys. It is also of great benefit after spitting of blood, or any active hemorrhage, while in gout it is of the highest importance as a dietetic agent. The diseases of infancy and childhood, in which a milk diet is of the utmost consequence, are mesenteric diseases, scrofulous habits of body, spinal affections, epileptic fits, and enlarged glands, or whatever indicates a strumous taint of the blood. For such purposes, when cow's milk is too rich, even if denuded of a part of its cream, it may be often made wholesome and digestible by adding one-third of lime-water to two-thirds of milk. When, from the loes of her own milk, or from eickness, the mother is unable to euckle her infant, assee' milk, ae agreeing more nearly to human milk than any other kind, is the article neually employed ae the source of nutritiou for the child. In ountries where neither cows nor assee are to be met with, recourse must be had to goat'e milk, which, containing less caeeine and more engar than cows', is very well euited both for infants and invalids, and ie but a shade less nutritious thau aesee' milk.

Milk, *v. a.* To draw or press milk from, as by the hand or mouth; to draw off the milk from.

"I have given suck, and know
How tender 'tis to love the babe that *milks* me." — *Shaks.*

—To extract or draw from the breasts, teats, or udder; as, to *milk* a cow. — To furnish with milk; to add milk to; to mix milk with.

Milk'er, *n.* One who milks; also, one who, or that which, yields milk; as, that cow is a good *milker.*

"His kine with swelling udders ready stand,
And lowing for the pail invite the *milker's* hand." — *Dryden.*

Milk'-fever, *n.* (*Med.*) The fever which precedes or accompanies the secretion of milk in women recently delivered. It comes on generally about the third day after delivery, and is characterized by quick pulse; increased heat; redness of face; diminution or temporary suspension of the lochial discharge; tumefaction or tension of the breasts. It commonly terminates in 24 hours, and is ushered in with profuse perspiration. It requires the use of antiphlogistics, with dry diet.

Milk'ily, *adv.* Lacteally; after the manner of milk.

Milk'iness, *n.* Softness of quality, like that of milk; approach to the nature or appearance of milk.

"Thy balmy, even temper, and *milkiness* of blood." — *Dryden.*

Milk'-livered, (*-liv'ĕrd,*) *a.* White-livered; cowardly; faint-hearted; timorous; as, a "*milk-livered* man." *Shak.*

Milk'-maid, *n.* A dairy-maid; a female employed in milking cows.

"In vain the *milk-maid* tugs an empty teat." — *Dryden.*

Milk'-molar, *a.* Belonging or having reference to the molar teeth of young mammalia, which being early shed, give place to others.

—*n.* A molar tooth shed by a young mammal, and succeeded by a pre-molar.

Milk'-punch, *n.* (*Drinks.*) A mixture of spirits and milk, sweetened and spiced.

Milk River, rises on the E. slope of the Rocky Mountains, in British N. America, and flowing a general E. course for abt. 150 m., turns S.E. and enters Moutaua Territory in the Blackfeet Indian region. Thence turning E. again, it enters the Missouri River abt. 100 m. above Fort Union.

Milk'-sickness, *n.* (*Med.*) A disease occasionally observed in some of the Western States, which affects both men and cattle, but chiefly the latter. It is attributed in cattle to something eaten or drank by them; and in man, to the eating of the flesh of animals laboring under the disease. Owing to the tremors that characterize it in animals, it is called the *Trembles.* It is endemic. The symptoms are vomiting, purging, extreme nervous agitation, &c.; and the approved indications of treatment appear to be gentle emetics and laxatives, with quiet, and mucilaginous drinks.

Milk'sop, *n.* A piece of bread sopped in milk; but, more commonly, a soft, effeminate, feeble-minded, finical man; a thin-blooded, wishy-watery kind of fellow; a fribble.

"Give him port-wine and potent sack;
From *milksop* he'll start up mohack." — *Prior.*

Milk'-tooth, *n.; pl.* MILK-TEETH. (*Farriery.*) A small fore-tooth which a foal cuts when about three months old, and casts before he is three years old.

Milk-teeth is the name popularly given to the first complete set of twenty teeth with which the gums of children are furnished, and which usually last till the twelfth or fourteenth year, when they are succeeded by the permanent set of thirty-two.

Milk'-vessel, *n.* (*Bot.*) One of the canals or cavities formed between or among the cells, containing a milky juice.

Milk'-vetch, *n.* (*Bot.*) The common name of the genus ASTRAGALUS, *q. v.*

Milk-wort, *n.* (*Bot.*) See POLYGALA.

Milk'y, *a.* Made of milk; consisting of milk; lacteal. — Resembling milk; as, *milky* sap. — Yielding or giving forth milk.

"He courts the *milky* mothers of the plains — *Roscommon.*

—Soft, mild; gentle; tender; timorous.

"Has friendship such a faint and *milky* heart?" — *Shaks.*

Milky Vetch, *n.* (*Bot.*) See ASTRAGALUS.

Milk'y Way, or **Gal'axy,** *n.* (*Astron.*) A name given to a broad, luminous belt which entirely encircles the sky, and, like the stars, makes an apparent revolution around the heavens once a year. When examined with a telescope, it is found to be produced by the blended light of millions of self-shining suns like our own, which is also a distinguished member of the celestial stream. Nearly 100,000,000 stars are visible in it with our mammoth telescopes; but a photograph, made by an exposure of 8 or 10 hours, depicts at least ten times that many. The statement may well cause the reader to pause, and reflect on what a mighty idea is presented to his contemplation. These bodies are, however, very unequally distributed, some places being so packed with stars as to require a high magnification to see them individually. It is estimated that this girdle of suns contains nine-tenths of all the stars visible to us; and if, as is no doubt the case, every one is surrounded with a train of attendant planets on which sentient beings exist, the idea of the number becomes too appalling for any but the Creator to grasp. Our sun being placed near the center (a little north) of the group supposed to be a ring, we find ourselves surrounded on all sides with stars, whereas if we were placed at its margin, instead of at its center, the stars would all appear to be on one side. There are many milky ways besides ours visible with the telescope. The great nebula in Andromeda, which no telescope can resolve into stars, but which the spectroscope declares to be a cluster, is supposed to equal, if not surpass, in extent our well-known milky way. It certainly resembles it in shape. It is one of the six nebulæ visible to the naked eye. The unassisted eye takes us only one step toward the borderland of the endless universe. Then the telescope takes us another step, but there its far-reaching power leaves us. Then the all-grasping photographic camera comes to our aid, and carries us one step farther. Here our investigation stops, and our reason falters beneath the crushing weight of space without limit and worlds without end—a transcendent illustration of what Omnipotence has done. The shape of this mighty cluster is a thin, flat ring, whose diameter in proportion to its thickness is so infinitely great that when looking at it with the naked eye, through its thinnest direction, no milkiness is seen, for we are looking through it and beyond. But when we attempt to fathom its diameter, no telescope nor camera is adequate to the task; hence the blended light from its countless millions of stars. There are many dark patches, called "coal-sacks," which look as though we could see clear through it; other regions are inundated with light, which the telescope resolves into stars; while other similar patches are not resolvable even by the camera. The camera, with an exposure of 8 to 10 hours, fills the negative plate with stars in the coal-sacks, and the longer the exposure the more stars are recorded. Starting from the constellation Cassiopeia, the galaxy passes through Cygnus, where it divides into two parts, one passing through Vulpecula, Aquilla, and Sagittarius, where it unites with the other passing through Ophiuchus, Scorpius, Ara, Cruss, Argo Navis, Centaur, Canis Major, Monoceros, Orion, Auriga, and Perseus, to Cassiopeia. As to the stars that compose the milky way, nothing is known, with the single exception of Alpha Centauri, whose parallax has been determined (as is supposed) with some approach to accuracy. Its parallax was formerly supposed to be one second, but later determinations make it about three-fourths of a second, giving a distance of 24,000,000,000,000. Its light must travel 3½ years at the speed of 185,500 miles a second in order to reach us; and yet we call it our nearest stellar neighbor.

Mill, *n.* [Fr. *mille,* thousand.] In the United States a fictitious money of account, being equivalent to the tenth part of a cent, or the thousandth of a dollar.

Fig. 1789.—WIND-MILL.

Mill, *n.* [A. S. *mylin, miln;* D. *molen;* Ger. *mühle;* Ir. *mulcan;* Fr. *moulin,* from Lat. *molo, molere.*] A name applied to almost all machinery consisting of wheel-work, whether intended to change the form or the position of the object to be operated upon. Machines of this kind, therefore, take their name from the processes for

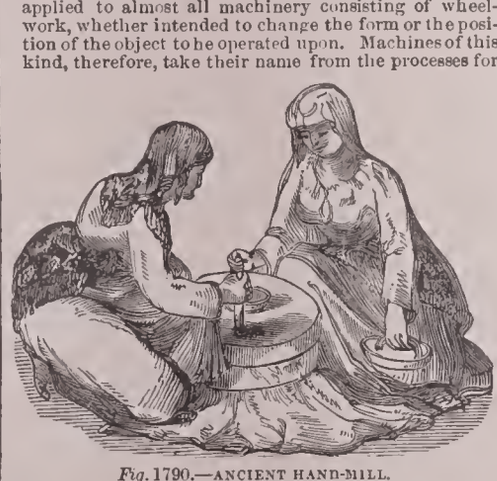


Fig. 1790.—ANCIENT HAND-MILL.

which they are used—as saw-mills, stamping-mills, fulling-mills, grinding-mills, &c.; from the motive power—as wind-mills (Fig. 1789), water-mills, steam-mills, hand-mills, &c.; or from the material operated on—as cotton-mills, sugar-mills, flour-mills, oil-mills, &c. We shall reduce the present notice to the flour-mill. Among the rudest nations the grinding of corn was done by pounding it between two stones. With the advance of art, however, a simple hand-mill was constructed, composed of an immovable nether stone, called the *mule,* and an upper stone, called *mulos,* put in motion by the hand. These mills were used by the Hebrews (Fig. 1790) and Greeks and were commonly worked by criminals or slaves. Asses were afterward employed. Water-mills appeared to have been used by the Romans, and the wind-mill was invented in the reign of Augustus. Until about 1875 the ordinary mill for grinding grain was constructed with two circular stones, made of buhr-stone (*q. v.*), placed horizontally, furrowed or grooved—the grooves being cut perpendicularly on the one side, and with a slope on the other. The two millstones were furrowed exactly alike; the sharp edges of the grooves on the one came against those on the other, and so cut the grain to pieces. Fig. 1791 shows a section of a flour-mill reduced to its simplest elements. The millstones are at *a,* the lower of which is firmly fixed, it being a matter of importance to have this done securely; and the upper is made to revolve on a shaft which passes up through the lower one, at a speed of one hundred revolutions per minute, more or less. Motion is communicated by the spur-wheel *b,* which is driven by a water-wheel or other power. The corn, previously cleaned, is supplied to the millstones by means of the hopper *c,* connected with which there is a valve *d,* for regulating the supply. Passing through a hole in the center of the upper millstone, it comes in between the two, where it is ground and thrown out on all sides by means of the centrifugal force. The millstones are, of course, enclosed, and the flour passes down through the spout *e* to the worm at *f,* which, while it cools the ground corn, carries it along to elevators, *g.* These raise it up to the floor, on which the silk-dressing machine, *h,* is placed. This is a cylinder, which was formerly made of wire-cloth of various de-

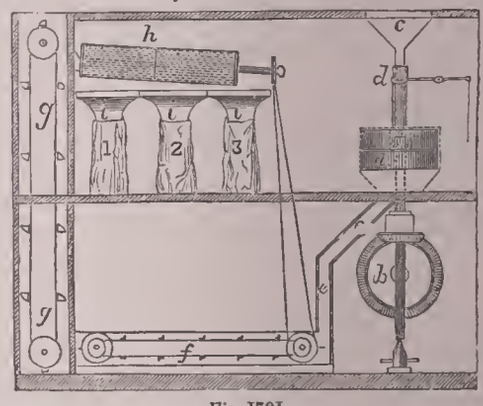


Fig. 1791.

grees of fineness, and consequently separated the flour into different qualities — the finest passing through the first portion, the second passing through the next, and so on; but no part of it large enough in the openings to let through the bran, which passed out at the end, while the flour, of various degrees of fineness, falls through hoppers *i* into sacks, 1, 2, &c., and the bran into 3. The iron roller was first employed in place of the millstone in 1840, at Pest, Hungary. By 1875 it was widely adopted in the U. S., and since 1880 has come almost universally into use. In this, the "high grinding" system, the grain is sent between a succession of grooved cylindrical iron rollers, by which it is gradually converted into flour, the bran being separated by various methods of sifting. See FLOUR, MANUFACTURE OF.

(NOTE. — *Mill,* used in the construction of compound-words, affords such self-explaining examples as *mill*-hand, *mill*-wheel, *mill*-pool, &c.)

—*v. a.* To grind; to triturate; to comminute; to reduce to fine particles, or to small pieces. — To shape, trim, or finish by passing through a machine; — said chiefly in reference to metal work. — To make a raised impression round the edges of a piece of money as a preventive against clipping of the coin.

"It would be better for your *milled* medals, if they carried the whole legend on their edges." — *Addison.*

—To full by passing through a machine, as cloth; as, *milled* kerseymere. — To pommel or punch with the fist; to administer a sound drubbing with one's fists; to engage in a pugilistic encounter; as, to *mill* a bully. (Cant.)

To mill chocolate, to heat it up until it froths on the surface.

Mill, *n.* A set-to at fisticuffs; a pugilistic encounter; a boxing-match: as, the *mill* was made up for $250 a side. (Colloq. and vulgar.)

Mill, JAMES, an English political economist and historian, born in Kincardinshire, 1774. He first came to London as tutor in the family of Sir John Stuart, but gave up that post, and devoted himself entirely to literary pursuits. In 1818 he published his admirable *History of British India;* a work of great research and powerful reasoning. He also produced several valuable works on legislation and morals, viz., his *Elements of Political Economy;* an *Analysis of the Human Mind;* and *Prison and Prison Discipline; Colonies; Laws of Nations; and Education.* He was also a contributor of many excellent articles to the "Encyclopædia Britannica," and the "Edinburgh," "Westminster," and "London Reviews." In morals and legislation he was the powerful auxiliary of Jeremy Bentham; in political economy the ally of Adam Smith and Ricardo; and in philosophy he was a follower of Bacon and Locke. He held the office of chief examiner of accounts to the East India Company. D. 1836.

Mill, in *Iowa,* a village of Fayette co., about 25 m. N.E. of Cedar Falls

Mil'lard, in *Wisconsin*, a post-village of Walworth co., abt. 7 m. N.W. of Elkhorn.
Mil'lardsville, in *Pennsylvania*, a village of Susquehanna co.
Mill'-board, *n.* A kind of stout, thick pasteboard.
Mill'borough Springs, in *Virginia*, a post-village of Bath co., abt. 157 m. W.N.W. of Richmond.
Mill'brook, a village of Durham co., Upper Canada, abt. 18 m. N.W. of Port Hope.
Mill'brook, in *Illinois*, a post-office of Kendall co. — A township of Peoria co.
Mill'brook, in *Ohio*, a post-village of Wayne co., abt. 80 m. N.E. of Columbus.
Mill'brook, in *Pennsylvania*, a village of Mercer co.
Mill'burg, in *Michigan*, a post-village of Berrien co., abt. 14 m. N. of Berrien.
Mill'burn, in *Illinois*, a post-village of Lake co., abt. 45 m. N.N.W. of Chicago.
Mill'burn, in *New Jersey*, a post-village and township of Essex county, about 10 miles W. of Newark.
Mill'bury, in *Massachusetts*, a post-village and township of Worcester county, about 42 miles W.S.W. of Boston.
Mill'-cake, *n.* The spongy or doughy mass of ingredients incorporated to make gunpowder, preparatory to the granulating process.
Mill'-cog, *n.* The denticulated cog of a mill-wheel.
Mill Creek, a village of prov. Ontario, about 12 m. W. of Kingston. Now called ODESSA.
Mill Creek, in *Delaware*, a hundred of New Castle co.
Mill Creek, in *Illinois*, a township of Clark co.
Mill Creek, in *Indiana*, enters Eel River in Putnam co. It has one perpendicular fall of 45 ft.—Another, enters the Tippecanoe in Pulaski co.
—A township of Fountain co.
—A township of Putnam co.
Mill Creek, in *Michigan*, enters Black River in St. Clair co.—Another, enters the Huron River near Dexter, in Washtenaw.
Mill Creek, in *Missouri*, a village of Ripley co., abt. 160 m. S.S.E. of Jefferson City.
Mill Creek, in *Ohio*, enters the Mahoning River from Mahoning co.—2. Enters the Ohio River at Cincinnati, in Hamilton co.—3. Enters the Sciota River in Delaware co.
—A township of Coshocton co.
—A township of Hamilton co.
—A township of Union co.
—A township of Williams co.
Mill Creek, in *Pennsylvania*, a township of Erie co.
—A post-office of Huntingdon co.
—A village of Lancaster co.
—A township of Lebanon co.
—A township of Mercer co.
—A village of Tioga co.
Mill Creek, in *Tennessee*, enters Cumberland River abt. 4 m. above Nashville.
Mill Creek, in *Texas*, enters Brazos River in Austin co., a few m. below San Felipe.
Mill'dale, in *Mississippi*, a village of Warren co., abt. 13 m. N.E. of Vicksburg.
Mil'ledgeville, in *Georgia*, a city, (former capital,) and the seat of justice of Baldwin co., on the Oconee River, about 158 m. N.W. of Savannah, and 659 m. S.W. of Washington; Lat. 33° 7′ 20″ N., Lon. 83° 19′ 45″ W. It is beautifully situated in the midst of a rich and fertile region, and, besides the State Penitentiary, State Arsenal, and Capitol, contains many handsome and substantial edifices. The Oconee River furnishes abundant water-power, but is not navigable.
Milledgeville, in *Illinois*, a post-village of Carroll co., abt. 50 m. S.E. of Galena.
Mil'ledgeville, in *Kentucky*, a post-village of Lincoln co., abt 9 m. S. of Danville.
Milledgeville, in *N. Carolina*, a village of Montgomery co., abt. 133 m. W.S.W. of Raleigh. — A village of Northampton co.
Milledgeville, in *Pennsylvania*, a post-village of Mercer co., abt. 15 m. S. by E. of Meadville.
Milledgeville, in *Tennessee*, a village of White co., abt. 80 m. E. by S. of Nashville.
Mill'-dam, *n.* A dam, mound, or dike, to obstruct a watercourse, and raise the water to a height sufficient to turn a mill-wheel.
Mille Lacs, (*mil lak,*) in *Minnesota*, an E. central co.; *area*, abt. 550 sq. m. *Rivers.* Rum River, and many smaller streams, while Lake Mille Lacs occupies the N.W. part of the co. *Surface*, diversified; *soil*, fertile. *Cap.* Princeton.
—A village of Aiken co., abt. 70 m. N.N.E. of St. Cloud.
Mil'len's Bay, in *N. York*, a post-vill. of Jefferson co.
Millena'rian, *n.* [Fr. *millénaire.* See MILLENNIUM.] One who believes in Christ's personal reign on earth for a thousand years; a chiliast. See MILLENNIUM.
—*a.* Consisting of a thousand years; pertaining or having reference to the millennium.
Millena'rianism, Mil'lenarism, *n.* The doctrine or theory of the millenarians. See MILLENNIUM.
Millen'arist, *n.* A millenarian.
Mil'lenary, *a.* [Lat. *millenarius.*] Consisting of a thousand; as, the *millenary* sestertium.
—*n.* The space of a thousand years. — A millenarist.
Millen'nial, *a.* Pertaining, or having reference to the millennium, or to a thousand years; as, *millenial* happiness.
Millen'nialist, *n.* A believer in the millennium; a millenarian; a chiliast.
Millen'nianism, Millen'narism, *n.* Millenarianism.
Millen'nium, *n.* [Lat. *mille*, a thousand, and *annus*, year. See ANNUAL.] (*Theol.*) A term applied by ecclesiastical writers to that period predicted in Scripture when Christ is to reign with his saints upon earth for the space of one thousand years, (*Rev.* xx.) Many have held, from the earliest period of Christianity, that this is to be received literally, and have drawn up ideas of this earthly paradise. Those who hold this doctrine are commonly called millenarians. The ancient millenarians held that the city and temple of Jerusalem were to be rebuilt and splendidly adorned with gold and jewels, and that Christ, having come down from heaven, would reign there a thousand year with his saints, both those who were already dead, and those who were still alive. The productions of nature were to be prodigiously increased, and everything in nature was to minister to their corporeal delights. The Jews were to be restored to their own land, and raised to the first rank among the nations of the earth. Irenæus and others of the early Fathers held these views; but they were warmly opposed by Origen and others. These maintained that the passages founded upon were to be understood figuratively as pointing to a period when Christianity should prevail in the world; and in consequence, physical and moral evil abated. The latter is now the view generally held; but some, as the Irvingites, still look for a personal reign of Christ upon earth.
Mil'leped, Mil'lepede, *n.* [Lat. *mille*, and *pes, pedis*, a foot. See PEDAL.] An insect having many feet, as the Wood-louse, *Oriscus asellus*, and many others.
Mil'lepore, *n.* [Fr., from Lat. *mille*, and *porus*, pore.] (*Zoöl.*) One of a genus of hydroid medusæ that build a coral branching stem, in which are numerous pits or pores for the retreat of the heads, and from which the medusa are budded off. See MEDUSA.
Mill'eporite, *n.* (*Pal.*) A fossilized millepore.
Mil'ler, *n.* [From *mill.*] One who attends a mill.
(*Zoöl.*) A winged insect or moth; — so called from the white, powdery substance with which their wings are covered.
Mil'ler, HUGH, an eminent geologist, B. at Cromarty, Scotland, in 1802, whose father was lost at sea, on board a small vessel of which he was the owner, while Hugh was still a child. He was sent to the parish-school, and in course of time was apprenticed to the trade of a stone-mason. From the time he had mastered the art of reading, he had been assiduous in his search after knowledge, and a love of natural history had been fostered in him by his uncle. While hewing stones in the quarry, he was engaged in observing their geological form. Of poetry, also, he was very fond, and after seeking in vain to get a certain effusion in rhyme inserted in a newspaper, he published a volume of verse, which brought him into notice, and obtained for him the clerkship of a bank in his native place. The leisure afforded by this occupation he turned to good account. After contributing for a short time to the "Inverness Courier," he published *Scenes and Legends of the North of Scotland.* He was next selected by the Free Church party to

Fig. 1791. — HUGH MILLER.

edit their organ, the "Witness" newspaper, a post which he continued to fill till his death. His first geological paper appeared in this print, and when the Geological Association met at Glasgow, Sir Charles Lyell, Dr. Buckland, and Sir Roderick Murchison, all expressed themselves astonished and delighted at the labors of the new scientific writer. One of the fishes described by him in this course, was named by Prof. Agassiz after Mr. *M.* A republication of the papers afterwards took place under the title of the *Old Red Sandstone, or New Walks in an Old Field.* His ready, picturesque, and vigorous pen was henceforth constantly employed; and he produced, after a visit to the S., *First Impressions of England and its People*; *Footprints of the Creator* — an answer to some of the statements of the *Vestiges of Creation*; the *Geology of the Bass*, and the *Testimony of the Rocks.* He also lectured upon his favorite science in Edinburgh and London, and in 1855, read a paper on the *Fossil Flora of Scotland*, before the British Association at Glasgow. In addition to the above-mentioned works, he gave to the world a most interesting account of his early life, in a work called *My Schools and Schoolmasters.* In 1855, while laboring under a paroxysm of disease of the brain, he shot himself through the body.
Miller, WILLIAM ALLEN, a distinguished English chemist, B. at Ipswich, 1817. His chief work is *Elements of Chemistry, Theoretical and Practical*, of which a third edition appeared in 1866.
Mil'ler, in *Georgia*, a S.W. co.; *area*, abt. 300 sq. m. *Rivers.* Spring Creek, and several smaller streams. *Surface*, nearly level; *soil*, generally fertile. *County-seat* Colquitt.
Miller, in *Indiana*, a village and township of Dearborn county, about 6 miles north of Lawrenceburg.
Miller, in *Missouri*, a S. central co.; *area*, abt. 570 sq. m. *Rivers.* Osage and Auglaize rivers, and several smaller streams. *Surface*, hilly; *soil*, in some places fertile. *Cap.* Tuscumbia.
—A township of Marion co.
—A township of Scotland co.
Miller, in *Ohio*, a township of Knox co.
Miller, in *Pennsylvania*, a township of Perry county.
Mil'lerite, *n.* (*Min.*) A native sulphide of nickel, occurring in delicate capillary crystals of a brass or bronze-yellow color, with a gray or iridescent tarnish, with spathic iron, at the Sterling Mine, Antwerp, N. Y.
Mil'lerites, *n. pl.* (*Eccl. Hist.*) A religious sect named after the founder, William Miller, B. in Pittsfield, Mass., 1781; D. 1849; who predicted that the end of the world was soon to take place. The *M.* were, at a time, about 50,000; but the failure of the prediction of Miller, in 1843, greatly diminished the number of his disciples. It is said that the sect still exists, but so diminished that it is of no importance.
Millerolles, (*meel-leh-rosh',*) a village of Upper Canada, abt. 45 m. N.W. of Prescott.
Mil'lersburg, in *Idaho*, a mining-village of Nez Percés co., about 120 m. N. of Idaho City.
Millersburg, in *Illinois*, a post-village and former cap. of Mercer co., about 156 m. N.W. of Springfield.
Millersburg, in *Indiana*, a post-town of Elkhart co., about 8 m. S.E. of Goshen. *Pop.* (1897) 450.
—A village of Ohio co., on the Ohio River, abt. 40 m. below Cincinnati.
—A village of Orange co., abt. 37 m. N.W. of New Albany.
—A village of Whitley co., abt. 12 m. S.W. of Columbia.
Millersburg, in *Kentucky*, a post-village of Bourbon co., abt. 48 m. E. of Frankfort.
Millersburg, in *Minnesota*, a post-village of Rice co., abt. 10 m. N.N.W. of Faribault.
Millersburg, in *Missouri*, a post-village of Calloway co., abt. 21 m. N. of Jefferson City.
Millersburg, in *Ohio*, a post-village, cap. of Holmes co., abt. 87 m. N.E. of Columbus.
—A village of Meigs co., abt. 90 m. S.E. of Columbus.
Millersburg, in *Pennsylvania*, a village of Berks co.
—A post-borough of Dauphin co., about 28 m. N.N.W. of Harrisburg.
Millersburg, in *Tennessee*, a post-office of Rutherford co., about 43 m. S.E. of Nashville.
Mil'ler's Place, in *New York*, a post-vill. of Suffolk co.
Mil'lersport, in *Ohio*, a post-village of Fairfield co., abt. 30 m. E.S.E. of Columbus.
Miller's Ranch, in *California*, a village of Butte co., abt. 16 m. S.E. of Oroville.
Miller's River, in *Massachusetts*, rises in Worcester co., and flowing W., enters the Connecticut River in Franklin co.
Miller's River, in *Vermont*, enters the Passumpsic River in Caledonia co.
Miller's-thumb, *n.* (*Zoöl.*) The Bull-head, *Cottus gobio*, a small fish, abundant in clear rivers and streams, and seldom exceeding 4 or 5 inches in length. It belongs to the genus COTTUS, *q. v.*
Mil'lerstown, in *Kentucky*, a village of Grayson co., abt. 125 m. S.W. of Frankfort.
Mil'lerstown, in *Ohio*, a post-village of Champaign co., abt. 11 m. W.N.W. of Urbana.
Mil'lerstown, in *Pennsylvania*, a borough of Butler co., about 10 m. E.N.E. of Butler.
—A village of Lebanon co., about 20 m. E. of Harrisburg.
—A village of Lehigh co., about 9 m. S.W. of Allentown.
—A post-borough of Perry co., 29 m. N.W. of Harrisburg.
Mil'lersville, in *Indiana*, a village of Marion co.
Mil'lersville, in *Maryland*, a post-village of Anne Arundel co., about 11 m. N.W. of Annapolis.
Mil'lerville, in *New York*, a village of St. Lawrence co., about 30 m. N.E. of Ogdensburg.
Mil'lersville, in *Ohio*, a post-village of Sandusky co., 28 m. N.N.W. of Columbus.
Mil'lersville, in *Pennsylvania*, a post-village of Lancaster co., about 39 m. S.E. of Harrisburg.
Mil'lerton, in *California*, a village, former cap. of Fresno co., about 130 m. S.E. of Stocktou.
Mil'lertown, in *California*, a village of Placer co., abt. 6 m. N.E. of Auburn.
Mil'lery, or MIL'LERAY, in *Iowa*, a village of Dubuque co., abt. 10 m. S.S.W. of Dubuque.
Milles'imal, *a.* [Lat. *millesimus*, from *mille*, a thousand.] Thousandth; consisting of a thousand parts; as, *millesimal* fractions.
Millesimo, (*mil-li-se'mo,*) a small town of N. Italy, in Piedmont, on the Bormida. It was the scene of one of the first victories of Napoleon I., won against the Austrians, April 14, 1796.
Mill'eville, (*mill'vil,*) in *New York*, a village of Rensselaer co., abt. 12 m. N.E. of Albany.
Mill'field, in *Ohio*, a post-village of Athens co., abt. 72 m. S.E. of Columbus.
Mill Grove, in *Indiana*, a village of Owen co., abt. 18 m. N. of Spencer.
—A township of Steuben co.
Mill Grove, in *Ohio*, a post-office of Morgau co.
—A village of Wood co., abt. 120 m. N.N.W. of Columbus.
Mill Grove, in *S. Carolina*, a village of Sumter co

Mil'let, *n.* [Fr. *millet*, or *mil*; Lat. *milium*. Etym. uncertain.] (*Bot.*) The common name for a great number of cereal plants, the grains of which are used as food, and for making a kind of beer, in various countries. *Holcus Sorghum* is the Turkish millet; *Panicum miliaceum*, the Indian; *Paspalum exile*, the Sierra Leone; *Setaria Germanica* and *Italica* (Fig. 1792), the German and Italian millet respectively, probably varieties of the same species.

Fig. 1792.—MILLET, (*Setaria Italica.*)

Mill Hall, in *Pennsylvania*, a post-borough of Clinton co., about 104 m. N.W. of Harrisburg.

Mill Haven, in *Georgia*, a post-office of Screven co., about 75 m. N.W. of Savannah.

Mill Haven, in *Wisconsin*, a village of Juneau co., about 7 m. N.W. of Manston.

Millheim (*mil'hime*), in *Pennsylvania*, a post-borough of Center co., 85 m. N.W. of Harrisburg.

Mill'housen, in *Indiana*, a post-town of Decatur co., about 55 m. S.E. of Indianapolis.

Mill'-head, *n.* The head of water available for the working of a mill-wheel.

Milliard, (*mil'le-ar,*) *n.* [Fr., from Lat. *mille.*] A thousand millions.

Mil'liare, *n.* [From Lat. *mille.*] A Roman mile, consistiug of 1,000 paces of 5 ft. each, and therefore = 5,000 feet; taking the Roman foot at 11·6496 Eng. inches, the Roman mile would be 1,618 Eng. yards, or 142 yards less than the English statute mile.

Mil'liary, *a.* [Lat. *milliarius.*] Pertaining, having reference to, or denoting a mile.

—*n.* [Lat. *milliarium.*] A mile-stone.

Mil'ligram, Milligramme, *n.* [Fr. *milligramme.*] The thousandth part of a gramme = 0·154 English grains. See METRIC SYSTEM.

Mill'iken's Bend, in *Louisiana*, a post-village of Madison parish, on the Mississippi River, abt. 55 m. above Vicksburg, Mississippi. Near this village, in June, 1863, a body of 1,400 colored troops, with 160 soldiers of the 23d Iowa regt., under the command of Gen. Elias S. Deunis, were attacked by a Confederate force, numbering nbt. 2,500, nnder Gen. Henry McCullough, and wonld bave been defeated but for the assistance of two U. S. gunboats, sent from Admiral Porter's fleet. After a desperatc coutest of several hours, the Confederates were repulsed. The loss on either side was abt. 150 killed, and 300 wounded.

Mil'lilitre, *n.* [Fr. See LITRE.] The thousandth part of a litre = 06103 of an English cubic inch. See METRIC SYSTEM.

Millim'etre, *n.* [Fr. See METRE.] The thousandth part of a metre = 03937 of an English inch. See METRIC SYSTEM.

Mil'liner, *n.* [Supposed to be from *Milaner*, or a Milanese importer of finery for females.] A person, generally a female, who makes and sells head-gear, as hats, bonnets, &c., for women's wear. See MAN-MILLINER.

Mil'linery, *n.* The articles for feminine wear made or sold by milliners, as head-dresses, hats, bonnets, and fal-lals, &c. — Paraphernalia; trumpery; tinsel; as, church or sacerdotal *millinery*, stage *millinery*, &c.

Mil'ling, *n.* Act or avocation of grinding and passing through a mill. — Act of making raised impressions on the edges of coin, &c., or the impressions thus made. — Act or process of fulling cloth. — A sound pommelling, or drubbing with the fists. (Cant.)

Milling-machine. A machine tool for trimming surfaces by rotary cutters. — *Milling-tool.* A roller having a denticulated surface for giving indentations corresponding thereto in metal by rotary pressure.

Mil'lington, in *Connecticut*, a post-village of Middlesex co., abt. 35 m. E.N.E. of New Haven.

Millington, in *Maryland*, a post-village of Kent co., abt. 60 m. E.N.E. of Annapolis.

Millington, in *Massachusetts*, a post-village of Franklin co., abt. 25 m. N.E. of Northampton.

Millington, in *Michigan*, a post-village and township of Tuscola co.

Millington, in *New Jersey*, a post-village of Morris co., on the Del., Lack. & W. R. R.

Millington, in *Virginia*, a post-office of Albemarle co., about 25 m. E. of Staunton.

Mil'lion, *n.* [Fr., from Lat. *mille*, thousand.] A thousand times a thousand, written 1,000,000; the number of ten hundred thousand. — A very great number; — used indefinitely.

"Many people at the Derby this year? Well, I should say, perhaps two *millions*." — *Thackeray.*

Millionaire, (*mil'yon-ér,*) *n.* [Fr.; Sp. *millonario.*] A man worth a million; — hence, a common titular term for a very rich person. (Sometimes written *millionnaire.*)

Mil'lionary, *a.* Having reference, or pertaining to millions; consisting of millions.

Mil'lionnaire, *n.* Same as MILLIONAIRE, *q. v.*

Mill'ionth, *a.* The ten hundred thousandth.

—*n.* A unit of a million equal parts.

Mill Plain, in *Connecticut*, a post-village of Fairfield co., abt. 70 m. S.W. of Hartford.

Mill Point, in *Michigan*, a village of Ottawa co., on Grand River, abt. 2 m. above Grand Haven.

Mill Point, in *W. Virginia*, a post-village of Pocahontas co

Mill'port, in *Indiana*, a village of Jackson co., about 78 m. S. of Indianapolis.

Millport, in *Missouri*, a post-village of Knox co., abt. 50 m. N.W. of Quincy, Illinois.

Millport, in *New York*, a post-village of Chemung co., abt. 150 m. S.W. by W. of Albany.

Millport, in *Pennsylvania*, a post-village of Potter co., abt. 200 m. N.W. Harrisburg.

Mill'race, *n.* The stream or channel of water that serves to drive a mill-wheel.

Mill'rea, Mill'ree, Mill'reis, *n.* [Pg. *mil*, a thousand, and *reis*, pl. of *real*, a coin.] A current money of account in Portugal and Brazil; in the former country it is equivalent to about $1.05; in the last-named, it is worth, at par of exchange, 54 cents.

Mill River, in *Connecticut*, enters Long Island Sound from Fairfield co.

Mill River, in *Vermont*, enters the Counecticut River from Windsor co.

Mills, in *Iowa*, a W.S.W. co., adjoining Nebraska; *area*, abt. 400 sq. m. *Rivers.* Missouri and Nishnabatona rivers, besides several large creeks. *Surface*, mostly level; *soil*, fertile. *Cap.* Glenwood.

Mills'borough, in *Delaware*, a post-village of Sussex co., abt. 45 m. S. by E. of Dover.

Millsborough, in *Ohio*, a village of Richland co.

Millsborough, in *Pennsylvania*, a post-village of Washington co., abt. 36 m. S. of Pittsburg.

Mills'field, in *New Hampshire*, a township of Coos co.

Millsfield, in *Ohio*, a township of Ashtabula co.

Mill'-sixpence, *n.* (*Numis.*) An old English silver coin, first milled in 1561, and now extremely rare.

Mill's Mills, in *Indiana*, a village of Fayette co., abt. 60 m. E.S.E. of Indianapolis.

Mill's Point, in *Kentucky.* See HICKMAN.

Mills'port, in *Pennsylvania*, a village of Lancaster co.

Mill Springs, in *Kentucky*, a locality in Wayne co., on the Cumberland River, abt. 100 m. S. of Frankfort. Here, on Jan. 19, 1862, an important battle was fought between abt. 28,000 National troops, commanded by Gen. George H. Thomas, and about 10,000 Confederates (infantry and cavalry), exclusive of 20 pieces of artillery, under Gen. George B. Crittenden. The latter had been intrenched at this point and at Beech Grove, but on the approach of Gen. Thomas, conceiving his position not sufficiently strong, he determined to act on the offensive. The Confederate column was led by Gen. Felix K. Zollicoffer. A severe contest ensued, in which Gen. Zollicoffer was killed, and the Confederates defented. The loss of the Coufederates was 192 killed and 62 wounded; that of the Nationals was 39 killed and 203 wounded.

Mill'stadt, in *Illinois*, a post-village and township of St. Clair county, about 10 miles south-west of Bellville.

Mill'stone, *n.* A large circular stone used for grinding grain. See BUHRSTONE, and MILL.

To see into, or *through a millstone*, to penetrate with accuracy; to be acute or sharp-sighted; to observe with judicial exactness of scrutiny; as, he is shrewd enough *to see through a millstone* further than any of us. (Used as a colloquial proverbialism.)

Mill'stone, in *New Jersey*, a flourishing post-township of Somerset co., nbout 25 m. N.E. of Trenton.

Millstone, in *Pennsylvania*, a thriving post-township of Elk co.

Millstone-grit, *n.* (*Geol.*) A group of strata consisting of coarse-grained quartzose sandstone, which occurs between the mountain limestone and the superincumbent coal formations.

Millstone River, in *New Jersey*, rises in Monmouth co., and flowing N., enters the Raritan from Somerset co.

Mill'street, a market-town of Ireland, in co. Cork, Munster, abt. 20 m. E. of Killarney; *pop.* 2,162.

Mill's Village, in *Maine*, a village of Waldo co., abt 20 m. N. by E. of Belfast.

Mill'-tail, *n.* The flow or current of water that has passed a mill-wheel: — correlative to *mill-head.*

Mill'-tooth, *n.*; *pl.* MILL-TEETH. A molar tooth; a grinder.

Mill'town, in *Indiana*, a post-village of Crawford co., abt. 110 m. S. by W. of Indianapolis.

Mill'town, in *New Jersey*, a village of Hunterdon co., abt. 11 m. W.S.W. of Flemington.

Milltown, in *New York*, a village of Putuam co., abt. 100 m. S. of Albany.

Milltown, in *Pennsylvania*, a village of Bradford co.

—A post-village of Chester co., abt. 4 m. E. of West Chester.

—A village of Montgomery co., abt. 8 m. N. by E. of Philadelphia.

Mill'town-Malbay, a town of Ireland, in the co. Clare, Munster, abt. 18 m. W. of Ennis; *pop.* 1,200.

Mill'view, in *Virginia*, a village of Fauquier co.

Mill Village, in *New Hampshire*, a post-village of Sullivan co.

Mill'ville, in *Alabama*, a village of Butler co., abt. 65 m. S.S.W. of Montgomery.

—A village of Marion co.

Millville, in *California*, a village of Lassen co.

—A post-village of Shasta co., abt. 20 m. E. of Shasta.

Mill'ville, in *Indiana*, a post-village of Henry co., about 6 m. E. by S. of New Castle.

Mill'ville, in *Iowa*, a post-township of Clayton co.

Mill'ville, in *Massachusetts*, a post-village of Worcester co., about 23 m. S.E. of Worcester. *Pop.* (1897) 2,450.

Mill'ville, in *Missouri*, a post-village of Ray co., about 150 N.W. of Jefferson City.

Mill'ville, in *New Jersey*, a city of Cumberland co., about 40 m. S. by E. of Camden, contains most extensive glass works. *Pop.* (1895) 10,466.

Mill'ville, in *New York*, a post-village of Orleans co., about 40 m. W. of Rochester.

Mill'ville, in *Ohio*, a post-village of Butler co., about 22 m. N.N.W. of Cincinnati.

—A village of Delaware co., about 27 m. N.N.W. of Columbus.

Mill'ville, in *Pennsylvania*, a township of Cambria co.

—A post-village of Columbia co., about 85 m. N.N.E. of Harrisburg.

Mill'ville, in *Tennessee*, a post-village of Lincoln co., about 100 m. S. by E. of Nashville.

Mill'ville, in *Texas*, a post-village of Rush co., about 10 m. N.E. of Henderson.

Mill'ville, in *Utah*, a post-precinct of Cache co., about 5 m. S.S.E. of Logan.

Mill'ville, in *Virginia*, a village of King George co., abt. 70 m. N.N.E. of Richmond.

Mill'ville, in *Wisconsin*, a post-village and township of Grant county, about 14 miles E.S.E. of Prairie du Chien.

Mill'wood, in *Indiana*, a village of Kosciusco co., abt. 14 m. N.W. of Warsaw.

Mill'wood, in *Ohio*, a township of Guernsey co.

—A post-village of Knox co., nbt. 55 m. N.E. of Columbus.

Mill'wood, in *Virginia*, a post-village of Clarke co., abt. 140 m. N. by W. of Richmond.

Mill'-work, *n.* The collective plant or working machinery of a mill, as of cotton-mills, &c.

Mill'-wright, (*-rit,*) *n.* A mechanic engaged in the construction of mills.

Milman, HENRY HART, an English divine and author, b. in London, 1791, concluded his education at Oxford, of which university he was elected Fellow. In 1815 he published a tragedy, entitled *Fazio*, which was successfully played at Covent-Garden theatre. In 1817 he entered into holy orders, and obtained a living at Reading. In 1820 he produced *The Fall of Jerusalem*, a sacred poem, founded upon Josephus's narrative. The university of Oxford appointed him its professor of poetry in the following year. The *History of Christianity from the Birth of Christ to the Abolition of Paganism in the Roman Empire*, was his next important publication. In 1849 he produced a beautiful edition of Horace, adding to it a most interesting life of the poet. In the same year he was appointed dean of St. Paul's, and shortly afterwards gave to the world a continuation of his *History of Christianity*, under the form of a *History of Latin Christianity.* He likewise produced a new and copiously annotated edition of Gibbon's *Decline and Fall of the Roman Empire.* In addition to the poem already mentioned, he was the author of *The Martyr of Antioch*, *Belshazzar*, and *Anne Boleyn.* D. 1870.

Mil'mine, in *Illinois*, a post-village of Piatt co., abt. 55 m. E. by N. of Springfield.

Milne-Edwards, HENRI, one of the most profound naturalists of the age, and one of the most eminent representatives of the French school of natural history, b. at Bruges, 1800, was professor of entomology at the Jardin des Plantes, and of zoölogy and physiology at the Faculté des Sciences of which he is president. His principal works are, *Monograph of the Crustacea* (1837–1841); *Elements of Zoölogy*, 4 vols. containing 600 illustrations (2d ed. 1840–1850); and *Comparative Anatomy of Men and Animals* (1855–1857).

Mil'ner, in *Georgia*, a post-village of Pike co., abt. 46 m. N.W. of Macon.

Mi'lo, a celebrated wrestler and athlete of Crotona in Italy, of extraordinary strength and endurance. Some of his feats of strength are perfect fables; such as the story told of his carrying a live bullock on his shoulders, killing it with one blow of his fist, and concluding the performance by eating the entire carcass for his dinner. He obtained 7 prizes at the Olympic games. His death was characteristic of his life and habits: attempting to tear open a split tree, to reach the honey within, the tough oak rebounded, and grasping both hands, as in a vice, held him a prisoner, where some wild beasts devoured him: about 500 years B.C.

Milo, TITUS ANNIUS, a Roman tribune and demagogue, who formed several parties for the purpose of obtaining the consulate. He was opposed by Claudius, and supported by some of the first members of the senate. In a quarrel bet. Clandius and Milo, on the Appian Way, the former was slain by some of the domestics of the latter. Cicero undertook to plead the cause of Milo; but the rostrum being surrounded by soldiers and a crowd of people, who expressed their disapprobation, he was so dismayed as to be unable to proceed. Milo was exiled to Marseilles, whither the orator sent him his discourse; on which he said, "How fortunate it is that this oration was not delivered, for then I should have been acquitted, and have never known the delicious flavor of these Marseillian mullets." He was killed B.C. 48.

Mi'lo, (anc. *Melos,*) an island of the Grecian Archipelago, in the Mediterranean, Lat. 36° 45′ N., Lon. 24° 23′ E.; *area*, 65 sq. m. The surface is mountainous, volcanic, and barren, except in the valleys, where the soil is very fertile. It is now almost depopulated, by the ravages of the plague, the badness of the water, and the prevalence of malaria. *Chief Towns.* Milo, the cap., and Castro. *Pop.* 4,000.

John Milton

1608–1675

Mil'lo, In *Illinois*, a post-township of Bureau county.

Mil'lo, In *Iowa*, a township of Delaware co.

Mil'lo, in *Maine*, a post-village and township of Piscataquis county, about 35 miles N. by E. of Bangor.

Mil'lo, in *New York*, a twp. of Yates co.

Mil'lo Cen'tre, in *New York*, a post-village of Yates co., abt. 4 m. S. of Penn Yan.

Miloradowitsch, MICHAEL, (COUNT,) a Russian general, distinguished in the wars against Napoleon, 1770–1820.

Mil'pitas, In *California*, a post-village of Santa Clara co., abt. 8 m. N.N.E. of San Jose.

Milroy', in *Indiana*, a post-village of Rush co., abt. 8 m. S. of Rushville.

Milroy', in *Pennsylvania*, a post-village of Mifflin co., abt. 10 m. N. of Lewistown.

Milt, *n.* [A. S., L. Ger., D., and Dan.; Icel. *milti;* Ger. *milz;* akin to A. S. *meltan*, to liquefy. See MELT.] (*Zoöl.*) The sperm of male fish, susceptible of easy liquefaction. (*Anat.*) The spleen, a viscus situated in the left hypochondrium, under the diaphragm.

—*v. a.* To impregnate, as the roe or spawn of the female fish.

Milt'er, *n.* A male fish.

Miltiades, (*mil-ti'ä-dees,*) a celebrated Athenian general, hero of Marathon, was the youngest son of Cimon, and succeeded his brother Stesagoras, about B. C. 515, as tyrant of the Chersonese. He took part in the invasion of Scythia by Darius, held his government of the Chersonese at least 22 years, and retired to Athens in 493. On occasion of the second Persian invasion of Greece, under Datis and Artaphernes, 490, *M.* was chosen one of the ten generals, and signalized himself by a great victory over the Persians, on the field of Marathon. Having persuaded the Athenians to give him the command of a fleet, he used it for private ends in an attack on Paros. The attack failed, *M.* was severely wounded, and on his return to Athens was prosecuted and imprisoned for deceiving the people. His death took place in prison soon after.

Fig. 1793.—MILTIADES.

Milti'ades, or **Melchi'ades, (St.,)** was pope from 311 to 314.

Mil'ton, JOHN, the greatest of the English poets, B. in London, Dec. 9, 1608. His father, a notary, was a man of cultivated mind, and gave him a careful education, which was continued at St. Paul's School and the university of Cambridge. He entered the latter in 1624, and quitted it in 1631, without taking his degree of M. A. He distinguished himself at Cambridge by the excellence of his Latin poems. The next few years he spent at his father's house in Buckinghamshire, devoting himself with such earnestness as only genius can to study and self-cultivation. Some of his minor poems were probably written during this period. In 1637 he set out for Italy, and visiting Paris on his way, made acquaintance with Grotius. At Florence he visited the aged Galileo in his prison, and at Rome Cardinal Barberini received him kindly. After three years' absence, news reached him of the political troubles which were beginning in England, and, passionate lover of liberty as he was, he hastened home, to take part in the struggle. He almost immediately began that career as a controversialist, which, while it has exposed him to much obloquy from those who dissent from his opinions, has enrolled his name among the noblest and most eloquent of the writers of Old English prose. His polemical writings are keen and sometimes classic; but they are singularly able. His first work of this sort was a treatise *Of Reformation*, published in 1641, to aid the attack then made against the bishop. In 1643 he married Miss Powell, daughter of an Oxfordshire gentleman attached to the royal cause. She very soon returned to her father's house, and for her desertion was repudiated by *M.*, who soon after published successively his several treatises on divorce. About the same time he passed to the side of the Independents, and wrote the *Areopagitica*, an appeal in behalf of the freedom of the press, and the most magnificent of his prose works. A reconciliation with his wife was brought about by friendly intervention, and she returned to him. In 1649, he was appointed Latin Secretary to the Council of State: and among the duties assigned to him were those of writing a refutation of the *Eikon Basilike* then attributed to Charles I., and a reply to the work of Salmasius in defence of the king and the monarchy. Hence the *Eikonoklastes*, and the *Defence of the People of England*. On the establishment of the Protectorate *M.* became secretary to Cromwell, and remained so till the death of the latter in 1658. Several years before that time he had become totally blind, deliberately and heroically preferring, as he says, the loss of his sight to the desertion of his duty. The last short intervals of sight allotted him were devoted to the composition of the *Defence*. His pathetic reference to his blindness in the *Paradise Lost* is well known: less known, but at least equally deserving to be so, are the passages in which he speaks of it in the *Defence*, and in one of his Latin letters (XV.). The Restoration of 1660 consigned *M.* to obscurity. At first he thought it necessary to conceal himself; his friends are said to have made a mock funeral for him; and a proclamation was actually issued for his apprehension, and that of Goodwin the theologian. But, though the most offensive of his books were burned by the hangman, he was included in the Act of Indemnity; and it is even asserted that his former office was offered to him, but of course refused. He had in the end inherited but little from his father, had failed in getting payment of the portion of his first wife, had lost money lent, and had had his house accidentally burned. Accordingly, his circumstances were now indifferent, yet not very low for a man so moderate in his habits. He published, in 1661, a Latin grammar in English. In 1664 he married his third wife, Elizabeth Minshull, of a good Cheshire family.—In 1665, being in his 57th year, he completed *Paradise Lost*, and it was published in 1667. It was sold for five pounds to a bookseller, who engaged to pay a like sum for each 1,500 copies that should be sold from each of three editions of two thousand each. In two years the first of these additional payments was due and made; a second edition was published in 1674, and a third in 1678. This was a large sale for a serious poem in an age like that of the Restoration; and though it could not meet with applause from the fashionable debauchees of the court, the hearty and respectful admiration of Dryden was not the only tribute that was immediately paid, by competent judges, to the extraordinary merit of the only great epic in the English language. The poet next published his *History of England down to the Norman Conquest;* and in 1671 appeared the *Paradise Regained*, to which was subjoined *Samson Agonistes*. His second epic was written with great quickness, perhaps altogether during a retirement of several months which he made to Chalfont in Buckinghamshire, on the breaking out of the plague in London in 1665. John Milton, one of the greatest of poets, and the very greatest of all poets who have consecrated their genius to the service of Christianity, had now, amid evil men and evil days, discharged the debt which, many years before, he had proudly said that he held himself to owe to posterity. He had enriched the world of poetry with a host of the noblest images and sentiments, and in his sacred epic had given to English diction and rhythm new and original developments.—His literary labors closed with a treatise on Logic, very ably written, in Latin; a new treatise in controversial theology, *Of True Religion*, directed against Popery; and a Latin collection, published in 1674, of his private letters and academical exercises. To the latest years of his life may have belonged the completion of his Latin treatise, *Of Christian Doctrine*, which, left unpublished till it was disinterred from the State Paper Office in 1823, showed him to have become decidedly an Arian. In July, 1674, having long been distressed by gout, and thinking himself near death, he gave his brother directions as to the disposal of his property. These throw some light on his domestic position. The facts exhibit traces of those infirmities of temper with which the great poet is traditionally charged. The current account, which represents his daughters as having been trained to read and write for him, appears to be true only as to Deborah, the youngest; and all of them had lived uncomfortably with him and his third wife, and had left his house some years before his death. He was chiefly served in his studies and in composition by Ellwood the Quaker, by other young men who were attracted by his genius, and by boys whom he hired. He now intimated his intention (which his widow unsuccessfully attempted to establish as a completed will) of bequeathing all his property to his wife, leaving to his daughters only, besides what he "had done for them," a claim on their mother's family for her portion still unpaid. He spoke of them as his "unkind children," and said they had been "very undutiful to him." He died so easily that the moment was not perceived, on Sunday, the 8th of November, 1675, and was buried beside his father, in the chancel of St. Giles, in Cripplegate.

Fig. 1794.—MILTON.

Mil'ton, a vill. of Halton co., prov. of Ontario, abt. 36 m. S.W. of Toronto.

Milton, a village of Shefford co., prov. of Quebec.

Milton, In *Alabama*, a post-village of Autauga co., about 40 m. W.N.W. of Montgomery.

Milton, In *Connecticut*, a post-village of Litchfield co., about 35 m. W. of Hartford.

Milton, In *Delaware*, a post-town of Sussex co., about 8 m. S.E. of Milford.

Milton, in *Florida*, a city, cap. of Santa Rosa co., on Blackwater river, near its mouth in Pensacola Bay, 25 m. N.E. of Pensacola, on Louis. & Nash. R.R. *Pop.* (1897) 1,650.

Milton, in *Georgia*, a N. central co.; *area*, about 160 sq. m. *Rivers.* Chattahoochee river, and some less important streams. *Surface*, somewhat hilly; *soil*, fertile. *Cap.* Alpharetta. *Pop.* (1890) 6,208.

Milton, in *Illinois*, a village of Brown co.

—A township of Du Page co.

Milton, in *Indiana*, a township of Jefferson co.

—A post-town and township of Wayne co., on the Ft. W., Cin. & Lonisv. and the C., C., C. & St. L. R.Rs., 16 m. S.W. of Richmond. *Pop.* (1897) 900.

Milton, in *Kentucky*, a post-village of Trimble co., on the Ohio river, nearly opposite Madison, Indiana.

Milton, in *Massachusetts*, a post-town and township of Norfolk co., about 8 m. S. of Boston. *Pop.* (1895) 5,518.

Milton, in *Michigan*, a township of Cass co.

—A township of Antrim co.

Milton, in *Minnesota*, a post-town and township of Dodge co.

Milton, in *Mississippi*, a village of La Fayette co.

Milton, In *Missouri*, a post-village of Atchison co., on the Kan. City, St. J. & C. B. R.R., about 12 m. E. of Huntsville.

Milton, in *New Hampshire*, a post-town and township of Strafford co., about 30 m. E.N.E. of Concord. *Pop.* (1897) 1,680.

Milton, in *New Jersey*, a post-village of Morris co., about 20 m. N. of Morristown.

Milton, in *New York*, a township of Saratoga co.

—A post-village of Ulster co., about 80 m. S. of Albany.

Milton, in *North Carolina*, a post-village of Caswell co., about 75 m. N.W. of Raleigh. *Pop.* (1897) 770.

Milton, in *Ohio*, a township of Ashland co.

—A township of Jackson co.

—A post-township of Mahoning co.

—A village of Stark co., about 100 m. N.E. of Columbus.

—A township of Wayne co.

—A township of Wood co.

Milton, in *Oregon*, a post-village of Umatilla co., 31 m. N.E. of Pendleton. *Pop.* (1897) 675.

Milton, in *Pennsylvania*, a thriving post-borough of Northumberland co., on the Susquehanna river, 13 m. N. of Sunbury, has extensive and varied manf. *Pop.* (1897) 6,400.

Milton, in *S. Carolina*, a village of Laurens dist., abt. 65 m. W.N.W. of Columbia.

Milton, in *Tennessee*, a post-village of Rutherford co., abt. 15 m. N.E. of Murfreesborough.

Milton, in *Vermont*, a post-township of Chittenden co.

Milton, In *Wisconsin*, a post-vill. and township of Rock co., abt. 8 m. N.E. of Janesville.

Milton Centre, in *Ohio*, a post-village of Wood co., abt. 30 m. S.S.W. of Toledo.

Milton Mills, in *Minnesota*, a village of Washington co., abt. 18 m. E. by S. of St. Paul.

Mil'tonsburg, in *Ohio*, a post-village of Monroe co., abt. 114 m. E. by S. of Columbus.

Mil'tonville, in *Mississippi*, a village of Wayne co., abt. 115 m. E.S.E. of Jackson.

Miltonville, in *Ohio*, a village of Butler co., abt. 30 m. N. of Cincinnati.

—A village of Wood co., abt. 55 m. W. of Sandusky.

Milton'ic, *a.* Pertaining or having reference to, or resembling, Milton, or his poetry; as, *Miltonic* verse.

Mill'ville, a village of the twp. and county of York, prov. of Ontario.

Mel'vine, *a.* (*Zoöl.*) Belonging, having reference to, or resembling birds of the Kite family.

Milvine, *n.* (*Zoöl.*) A bird of the Kite family.

Mil'vus, *n.* (*Zoöl.*) A genus of *Falconidæ*. The KITE, *q. v.*

Milwau'kee, in *Oregon*, a post-village of Clackamas co., abt. 7 m. N. of Oregon city.

Milwaukee, or MILWAUKIE, in *Wisconsin*, a river rising in Fond du Lac co., and flowing generally S.E. and S., enters Lake Michigan from Milwaukee co. Length, abt. 100 m., the last 30 m. of which are nearly parallel with the lake.

—A S.E. co., bordering on Lake Michigan; *area*, abt. 240 sq. m. *Rivers.* Milwaukee, Menomonee, and Root rivers, besides many smaller streams. *Surface*, level or gently undulating; *soil*, very fertile. *Cap.* Milwaukee. *Pop.* (1895) 287,922.

—A city, port of entry, and the cap. of the above co., on Lake Michigan, about 75 m. E. of Madison; Lat. 43° 3′ 45″ N., Lon. 87° 57′ W. *M.* is conveniently located at the mouth of the Milwaukee river, which flows through the city and has been rendered navigable to the heart of the city by vessels of every tonnage used on the lake. It forms one of the best harbors along the lakes, and with the numerous railroads centering here, affords almost unequalled facilities to commerce. *M.* is well built, and the houses, constructed of those peculiar light-yellow or cream-colored bricks, known as Milwaukee brick, present a very neat and attractive appearance.—*Manufactures.* Engines, machinery, iron and brass products, beer, flour, meat-packing, woollens, leather, agricultural implements, tobacco, clothing, distilled liquors, and various other products. As a grain market *M.* has of late fallen off; it contains, however, some of the best flouring-mills in the West, and

the representation of several of its prominent brands of flour is excellent in the Eastern and European markets. The receipts of grain of all kinds are over 20,000,000 bushels annually. *M.* is a port of entry for goods in bond, both by rail and water, and is the meeting point of 14 railroads and 11 lake steamship lines, all of which do a large business. The climate is peculiarly bracing and healthful, and the atmosphere remarkably clear and pure. The schools, free for all, are graded, and the higher as well as the elementary branches are taught in them. The city has a Chamber of Commerce, numerous banks and insurance companies, 2 orphan asylums, a Roman Catholic convent, and a hospital under the charge of the Sisters of Charity. Prominent among its public buildings are the County Court House, U. S. Custom House and Post-office Building, the Academy of Music, Music Hall, &c. There was a female college incorporated in 1846. Near the city has been erected a national asylum for disabled volunteer soldiers (Fig. 1795). The grounds on which it is built comprise about 400 acres, laid out with taste as a park immediately around the main edifice, and affording ample opportunity for such light outdoor work as the condition of the inmates will allow them to perform,

Fig. 1795.—SOLDIER'S NATIONAL ASYLUM AT MILWAUKEE.

and for which they receive pay. The streets of *M.* are wide, and parked between the roadway and the sidewalk, being lined by magnificent elms, whose branches, in the residential part, form a leafy archway over the drive. The public parks contain about 600 acres, and are connected by boulevards. A new and vast system of intercepting sewers is in operation. The public library contains over 60,000 volumes. In 1888 the Layton Free Art Gallery was completed at a cost for the building of $300,000. A new government building, to cost $2,000,000, a city hall, and a library and museum building are among the improvements projected or completed. There are numerous charitable homes, hospitals and asylums. Settled in 1835. *Pop.* (1900) 285,315.

Mime, *n.* [Fr., from Lat *mimus;* Gr. *mimos.*] (*Dram.*) A kind of dramatic burlesque formerly in vogue, which sustained the mimicry of real or living characters. — An actor in such performance; a buffoon; a burlesquer.

Mime'sis, *n.* [From Gr. *mimeisthai*, to mimic.] (*Rhet.*) Mimicry; close imitation of the voice or manner of another person.

Mimet'ic, Mimet'ical, *a.* [Gr. *mimetikos.*] Imitative: disposed to ape or mimic; as, the *mimetic* art.

Mim'ic, Mim'ical, *a.* [Fr. *mimique;* Lat. *mimicus*, from Gr. *mimikos, mimos*, a mime, actor, imitator.] Imitative; inclined to ape or imitate; having the faculty of imitating or burlesquing.

"Man is, of all creatures, the most *mimical*." — *Sir H. Wotton.*

—Consisting of imitation; partaking of the qualities of mimicry; droll; ludicrous; as, "*mimical* gestures." *Dryden.*

Mim'ic, *n.* One who practises mimicry or the art of imitation; a buffoon who strives to evoke derisive applause by copying in speech and manner the individuality of another person. — A mean or servile imitator.

"Of France the *mimic*, and of Spain the prey "—*Lord Peterborough.*

—*v. a.* To ape or imitate for sport or amusement; to seek to excite derisive applause by copying the voice or manner of another; to ridicule by burlesque imitation.

"Fiction . . . so *mimics* truth, it looks the very same."—*Granville.*

Mim'ically, *adv.* In a mimical or imitative manner.

Mim'icker, *n.* One who mimics; a mimic.

Mim'icry, n. Art or practice of mimicking the peculiarities of another; droll or ludicrous imitation to excite laughter or derision, and make sport.

Mimog'rapher, *n.* [Gr. *mimographos.*] One who writes farces, or adapts mimical pieces for the stage.

Mimo'sa, *n.* [Gr. *mimos*, a buffoon; the leaves seeming to sport with the hand that touches them.] (*Bot.*) The typical genus of the sub-order *Mimoseæ*. They are perennial herbs, shrubs, and trees, natives of tropical America. The most remarkable species is *M. pudica*, the Humble plant, or Sensitive plant. Stem shrubby, about a foot high; flowers small, capitate. It is occasionally cultivated for the interest excited by its spontaneous motion, the leaves bending, folding, and apparently shrinking away from the touch of the hand. — See SENSITIVE PLANT.

Fig. 1796. — MIMOSA NIPOTICA.

Mimo'seæ, *n.* (*Bot.*) A sub-order of plants, order *Fabaceæ*. DIAG. Corolla valvate in æstivation. The plants included in this sub-order are mostly natives of tropical regions, and are remarkable for yielding gum and astringent principles. The sub-order includes 29 genera and 1,000 species. — See ACACIA.

Mim'ulus, *n.* [Gr. *mimo*, an ape; from the resemblance of the ringent or grinning corolla.] (*Bot.*) A genus of plants, sub-order *Antirrhinideæ*. Perennial herbs, prostrate or erect, with square stems and opposite leaves; peduncle axillary, solitary, 1-flowered. *M. ringens*, the Monkey Flower, is a common inhabitant of ditches and mud soils throughout Canada and the U. States. Leaves sessile, serrate, acute, lanceolate; calyx tubular, 5-angled and 5-toothed; corolla pale blue, yellow within. The other principal species are *M. alatus*, the Wing-stem Monkey Flower, *M. luteus*, the Yellow Monkey Flower, and *M. cardinalis*, the Cardinal Monkey Flower. Some species are very frequent in flower gardens, and many fine varieties have resulted from cultivation (Fig. 1797). The little yellow-flowered MUSK-PLANT, not so common in gardens, is *M. moschatus*, a native of Oregon and other Western States.

Fig. 1797. — FLOWER MIMULUS. (*Hybridus tigrinus.*)

Min, or **Min-Kiang,** a river of China, rising in the Black Tea dist., and flowing in a S.E. direction through the prov. of Fo-kien, falls into Ho-sein Bay in Lat. 26° 8′ N., Lon. 119° 40′ E.

Mi'na, *n.* [Lat.] An ancient denomination of money among the Greeks. The Attic mina, which is the most frequently mentioned, contained 100 drachmæ, and was itself contained 60 times in an Attic talent, and was worth about $16.

Mi'na, DON FRANCISCO ESPOZ Y, a Spanish general and statesman, b. in Navarre, 1781, chief of the guerrillas when Spain was invaded by the French, 1809, defender of the constitution in 1812, and again in 1820. He became an exile on both occasions, but returned on the death of Ferdinand, and took an active part against Don Carlos, 1834. D. 1836.

Mi'na, in *New York*, a post-village and township of Chautauqua co., abt. 20 m. E. of Erie; *pop.* of township abt. 2,000.

Mi'nas-Geraes, a S.E. prov. of Brazil, lying between Lat. 14° 25′ and 23° S., and 40° 37′ and 53° 20′ W.: *area*, abt 160,847 sq. m. *M. G.* occupies the most elevated lands, and embraces the most populous dist. of Brazil. The prairies are covered with immense herds of wild cattle, and the inhabitants outside the towns are extensively engaged in stock-raising, the cheese of this prov. being held in high estimation. Gold and precious stones are found in large quantities, and form one of the most considerable sources of the imperial revenue. Iron is being mined and worked to some extent, and foundries have been established which furnish the castings and other machinery for the sugar-houses in the vicinity. *Cap.* Ouro-Preto. *Pop.* 1,480,000.

Min'aret, *n.* [Fr.; Ar. *minaurat*, a light-house; otherwise, *manarat;* akin to Heb. *minora*, a chandelier, a lantern.] (*Arch.*) In modern architecture, a slender, lofty turret, (usually belonging to a mosque,) having a balcony, from which the "Faithful" are called to prayer.

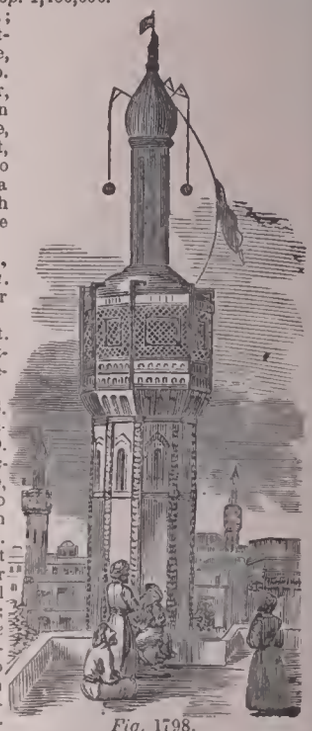


Fig. 1798.
MINARET IN ALEXANDRIA.
(Used as a marine telegraph.)

Minato'rially, Min'atorily, *a.* In a minatory or threatening manner.

Min'atory, *a.* [Lat. *minatorius.*] Threatening; menacing; rebuking.

Mince, *v. a.* [A. S. *minsian;* Swed. *minska;* Icel. *minka;* O. Fr. *mencer;* It. *minuzzare*, from Lat. *minuo*, to make smaller, to break in pieces, from *minus*, less; Sansk. *manak*, too little, not enough.] To cut or chop into very small pieces; to chop fine; to hash; as, to *mince* a chicken. — To diminish in speaking; to utter one's words in an affected or namby-pamby manner; to retrench, cut off, or omit, as a part for the purpose of suppressing the truth; to extenuate or palliate in representation; to speak lispingly, or with affected softness of tone; to clip, as words or expressions.

"Siren, now *mince* the sin,
And mollify damnation with a phrase."— *Dryden.*

—*v. n.* To walk trippingly, or with small or short steps; to perambulate with affected nicety of manner; to deport one's self in a lackadaisical or namby-pamby fashion: to speak with scrupulosity, or with an assumption of finical delicacy; as, she *minces* her words better than she *minces* veal.

"A *mincing* step, small voice, and languid eye." — *Dunciad.*

Minar'gent, *n.* (*Chem.*) A substance consisting of 100 parts, by weight, of copper, 70 of nickel, 5 of antimony, and 2 of aluminum, of which the first three are melted together, and granulated by pouring into water. The grannies, after being dried, are again melted, and the aluminum then added, with 1½ per cent. of a flux consisting of 1 part of borax and half a part of fluoride of calcium. This flux is to be introduced in smaller and smaller quantities successively, as the melting progresses. The principal difficulty in the process consists in bringing about the union of so large an amount of nickel into an homogeneous mass with the aluminum, for which it has but little affinity. *M.* does not quite equal silver in whiteness, malleability, resonance and specific gravity, but as it considerably exceeds it in durability, metallic luster and maintenance of the white color, had at one time some use in the arts.

Mi'nas-No'vas, formerly BOM-SUCCESSO DAS MINAS-DE TANADO, a town of Brazil, abt. 230 m. N.N.E. of Ouro-Preto; *pop.* 3,000.

Mi'naville, in *New York*, a post-village of Montgomery co., abt. 35 m. W.N.W. of Albany.

Minced-meat, (*mĭnst-*) *n.* (Often, and popularly, MINCE-MEAT.) Meat chopped into small particles.

Minced-pie, (*mĭnst-*) *n.* (Colloquially, MINCE-PIE.) A very excellent pie, when properly made, consisting of minced-meat (dashed with cognac) and other materials, enclosed and baked in paste, and found very good to an appreciable palate.

Mince'-meat, Mince'-pie, *n.* See *supra.*

Min'chinhamp'ton, a town of England, co. of Gloucester, on the Cotswold Hills, 12 m. S.E. of Gloucester, and 89 m. N.W. of London. *Manuf.* Woollen cloth. *Pop.* 4,500.

Minchinmadiva, or MINCHINMA'DOM, (*min-chin-ma-dee'va,*) a mountain-peak of the Andes in Patagonia, abt. Lat. 42° 50′ S. *Elevation*, 5,000 feet.

Min'cingly, *adv.* In small part; not fully. — In a mincing, affected manner: lackadaisically: with an assumption of finical delicacy or scrupulosity.

Mincio, (*min'cho,*) a river of N. Italy, having its source in the Lago di Garda, and after a S. course of 38 m., unites with the Po, 12 m. S.E. of Mantua. — The French, under Napoleon Bonaparte, defeated the Austrians on the banks of this river, May 29, 1796. — Gen. Brun crossed it, Dec. 25, 1800. — Eugène Beauharnais gained a victory over the Austrians, Feb. 8, 1814. — In 1848, on the outbreak of the revolution in Italy, the Austrian general Radetzky retreated to the *M.*, April 2. He was followed by Charles Albert, who forced the passage of the river, April 8. Charles Albert, after losing the battle of Valeggio, was compelled, July 26, to retrace his

stepa and abandon the line of the *M.* — The Austrians retreated to the left bank after the battle of Magenta, in June, 1859, and recrossed it July 23, to fight the battle of Solferino. The allied French and Sardinians followed them across the river Aug. 1, and found the Austrians had taken shelter in the lines of the Quadrilateral.

Mind, *n.* [A. S. *gemynd*, mind, memory; D. *gemœd;* Dan. *minde*, allied to Goth. *munan*, to think; Lat. *mens;* Sansk. *menas*, mind, from *man*, to think.] The intellectual or intelligent power in man; the understanding; the power that conceives, judges, or reasons; a manifestation of the soul. "When the mind," says Locke, "turns its view inward upon itself, thinking is the first idea that occurs; wherein it observes a great variety of modifications, whence it frames to itself distinct ideas. Thus the perception annexed to any impression on the body by an external object, is called *sensation;* when an idea recurs without the presence of the object, it is called *remembrance;* when sought after by the mind, and again brought into view, it is *recollection;* when the ideas are taken notice of, and, as it were, registered in the memory, it is *attention;* when the mind fixes its view on any one idea, and considers it on all sides, it is called *study.*"

—Intellectual capacity; liking; choice; inclination; propensity; affection; will; desire; intention; purpose; design. — Thoughts; sentiments; opinion. — Memory; remembrance; as, to call to *mind*, to bear in *mind.*

—*v. a.* To fix the mind on; to attend to; to fix the thoughts on; to notice; to mark; to observe; to heed; to regard; to attend to with submission; to intend; to mean. — To have in remembrance; to bear in mind.

—*v. n.* To incline; to be disposed.

"One of them *mindeth* to go into rebellion." — *Spenser.*

Mindana'o, one of the Philippine Islands. See MAGINDANAO.

Mind'ed, *a.* Disposed; inclined; — used chiefly in compounds, as right-*minded.*

Min'den, a town of Prussia, prov. of Westphalia, on the Weser, 60 m. E.N.E. of Münster. It is strongly fortified, and has extensive manufactures, consisting of woollen and linen fabrics, hosiery, gloves, soap, tobacco, and leather. *Pop.* 15,453. — Here, Aug 1, 1759, the French, under Marshal de Contades, were defeated by the allied English, Hessians, and Hanoverians, under Prince Ferdinand of Brunswick.

Min'den, in *Louisiana*, a post-town, cap. of Webster parish, 30 m. E.N.E. of Shreveport. *Pop.* (1897) 1,420.

Min'den, in *Michigan*, a township of Sanilac co.

Min'den, in *Missouri*, a village of Lawrence co., about 40 m. W.S.W. of Springfield.

Min'den, in *New York*, a post-township of Montgomery co. *Pop.* (1897) 5,250.

Min'den City, in *Michigan*, a post-village of Sanilac county.

Min'denville, in *New York*, a village of Montgomery co., about 60 m. W.S.W. of Albany.

Mindererns' Spirit, *n.* (*Pharmacy.*) Solution of acetate of ammonia, first recommended as a febrifuge by Raymond Mindererus, a physician of Augsburg.

Mind'ful, *a.* Bearing in mind; attentive; regarding with care; heedful; observant; regardful.

Mind fully, *adv.* Attentively; heedfully.

Mind'fulness, *n.* Quality of being mindful; attention; regard; heedfulness.

Mind'ing, *n.* Attention; mindfulness.

Mind'less, *a.* Destitute of mind or of intellectual powers; unthinking. — Stupid; inattentive; heedless; forgetful; negligent; careless

Mindo'ro, one of the Philippine Islands, in the Eastern Archipelago, between Lat. 12° 21′ and 13° 30′ N., Lon. between 120° 24′ and 121° 24′ E.; *area*, 4,150 sq. m. *Pop.* 30,000.

Mindo'ro, in *Illinois*, a post-village of La Crosse co., abt. 18 m. N. by E. of La Crosse.

Mine, *pron.;* also a *pronominal adj.* [A. S., O. Ger., and Icel. *min.*] My; belonging to me.

—*n.* [Fr. *mine;* Sp. *minar;* Lat. and It. *mina.*] In its strict sense, a mine is an opening in the ground from which anything is dug. The name is not properly applied until an opening is made; although now the term is generally used to signify coal, lead, iron, and similar minerals before an opening is made for digging them out. In opposition to the underground works, which constitute the mine properly so called, the term usually comprehends all the ground on the surface, together with the steam-engines, water-wheels, and other machinery and appendages for drainage, the extraction of ores and their mechanical preparation, with various buildings and erections. From the earliest antiquity, the art of mining has been practised, and it has formed a branch of industry in the most barbarous, as well as the most civilized countries. In this country, where almost every precious metal or useful mineral is found in abundance, mining is a very important source of trade and wealth; but the matter is too large and too diverse for being grouped under the same head. By referring to the names of the metals, mineral substances, or places where they are found, the inquirer will get a succinct account.

—A rich source of wealth or other good.

(*Mil.*) A subterranean canal or passage dug under the wall or rampart of a fortification, where a quantity of powder may be lodged, which, being exploded, forms a breach in the rampart, or destroys any of the enemy's troops or works in its vicinity. Mines are either *offensive*, in which case they are constructed by the besiegers of a fortified place; or *defensive*, in which case they are called *counter-mines*, and are executed by the besieged. The cavity for the powder is called a *chamber*, the approach to this a *gallery*, or in very small mines, a *branch.*

(*Law.*) Mines of gold, silver, and the precious metals belong to the sovereign, but are held by him concurrently with the ownership of the soil, and pass by a grant of the land without exception or reservation. In New York and Pennsylvania, the State's right as sovereign is asserted. Mines of other minerals belong to the owner of the soil.

—*v. n.* To dig a mine or pit in the earth; to dig for ores, &c.

—To form a subterraneous canal or hole by scratching; to form a burrow or lodge in the earth, as animals.

—*v. a.* To undermine; to sap; to dig away or otherwise remove the substratum or foundation; to ruin or destroy by slow degrees.

Mine Creek, in *Arkansas*, a township of Hampstead co.

Mine'-dial, *n.* A magnetic compass used by miners.

Mine'head, a promontory of Ireland, on the coast of co. Waterford, Munster, abt. 6 m. S.S.W. of Ardmorehead.

Min'er, *n.* One who digs for metal ores or other minerals.

—One who makes military mines; as, the sappers and *miners* of an army.

Min'eral, *n.* [Fr. *mineral.*] Any natural body destitute of organization, which naturally exists within the earth or at its surface, and which is neither vegetable nor animal.—See MINERAL KINGDOM.

—*a.* Pertaining to minerals; consisting of minerals.

—Impregnated with minerals; as, *mineral* waters.

Min'eral, in *California*, a township of Plumas county.

Min'eral, in *Illinois*, a post-township of Bureau county.

Mineral Adipocere, MINERAL TALLOW, HATCHETTIN, *n.* (*Min.*) A greasy bitumen, found in the argillaceous ores of iron.

Mineral Carbon, MINERAL CHARCOAL, *n.* (*Min.*) A name given to the thin fibrous layers of nearly pure carbon of a silky-black color, which occur in the coal measures of Whitehaven and elsewhere. By the miners it is called *mother of coal.*

Mineral Coal, *n.* A general name in which are included all varieties of coal, as lignite, bituminous coal, anthracite, &c., of which we propose to give here a collective account. (*Chem.*) All the varieties of coal are characterized by the presence of carbon as a largely predominant constituent, associated with smaller quantities of hydrogen, oxygen, nitrogen, sulphur, and certain mineral matters which compose the ash. Coal appears to have been formed by a peculiar decomposition or fermentation of buried vegetable matter, resulting in the separation of a large proportion of its hydrogen in the form of marsh-gas (CH_4) and similar compounds, and of its oxygen in the form of carbonic acid (CO_2), the carbon accumulating in the residue. Marsh-gas and carbonic acid are the ordinary products of the fermentation of vegetable matter, and a spontaneous carbonization is often witnessed in the "heating" of damp hay. But just as the action of heat upon wood produces a charcoal containing small quantities of the other organic elements, so the carbonizing process by which the plants have been transformed into coal, has left behind some of the hydrogen, oxygen, and nitrogen; the last, as well probably, as a little of the sulphur, having been derived from the vegetable albumen and similar substances which are always present in plants. The chief part of the sulphur is generally present in the form of iron pyrites, derived from some extraneous source. The examination of a peat-bog (*q. v.*) is instructive with reference to the formation of coal, as affording examples of vegetable matter in every stage of decomposition, from that in which the organized structure is still clearly visible, to the black carbonaceous mass which only requires consolidation by pressure in order to resemble a true coal. The three principal varieties of coal — *lignite*, *bituminous coal*, and *anthracite* — present us with the material in different stages of carbonization; the lignite, or brown coal, presenting indications of organized structure, and containing considerable proportions of hydrogen and oxygen, while anthracite often contains little else than carbon and the mineral matter or ash. The following table shows the progressive diminution in the proportions of hydrogen and oxygen in the passage of wood to anthracite:

	Carbon.	*Hydrogen.*	*Oxygen.*
Wood	100	12·18	83·07
Peat	100	9·85	55·67
Liguite	100	8·37	42·42
Bituminous coal	100	6·12	21·23
Anthracite	100	2·84	1·74

The combustion of coal is a somewhat complex process, in consequence of the rearrangement which its elements undergo when the coal is subjected to the action of heat. As soon as a flame is applied to kindle the coal, the heated portion undergoes destructive distillation, evolving various combustible gases and vapors, which take fire and convey the heat to remoter portions of the coal. While the elements of the exterior portion of coal are undergoing combustion, the heat thus evolved is submitting the interior of the mass to destructive distillation, resulting in the production of the various compounds of carbon and hydrogen. Some of these products, such as marsh-gas (CH_4) and olefiant gas (C_2H_4), burn without smoke while others, like benzole (C_6H_6), and naphthaline ($C_{10}H_8$), which contain a very large proportion of carbon, undergo partial combustion, and a considerable quantity of carbon, not meeting with enough heated oxygen in the vicinity to burn it entirely, escapes in a very finely divided state as smoke or soot, which is deposited in the chimney, mixed with a little carbonate of ammonia and small quantities of other products of the distillation of coal. When the gas has been expelled from the coal, there remains a mass of coke or cinder, which burns with a steady glow until the whole of its carbon is consumed, and leaves an *ash*, consisting of the mineral substances present in the coal. The final results of the perfect combustion of coal would be carbonic acid (CO_2), water (H_2O), nitrogen, a little sulphurous acid (SO_2), and ash. The production of smoke in a furnace supplied with coal may be prevented by charging the coal in small quantities at a time in front of the fire, so that the highly carbonaceous vapors must come in contact with a large volume of heated air before reaching the chimney. In arrangements for consuming the smoke, hot air is judiciously admitted at the back of the fire, in order to meet and consume the heated carbonaceous particles before they pass into the chimney. The difference in the composition of the several varieties of coal gives rise to a great difference in their mode of burning. The following table exhibits the composition of representative specimens of the three principal varieties:

	Lignite.	*Bituminous.*	*Anthracite*
Carbon	66·32	78·57	90·39
Hydrogen	5·63	5·29	3·28
Nitrogen	0·56	1·84	0·33
Oxygen	22·86	12·88	2·98
Sulphur	2·36	0·39	0·91
Ash	2·27	1·03	1·61
	100·00	100·00	100·00

The lignites furnish a much larger quantity of gas under the action of heat, and therefore burn with more flame than the other varieties, leaving a coke which retains the form of the original coal; while bituminous coal softens and cakes together, — useful property, since it allows even the dust of such coal to be burnt, if the fire be judiciously managed. Anthracite (*stone coal*) is much less easily combustible than either of the others; and since it yields but little gas when heated, it usually burns with little flame or smoke. This variety of coal is so compact that it will not usually burn in ordinary grates, but is much employed for furnaces.

(*Geol.*) The essential characters of coal in practical geology are derived from its color, texture, composition, and uses as a combustible. The associated rocks are not unimportant and the thickness and number of the coal-seams within certain limits greatly affect the value of a deposit. Coal differs from most rocks very distinctly. Some black minerals, such as obsidian, black quartz, and others, resemble it, but are distinguishable in a moment by texture, and also by their being non-combustible. There is, however, a rock into which it passes by gradations which are often hardly perceptible. Generally alternating with shale or hard clayey bands, these have not unfrequently obtained from the coal so much carbon and various hydrocarbons as to be quite black, and even to burn with facility, though with a large percentage of ash. It is sometimes not easy to determine to which of the two rocks a given specimen belongs. Coal is very widely distributed over the earth. It is found in all the principal divisions of the globe, and is of all geological ages. Whatever its origin may have been, it is certainly a mineral that has been in course of formation since the existing state of the world began. It probably is so still. Silurian coals have not indeed yet been found, though strong indications exist of large deposits of carbon of that period. Devonian coal is abundant. The carboniferous series is that which yields the chief supplies in Western Europe and Eastern North America. Permian coal is probable. Liassic coal abounds, and the whole of the oölitic series seems to contain carbonaceous deposits, as we advance towards the East. Cretaceous coal occurs at intervals in Hungary and the East, not indeed so good as could be desired, but still true coal, and excellent beds of true coal of the older tertiary period are found in mountain valleys of the Carpathians. Besides these are the enormous deposits of lignite or brown coal, widely spread in various parts of the world, but generally of tertiary date. The most remarkable coal-fields of Europe at present in actual work are the following: England, Belgium, France, Rhenish Prussia, Silesia, Bohemia, Spain, and Russia. Those of Spain and Portugal are the least developed. The Russian deposits are also not very actively handled. The carboniferous areas of N. America have been pointed out in the article CARBONIFEROUS AGE, *q. v.* The regions corresponding to the local period, that we take from the *Manual of Geology* of our great mineralogist and geologist, James D. Dana, are: 1. The great *Appalachian* coal-field, covering parts of Pennsylvania, Ohio, Virginia, E. Kentucky, E. Tennessee, and Alabama. The workable area is estimated at 60,000 sq. m. The whole thickness of the formation is 2,500 or 3,000 ft.; aggregate thickness of the included coal beds, over 120 ft. in the Pottsville and Tamaqua valley, about 62 ft. near Wilkesbarre, 25½ ft. at Pittsburg. The area is partly broken up into patches in Pennsylvania. In the centre of the State, between Pottsville and Wyoming, are the famous anthracite beds, divided into many distinct patches; and in the W. part commences the great bituminous coal-field which spreads into Ohio, and stretches S. to Alabama. 2. The *Illinois and Missouri*, covering a very considerable part of Illinois, part of Indiana and Kentucky; and, W. of the Mississippi, portions of Iowa, Missouri, Kansas, and Arkansas. Estimated area, 60,000 sq. m. Whole thickness of the formation in Missouri, 600 to 1,000 ft.; in W. Kentucky, nearly 3,300 ft. — with about 70 ft. for the aggregate thickness of the coal-beds. 3. The *Michigan*, situated about the centre of the peninsula. Estimated area about 5,000 sq. m. Whole thickness of the formation 123 ft.; rests upon a sandstone, probably of the

Millstone grit epoch, which is 105 ft. thick. 4. The *Texas*, covering several of the N. and N.W. cos. 5. The *Rhode Island*, lying between Providence and Worcester, Mass., and opening at Cumberland N. of Providence, at Portsmouth, 23 m. S., and also showing thin scams at Newport and elsewhere. In Massachusetts, outcropping at Mansfield, 15 m. N.E. of Providence, at Wrentham, 5 m. from Mansfield, and at Worcester. Estimated area, 1,000 sq. m. 6. The *New Brunswick and Nova Scotia*, covering part of New Brunswick, Nova Scotia, Prince Edward's Island, and Newfoundland. Estimated area, 18,000 sq. m. Whole thickness of the formation at the Joggins, including the beds of the Millstone-grit epoch, 14,570 ft.; the number of included coal-beds is 76, some of them being very thin, and the aggregate thickness is 45 ft. These coal-beds are situated in a part of the coal-measures, 2,819 ft. thick, near the middle of the series. At Pictou there are 6 beds of coal, with an aggregate thickness of 80 ft. Later geological exploration has added somewhat to some of the areas given above, and considerably increased our knowledge of the coal fields of the Rocky Mountain and Pacific coast region, though concerning those much still remains to learn. Large deposits of coal are known to exist in North Dakota, Montana, Idaho, Wyoming, Utah, Colorado, and New Mexico, the extent of which is not even approximately known, though it is surmised that they cover not less than 200,000 or 300,000 sq. m. Others exist in the Pacific States, California, Oregon, and Washington, of whose extent no estimate can at present be made. In addition to the fields named, there are about 20,000 sq. m. of carboniferous strata in the Indian Territory, while coal discoveries of importance are reported from Alaska. The coals of Dakota are lignite, the seams being from a few inches to 12 ft. in thickness. Those of Montana are quite extensive, comprising bituminous and lignitic coals. Wyoming has a wide extent of lignite deposits, which are 9 ft. thick in Carbon co., where they are worked quite largely. In Colorado the coals are of all varieties from lignite to anthracite, the veins varying from 3 to 12 ft. in thickness. The same is the case with the deposits of New Mexico. In the Pacific States, Washington is most richly provided with coal, possessing very extensive deposits of lignite and semi-bituminous, of which several important areas are worked. The productive coal-fields of the U. S. are estimated at 194,000 sq. m., exclusive of some of the newer Western fields. The coal fields of China, Japan, India, Russia, Germany, and Great Britain are estimated to contain 300,000,000,000 tons, sufficient at the present rate of consumption to serve the world's needs for 700 years. If to the above be added the coal fields of the United States and Canada, there will be found to be an ample supply for 1,000 years, and possibly considerably longer. Improved machinery has greatly increased the yield per miner, and produced a fall in price which has stimulated a larger consumption. This, in addition to the rapid development of manufactures and the coming of new countries into the field of productive enterprise, promises a much more rapid exhaustion of the coal deposits than under the present rate of consumption, and will undoubtedly require man to develop some other source of power before many centuries. Fortunately for his future, such a development is already taking place, and the time is apparently approaching when the demand for coal will be greatly reduced. Eventually it may completely vanish before the utilization of water, air, and solar power, with electricity as their agent of distribution. The development of bituminous and liguite coal production in the U. S., in its different localities, from 1880 to 1900, is shown in the following table, to which is added the yield of anthracite for 1900:

States.	*Tons, 1880.*	*Tons, 1900.*
Alabama	323,973	9,099,052
Arkansas	14,778	1,816,136
California	236,950	151,079
Colorado	462,747	5,635,435
Georgia	156,644	354,825
Illinois	6,115,377	27,331,552
Indiana	1,454,327	6,918,225
Indian Territory	.....	2,421,781
Iowa	1,461,116	5,617,499
Kansas	771,142	4,900,528
Kentucky	946,288	5,469,986
Maryland	2,228,917	5,113,127
Michigan	100,800	1,241,241
Missouri	556,304	3,802,088
Montana	224	1,396,081
New Mexico	.....	1,384,257
North Carolina	350	30,000
North and South Dakota	.....	166,601
Ohio	6,008,595	6,008,595
Oregon	43,205	43,205
Pennsylvania	18,421,163	82,305,945
Tennessee	495,131	3,633,200
Texas	.....	1,107,953
Utah	.....	1,322,614
Virginia	43,097	2,725,873
Washington	145,015	2,578,217
West Virginia	1,839,845	24,068,402
Wyoming	589,595	4,485,374
TOTAL,	42,417,564	225,759,980
Pennsylvania Anthracite	.....	67,471,667
GRAND TOTAL,	.....	293,231,647

—*Hist.* It is not well known when coal was first used as fuel, though there seems some reason for thinking that this took place in England, which country still produces about half the coal of the world, and where it was probably used in ancient times. It came into use in London about the end of the 13th century for manufacturing purposes, though it was complained of as injurious to human health; a proclamation was issued against it by Edward III. in 1316, but the high price of wood soon brought it into general use as a fuel. Anthracite coal was discovered in Wyoming co., Pennsylvania, in 1768, and some use made of it, but it was first brought to notice by the Lehigh Coal Mine Co. in 1793, it having been discovered in the Lehigh region two years before. It was long, however, before it came into general use, the proper method of burning it not being early discovered. It is said that Judge Fell, of Wilkesbarre, burned it in a grate in his house in 1808, but it was much later before it was learned, partly by accident, how it could be burned in furnaces. As the world now stands, coal is invaluable to mankind, it far surpassing wood as a fuel in several particulars, while its abundance and cheapness alone render possible the active manufacturing processes of the present day. See ANTHRACITE COAL PERIOD, and CARBONIFEROUS AGE.

Min'eral City, in *Arizona*, a mining vill. of Yuma co.

Min'eral Green, *n.* (*Chem.*) Carbonate of copper, obtained by precipitating a hot solution of sulphate of copper by carbonate of soda.

Min'eralist, ? [Fr. *minéraliste.*] One skilled or employed in minerals.

Mineraliza'tion, *n.* The process of converting into or combining with a mineral. — The act of impregnating with a mineral, as water.

Min'eralize, *v. a.* [Fr. *minéraliser.*] To combine with a metal in forming an ore or mineral; to convert into a mineral; to impregnate with a mineral substance.

—*v. n.* To go on an excursion for the observing and collection of minerals.

Min'eralizer, *n.* A substance which neutralizes another, or combines with it in an ore.

Mineralog'ical, *a.* Pertaining to the science of minerals.

Mineralog'ically, *adv.* According to mineralogy.

Mineral'ogist, *n.* One who is versed in the science of minerals, or who treats or discourses of the properties of mineral bodies.

Mineral'ogy, *n.* [Fr. *minéralogie*, from *minéral*, and Gr. *logos*, discourse.] The science which treats of the properties of mineral substances, and teaches us to characterize, distinguish, and class them according to their properties. Geology, or geognosy, was formerly included in the science of mineralogy, but this term has more recently become restricted to the study of the individual minerals, their aggregation into rocks and their relations to each other forming an important section of the science of geology. The science of *M.*, however, is not confined to the study of the external characters of mineral substances, their chemical composition being equally important. Some mineralogists, as Mohs and Jameson, have classified minerals solely on the basis of their external characters; others, as Berzelius, on their chemical composition solely; but in both cases the results have been unsatisfactory, and the more recent systems take both those characteristics into consideration. As regards chemical classification, it is rendered difficult by the great variety of elements and their proportions, the presence of non-essential substances, and the impossibility, in many cases, of deciding what is and what is not an essential constituent of the mineral examined. Chemical purity scarcely exists in nature. Even the purest diamond leaves some trace of ash when burned; and the colors of precious and other stones are frequently due to foreign substances, too small in quantity to affect the physical character of the mineral. On the other hand, there are minerals of identical chemical composition which differ in crystalline form, and many which occur in an uncrystallized state, thus rendering crystallization an unsafe guide in classification, and making chemical composition the leading, though not the only, element in arrangement. Important characters in the consideration of minerals are those of specific gravity, cleavage, form, structure (as laminated, fibrous, granular, &c.), opaqueness or transparency, luster, color, hardness, and teuacity, and various others. Many systems of classification have been proposed, of which that of Dana, first issued in 1837, and revised from time to time, is the principal one in vogue in the United States. *M.* has very important relations to geology, which cannot be studied without taking it constantly into consideration. It has also much to do with agriculture, while many minerals are of great importance from an economic point of view. Among these it will suffice to name salt, alum, borax, cryollte, graphite, native metals and metallic ores, petroleum, asphalt, bitumen, &c.

Min'eral-pitch, *n.* See ASPHALT, and BITUMEN.

Min'eral Point, in *Missouri*, a post-village of Washington co., about 61 m. S.S.W. of St. Louis.

Min'eral Point, in *Nevada*, a mining-village of Humboldt co., about 135 m. N.E. of Carson City.

Min'eral Point, in *Ohio*, a post-village of Tuscarawas co., about 7 m. S.S.E. of Massillon.

Min'eral Point, in *Pennsylvania*, a post-village of Cambria co., about 7 m. N.E. of Johnstown.

Min'eral Point, in *Wisconsin*, a city and township of Iowa co., 45 m. W.S.W. of Madison. Has large oxide of zinc works and other industries. *Pop.* 2,750.

Min'eral Ridge, in *Pennsylvania*, a small village in Clarion co.

Min'eral Wa'ters, *n. pl.* A name applied to certain spring-waters containing so large a proportion of foreign matter as to be unfit for ordinary use.

(*Chem.* and *Med.*) From the powerfully solvent properties of rain-water, that fluid no sooner reaches the ground and percolates through the soil, than it dissolves some of the substances with which it meets in its passage. Under ordinary circumstances, however, it takes up so small a quantity of soluble substances that their presence does not materially affect its sensible properties: in this state it is known by the names of *river*, *spring*, and *well* water. On some occasions, however, it becomes so strongly impregnated with saline and other substances, that it acquires a peculiar flavor, and is thus rendered unfit for ordinary domestic duties: it is then known by the name of *mineral water*. The different kinds of mineral-water may be arranged in six divisions; namely, Acidulous, Alkaline, Chalybeate, Sulphurous, Saline, and Silicious springs. 1. *Acidulous springs*, of which the Sweet Springs of Virginia, and those of Seltzer, Spa, Pyrmont, and Carlsbad, in Europe, are the best known, generally owe their acidity to the presence of free carbonic acid. When poured from one vessel into another, they sparkle, in consequence of the escape of carbonic acid gas. 2. *Alkaline waters*, or those which continue a free or carbonated alkali, either in their natural state or when concentrated by evaporation. These springs are rare; but some are found at St. Michael's, in the Azores. The water contains carbonate of soda and carbonic acid, and is almost entirely free from earthy substances. 3. *Chalybeate* or *ferruginous waters*, which are characterized by a strong, styptic, inky taste, and by producing a black color when mixed with an infusion of gall-nuts. The iron contained in these waters is most frequently in the form of protocarbonate held in solution by free carbonic acid. On exposure to the air, the protoxide is oxidized, and the hydrated peroxide descends, leaving the reddish-yellow deposit ordinarily observed in the neighborhood of chalybeate springs. Waters of this kind are not uncommon. Among the most noted in this country are those of Bedford, Pittsburg, and Yellow Springs; and in Europe, Wiesbadeu in Germany, and Tunbridge in England. 4. *Sulphurous waters* contain hydrosulphuric acid, and may easily be recognized by their odor. They also cause a brown precipitate when mixed with a salt of lead or silver. The springs of White, Red, and Salt Sulphur in Virginia, Aix-la-Chapelle in Rhenish Prussia, and Harrogate in England, afford examples of sulphurous waters. 5. *Saline springs* derive their characters from saline compounds held in solution. The salts which are most frequently contained in these waters are the sulphates and carbonates of lime, magnesia, and soda, and the chlorides of calcium, magnesium, and sodium. In a few, potash is found; and Berzelius discovered lithia in the spring of Carlsbad. Among instances of saline springs may be mentioned those of Saratoga in the U. States, and Epsom, Cheltenham, Bath, Bristol, Barèges, Buxton, Pitcaithly, and Tœplitz in Europe. Sea-water may be regarded as one of the saline mineral waters. The water of the Dead Sea, however, possesses a far stronger saline impregnation than sea-water, as it contains one-fourth of its weight of solid matter. It has a peculiarly bitter, saline, and pungent taste, and its specific gravity is 1·22. 6. *Silicious waters* are very rare, and in those hitherto discovered the silica appears to have been dissolved by means of soda. The most remarkable of these are the boiling springs of the Geyser and Rykum, in Iceland. (See GEYSER.) The term mineral water is sometimes applied to those springs which have no claim to repute except for their extreme purity; such as those of Malvern and Holywell, in England. — The best known *M. W.* are now prescribed by physicians in certain diseases with as much confidence as any preparation known to the apothecary. They are often recommended in the treatment of diseases of the skin, liver, spleen, and urinary organs; in dyspepsia, jaundice, gout, and rheumatism. *M. W.* may, in most cases, be artificially prepared by the skilful application of the knowledge derived from analysis, with such precision as to imitate very closely the native springs. When the various earthy or metallic constituents are held in solution by carbonic acid, they should be placed along with their due proportions of water in the receiver of the aërating machine, and then the proper quantity of gas should be injected into the water. Sufficient agitation will be given by the action of the forcing-pump to promote their solution.

Min'eral-yel'low, *n.* (*Chem.*) A compound of oxide and chloride of lead, obtained by digesting powdered litharge in a solution of common salt, washing, drying, and fusing the product.

Mine Ridge, in *Pennsylvania*, a chain of hills extending along the E. border of Lancaster co. The copper mines from which it derived its name are no longer worked.

Mi'ners, in *Missouri*, a village of Washington co., abt. 110 m. S.E. by E. of Jefferson City.

Mi'nersville, in *California*, a village of Trinity co., abt. 15 m. E.N.E. of Weaverville.

Minersville, in *Missouri*, a village of Jasper co., abt. 70 m. W. of Springfield.

Minersville, in *N. Carolina*, a village of McDowell co.

Minersville, in *Ohio*, a post-village of Meigs co., abt. 100 m. S.E. of Columbus.

Minersville, in *Pennsylvania*, a village of Allegheny co., abt. 2 m. E. of Pittsburg.

—A post-borough of Schuylkill co., abt. 4 m. W. of Pottsville.

Minersville, in *Utah*, a post-village of Beaver co., abt. 18 m. S. by W. of Beaver.

Miner'va. (*Myth.*) The Roman goddess of wisdom and war, the liberal arts, science, and learning, (Fig. 38.) She is reputed to have beeu the offspring of Jupiter's brain, without a mother. The fable told of Minerva's birth is as amusing as it is unquestionably origiual. Jupiter having married Metis, became conscious that her progeny, if allowed to come into existence, would bavo so much intelligence aud wisdom that Jupiter himself would be unable to cope with his children. To guard against such an event as the possibility of being eclipsed by his offspring, be divorced Metis before her confinement; when, feeliug a violeut pain in his head, he sent for the celestial surgeou, Vulcan, whom he ordered to cleave it open, to relieve the anguish he suffered. This surgicnl operation for tbe relief of a congested hrain the blacksmith accordingly performed; when, to the amazement of the heavenly conclave aud the operator also, out of the Thunderer's head flew Minerva, full-grown and ready armed, aud by universal acclaim was immediately admitted into the synod of the gods. She ie also called Athena, Pallas, Parthenos, Tritonia, Glaucopsis (Blue-Eyes), Agoræa, Hippia, Stratea, Area, Sais, and other nanies, according to the arts she taught or the functions over which she presided. The serpent, the owl, and the cock were sacred to her; nnd among plants, the olive. She was worshipped over all parts of Greece; but her great temple was the Parthenon at Athens, where she was the presiding goddess, and in which fane there was a colossal statue of her, by Phidias, overlaid with ivory.

Miner'va, in *Iowa*, a post-vill. and township of Marshall co., abt. 9 m. W.S.W. of Marietta.

Minerva, in *Kentucky*, a post-village of Mason co., abt. 10 m. W. of Marysville.

Minerva, in *New York*, a post-vill. and twp. of Essex co., abt. 90 m. N. of Albany.

Minerva, in *Ohio*, a post-village of Stark co., abt. 110 m. N.E of Clevelnnd.

Mines Basin, or MINES BAY, an extensive and remarkable inlet in the N.W. central part of Nova Scotia. It washes the cos. of Colchester, Pictou, Hants, and King's, communicating with the Bay of Fundy through Mines Channel, and terminating iu Cohequid Bay. It extends 60 m. inland, and the tides, particularly during the equinoxes, rush in with great violence, forming what is called the *bore*, and rising, sometimes, 60 or 70 feet, while in Halifax Harbor on the opposite coast, and distant only 20 m., the tides seldom or uever rise above 9 feet.

Mines Shib'boleth, in *Missouri*, a village of Washington co.

Minet'to, in *New York*, a post-village of Oswego co., abt. 5 m. S.S.E. of Oswego.

Min'ever, or **Miniver,** *n.* The white stoat or eremite, and its fine, white fur.

Mingan Islands, (*ming'gan,*) a group of British N. America, in the Gulf of St. Lawrence, N. of Anticosti Island.

Mingle, (*ming'gl,*) *v. a.* [A. S. *mengan*, or *menegan;* Du. and Ger. *mengen.*] To mix; to blend; to unite in one body; to compound; to unite in a mass, as solid substances. — To mix or blend without order, or promiscuously. — To join in mutual intercourse, or in society. — To contaminate; to render impure; to debase by mixture. — To confuse.

—*v. n.* To be mixed; to be united with.

Min'gledly, *adv.* In a confused manner.

Min'glement, *n.* State of being mixed; the act of mixing.

Min'gler, *n.* One who, or that which, mingles.

Min'goes, *n. pl.* A tribe of N. American Indians. See IROQUOIS.

Mingre'lia, a province of Asiatic Russia, on the S. side of the Caucasian Mountains, between the Caspian and the Black seas. It is bounded N. by Georgia, E. the Imeritia, S. the river Phaeis, W. the Black Sea. *Area*, 1,665 sq. m. The enrface is generally mountainous and barren, but fertile in the valleys. *Cap.* Zubdidi. *Pop.* 61,000.

Min'ho, a province of Portugal. See ENTRE DOURO E MINHO.

—A river of Spain and Portugal, rises iu the N.E. of Galicia, in Lat. about 43° 20′ N., Lon. about 7° 15′ W. Its course is S.W. through the modern Spanish provinces of Lugo and Orense, after which, continuing its conrse, and forming the northern boundary of the Portuguese province of Minho, it falls into the Atlantic Ocean. Its length, exclusive of windings, is 130 m., and it is navigable for small craft 23 m. above its mouth.

Min'iate, *v. a.* [Lat. *miniare, miniatum*, from *minium*, q. v.] To paint with red lead or vermilion.

—*a.* Of, or pertaining to the color of red lead or vermillon.

Miniature, (*min'i-at-yur.*) *n.* [It. and Sp. *miniatura*, from Lat. *miniare*, to color with minium, vermilion, or oxide of lead.] A painting in water-colors on vellum, ivory, or paper, with points or dots; a portrait painted on a very small ecale; a picture or representation in a small compass, or lese than the reality, or a representation of nature on a very small scalo. In the ordinary acceptation of the term, the word miniature incindes two widely different kinds of painting. Of these, one ie that ornamental painting or illuminating which is seen in ite highest perfection in Mediæval bibles, pealters, missals, and other costly manuscripts on vellum; the other kind is that of minute or diminutive portraits generally painted on ivory, to which, in popular language, the word hae heen confined exclusively in late years. Tho first kind of miniaturo ie of very ancient origin: they are to be seen among the hieroglyphics of tho Egyptiane. The booke of the ancient Romans were often decorated with small paintinge in a costly style. The oldest existing manuscripts with minlatures are Byzantine, and of the latter part of the 4th, or beginning of the 5th century. Tbe manner of the Byzantine miniatures was closely imitated in the Italian monasteries as late as the 13th century; but early in the 15th ceutury the works produced by the Italian inouks assumed a higher place than that of their Greek masters. The earliest school of miniature-palntiug in the west of Europe seems to have been that founded at Fingal, in Ireland, in the first half of the 6th century, by St. Columba. There is great diversity in the miniature-painting of different ages and couutries, not only in style, but in the methods of execution. They were generally paiuted on vellum or paper, with colors very finely levigated and rendered opaque by beiug — for the shadows as well as the lights — mixed with white; the usual vebicle being gum, glue, or white of egg. Gold was also freely used, gold back-grounds being frequent at most periods. The second class of *miniatures* includes the small portraits painted either for decorative purposes or to place in cabinets, lockets, or brooches. Ivory was adapted for this purpose at an early date; it was found to forn a more suitable ground thau vellum for iudepeudent works, and its adoptiou led to a change in the technical processes. The ivory required for miniatures is cut into very thin sheets, and when mounted is backed up with some very white material. The painting is executed in water-colors, and the flesh-tints and other parts requiring great delicacy of fiuish are wholly, dotted, stippled, or hatched upon the surface. In late years tho art seems to have entirely succumbed before the rapid advance of photography.

Min'iature, *a.* Representing nature on a small scale; very small; diminutive.

—*v. a.* To paiut or represent on a small scale, or in a small space.

Miniatur'ist, *n.* One who paints miniatures, or small portraits.

Min'ibus, *n.* [From Lat. *minor*, less.] A light, covered vebicle desigued to convey passengers for short distances.

Minié, CLAUDE-ETIENNE (*min'e-ai,*) a French officer, b. in Paris about 1810, to whom has heen erroneously ascribed tho iuvention of the well-known rifle which hears his name. He had attained tbe rank of sous-lieutenant in the French army, when he made the acquaintance of Capt. Delvigno, who wae engaged in perfecting the musket for the newly raised *Chasseurs-à-pied;* and having, under his direction, rendered some services to him in his experiments, he was, at his recommendation, attached to that *corps d'élite*, and was appointed to the School of Musketry. By virtue of bis position, the new weapon, although really iuvented by Capt. Delvigne, was attributed to his pupil, and is generally known as tbe "Minié rifle," the principle of which has not only heen adopted in the Frèncb service, hut, with some modifications, in the English Enfield rifle and the musket of other armies. The "Minié-ball" (Fig. 446) was a great advance upou everything of the kind that had preceded it. It consists of an elougated cylinder, conical in front and hollow behind, and filled with a cap of thin iron, which, by filling the grooves of the barrel as the ball is forced through, gives to the latter a precision and range of flight hitherto nuknowu to the science of projectiles. The Minié-rifle is now superseded in France by the Chassepot. *M.*, having been appointed *chef de bataillon* in 1852, declined to quit France, to give the beuefit of his improvemeuts in fire-arms to Russia, which country had offered bim a higher grade of rank. Napoleon III. made him a present of 20,000 francs, and for many years he was employed in giving instruction at the Normal School of Musketry, established at Vincennes. He was made Grand Cross of the Legion of Honor, retired from the service in 1858, and was appointed, with the consent of the French emperor, Inspector of Foundries, and Gun Manufacturer, to tho Viceroy of Egypt.

Minié-ball, Minié-rifle, *n.* See MINIÉ.

Min'ikin, *a.* Small; diminutive.

—*n.* A small sort of pin. — A favorite; one dear or loved.

Min'im, *n.* [Fr. *minime;* Lat. *minimum*, tbe least.] Something exceedingly small; tbe least part or portion. — The smallest liquid measure; a single drop; the sixtieth part of a fluid drachm.

—A small sort of fish; a minnow.

(*Mus.*) A character, thus , equal in duration to two crotchets, or half a semibreve.

—*a.* Very small; infinitesimal; minute.

Min'ims, or LEAST BRETHREN, *n. pl.* (*Eccl. Hist.*) A religious order, so called in contrast to the Minorites, or Lesser Brethren, of St. Francis d'Assisi, were founded by St. Francis di Paulo, in Calabria, in the 15th century. He first formed an association of hermits, called Hermits of St. Francis, who lived in separate cells, in 1453. They were assembled in convents in 1474, and several establishments were formed in Italy and France. St. Francis died April 2, 1507.

Min'imize, *v. a.* To render exceedingly small; to reduce to the smallest proportions.

Min'imum, *n.*; *pl.* MINIMA. [Lat.] The least quantity assignable in a given case; the least part or portion of anything; the lowest price of any article, as fixed by some law or regulation.

Min'ing, *n.* The art or operation of discovering, and removing from the bowels of the earth such minerals as are valuable to man. When tho minerals in question occur at the earth's surface, so that they can he removed by the light of day, the operation is properly regarded as *quarrying*. The nature of the materials removed should make no difference in the term, as many earthy minerals are mined for, and many mineral veins quarried. Generally speaking, mineral products lie in veins, or layers, beneath the surface of the earth. The miner, in order to reach them, sinks a vertical pit, or shaft, in such a manner as to cut the vein or layer, which is suspected to exist either from the well-known nature of the district, or from part of it making its appearance at the surface. Occasionally, it happens that the mineral forms part of the regular strata of the country. Thus, in Staffordshire, Eng., we find thin bands or seams of coal, ironstone, and limestone, varying in thickness from a few inches to several feet, and extending over many square miles of country. Usually, however, metalliferous mineral matter is found in fissures, which traverse the ordinary strata of the district. These fissures, when filled with granite, trachyte, or other igneous rocks, are termed *dykes;* but when they contain metallic ores, they are called *veins*, or *lodes*. The business, then, of the miner is to follow these lodes as far as possible. As soon as the shaft is sunk, and the lode is reached, an horizontal gallery or level is driveu right and left in the direction of the lode, — the ore being conveyed to the shaft, and thence hy buckets or kibbles to the surface. If tho lode is pretty rich, and the strata give indications of the existence of other veins, more shafts are sunk, and levels driven. As might be expected, the lodes often differ considerably in thickness even within the length of a few yards. Sometimes they dwindle away altogether, and at others disappear suddenly by the subsidence or dropping down of the strata. In the latter case, the miner drives several levels in different directions, until the broken lode is found once more. One of the greatest difficulties with which the miner has to contend is water, which often oozes into the mine in all directions. When the mine is situated on the side of a hill, it is simply necessary to open an adit-level at the lowest part of the hill-side, to serve as a water-course; but when the workings extend below

Fig. 1799. — MINERS GOING DOWN A SHAFT.

(Copied from A. Winchell's *Sketches of Creation.*)

this point, a shaft is sunk to the lowest part of the mine, and the water is led into it and pumped up either to the adit-level or to the surface, where it is used for washing the ore. Much of the excavation is done by hand with the pickaxe, and *gad*, or iron wedge; but if the strata allow of it, large masses are removed at once by blasting with gunpowder. A hole, eighteen inches in depth, is bored into the rock, and about two ounces of powder are inserted; a slow-burning fire is then carried from the powder to the mouth of the hole, and the whole is closed by ramming in clay. The ore, when it is brought to the surface, is dressed or sorted, an operation differing according to the value of the ore and its specific gravity. Taking copper, tin, or lead ores as types, the process pursued is as follows: — The ore is first sorted by hand, the purest portions being set aside ready for smelting. The rest is broken by hammers into pieces the size of a walnut, the best bits being again set aside. The remainder is then crushed, the finer portion being subjected to the operation of *jigging*, which consists in sifting the crushed ore in a stream of running water, which carries away the lighter portions. These, with the coarser pieces left from the crushers, are stamped and then *buddled*. A buddle is a wooden trough, from which flows a stream of water, spread out into a thin layer by a distributing-board. Below this, the crushed ore is placed, and the gentle stream flows over it, carrying away the lighter portions and leaving the heavier behind. It will be seen that the operations of jigging and buddling depend on the difference of specific gravity between the ore and its matrix. When the two assimilate, these processes cannot be resorted to. The dressed ore is then either smelted on the spot, or else carried to some other part of the country where fuel is abundant.

Min'ing, or MINING PORT, in *Missouri*, a post-village of Morgan co.

Min'ion, *n.* [Fr. *mignon, mignonne*, from O. Ger. *minna, minnia, minni*, love, fondness.] A favorite; a darling; particularly the favorite of a prince on whom he lavishes his favors; one who gains favor by flattery or mean adulation.

(*Print.*) A kind of type, intermediate in size between Nonpareil and Brevier; thus, a, b, c. Why it received this name is unknown; "probably," says Johnson, "it was held in great estimation on its first introduction, and consequently received the title of *minion* (darling)."

Min'ion-like, Min'ionly, *a.* Daintily; flatteringly.

Min'ish, an island of Ireland, in the Atlantic Ocean, off the S.W. coast of co. Galway.

Min'isink, in *New York*, a post-village and township of Orange county, about 60 miles N.W. of New York city.

Min'ister, *n.* [Fr. *ministre*, from Lat. *minister*, from *minor, minus*, less; as, *magister*, master, from *magis*, in a higher degree.] (*Pol.*) One to whom a sovereign intrusts the direction of affairs of state. In France, Italy, Belgium, &c., the heads of departments in the state are so called, and the collective name *ministry* is applied to all of them. In England, the individual members are not so designated, but the collective name is retained. A British ministry is, in fact, a committee of the leading members of the two Houses. It is nominated by the crown, but consists exclusively of statesmen whose opinions on the pressing questions of the time agree in the main with those of the majority of the House of Commons. Some eminent party leader, who has the confidence of the House of Commons, is authorized by the sovereign to form a ministry, the members of which he selects from his party, or from those favorable to his policy, he himself being the prime minister, and taking commonly the office of First Lord of the Treasury. Those of the ministers who are peers sit in the House of Lords, the others sit in the House of Commons, in virtue of being elected members, which is indispensable. When the House of Commons, by a decisive vote on a test question, shows that it no longer approves of the policy of the cabinet, the ministers are expected to resign and make way for a new cabinet. — See CABINET. — A *Foreign minister* is a person sent from one government to another, and accredited to the latter, in order to transact public business in the name of his government.

(*Eccl.*) In most of the Reformed Churches, a pastor of a church, chapel, or meeting-house.

—*v. a.* To give; to afford; to supply.

—*v. n.* To perform service in any office, sacred or secular; to serve.

—To afford supplies; to give things needful; to supply the means of relief; to contribute; to afford.

Ministe'rial, *a.* [Fr. *ministériel.*] Attending for service; attendant; acting at command; operating under superior authority; pertaining to executive offices; official. — Sacerdotal; pertaining to ministers of the gospel, or their office. — Pertaining to ministers of state.

Ministe'rialist, *n.* A supporter of the ministry of the day.

Ministe'rially, *adv.* In a ministerial manner.

Min'istery, *n.* See MINISTRY.

Min'istrant, *a.* [It. *ministrante*, from Lat. *ministrans, ministrantis.*] Attendant; acting at command; performing service.

Ministra'tion, *n.* [Lat. *ministratio.*] Act of ministering, or of performing service as a subordinate agent; agency; intervention for aid or service.

—Office of a minister; service; ecclesiastical function.

Min'istrative, *a.* Affording service; assisting.

Min'istress, *n.* A female who ministers.

Min'istry, *n.* [Fr. *ministere*; Lat. *ministerium.*] The office, duties, or functions of a minister, or subordinate agent of any kind; agency; service; aid; interposition; instrumentality. — Ecclesiastical profession; agency or service of a clergyman or priest. — The clergy taken collectively. — Persons who compose the executive government, or the council of a supreme magistrate; the body of ministers of state.

—Business; profession; employment.

Min'ium, *n.* [Lat.] (*Min.*) An old name for red-lead. It is a compound of the protoxide and peroxide of the metal.

Min'iver, *n.* (*Zoöl.*) The same as MINEVER.

Mink, *n.* (*Zoöl.*) A quadruped of the genus *Putorius*, family *Mustelidæ*. The common *M.*, found in N. America and Northern parts of Europe, can swim and dive well, and is generally to be found on the banks of rivers, where it preys upon small fish, frogs, rats, mice, &c. Its fur is fine, but not very valuable. When irritated, the *M.* exhales a fetid, musky smell. It is about 17 inches long to the tail, which is about half the length of the body. Its general color is dark brownish-chestnut, tail nearly black, and the end of the chin white.

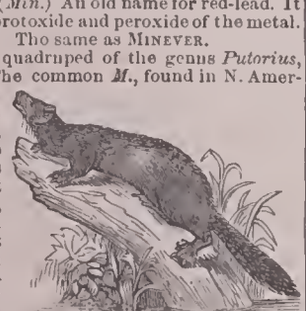


Fig. 1800. — MINK.

Minneap'olis, in *Minnesota*, a city, cap. of Hennepin co., on the Mississippi, at the Falls of St. Anthony (*q.v.*), 3 miles above Minnehaha Falls, and about 7 m. W.N.W. of St. Paul. *M.* is well built: the Court House and City Hall, the Chamber of Commerce, Syndicate Block, High School, West Hotel, &c., are fine structures. *M.* is the most important milling and grain center of the N.W. Power of immense capacity is supplied from the Mississippi river, which is nearly 1,000 feet wide at this place, has a fall of 75 feet within the space of a mile, and has been utilized to the supply of numerous large flouring-mills, with a total productive capacity computed at 35,000 barrels of flour a day; and lumber mills producing several hundred million feet annually. The city has had a very rapid growth, now considerably exceeding its neighboring rival, St. Paul, in point of population and business activity, if not in wealth. *Pop.* (1900) 202,718.

Minnecha'ha, in *South Dakota*, a S. E. co.; *area*, 790 sq. m. *Surface*, rolling; *soil*, fertile. *Cap.* Sioux Falls. *Pop.* (1895) 20,468.

Min'nelie'fe, *n. pl.* [Ger., courts of love.] Name given by Germans to the courts of love. — See LOVE, (COURTS OF.)

Minneo'la, in *Kan.*, a v. of Franklin co., 20 m. S. by W. of Lawrence. — In *Min.*, a p.-twp. of Goodhue co.

Min'nesingers, *n. pl.* A name given to the German lyric poets of the Middle Ages, on account of love being the chief subject of their poems, the ancient German word *minne* being used to denote a pure and faithful love. After the fashion of the Provençal troubadours, the minnesingers engaged in poetical contests for the gratification of princes and ladies of the court. Some among them were poor, and earned their living by reciting their songs from court to court; but most of them sang merely for pleasure, when their swords were unemployed.

Minneso'ta, (from the principal river, the name of which, in the Indian tongue, signifies *cloud-colored* or *sky-tinted water*,) one of the most northern States of the American Union, having British N. America on the N., Lake Superior and Wisconsin on the E., Iowa on the S., and Dakota on the W. It lies between Lat. 43° 30′ and 49° N., and Lon. 89° 29′ and 97° 12′ W., extending about 380 miles in length from N. to S., and 350 in breadth. *Area*, about 84,000 sq. m., or 54,760,000 acres, being larger than the six New England States combined, and equal to Indiana and Illinois. — *Gen. Desc.* Lying near the centre of the continent, *M.* occupies the summit of the interior plateau formed by the converging basins of the Mississippi River, Lake Superior, and Lake Winnipeg; embracing the head-waters of the 3 great river-systems of N. America. Its series of undulating plains, seldom broken by abrupt elevations, and never rising into mountains, present an agreeable variety of prairie, alternating with belts of heavy timber, and studded with beautiful lakes, the crystal waters and euphonious Indian names of which have become proverbial, and whose intercommunication, together with the large and numerous rivers, form a system of internal navigation permeating all parts of the State. The surface is sufficiently rolling for all purposes of drainage, yet susceptible of easy cultivation. — *Rivers, Lakes, &c.* After the Mississippi, which rises in and drains this State for nearly 800 miles (being navigable for 534 miles), the chief rivers are the Minnesota (334 miles in length, and navigable for 238 miles); the Red River of the North (379 miles long, and navigable for its entire length), and the St. Croix (130 m. long, and navigable for 52 m.) Besides these there are the St. Louis, Root, Crow, Rum, Blue Earth, Snake, Kettle, Crow Wing, Red Wood, Cottonwood, Sauk, Cannon, Zumbro, Le Sueur, Red Cedar, Red Lake, Des Moines, and many others, with innumerable tributaries, the whole spreading out over every section of the State, and bringing almost to the door of every farmer the priceless boon of living water for stock, and water-power for mills and manufactories. The number, beauty, and picturesqueness of its lakes form a marked feature in the scenery of *M.* These lovely little sheets of water are found dotting its surface in nearly every section of the State, sparkling in the open prairie, hidden in the depths of its primeval forests, and glistening like gems of beauty among the rugged hills of its N. portion. They are from 1 to 30 miles in diameter. Some of them are of a circular form; others of an exceedingly irregular outline. The waters of these lakes are remarkably clear and pure, resting upon a basin of quartzose sand and pebbles, among which the jasper, agate, and cornelian appear conspicuous. These lakes are sometimes found isolated, having no outlet; others are the manifest reservoirs whence issue the mighty rivers of the continent. These lakes abound with a great variety of fish of superior flavor and quality. Lake Superior washes the N.E. border of the State for abt. 150 m., after which the largest sheets of water are the Lake of the Woods, Rainy Lake, Vermilion Lake, Red Lake, Leech Lake, Mille Lacs, and Big Stone lakes. It has been estimated that in a single body of 1,250,000 acres of land between the Mississippi and St. Croix rivers, 73,000 acres are covered by small lakes. — *Min.* Notwithstanding the large area of this State, its geological character seems to be confined to the azoic and protozoic groups, concealed by a thin superincumbent stratum of drift, extending over a large part of the country. Copper abounds in the mineral belt stretching along the north shore of Lake Superior, and masses of the pure metal have been taken from Knife and Stuart rivers. Superior iron ore is found near Vermilion lake, near Canada, and around Portago and Pigeon rivers. Large deposits of peat exist in several parts. Superior slate exists in abundance near the St. Louis Falls. Limestone abounds in many places. Potter's clay has already been found in large quantities, and extensive potteries established. The numerous salt-springs in the Red River Valley are but the beginnings of ths numerous salines which extend to the W., and will form the basis of great wealth to the State, as all ths salt that can be made from them will be consumed in packing beef and pork in these extensive regions, and in domestic economy. Coal has not yet been found in quantities comparable to its development in the neighboring States; but lead gives promise of great abundance. In the N.E. part, large formations of gold- and silver-bearing quartz, accompanied by still further developments of iron ore, were reported by the State geologist upon actual survey. — *Clim.* From its high latitude, the climate of *M.* is necessarily severe, particularly in the N. portions; yet it is accompanied by an equability which easily assimilates the human system to its low temperature, preventing those sudden changes which are insalubrious in lower latitudes. The climatic relations are very favorable to health and longevity, presenting many alleviations to the extreme cold of winter. Seasons of drought are unknown. The great lakes and rivers on the N. and E., with the many smaller streams and lakes, present so large a surface for the action of the sun's rays during summer, that evaporation is rapid, and is generally condensed by the cool nights, watering the earth with numerous and seasonable showers. — *Soil, Vegetation, &c.* The soil of *M.* may be divided into four geological classifications — limestone, drift, clay, and trap. Scientific analysis develops the presence, in due proportion, of elements of extraordinary fertility in each of these, comparing favorably with the most celebrated soils of the world. The prevailing soil is a dark, calcareous, sandy loam, containing a various intermixture of clay, abounding in mineral salts and in organic ingredients derived from the accumulation of decomposed vegetable matter for long ages of growth and decay. Its peculiar excellence is shown in its adaptation to the culture of wheat, the great and unfailing staple of *M.* The valleys of the great rivers, especially the Mississippi and Minnesota, are very productive. Above the Falls of St. Anthony, with the exception of river alluvions and some prairie land, the country is covered with drift and marshes, restricting the area of effective cultivation. The agricultural character of the Red River country is excellent. Notwithstanding its high latitude, the State produces Indian corn of superior quality, and in considerable quantities. Wild rice, strawberries, currants, plums, and cranberries abound in the prairies. The principal trees are the sugar-maple, oak, elm, ash, basswood, black and white walnut, lime, butternut, hickory, cottonwood and boxwood, with immense forests of pine in the N. part, covering an area of not less than 21,000 sq. m.—*Agric.* No State possesses more natural advantages for crop-raising and pasturage. In almost every section there is an ample supply of timber, while the adjacent and rich prairies are ready for the plow of the husbandman. As the resources of this State are developed they are found to increase in an extraordinary ratio, and are apparently almost inexhaustible. A few years ago, *M.* imported most of the necessaries of life, when there was even a deficiency of bread and meat. Now it ranks almost first among the States in the production of cereals, and the exports in every particular are far in excess of the imports. In cereal production *M.* ranks high among the States, particularly in wheat, of which she produces an enormous yield, far surpassing that of any other State but North Dakota, which comes next in product. The crop in 1880 was 39,399,068 bushels; in 1895 it had increased to 65,584,155 bushels. This was looked upon as a phenomenally large crop, but that of 1900 reached the much larger total of 95,278,660 bushels. Indian corn increased from 13,125,555 bushels in 1880 to 47,256,920 in 1900, and oats from 22,867,932 in 1880 to 74,054,150 in 1900; barley in 1900, 24,314,240 bushels. *M.* is one of the group of States characterized by immense farms, on which the planting and harvesting of the cereal crop is reduced to a science, being performed far more by machine than by man power, labor-saving machinery being employed to a very large extent.

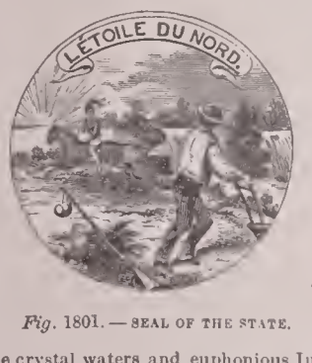
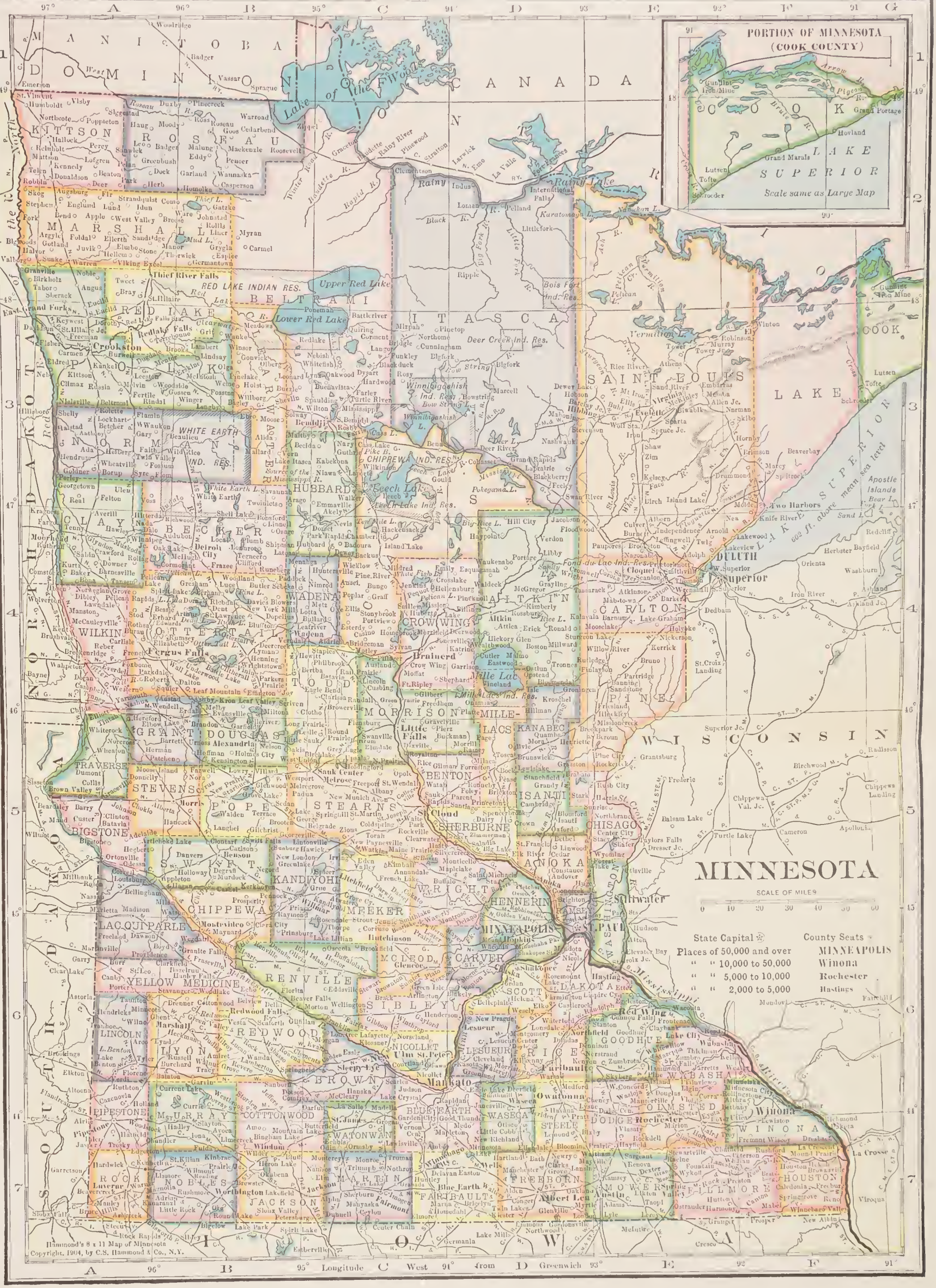


Fig. 1801. — SEAL OF THE STATE.

Fig. 1802.—SUSPENSION-BRIDGE ACROSS THE MISSISSIPPI.


PORTION OF MINNESOTA
(COOK COUNTY)
Scale same as Large Map
MINNESOTA
SCALE OF MILES
0 10 20 30 40 50 60
State Capital ☆
Places of 50,000 and over
" " 10,000 to 50,000
" " 5,000 to 10,000
" " 2,000 to 5,000
County Seats •
MINNEAPOLIS
Winona
Rochester
Hastings
Lake Superior
602 ft. above mean sea level
Lake of the Woods
Rainy Lake
Upper Red Lake
Lower Red Lake
Mississippi R.
Red River of the North
Minnesota R.
St. Croix R.
Rainy R.
Big Fork R.
Little Fork R.
Vermilion L.
Winnibigoshish L.
Leech Lake
Pokegama L.
Mille Lacs
Mille Lacs Ind. Res.
Leech Lake Ind. Res.
Fond-du-Lac Ind. Res.
Chippewa Ind. Res.
Bois Fort Ind. Res.
Red Lake Indian Res.
Winnibigoshish Ind. Res.
Deer Creek Ind. Res.
MANITOBA
ONTARIO
CANADA
DOMINION OF
KITTSON
ROSEAU
MARSHALL
BELTRAMI
RED LAKE
LAKE OF THE WOODS
POLK
NORMAN
CLEARWATER
MAHNOMEN
WHITE EARTH IND. RES.
HUBBARD
CASS
ITASCA
COOK
SAINT LOUIS
LAKE
CLAY
BECKER
WADENA
CROW WING
AITKIN
CARLTON
DULUTH
Superior
WILKIN
OTTER TAIL
Fergus Falls
Brainerd
TODD
MORRISON
MILLE-LACS
KANABEC
PINE
GRANT
DOUGLAS
TRAVERSE
STEVENS
POPE
STEARNS
BENTON
ISANTI
CHISAGO
WISCONSIN
BIGSTONE
SWIFT
KANDIYOHI
MEEKER
WRIGHT
HENNEPIN
ANOKA
RAMSEY
Stillwater
MINNEAPOLIS
ST. PAUL
LACQUIPARLE
CHIPPEWA
MCLEOD
CARVER
DAKOTA
WASHINGTON
Mississippi R.
LINCOLN
YELLOW MEDICINE
RENVILLE
SIBLEY
SCOTT
GOODHUE
WABASHA
REDWOOD
NICOLLET
LESUEUR
RICE
LYON
BROWN
Ulm
St. Peter
Mankato
Owatonna
Northfield
Faribault
Red Wing
Lake City
OLMSTED
Rochester
WINONA
Winona
LA CROSSE
PIPESTONE
MURRAY
COTTONWOOD
WATONWAN
BLUE EARTH
WASECA
STEELE
DODGE
ROCK
NOBLES
JACKSON
MARTIN
FARIBAULT
FREEBORN
MOWER
FILLMORE
HOUSTON
Albert Lea
Austin
Fairmont
Worthington
Hammond's 8 x 11 Map of Minnesota
Copyright, 1904, by C.S. Hammond & Co., N.Y.
Longitude West from Greenwich

MINNESOTA.

Land surface, Sq. in. 79,205
Water surface, Sq. m. 4,160
Pop. 1900...1,751,394
White.. 1,737,036
African.....4,959
Indlan.....9,182
Cbinese.....166
Japanese 51
Native-born, 1,246,076
Foreign-born, 505,318
Males. ...932,490
Females..818,904

COUNTIES.

Aitken.....D 4
Anoka.....D 5
Becker .....B 4
Beltraml.....B 2
Benton.....D 5
Bigstone .....A 5
Blue Eartb....C 6
Brown.....C 6
Carlton.....E 4
Carver.....D 6
Cass.....C 3
Cbippewa .....B 5
Chisago .....E 5
Clay..... A 4
Clearwater....B 3
Cook .....G 3
Cottonwood...B 6
Crow Wing...C 4
Dakota.....D 6
Dodge .....E 7
Douglas.....B 5
Faribault.....D 7
Fillmore .....E 7
Freeborn.....D 7
Goodbue .....E 6
Grant .....A 5
Hennepin.....D 5
Houston.....F 7
Hubbard.....B 3
Isanti.....D 5
Itasca.....D 3
Jackson .....B 7
Kanabec .....D 5
Kandiyohi....B 5
Kittson.....A 2
Lac qui Parle. A 6
Lake... ....F 3
Lesueur. .....D 6
Lincoln.....A 6
Lyon ..... B 6
McLeod.....C 6
Marshall .....A 2
Martin.....C 7
Meeker.....C 5
Millelacs.....D 5
Morrison .....C 4
Mower.....E 7
Murray.....B 6
Nicollet.....C 6
Nobles.....B 7
Norman.....A 3
Olmsted.....E 6
Ottertail.....B 4
Pine.....E 4
Pipestone .....A 6
Polk .....A 3
Pope.....B 5
Ramsey.....D 5
Red Lake.....A 3
Redwood.....B 6
Renville.....B 6
Rice..... D 6
Rock .....A 7
Roseau.. .....B 2
Saint Louis....E 3
Scott.....D 6
Sherburne ....D 5
Sibley.....C 6
Stearns.....C 5
Steele..... D 7
Stevens .....A 5
Swift .. ..B 5
Todd.....C 4
Traverse .....A 5
Wabasha .....E 6
Wadena.....C 4
Waseca.....D 6
Wasbington...E 5
Watonwan ....C 7
Wilkin .....A 4
Winona.....F 7
Wrigbt.....C 2
Yellow Medicine B 6

CITIES-TOWNS

Pop. Thousands.		
202	Minneapolis	D6
163	St. Paul...	D 6
52	Duluth	E 4
10	Mankato...	D 6
19	Winona....	F 6
12	Stillwater..	E 5
7	Faribault...	D 6
7	Red Wing...	E 6
7	Brainerd	C 4
7	St. Cloud.....	C 5
6	Rochester...	E 6
6	Fergus Falls	A 4
5	Little Falls..	C 5
5	Owatouna...	D 6
5	Austin	E 7
5	New Ulm....	C 6
5	Crookston...	A 3
4	Albert Lea..	D 7
4	St. Peter....	D 6
3	Hastings. ..	E 6
3	Anoka	D 5
3	Moorhead...	A 4
3	Ely	F 3
3	Willmar.....	B 5
3	Two Harbors	F 3
3	Northfield...	D 6
3	Waseca.....	D 6
3	Cloquet.....	E 4
3	Fairmont ...	C 7
2	Virginia.....	E 3
2	Blue Earth	C 7
2	Eveleth.....	E 3
2	Lake City...	E 6
2	Alexandria..	B 5
2	St. James....	C 7
2	Pipestone...	A 7
2	Wabasba. ...	E 6
2	Hutchinson	C 6
2	Hibbing	E 3
2	Worthlugton	B 7
2	S. St. Paul..	D 6
2	Litchfield...	C 5
2	Luverne ...	A 7
2	Sauk Center	C 5
2	Bemidji.....	C 3
2	Chaska.....	D 6
2	Montevideo	B 6
2	Marshall	B 6
2	East Grand Forks..	A 3
2	Detroit City..	B 4
2	Shakopee...	D 6
2	Sleepy Eye..	C 6
2	Wells	D 7
1	Windom.....	B 7
1	Lesueur	D 6
1	Morris	B 5
1	Tracy...	B 6
1	Redlake Falls	A 3
1	W. St. Paul..	D 6
1	Thief River Falls..	A 2
1	Winnebago	C 7
1	Glencoe.. ..	C 6
1	Spring Valley	E 7
1	Melrose.....	C 5
1	Jacksou.....	C 7
1	Aitkin.....	D 4
1	Redwood Falls	B 6
1	Benson	B 5
1	Springfield..	C 6
1	Wadena	B 4
1	Staples	C 4
1	Grand Rapids	D 3
1	Chatfield....	E 7
1	Sauk Rapids	C 5
1	Long Prairie	C 5
1	Tower.	E 3
1	Madison	A 6
1	Barnesville..	A 4
1	Princeton...	D 5
1	Park Rapids	B 4
1	Biwabik.....	E 3
1	Whitebear Lake..	D 5
1	Breckenridge	A 4
1	Preston	E 7
1	Warren	A 2
1	Madelia	C 6
1	Jordan	D 6
1	Watervllle...	D 6
1	Adrian	B 7
1	Janesville ..	D 6
1	Ada.....	A 3
1	Ortonville...	A 5
1	Cannon Falls	E6
1	New Prague	D 6
1	Lake Crystal	C6
1	Nortbbrancb	E5
1	Milaca	D 5
1	Kenyon.....	E 6
1	Sandstone...	E 4
1	Appleton....	A 5
1	Perbam.....	B 4
1	Caledonia. ...	F 7
1	Wheaton....	A 5
1	Belle Plaine	D 6
1	Glenwood ..	B 5
1	Zumbrota...	E 6
1	Kasson.....	E 6
1	Canby	A 6
1	Lanesboro..	F 7
1	Renville.....	B 6
1	Rusbford ...	F 7
1	Buffalo.....	D 5
1	Plainview...	E 6
1	Pelican Rapids	A 4
1	Kasota	D 6
1	Mapleton...	D 7
1	Frazee.....	B 4

Pop.	Hundreds.	
9	Pine City...	E 5
9	Rusb City...	E 5
9	Montgomery	D 6
9	Olivia.....	C 6
9	Delano	D 5
9	Dawson	A 6
9	Mountain Lake	C 7
9	Sparta.....	E 3
9	Granite Falls	B 6
9	Dodge Cent.	E 6
9	Heron Lake	B 7
9	Elmore.....	C 7
9	Henderson..	D 6
8	Sberburne..	C 7
8	Lake Benton	A 6
8	Fulda.....	B 7
8	Slayton	B 7
8	Fosston....	B 3
8	Lakefield ...	B 7
8	Graceville...	A 5
8	Blooming Prairie..	D 7
8	Bird Island	C 6
8	St. Hilaire..	A 2
8	Pine Island	E 6
8	Elk River....	D 5
8	Stewartville	E 7
8	Argyle	A 2
8	Monticello..	D 5
8	Osakis.....	B 5
8	Winthrop....	C 6
8	Hallock	A 2
7	Morton.....	C 6
7	Mora	D 5
7	ProctorknottE	4
7	Minneota...	B 6
7	Leroy.....	E 7
7	New Richland	D 7
7	Cambridge.	D 5
7	Farmington	D 6
7	Waconia.....	D 6
7	Browns Valley	A 5
7	Arlington...	C 6
7	Harris... ...	E 5
6	Cokato	C 5
6	Golden Valley	D 6
6	Verndale....	B 4
6	Royalton....	C 5
6	Hector.....	C 6
6	Fairfax.....	C 6
6	Alden.....	D 7
6	W. Concord	E 6
6	Elbow Lake	B 5
6	Lamberton..	B 6
6	Gaylord ...	C 6
6	Eden Valley	C 5
6	Mantorville	E 6
5	Morgan ..	C 6
5	Morristown	D 6
5	Atwater.....	C 5
5	Fertile.....	A 3
5	Adams.....	E 7
5	Mclntosb....	B 3
5	Dassel	C 5
5	Jasper.....	A 7
5	Mazeppa.....	E 6
5	Herman.....	A 5
5	Welcome....	C 7
5	St. Josepb...	C 5
5	Cottonwood	B 6
5	Eagle Bend..	B 4
5	Cass Lake....	C 3
5	Henning....	B 4
5	Waverly....	D 5
5	Houston.....	F 7
5	Sacred Heart	B 6
5	Hawley	A 4
5	Hokab.....	F 7
5	Taylors Falls	E 5
5	Robbinsdale	D 5
5	Minnesota Lake	D 7
5	Harmony...	E 7
5	Albany	C 5
5	Tyler.....	A 6
5	Stephen.....	A 2
5	Good Tbunder	D 7
5	Norwood....	D 6
5	Walker.....	C 3
4	Wykoff.....	E 7
4	Dundas.....	D 6
4	Springgrove	F 7
4	Lyle.....	E 7
4	Coldspring..	C 5
4	New Paynesville	C 5
4	Evansville ..	B 4
4	Lesueur Center	D 6
4	Grand Meadow	E 7
4	Mt. Iron	E 3
4	Starbuck ...	B 5
4	Clara City...	B 6
4	Hinckley....	E 4
4	Brownton ...	C 6
4	Carlton.....	E 4
4	Beardsley...	A 5
4	Halstad	A 3
4	Hayfield....	E 7
4	Franklin	C 6

Other agricultural products include rye, barley, buckwheat, potatoes, tobacco, hay, apples, grapes, maple-sugar and syrup, honey, butter, cheese, &c. In 1900, per the census returns of that year, *M.* possessed 154,659 farms of 26,248,498 acres, about 15,000,000 being improved. These were valued at $559,301,900, their buildings and implements valued at about $140,000,000, and their live stock at $89,063,097. *M.* possesses another great source of natural wealth in its forests, already adverted to. These are estimated to possess a total of 14,424,000,000 feet of white pine lumber, and 3,412,475,000 feet of red or Norway pine, in addition to a large amount of hardwood lumber. In 23 counties of the State there are 10,889,000 acres of natural forest, and 11,890,000 in the whole State. For the past three years the annual cut of pine has averaged 1,500,000,000 feet, while the consumption of merchantable hardwood is estimated at 100,000,000 feet annually. This rate of consumption threatens, as elsewhere in the forested States, a practical exhaustion of these immense stores of lumber in the near future. In this State, as in the forest regions generally, fire consumes more than the axe. As yet little has been done toward conservative handling of the forests, though a strong public sentiment in that direction is being awakened.—*Counties, Towns, &c.* The State is divided into 80 counties:

Aitkin,	Faribault,	Martin,	Rock,
Anoka,	Fillmore,	McLeod,	Scott,
Becker,	Freeborn,	Meeker,	Sherburne,
Beltrami,	Goodhue,	Mille Lac,	Sibley,
Benton,	Grant,	Morrison,	Stearns,
Big Stone,	Hennepin,	Mower,	Steele,
Blue Earth,	Houston,	Murray,	Stevens,
Brown,	Hubbard,	Nicollet,	St. Louis,
Carlton,	Isanti,	Nobles,	Swift,
Carver,	Itasca,	Norman,	Todd,
Cass,	Jackson,	Olmsted,	Traverse,
Chippewa,	Kanabec,	Otter Tail,	Wabashaw,
Chisago,	Kandiyohi,	Pine,	Wadena,
Clay,	Kittson,	Pipestone,	Waseca,
Cook,	Lac qui Parle,	Polk,	Washington,
Cottonwood,	Lake,	Pope,	Watonwan,
Crow Wing,	Le Sueur,	Ramsey,	Wilkin,
Dakota,	Lincoln,	Redwood,	Winona,
Dodge,	Lyons,	Renville,	Wright,
Douglas,	Marshall,	Rice,	Yellow Medicine.

The chief towns are Minnespolis, St. Paul (the capital), Duluth, Winona, Stillwater, Mankato, St. Cloud, Faribault, Red Wing, &c.—*Education.* The educational and moral interests of the State are carefully and judiciously managed, and the school system, under the special attention of the authorities, is one of the best to be found in the commonwealths of the West. Every township is entitled to a free school, and two sections of land in every township are set aside as an endowment for school purposes, making an aggregate of 3,000,000 acres. The value of buildings for school purposes in 1896 was $16,232,839, and the enrollment of pupils, 359,189. The school enrollment has increased faster than the population, and the average attendance twice as fast. The State supports several normal schools, in which the pupils are trained to a knowledge of the best methods of imparting instruction, and of influencing character, so that all those forces which contribute to well-educated communities may be aroused and properly directed. There is also a Teachers' Institute, where the best methods of instruction and school government are illustrated. A State University, with a costly building, and an endowment of 46,080 acres of land, besides 120,000 acres of agricultural college lands, and a full corps of professors, is in successful operation at Minneapolis, without expense to students except for board. There is a Roman Catholic college at Clinton, in Stearns co., a Methodist college at Red Wing, a Congregational college at Northfield, and an Episcopal college at Faribault, besides commercial colleges at St. Paul and Minneapolis, and many classical and other academies and seminaries for females in different parts of the State.—*Public Institutions.* The most prominent are, a State penitentiary at Stillwater, an asylum for deaf-mutes at Faribault, and an Historical Society, which publishes its transactions annually, at St. Paul.—*Industry.* Among the striking and pre-eminent evidences of the future wealth and greatness of this State, none are more impressive than its inexhaustible water-power, unparalleled on the continent in its capacity, and unequalled in any State for a universal distribution in every direction. At St. Anthony's Falls alone, including the rapids, there is an hydraulic capacity of 120,000 horse-power, more than sufficient to drive all the 25,000,000 spindles and 4,000 mills of England and Scotland combined, greater than the whole motive-power, steam and water, actually employed in textile manufactures in England, and nearly seven times as great as the water-power so employed. The St. Croix and St. Louis River Falls are second only to St. Anthony's in volume, and equally well located; the Pokegama Falls, Little Falls, Sauk Rapids, Cannon Falls, and Vermilion Falls, with the 43 rivers and creeks on the N. shore of Lake Superior, and hundreds of smaller cascades and rapids, combine to give *M.* a water-power for the State at large, and for almost every county, which challenges the world for a parallel. Near St. Anthony are Minnehaha Falls (Fig. 1803), a romantic and beautiful cascade, with a perpendicular fall of 40 feet. The principal manufacturing interests are situated at the Falls of St. Anthony, mentioned above, the power yielded by which has greatly stimulated the industries of the neighboring cities of Minneapolis and St. Paul. The lumber mills of Minneapolis are among the largest in the country, and its flour mills have no superiors in the world. These mills have a total daily capacity of 35,000 barrels. In 1900, per the census returns, *M.* produced manufactured goods to the value of $262,655,881. The commercial position of *M.* is one of the grandest among the States. Occupying the exact center of this continent, and constituting the water-shed of its eastern half, the steam navigation of three great internal water-systems terminates here, viz.: The Mississippi river N. from the Gulf of Mexico; the Red River of the North S. from Hudson Bay, and the St. Lawrence river and chain of great lakes W. from the Atlantic Ocean. *M.* is thus the focus of three cardinal radii of a vast commercial system; the fourth radius, connecting her with the Pacific, is supplied by the Nor. Pac. and Gt. Nor. R.Rs. With these great, almost unequalled facilities for commerce and manufacture, *M.* is destined, at no distant day, to hold a prominent place along with the older States of the Union.—*Finances, &c.* The financial condition of *M.* is most satisfactory, having a comparatively trifling public debt, and a revenue much greater than its expense. The assessed valuation of real estate in *M.* in 1894 was $552,560,000. In 1900 it was $585,083,328. This small increase did not indicate any actual falling off in value, but was due to a reduction in the assessments of real estate in the three largest cities. The funded debt of the State in 1900 was $2,000,000. The grants of lands to railroads aggregate about 20,000,000 acres, worth about $103,000,000. Of these the companies have received 10,000,000 acres, and 3,000,000 in addition under the swamp land act. The swamp lands of *M.* were transferred to the State by Act of Congress, but this is held not to include 975,896 acres which at that time were part of the Indian reservations, and which are claimed as still the property of the national government. In 1883 the State auditor selected as indemnity school-land a tract which is underlaid by a rich iron mine. The same official in 1888, by mistake or oversight, executed a relinquishment of this tract to the government. It is claimed, however, that the title to this valuable tract, worth about $12,000,000, still inheres in the State, but the question of its ownership remains open.—*Govt.* The legislature consists of 54 senators elected for 4 years, and 114 representatives elected for 2 years. Its sessions are biennial, commencing on the first Tuesday of January, and are limited to 60 days. The executive department consists of a governor and lieutenant-governor, a secretary of State, treasurer, and attorney-general, all elected for 2 years, and an auditor elected for 3 years. The judicial power is invested in a Supreme Court, composed of a chief justice and 2 associates, 6 district courts, courts of probate, and justices of the peace, which are also elected by the people; those of the supreme and district courts for 7 years, and the others for 2 years. The State Constitution secures to the citizen by naturalization equal rights and immunities with the citizen native born. No property qualifications are required for the elective franchise; and "persons of foreign birth, who shall have declared their intention to become citizens, conformably to the law of U. S. upon the subject of naturalization, and who shall have resided in the U. S. one year, and in this State for four months next preceding any election," enjoy this privilege, in common with the native-born or naturalized citizen. The alien, while enjoying the protection of the government, is exempt from performing military duty, or from payment of money to secure such exemption, and is excluded only from some civil rights.—*Hist.* Although the first actual settlement of *M.* is of so recent date, nearly two centuries have elapsed since its discovery and partial exploration by white men. As early as 1680, Louis Hennepin, a Franciscan priest, in company with fur-traders employed by a French exploring party, ascended the Upper Mississippi as far as the Great Falls, to which he reverently gave the name of St. Anthony. The early strife between England and France resulted in the treaty of Versailles in 1763, by which all the territory now embracing *M.* was ceded to the former power. In 1766, Capt. Jonathan Carver, a native of Connecticut, a zealous royalist and enthusiastic adventurer, undertook an exploration of England's newly acquired possessions. In the fall of that year he reached St. Anthony Falls, and ascended the Mississippi some miles further, and then returned to the mouth of the Minnesota, which he explored, and passed the winter of 1766–67 among the Indians near the present site of New Ulm. In 1783 the Northwestern Territory, including *M.* E. of the Mississippi, was transferred to the U. S. But no attempt was made to extinguish the Indian title till 1805, when a purchase was made of a tract of land for military purposes at the mouth of the St. Croix, and another at the mouth of the Minnesota river, including St. Anthony's Falls. Upon the latter was commenced the construction of Fort Snelling, in the summer of 1820. In 1827 a small tract of country between the St. Croix and Mississippi was ceded by the Indians to the U. S., and lumbering operations commenced upon the St. Croix. The Territory of Minnesota was established by an Act of Congress passed March 3, 1849, and the government organized in June. It embraced nearly twice the area of the present State, its W. limits extending to the Missouri and White Earth rivers. Up to this period the country was occupied almost entirely by Indians; but a small civilized population of whites and half-breeds had grown up around the mission stations and trading-posts, amounting in 1849 to about 5,000 souls. In this year *M.* was organized as a Territory. In 1851 the Sioux ceded to the U. S. all their lands in the territory between the Mississippi and Big Sioux rivers. In 1857, owing to the rapid increase of population following the withdrawal of the Indians, application was made for admission into the Union, which admission took place May 11, of the following year. That portion of the State lying E. of the Mississippi belonged originally to the "territory N.W. of the Ohio," while that portion W. of the Mississippi was included in the territory known as the Louisiana Purchase. In 1862 the Indians attacked the frontier settlements, and in a few days killed about 800 settlers. In consequence the Sioux and Winnebagoes were removed from the State, and their lands opened to settlement. *Pop.* (1890) 1,301,826; (1900) 1,751,394.

Fig. 1803.—MINNEHAHA FALLS.

Minneso'ta, in *California*, a village of Sierra co.

Minneso'ta City, in *Minnesota*, a post-village of Winona co.

Minneso'ta Junction, in *Wisconsin*, a post-village of Dodge co.

Minnes'ka, in *Minnesota*, a post-village of Wahasha co., about 22 m. N. of Winona.

Minneton'ka, or **Minnitan'ka,** in *Minnesota*, a lake of Henucpin co., about 25 m. W. of St. Paul.

—A post-village of Hennepin co., about 10 m. W. by S. of Minneapolis.

Minniwakan (*min-nee-wa-kan'*), or DEVIL LAKE, in *North Dakota*, a large lake on the S. border of the Salt Water Region, betwen Lat. 47° 50′ and 48° 20′ N. and Lon. 98° 35′ and 99° 30′ W. It is about 50 m. in length, by an average breadth of 15 m.; *area*, about 750 sq. m. The waters are too brackish to be drunk by man, although buffaloes and other wild animals drink them freely. It has no apparent outlet, and is of a deeper tint than the neighboring fresh-water lakes.

Minnow (*min'no*), *n.* [Fr. *menu*, small, slender; O. Fr. *mennise*, small fish, or fry.] (*Zoöl.*) See CYPRINODONTIDÆ.

Mi'nouk, in *Illinois*, a city and township of Woodford co., on the Ill. Cent. and A., T. & S. Fé R. Rs., 29 m. N. of Bloomington. *Pop.* (1897) 2,750.

Minoo'ka, in *Illinois*, a post-village of Grundy co., abt. 11 m. W.S.W. of Joliet.

Mi'nor, *a.* [Lat. irreg. compar. of *parvus*, small, little.] Lower; subordinate; inferior; of small consequence; inconsiderable.

(*Mus.*) The opposite to *major*, a term used to distinguish the mode or key that takes a minor third, as well as to designate all the diatonic intervals; more especially the *third*, which comprises a tone and a semi-tone (A—C), while the major third consists of two whole tones (C—E).

(*Law.*) A person under age; one who, by the laws of the country, is not arrived to the power of administering his own affairs, or the possession of his estate. *Major* and *minor* belong rather to civil law. The common law terms are *adult* and *infant*.

(*Logic.*) The second proposition of a regular syllogism.

Mi'norites, or MINOR FRIARS, *n. pl.* (*Eccl. Hist.*) See CAPUCHINS; FRANCISCANS.

Minor'ity, *n.* [Fr. *minorité.*] The state of being a minor, or under age; the period from birth until 21 years of age.

—The smaller number, as distinguished from the majority, state of being less, smaller, or inferior; the party that has the fewest votes, in legislative assemblies.

Minor'ca, the second in size of the Balearic Islands, belonging to Spain, in the Mediterranean, off the E. coast of Spain, from which it is distant 140 m., Mahon, the cap., being in Lat. 39° 51′ 10″ N., Lon. 4° 18′ 7′ E. *Area*, 260 sq. m. It is of oblong shape, extending from W.N.W. to E.S.E., and has numerous small bays, or deep creeks, and is surrounded by islets, rocks, and shoals. The surface is uneven, but the only mountain is El Toro,

which rises 4,793 ft. above the sea. The soil is, in most part, poor, and water is scarce. *Min.* Iron, lead, copper, and marble. *Chief towns.* Mahon, Alayor, Mercadel, and Ciudadel. *Pop.* 40,000. — MAHON, the cap., is situated at the E. end of the island, and possesses a very safe and commodious harbor. It is the centre of most of the trade of the island. *Pop.* 14,500.

Mi'nos. (*Myth.*) A king of Crete, and the wisest legislator of antiquity, lived 1400 B. C. The gods, as a reward for his justice and integrity, made him, after death, one of the three judges of the infernal regions.

Minot. (*me-not'*,) in *Maine*, a post-village and township of Androscoggin co., abt. 37 m. N.N.W. of Portland; *pop.* of township abt. 2,800.

Min'otaur. *n.* [Lat. *minotaurus*, from *minos*, and *taurus*, a bull.] (*Myth.*) A monster half-man and half-bull, said to be the son of Pasiphaë, wife of Minos, king of Crete, by a bull (*ταῦρος*); hence the term Minotaur. According to one version of the myth, Minos shut him up in the labyrinth of Dædalus, feeding him with criminals, and afterwards with youths and maidens sent from Athens. Theseus, by the assistance of Ariadne, succeeded in destroying him, and thereby rescued the Athenians from the obligation of sending their children to be devoured. The bull of Minos, whose wife is Pasiphae, the *giver of light to all*, is seen again in the bull of Indra, as well as in that which bears Europa across the sea. In some myths, as in that of the Marathonian bull, the only idea attached to it is that of devastation; but the Marathonian bull, like the Minotaur, is slain by Theseus, who is also a solar hero.

Minot's Ledge, or COHAS'SET ROCKS, in *Massachusetts*, a promontory and light-house on the S.W. shore of Boston Harbor, abt. 8 m. S.E. of Boston Light. It exhibits a fixed light 66 feet high.

Min'ow, *n.* (*Zoöl.*) The same as MINNOW.

Minsk, a govt. of Russian Poland, comprising the former palatinate of Minsk, and portions of the palatinates of Polock, Wilna, and Novogrodek; Lat. between 52° and 56° N., Lon. 26° and 30° E. It is bounded N. by Witepsk, E. Moghilev, S. Kiev and Volhynia, and W. Grodno and Wilna. *Area*, 42,000 sq. m. The surface is mostly level except in the N. There are numerous small lakes, and in spring a great portion of the country is inundated. The forests are very extensive. The chief rivers are the Pripet, Dnieper, Berezina, Styr, Gorin, and Pechiza. The Dwina forms for a short distance the N. boundary, and the Niemen the W. boundary, of the govt. *Prod.* Corn, hemp, flax, and potash; and there is a large trade in timber. *Manuf.* Woollen cloth, glass, and Russian leather. The chief towns are Minsk, (the cap.,) Boubrousk, and Sloutsk. *Pop.* 1,001,335. — MINSK, the cap. of the above govt., is 150 m. S.W. of Grodno. *Manuf.* Woollen cloth, hats, and leather. *Pop.* 30,149.

Min'ster, *n.* [A. S. *minstre* or *mynster*; L. Lat. *monasterium*, a monastery.] The church of a monastery, or one to which a monastery has been attached; sometimes a cathedral church; as, York *Minster*, England.

Min'strel, *n.* [Fr. *ménétrier*; O. Fr. *menestrier*; L. Lat. *ministrallus*, *ministellus*, from Lat. *minister*, one who serves. See MINISTER.] A class of men who, in the Middle Ages, gained a livelihood by the arts of poetry and music, singing to the harp (Fig. 1804) their own verses, or the popular ballads and metrical histories of the time. They sometimes accompanied their music with mimicry and action; so that they were often called *mimi histriones*, *joculatores*. They were everywhere held in the highest estimation, being welcomed and caressed by all classes of society, and no great entertainment was considered complete which was not enlivened by their talents. From the Conquest downwards, for many ages, in England, the profession of the *M.* was a popular and privileged one. Numerous instances occur in the early history of England showing the esteem in which they were held even by royalty itself, and they were often more amply paid than the clergy. "In the year 1441," says Warton, "eight priests were hired in Coventry to assist in celebrating a yearly obit in the church of the neighboring priory of Maxstoke; as were six *M.*, called *mimi*, belonging to the family of Lord Clinton, who lived in the adjoining castle of Maxstoke, to sing, harp, and play in the hall of the monastery during the extraordinary refection allowed to the monks on that anniversary. Two shillings were given to the priests and four to the *M.*, and the latter are said to have supped *in camerâ pictâ*, or the painted chamber of the convent, with the sub-prior; on which occasion the chamberlain furnished eight massy tapers of wax." As learning and culture began to prevail, the high admiration in which this class of persons was held began to subside; poetry was cultivated more by men of letters, and the poet and minstrel became two distinct persons. So late as the reign of Henry VIII. these reciters of verse found free access into all companies, — the mansion of the noble as well as the village tavern. But they were gradually sinking into contempt; and in the reign of Elizabeth so singular a phenomenon had a veritable *M.* become, that when one of these ancient singers made his appearance at Kenilworth Castle, in 1575, before the queen, he excited so much interest that old Laneham has given a minute description of his

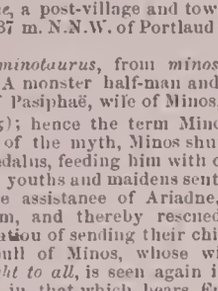


Fig. 1804.
A MINSTREL. (12th century.)
(From a manuscript in the Imperial Library, Paris.)

Fig. 1805. — MINSTRELSY AT COURT. (12th century.)
(From a manuscript of the romance of Guyon le Courtois, in the Imperial Library, Paris.)

persou and dress in his *Princely Pleasures of Kenilworth*. Towards the end of the 16th century this class of persons had lost all credit, and by an Act passed in the thirty-ninth year of Elizabeth they are classed with rogues, vagabonds, and sturdy beggars, and adjudged to be punished as such.—In the present day, a *M.* is merely a musician, a player upon some instrument.

Min'strelsy, *n.* The arts and occupations of minstrels; instrumental harmony.
—A number of musicians; the collective body of minstrels.
—The collection of songs or airs of a country.

Mint, *n.* [Lat. *moneta*; A. S. *mynet*, money.] An establishment for making coins or metallic money. The mint establishments of the U. States consist of the principal mint at Philadelphia, and 7 branches located respectively at New Orleans, La.; Charlotte, N. C.; Dahlonega, Ga.; San Francisco, Cal.; Denver, Colo.; Portland, Oregon; and New York city,— the last-named being styled an assay office. The mint was established by Act of Congress of April 2, 1792, at Philadelphia, which was then both the seat of government and the commercial metropolis of the country. It was not fairly in operation until Jan., 1795. The branch mints at New Orleans, Charlotte, and Dahlonega were established by the Act of March 3, 1835, and commenced operations in 1838, the one at New Orleans being for the coinage of gold and silver, and the other two for gold only. The branch mint at San Francisco, for the coinage of gold and silver, was established by Act of March 3, 1852, and went into operation in 1854. The U. States assay office at New York, established by Act of Congress of March 4, 1853, also commenced operations in 1854. The functions of the assay office are the same as those of the branch mints, with the single exception of coining. Gold and silver bullion is received on deposit, weighed, melted, assayed, and refined, on precisely the same terms as at the Philadelphia mint, and returns are made either in coins or stamped bars at the option of the depositor. That portion of the bullion, however, which is paid for in coins, or an equivalent amount, must necessarily be sent to the mint at Philadelphia, to be coined and returned. These branch establishments are managed by superintendents appointed by the President of the U. States, and the general direction of the business of the branches is under the control and regulation of the director of the mint at Philadelphia, subject to the approbation of the Secretary of the Treasury. The whole mint establishment, thus constituted, is itself a bureau of the Treasury Department, and its operations are annually reported to Congress through the Secretary of the Treasury, and made public. The course of business at the mint and branches is briefly as follows. Deposits of bullion, not less than $100 in value, are receivable by the Treasurer, who weighs the same in the presence of the depositor, and gives him a receipt therefor expressing the weight in troy ounces. Each deposit is kept separate during the process of melting and assaying, and until its precise value is determined. This is ordinarily accomplished in 2 or 3 days, when, on presentation of the original receipt, the net proceeds are paid to the depositor or his order. At the time of payment, the Treasurer furnishes the depositor a "memorandum" exhibiting the weight of his bullion before melting and after melting, its fineness and value, the amount of silver contained if a gold deposit, and *vice versa*, the "deductions" for parting, coinage, or bars, and the net amount payable. The charges made to depositors are for parting when gold and silver are combined, for refining and toughening when required, for coinage or fine bars according as a deposit is paid in one or the other. The law provides that these charges shall be fixed from time to time by the director, with the concurrence of the Secretary of the Treasury, so as not to exceed the expense to the mint of the labor and materials employed. The existing charge for parting on gold bullion of the ordinary range of fineness, at Philadelphia, New York, and New Orleans, is 5 cents per oz. gross; at Charlotte and Dahlonega, 12 cts.; and at San Francisco, 14 cts. The coinage charge at all the mints is 50 cts. per $100, and for fine gold-bars 6 cts. per $100. The charges for refining and toughening depend upon the condition of the metal deposited. — The organization of the several mint establishments is essentially the same. The officers are a director (or superintendent), a treasurer, an assayer, a melter and refiner, a coiner, and, at the principal mint only, an engraver. To these officers, as well as the clerks and workmen, are paid salaries or wages regulated by law, for which annual appropriations are made by Congress. A portion of the incidental expenses are covered by the charges on deposits; but no commissions or perquisites of any kind are enjoyed by any one belonging to the establishment. Since the beginning of the civil war, the branches at Dahlonega and Charlotte have been closed. The dies used in all the mints of the U. S. are made under the supervision of the engravers of the Philadelphia mint. The production of original dies cut by the engraver's hand in steel is a work of great labor, and it would be impossible in this manner to supply the dies necessary for the coinage of the country. The original dies, being carefully finished and hardened, are used simply to strike copies in softened steel, which is done by repeated blow under a powerful screw press. All the devices upon the original dies were sunk, then copies will be in relief. To prepare dies for coinage, therefore, this hardening and copying process must be repeated. We might now proceed to describe the various processes employed in the mint; but, as they are multiple, minute, and difficult to understand without the use of numerous diagrams, we have believed it unnecessary to enter into a matter which is of such limited interest.

(*Bot.*) See MENTHA.

Mint'age, *n.* That which is coined or stamped. — The duty paid for coining.

Mint'er, *n.* A coiner. — An inventor.

Mint-jn'lep, *n.* See JULEP.

Mint'-man, *n.*; *pl.* MINT-MEN. One skilled in coinage.

Mint'master, *n.* The person who presides over a mint. —One who invents.

Mint'-sauce, *n.* (*Cookery.*) A sauce compounded of vinegar and sugar, and flavored with green mint, used at table to impart a piquant relish to roast lamb.

Min'uend, *n.* [Lat. *minuendum*, from *minuo*, to lessen.] (*Arith.*) The number from which another number is to be subtracted.

Min'uet, *n.* [Fr. *menuet*, dimin. of *menu*, small.] (*Dancing.*) A stately, regular, and very graceful dance, formerly very popular, but now rarely, if ever, met with, except at occasional court balls in Europe. It was invented in Poitou in France, and first danced at Paris by Louis XIV., in 1653.—(*Mus.*) A movement of three crotchets or three quavers in a bar is also called a *minuet*.

Mi'nus, *a.* [Lat.] (*Algebra.*) Denoting less; — prefixed to negative quantities, or quantities to be subtracted.

Minus'cule, *n.* [Lat. *minusculus*.] A minute sort of letter or character used in MSS. in the Middle Ages.

Minute', *a.* [Fr.; Lat. *minutus*, from *minuo*, to diminish or make small.] Diminutive; little; very small or slender; of very small bulk or size; infinitesimal. — Observant of small things or trifles; circumstantial; particular; exact; critical; nice.

Min'ute, *n.* A small portion or duration of time; the sixtieth part of an hour.
—A space of time indefinitely small.
—A short sketch of any agreement or other subject, taken in writing; a note to aid in remembering anything; a memorandum.
(*Geom.*) The sixtieth part of a degree.
(*Arch.*) The sixtieth part of the diameter of a column, by which subdivision architects measure the smaller parts of an order; the diameter is chosen at the lower end of the column.
—*v. a.* To set down a short memorandum or note of any agreement or other subject in writing.

Min'ute-bell, *n.* A bell which is sounded regularly at intervals of a minute.

Min'ute-book, *n.* A book containing minutes, or short hints, notes, or memoranda.

Min'ute-glass, *n.* A glass, the sand of which measures one minute, while sinking.

Min'ute-gun, *n.* A gun discharged regularly at intervals of a minute, as a signal of distress or of mourning.

Min'ute-hand, *n.* The hand that points to the minutes on a clock or watch.

Min'ute-jack, *n.* A figure which is made to strike the hours of a clock.

Min'utely, *adv.* To a small point of time, space, or matter; exactly.
—*a.* Every minute; with very little time intervening (a.)

Min'ute-man, *n.*; *pl.* MINUTE-MEN. A man enlisted for military service, whenever and wherever required; — a term used during the American revolution.

Minute'ness, *n.* Extreme smallness, fineness, or slenderness. — Attention to small things; critical exactness.

Min'ute-watch, *n.* A watch in which minutes are more distinctly marked than in common watches, which reckon by the hour.

Minutia, (*mi-nu'shi-a,*) *n.*; *pl.* MINUTIÆ. [Lat.] The smaller particulars; — used generally in the plural.

Minu'tius Fe'lix, a famous Roman Christian orator in the 3d century. He wrote a dialogue, under the title of *Octavius*, in which he introduces a Pagan and a Christian disputing as to the merits of their respective religions. It is a production of considerable merit, and written with eloquence in favor of Christianity. The best edition is that of Davis.

Minx, *n.* A pert, wanton girl; a hussy.
(*Zoöl.*) Same as MINK, *q. v.*

Min'y, *a.* Abounding with mines; subterraneous

Mi'ocene, *n.* (*Geol.*) See TERTIARY PERIOD.

Miosen, (*me-o'zen,*) a large lake of Norway, 40 m. N.E.

of Christiana. *Ext.* 55 m. long, and 12 m. broad. It receives the River Lougen, and discharges its surplus waters, by the Vermen, into the river Glomuen.

Mipibu, (*me-pe-boo'*,) a town of Brazil, on a small river of its own name, abt. 40 m. S.S.W. of Natal; *pop.* 2,000.

Mi'quelet, *n.* [Sp. *miquelete.*] (*Hist.*) One of a body of partisan troops raised in the N. of Spain, and chiefly in Catalonia. The Miquelets became first known in the wars between Spain and France in the 17th century. At several periods (in 1687, 1787, and again in the wars of Napoleon) the French endeavored to organize several corps to oppose the *M.* in the mountain warfare in these districts.

Miquelon, (*mee-keh-long'*,) the name of two islands in the Atlantic Ocean, off the S. coast of Newfoundland. Great Miquelon is in Lat. 47° 4′ N., Lon. 56° 20′ W., and immediately S. of it is Little Miquelon, or Langlée. See SAINT PIERRE.

Mi'ra, a town of Ecuador, abt. 65 m. N.E. of Quito.

Mira, (*mee'ra,*) a river of S. America, rising on the W. slope of the Andes in Ecuador, and flowing N.W. into the United States of Colombia, enters the Pacific Ocean abt. Lat. 1° 36′ N., Lon. 79° 5′ W.

Mir'abeau, HONORÉ GABRIEL RIQUETTI, COUNT DE, one of the most celebrated characters of the French revolution, b. at Bigiion, in Provence, 1749, was the son of the Marquis Victor Riquette de Mirabeau, an author on political economy. On leaving school, he entered the military service; and his intercourse with young and dissipated officers familiarized him with all their vices. His active mind, however, could not remain idle, and he read all the books he could procure on the military art. He also fell in love, and his passion was marked by all the impetuosity of a strong and wild character. His father, who systematically thwarted his inclinations, procured his confinement in a fortress on the island of Rhé. After his liberation he went, as a volunteer, to Corsica, distinguished himself, and obtained a commission as captain of dragoons; but his father refusing to purchase him a regiment, he abandoned, though unwillingly, the military profession. In 1772 he espoused a rich heiress of Aix, but he soon squandered the fortune he received with her, and plunged himself in debt. He was confined in different prisons, and on obtaining his liberty, eloped to Holland with the wife of the Marquis de Monnier. For this he was afterwards imprisoned in the castle of Vincennes, and remained there 3 years and a half. He then instituted an ineffectual lawsuit against his wife, who obtained a separation from him. In 1784 he visited London, and afterwards Berlin, being sent to the latter city on a secret political mission; and he was variously employed in literary quarrels and occupations till the commencement of the French revolution. This offered *M.* an ample field for his activity. After unsuccessfully offering himself to the states of Provence as deputy to the States-General, he was elected for Aix and Marseillee as deputy of the third estate, and by courtiers he was termed the plebeian count. In this new capacity, his extraordinary eloquence, his talent, and his boldness, soon gave him irresistible weight in the assembly, and rendered him the idol of the people. The story of his life thenceforth would be the history of the Assembly, of which he was long the master-spirit, and was chosen president in January, 1791. At length he entered into a treaty with the court, to use his influence in stopping the progress of republicanism. Before, however, he could carry his intentions into effect, a sudden illness terminated his existence in 1791. His remains were honored with a public funeral, and deposited in the Pantheon. They were, however, in the following year, removed from the Pantheon, and deposited by night in a churchyard, and the great orator himself was declared traitor by the Assembly. The works of *M.* have been several times republished. His life and character are discussed in an elaborate essay by Carlyle.

Mirab'ilis, *n.* [Lat., wonderful.] (*Bot.*) A genus of plants order *Nyctaginaceæ*. The species, called in French *Belles de Nuit*, form highly ornamental border-plants. *M. jalapa*, the Four-o'clock, or Marvel of Peru, is a much admired perennial herb from the W. Indies, and is distinguished by its large, very fragrant flowers, in axillary and terminal clusters, with wide-spreading border (opening at about 4 o'clock P. M.), and bright purple calyx. With cultivation it sprouts into many pleasing varieties, with yellow and white, red and white, and red and yellow flowers. The roots of this species, as well as those of *M. longiflora*, the Long-flowered Four-o'clock, a native of Mexico, with white flowers, have purgative properties, and the first-mentioned species was, until recently, supposed to be the true Jalap-plant. *M. dichotoma*, the Mexican Four-o'clock, is another handsome plant, with yellow flowers, and, like the preceding, opening at 4 o'clock.

Miracle, (*mir'a-kl,*) *n.* [Fr.; It. *miracolo*, from Lat. *miraculum*, from *miror, miratus*, to wonder at.] A wonderful sight or thing; a wonder; a marvel; a prodigy.
—An event or effect contrary to the established constitution and course of things, or a deviation from the known laws of nature; an effect above human or natural power, performed in attestation of some truth; a supernatural event.—See SUPERNATURAL.

Mir'acle-mon'ger, *n.* A pretended worker of miracles.

Miracles and Moralities. (*Drama.*) See MORALITIES.

Mirac'ulous, *a.* [Fr. *miraculeux;* L. Lat. *miraculosus.*] Performed supernaturally, or by a power beyond the ordinary agency of natural laws.—Supernatural; gifted supernaturally, or competent to perform miracles; wonderful; extraordinary.

Mirac'ulously, *adv.*. By miracle; supernaturally.

Mirac'ulousness, *n.* State of being miraculous, or of being effected by miracle, or by supernatural agency.

Mirador', *n.* (*Arch.*) A balcony; a gallery having an extensive view.

Miraflo'res, a village of the Argentine Republic, on the Salado River, abt. 100 m. S.E. of Salta.

Mirage, (*mi'raj,*) *n.* [Fr., from *mirer*, to aim at, *se mirer*, to view one's self in a glass; It. *miraglio.*] (*Optics.*) An optical illusion by which inverted images of distant objects are seen as if below the ground, or in the atmosphere. This phenomenon is of most frequent occurrence in hot climates, and more especially on the sandy plains of Egypt. The ground there has often the aspect of a tranquil lake, on which are reflected trees

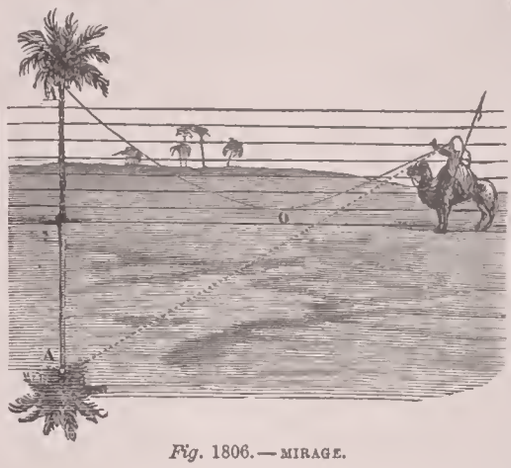


Fig. 1806.—MIRAGE.

and the surrounding villages. The phenomenon has long been known; but Mouge, who accompanied Napoleon's expedition to Egypt, was the first to give an explanation of it. It is a phenomenon of refraction, which results from the unequal density of the different layers of the air when they are expanded by contact with the heated soil. The least dense layers are then the lowest, and a luminous ray from an elevated object, A (Fig. 1806), traverses layers which are gradually less refracting; for the refracting power of a gas diminishes with lessened density. The angle of incidence accordingly increases from one layer to the other, and ultimately reaches the critical angle, beyond which, internal reflection succeeds to refraction. The ray then rises, as seen in the figure, and undergoes a series of successive refractions, but in a direction contrary to the first, for it now passes through layers which are gradually more refracting. The luminous ray then reaches the eye with the same direction as if it had proceeded from a point below the ground, and hence it gives an inverted image of the object, just as if it had been reflected at the point O, from the surface of a tranquil lake. Mariners sometimes see images in the air of the shores or of distant vessels. This is due to the same cause as the *M.*, but in a contrary direction, only occurring when the temperature of the air is above that of the sea, for then the inferior layers of the atmosphere are denser, owing to their contact with the surface of the water.

Miramichi, (*mir-a-me-shee'*,) a river of New Brunswick, rising by several branches in Victoria co., and flowing a general N.E. course of abt. 75 m., enters the Gulf of St. Lawrence. Its mouth forms MIRAMICHI BAY.

MIRAMICHI, a town, port of entry, and the cap. of Northumberland co., New Brunswick, on Miramichi Bay, abt. 140 m. N.N.E. of St. John's. The bay, which is here 9 m. wide, forms an excellent harbor, and the town has an active and increasing commerce. *Pop.* 5,000.

Miran'da, DON FRANCISCO, a general in the service of the French republic, and the earliest martyr in the cause of freedom in South America, was born at Caracas, of an ancient Spanish family. He presented to different courts plans for the emancipation of the Spanish American colonies, and with this view went to Paris in 1792, where he connected himself with Pétion and the Girondists. While waiting for an opportunity to commence operations in America, Miranda was appointed general of division under Dumouriez. Some time after, he was imprisoned in consequence of his political intrigues. In 1794 he was liberated, but received orders to quit France, and took refuge in England. Having procured some secret assistance, he sailed from New York in 1806 with one ship and a number of volunteers, and landed in Venezuela; but his attempts to rouse the inhabitants were altogether unsuccessful, and he found himself compelled to re-embark. In 1810 he renewed his attempt with more success, but was finally obliged to capitulate to the Spanish general Monteverde, who, in violation of the articles of surrender, treated him as a prisoner. Miranda was sent to Spain and confined in the dungeons of the Inquisition of Cadiz, where, in 1816, he died, after an imprisonment of four years.

Miran'da, in *N. Carolina*, a post-village of Rowan co., abt. 10 m. S.W. of Salisbury.

Mirandel'la, a town of Brazil, abt. 170 m. N.N.W. of Bahia.

Mirando'la, GIOVANNI PICO DELLA, a young Italian nobleman, distinguished for his precocious talents, learning, and memory, was b. in 1463. He studied at Bologna, and at many other universities in Italy and France, and attained extraordinary acquirements in language, logic, philosophy, theology, and other subjects. Like the "Admirable Crichton," a century later, he showed his vanity and arrogance by publishing a challenge to dispute with any person on any one of 900 propositions then set forth. He was then 23 years of age, and was living at Rome. Some of his propositions were submitted to the Pope as heretical, and he had them inquired into and censured. Pico, after some further wanderings, settled at Florence, where he enjoyed the friendship of Lorenzo de Medici, Poliziano, and other eminent scholars. He visited Lorenzo on his death-bed, and did not long survive him, dying at Florence, November 17, 1494; the very day on which the city was entered by the French under Charles VIII. The works of Pico have been several times republished, but are now neglected. His Life was written by his nephew, Giovanni-Francesco, who also wrote the *Life of Savonarola.*

Mir'bane, (ESSENCE OF.) See BENZINE.

Mire, *n.* [Icel. *myri*, a swamp, bog, fen; Du. *moer*, marsh.] Deep mud; earth, so wet and soft as to yield to the feet and to wheels.
—*v. a.* To plunge or fix in mire; to set or stall in mud.
—To soil or daub with mud or foul matter; to bemire; to slush.
—*v. n.* To sink in mire or mud, or to sink so deep as to be unable to move forward.

Mirebal'ais, (Le,) a town of Hayti, W. Indies, abt. 80 m. N.N.E. of Port-au-Prince.

Mirecourt, (*meer'koor,*) a town of France, dept. of Vosges, on the Madon, a tributary of the Moselle, 16 m. N.W. of Epinal. *Manuf.* Violins, guitars, barrel-organs, and other musical instruments. *Pop.* 6,000.

Mire'drum, *n.* (*Zoöl.*) A name of the BITTERN, *q. v.*

Mir'iam. (*Script.*) The sister of Moses and Aaron, probably the one who watched over Moses in the ark of bulrushes, (*Ex.* ii. 4, 5; *Num.* xxvi. 59; *Mic.* vi. 4.) As a prophetess, she led the women of Israel in their song of worship and thanksgiving to God on the drowning of the Egyptians, (*Ex.* xv. 20, 21.) Her jealous murmurs against Moses and his Cushite wife were punished by a temporary leprosy (*Num.* xii.; *Deut.* xxiv. 9); but she was forgiven and restored, and near the close of the wanderings of Israel, died at Kadesh-barnea, (*Num.* xx. 1.)

Mir'ickville, in *Massachusetts*, a post-village of Bristol co. Now generally spelled MYRICKVILLE.

Mirific, Mirifical, *a.* [Lat. *mirificus*, from *mirus*, wonderful, and *facere*, to make.] Causing wonder or admiration; marvellous; wonderful.

Mirim, (*me-reeng'*,) a lake of S. America, in the neutral territory between Brazil and Uruguay, Lat. 33° S., Lon. 63° W. It covers an area of abt. 2,000 sq. m., and receives several rivers, communicating E. with the Atlantic Ocean by the Trajim, and N. with Lake de los Patos by the Mirim.

Mir'iness, *n.* State of being miry, or consisting of deep mud.

Miriti, (*me-re-tee'*,) a town of Brazil, on a river of the same name, abt. 14 m. N.W. of Rio de Janeiro.

Mirk, *a.* [A. S. *mirc*, dark; Dan. *morck.*] Dark; murky; obscure.

Mirk'y, *a.* Obscure; dark. See MURKY.

Mir'ror, *n.* [Fr. *miroir;* from Lat. *miror*, to wonder at.] (*Optics.*) A speculum or looking-glass, or any other polished body capable of reflecting the images of luminous or illuminated objects. In ancient times mirrors were made of metal, but at the present day they are usually smooth plates of glass, tinned or silvered on the back, and are either plane, convex, or concave. A *plane* mirror, or looking-glass, reflects the rays in a direction similar to that in which they fall on it; hence, objects are represented of their natural size by it. In a *convex* mirror, the rays are made to diverge, and the images of objects seen in it are consequently diminished; while, in a *concave* mirror, or *reflector*, the rays are collected into a focus, and then, at a certain distance, images are seen inverted and magnified. Fig. 1807 gives a medial section of a concave mirror, called also *principal section.* The centre, C, of the sphere to which the mirror belongs is called the *centre of curvature;* the point A, the middle of the reflector, is the *centre of the figure;* the straight line A B, passing through these points, is the *principal axis* of the mirror. The reflecting power of concave or spherical mirrors may be explained as follows: In order to apply to them the laws of reflection from plane surfaces, they are considered to be composed of an infinite number of infinitely small plane surfaces, each belonging to the corresponding tangent plane; the normals to these small surfaces are all radii of the same sphere, and therefore meet at its centre, the centre of curvature of the mirror. Suppose now, the axis A B of the

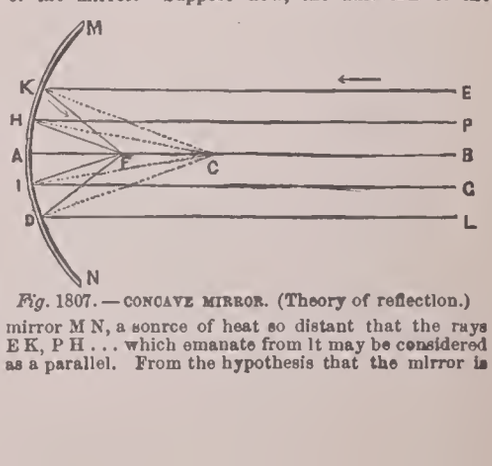


Fig. 1807.—CONCAVE MIRROR. (Theory of reflection.)

mirror M N, a source of heat so distant that the rays E K, P H . . . which emanate from it may be considered as a parallel. From the hypothesis that the mirror is

composed of an infinitude of small planes, the ray E K is reflected from the plane K just as from a plane mirror; that is to say, C K being the normal to this plane, the reflected ray takes a direction such that the angle C K F is equal to the angle C K E. The other rays, P H, G I . . . . are reflected in the same manner, and all converge approximately towards the same point, F, on the line A C. There is then a concentration of the rays in this point, and consequently a higher temperature than at any other point. This point is called the *focus*, and the distance from the focus to the mirror at A is the *focal distance*. — The following experiment, which was made for the first time by Pictet and Saussure, and

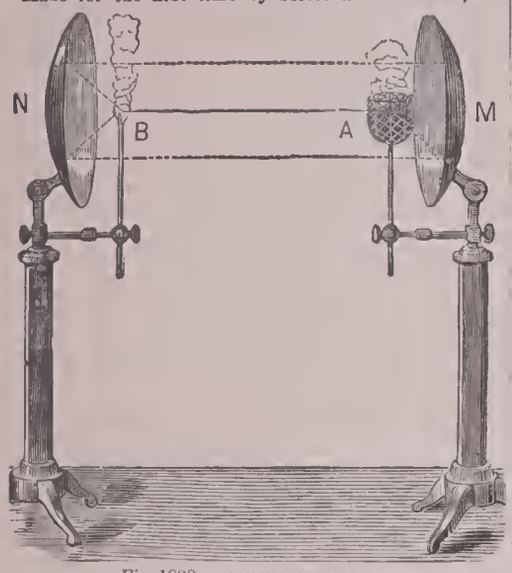


Fig. 1808. — CONJUGATE MIRRORS.

which is known as the *experiment of the conjugate mirrors*, demonstrates not only the existence of the foci, but also the laws of reflection. Two reflectors, M and N (Fig. 1808), are arranged at a distance of 4 to 5 yards, and so that their axes coincide. In the focus of one of them, A, is placed a small wire basket containing a red-hot iron ball. In the focus of the other, B, is placed an inflammable body, such as gun-cotton or phosphorus. The rays emitted from the focus A are first reflected from the mirror M, in a direction parallel to the axis, and impinging on the other mirror, N, are reflected so that they coincide in the focus B. That this is so, is proved by the fact that the gun-cotton in this point takes fire, which is not the case if it is above or below it. — The applications of plane mirrors in domestic economy are well known. Mirrors are also frequently used in physical apparatus for sending light in a certain direction. The solar light can only be sent in a constant direction by making the mirror movable. It must have a motion which compensates for the continual change in the direction of the sun's rays produced by the apparent diurnal motion of the sun. This result is obtained by means of a clockwork motion, to which the mirror is fixed, and which causes it to follow the course of the sun. This apparatus is called the *heliostat*. The reflection of light is also used to measure the angles of crystals by means of the instruments known as *reflecting goniometers*. Concave spherical mirrors are also often used. They are applied for magnifying *mirrors*, as in a shaving mirror. They have been employed for burning mirrors, and are still used in telescopes. They also serve as reflectors, for conveying light to great distances, by placing a luminous object in their principal focus. For this purpose, however, parabolic mirrors are preferable. *Parabolic mirrors* are concave mirrors whose surface is generated by the revolution of the arc of a parabola, A M, about its axis, A X, (Fig. 1809). It has been already stated that in spherical mirrors the rays parallel to the axis converge only approximatively to the principal focus and reciprocally, when a source of light is placed in the principal focus of these mirrors, the reflected rays are not exactly parallel to the axis. Parabolic mirrors are free from this defect: they are more difficult to con-

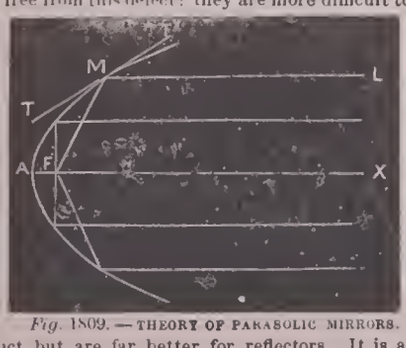


Fig. 1809. — THEORY OF PARABOLIC MIRRORS.

struct, but are far better for reflectors. It is a well-known property of a parabola that the right line F M, drawn from the focus F, to any point, M, of the curve, and the line M L, parallel to the axis A F, make equal angles with the tangent T T at this point. Consequently, all rays parallel to the axis after reflection in the focus of the mirror F, and reciprocally, when a source of light is placed in the focus, the rays incident on the mirror, are reflected exactly parallel to the axis. The light thus reflected tends to maintain its intensity even at a great distance, for it has been seen that it is the divergence of the luminous rays which principally weakens the intensity of light. — See GLASS, LENS, SPECULUM.

Mir'ror, *v. a.* To reflect, as in a mirror.

Mirth, *n.* [A.S. *myrth, mergth.*] Hilarity; jollity; high excitement of pleasurable feelings in company; noisy gaiety: merriment; fun; frolic.

Mirth'ful, *a.* Merry; jovial; festive; full of mirth.

Mirth'fully, *adv.* In a mirthful manner.

Mirth'fulness, *n.* State or quality of being mirthful; state of mirth; tendency to mirth.

Mirth'less, *a.* Joyless; cheerless; sad.

Mirth'lessness, *n.* Lack of fun or merriment; absence of mirth.

Mir'y, *a.* Full of mire; abounding with deep mud. — Consisting of mire.

Mir'za, *n.* [A corruption of the Persian title *Emirzadeh*, son of the prince.] The common title of honor in Persia, when it precedes the surname; when appended to it, it signifies *prince*.

Mirzapore, (*mir-za-por'.*) a dist. of Hindostan, presidency of Bengal, prov. of Benares, between Lat. 23° 50′ and 25° 30′ N., Lon. 82° and 83° 39′ E. *Area*, 5,235 sq. m. The surface is diversified. *Prod.* Wheat, barley, cotton, vegetables, and fruit. *Min.* Iron, sand-stone, and lime. *Pop.* 1,104,315. — MIRZAPORE, the cap. of the above dist., on the Ganges, 30 m. S.W. of Benares, has a flourishing trade, being the chief mart for silk and cotton goods in the British middle provs. *Manuf.* Carpets, and cotton stuffs. *Pop.* 80,000.

Mis- [A.S., Icel., and Dan. *mis.*] An inseparable particle used in composition to mark an ill sense, or defect, wrong, error, &c.

Misaccepta'tion, *n.* The act of taking or understanding in a wrong sense.

Misadvent'ure, *n.* Ill-hap; unlucky accident; mischance; misfortune; disaster.

(*Law.*) Homicide by *M* is where a man, doing a lawful act, without any intention of hurt, unfortunately kills another; as when a man is at work with a hatchet, and the head thereof flies off and kills a bystander, or where a person is shooting at a mark, and undesignedly kills a man. The homicide, in such cases, is excusable.

Misadvent'urous, *a.* Unfortunate; unlucky.

Misadvice', *n.* Bad, or evil advice.

Misadvise', *v. a.* To give bad advice or counsel to.

Misadvised', *a.* Ill-advised; ill-directed.

Misaffirm', *v. a.* To affirm erroneously.

Misallega'tion, *n.* An erroneous statement.

Misallege, (*mis-al-lĕj'.*) *v. a.* To state incorrectly.

Misalli'ance, *n.* [Fr. *mesalliance.*] An unsuitable connection by marriage with an inferior in rank or station; improper association.

Misallied', *a.* Ill associated or allied.

Misallot'ment, *n.* A wrong allotment.

Mis'anthrope, Misan'thropist, *n.* [Fr. *misanthrope*, from Gr. *misanthropos*, from *miseō*, to hate; from *misos*, hate, and *anthropos*, man.] A hater of mankind; one who hates or dislikes the society of man or mankind.

Misanthrop'ic, Misanthrop'ical, *a.* [Fr. *misanthropique.*] Hating, or having a dislike to mankind.

Misan'thropy, *n.* [Fr. *misanthropie.*] Hatred or dislike to mankind; — opposed to philanthropy, or a general love of mankind.

Misan'tla, an ancient, ruined Indian city of Mexico, abt. 35 m. N.E. of Jalapa. There are remains of a pyramid, streets, walls, and a cemetery.

Misapplica'tion, *n.* An application to a wrong person or purpose.

Misapply', *v. a.* To apply to a wrong purpose; to apply amiss.

Misappre'ciated, *a.* Ill-appreciated.

Misapprehend', *v. a.* To misunderstand; to take in a wrong sense.

Misapprehen'sion, *n.* Wrong apprehension of one's meaning, or of a fact; misconception; misunderstanding; mistake.

Misapprehen'sively, *adv.* By or with misapprehension.

Misappropria'tion, *n.* Wrong appropriation.

Misarrange', *v. a.* To arrange improperly.

Misarrange'ment, *n.* Wrong arrangement.

Mis-ascribe', *v. a.* To ascribe falsely.

Mis-assign, (*mis-as-sīn'.*) *v. a.* To assign erroneously.

Misbecome', *v. a.* Not to become; to be unseemly: not to suit.

Misbecom'ingly, *adv.* In an unbecoming manner.

Misbecom'ingness, *n.* Unsuitableness; unbecomingness; unseemliness.

Misbefit'ting, *a.* Unsuitable; unbefitting.

Misbegot', Misbegot'ten, *a.* Unlawfully or irregularly begotten.

Misbehave', *v. n.* To conduct one's self improperly; to behave ill; — often used with a reciprocal pronoun; as, to *misbehave one's self*.

Misbehaved', *a.* Ill-bred; untaught; uncivil.

Misbehav'ior, *n.* Ill conduct; improper; rude or uncivil behavior; misconduct.

Misbelief', *n.* Erroneous belief; false religion.

Misbelieve', *v. a.* To believe erroneously.

Misbeliev'er, *n.* One who believes wrongly; one who holds a false religion.

Misbeseem', *v. a.* To not suit; to suit unfitly.

Misbestow', *v. a.* To give or bestow improperly.

Mis'born, *a.* Born to ill-luck, or misfortune.

Miscal'culate, *v. a.* To calculate erroneously.

Miscalcula'tion, *n.* Erroneous calculation.

Miscall, (*mis-kawl'.*) *v. a.* To call by a wrong name; to name improperly; to revile.

Miscarriage, (*mis-kar'rĭj.*) *n.* Unfortunate result of an undertaking; failure of intended effect. — Ill conduct; evil or improper behavior.

(*Med.*) The untimely bringing forth of a child. Few medical men are agreed as to the proper application of this term, each practitioner forming his own views on the subject. By some, a *M.* is laid down as occurring before the twelfth week; properly, however, a *M. can only take place* between the time of quickening and the period when a child, if born, would be capable of living; in other words, between the fifth and the end of the seventh month; the loss of the fœtus between the twelfth and sixteenth week — the most common period — is properly an *abortion*; and the birth of the child at any time after it has become *viable*, and up to near the natural time, or from the middle of the seventh to the middle of the ninth month, is a *premature labor*.

Miscar'ry, *v. n.* To meet with failure, as an undertaking or design; not to succeed; to be unsuccessful; to suffer defeat. — Not to reach its destination; as, the letter *miscarried*. — To bring forth young before the proper time; to have an abortion.

Miscast', *v. n.* To take a wrong account of.

—*n.* An erroneous account or reckoning.

Miscegena'tion, *n.* [Lat. *miscere*, to mix, and *genere*, to propagate.] An amalgamation, or mixing of races.

Miscellana'rian, *a.* Belonging, or having reference to, or consisting of, miscellanies; as, "*miscellanarian* authors." — *Lord Shaftesbury.*

—*n.* A writer of miscellanies.

Mis'cellane, *n.* Same as MASLIN.

Miscella'nea, *n. pl.* [Lat.] A collection of miscellaneous matters or objects; intermixed varieties.

Miscella'neous, *a.* [Lat. *miscellaneus*, from *misceo*, to mix, to mingle. See MIX.] Mixed; mingled; various; consisting of several kinds; promiscuous, heterogeneous; as, *miscellaneous* writings, a *miscellaneous* company.

Miscella'neously, *adv.* With variety or mixture.

Miscella'neousness, *n.* State, quality, or condition of being miscellaneous.

Miscel'lanist, *n.* A writer of miscellanies; a miscellanarian.

Mis'cellany, *n.* [Sp. *miscelánea;* Fr. *miscellanées*, miscellanies.] A mass, medley, or mixture of various kinds; a jumble; an olio. — A book or pamphlet containing a collection of compositions on various subjects, or a collection of various kinds of compositions.

Mischance', *n.* Unlucky chance; ill-luck; misfortune; mishap; calamity; disaster.

Mischar'acterize, *v. a.* To characterize erroneously, or by wrong representations.

Mischarge', *v. a.* To make an error in charging, as an account.

—*n.* A mistake or erroneous item in an account.

Mischief, (*mĭs'chif.*) *n.* [O. Fr. *meschef* — *mes*, *mis*, and *chef*; Lat. *caput*, head, end, issue.] That which turns out ill; ill consequence; evil; harm; hurt; injury; detriment; damage; evil, whether intended or not; intentional harm; injury or damage done by design. — Vexatious affair; cause of trouble.

Mis'chief-maker, *n.* One who makes mischief; an intermeddler; one who foments or brings about contention, enmity, or disturbance; a talebearer; a tattler.

Mis'chief-making, *n.* Bringing about evil or mischief; fomenting enmity; causing or instigating strife.

Mischievous, (*mĭs'cher-us.*) *a.* Making mischief; harmful; hurtful; injurious; pernicious; noxious; as, a *mischievous* disposition. — Having a tendency to do harm or mischief; annoying; troublesome; impish; as, a *mischievous* boy.

Mis'chievously, *adv.* In a mischievous manner, with evil intention or disposition; harmfully; injuriously; hurtfully; with loss or detriment.

Mis'chievousness, *n.* State or quality of being mischievous; hurtfulness; harmfulness; wickedness; dispositiou to vex, annoy, injure, or damage.

Misch'na, *n.* Same as MISHNA, *q. v.*

Mischoose, (*mis-chooz'.*) *v. a.* To choose wrongly.

—*v. n.* To make an erroneous choice.

Mischristen, (*krĭs'n.*) *v. a.* To christen improperly or mistakenly.

Miscible, (*mĭs'ĭ-bl.*) *a.* [Fr., from Lat. *misceo*, to mix.] That may be mixed.

Miscita'tion, *n.* Inappropriate citation; erroneous quotation.

Miscite', *v. a.* To quote wrongly; to cite erroneously or inappropriately.

Misclaim', *n.* An erroneous claim; a mistaken demand.

Miscog'nizant, *a.* (*Law.*) Not cognizant.

Miscolloca'tion, *n.* Erroneous or false collocation.

Miscomprehend', *v. a.* To comprehend wrongly.

Miscomputa'tion, *n.* False reckoning; wrong computation.

Miscompute', *v. a.* To compute falsely or mistakenly; to reckon erroneously.

Misconceit, (*-kŏn-sēt'.*) *n.* Misconception; as, "error and *misconceit*." — *Hooker.*

Misconceive, (*-kon-sēv'.*) *v. a.* To conceive erroneously; to misapprehend; to misconstrue; to misunderstand.

—*v. n.* To receive a false notion, impression, or opinion

of anything; to have an erroneous understanding of anything.

Misconceiv'er, *n.* One who misconceives or misapprehends.

Miscon'duct, *n.* Wrong or evil conduct; ill behavior; bad management.

—*v. a.* To conduct illy; to mismanage; to carry on wrongly.

—*v. n.* To behave amiss; to deport one's self wrongfully.

Miscon'fident, *a.* Possessing a misjudged or mistaken confidence.

Misconjecture, (*-jĕct'yur,*) *n.* A wrong guess or erroneous conjecture.

—*v. a.* or *v. n.* To guess or conjecture wrongly.

Miscon'secra'tion, *n.* A wrong consecration.

Miscon'sequence, *n.* A wrong consequence. (R.)

Misconstruct', *v. a.* To construct wrongly; to interpret erroneously or mistakenly.

Misconstruc'tion, *n.* Wrong construction; erroneous interpretation of words or things; a mistaking of the true or exact meaning.

Misconstrue', *v. a.* To construe erroneously; to misinterpret; to come to a mistaken conclusion.

Miscon'stru'er, *n.* One who misconstrues or misinterprets.

Miscontent', *a.* Not content.

Miscorrect', *v. a.* To mistake in an endeavor to correct.

Miscoun'sel, *v. a.* To give false counsel or wrong advice to.

Miscount', *v. a.* To count erroneously; to mistake in counting or reckoning.

—*v. n.* To make a wrong calculation, computation, or reckoning.

—*n.* A false counting; an erroneous computing or castiug.

Mis'creant, *n.* [O. Fr. *mescreant;* Fr. *mécréant* — *mé, mis,* and *créance* = L. Lat. *credentia,* believing, from Lat. *credo, credens,* to believe. See CREED.] An infidel; a sceptic, or one who embraces a false faith. — A vile wretch; a base unprincipled fellow; a scouudrel; as, a heartless *miscreant.*

Misrea'tive, *a.* Having a tendency to wrong or distort creation.

Mis'cu, *n.* An Indian dentifrice.

Misdate', *n.* A wrong date.

—*v. a.* To date erroneously, as a letter or chronological event.

Misdeed', *n.* An evil deed; a wicked or sinful actiou; miscouduct; misdemeanor; fault; trespass; trausgression.

Misdeem', *v. a.* To misjudge; to construe or interpret mistakeuly or erroneously.

"And of a wit that nothing could *misdeem.*"—*Davies.*

Misdemean', *v. a.* To deem wrongly or evilly.

Misdemean'ant, *n.* A person guilty of a misdemeanor.

Misdemean'or, Misdemean'our, *n.* Improper or ill demeanor: bad behavior; evil couduct; trespass; misdeed; transgression.

(*Law.*) A term applied to all crimes and offeuces, whether of omission or commission, less than felony. *M.* are of two kinds, — either those which exist at common law, *mala in se,* or those created by statute. The former class includes whatever mischievously affects the person or property of another, openly outrages decency, disturbs public order, is injurious to the public morals, or a corrupt breach of official duty. *M.* created by statute are of two kinds; viz., those that consist in the omission or commission of an act enjoiued or forbidden by statute, but not specially made the subject of indictment, and heuce punishable at common law, it being a common-law offence to disobey a statute; and in those offences which are by statute made especially indictable, if the punishment is expressly defined, the provision of the statute must be strictly followed; but if the statute merely attaches a new penalty to what was already an offence at common law, the remedy may be pursued either as at common law or under the statute. The ordinary punishment of a *M.* at common law is by fine or imprisonment (short of imprisonment for life), or by both fine and imprisonment, at the discretion of the court. By several statutes special modes of punishment are provided for particular offences.

Misderive', *v. a.* To mistake in deriving.

Misdescribe', *v. a.* To describe fallaciously or erroneously.

Misdirect', *v. a.* To give a wrong direction to; as, to *misdirect* a traveller. — To direct or address to a wrong person or place; as, to *misdirect* a letter.

Misdirec'tion, *n.* Act of directing wrongly.

(*Law.*) An error committed by a judge in charging a jury, in matters of law or fact.

Misdistin'guish, *v. a.* To make a wrong distinction in.

Misdivide', *v. a.* To make a wrong division.

Misdivision, (*-vĭzh'un,*) *n.* Erroneous or inaccurate division.

Misdo', *v. a.* (*imp.* MISDID; *pp.* MISDONE; *ppr.* MISDOING.) [A. S. *misdon.*] To do wrong.

—*v. n.* To do wrong or amiss; to commit, as a fault or offence.

"I have *misdone,* and I endure the smart." — *Dryden.*

Misdo'er, *n.* A wrong-doer; one who commits a fault, offence, or crime.

"The law . . . inflicteth sharp punishments to *misdoers.*"—*Spenser.*

Misdoing, (*-dōō'ing,*) *n.* A fault, offence, or crime committed; deviation from right; wrong-doing.

Misdoubt, (*-dout',*) *n.* Suspicion of crime, harm, or danger.

Mise, (*meez,*) *n.* [Fr., from Lat. *mittere,* to send.] Cost; expense; charge; disbursement. — In Wales, an honorary gift made by the people to a new prince of Wales; also, a tribute paid in the English county palatine of Chester, at the succession of each new holder of the earldom, now vested in the princes of Wales as earls of Chester.

(*Law.*) The issue in a writ of right.

Mised'ucated, *a.* Wrongly or defectively educated.

Misemploy', *v. a.* To employ amiss; to misuse: to employ to no purpose, or to a bad purpose; to misapply; as, to *misemploy* talents.

Misemploy'ment, *n.* Idle or improper application; ill-employment; disadvantageous use; as, "*misemployment* of time and faculties." — *Sir Matthew Hale.*

Miseno, (*me-sai'no,*) a promontory in S. Italy, prov. of Naples, 9 m. S.W. of Naples. Near it are the ruins of the ancient port of Misenum.

Misentreat', *v. a.* To treat wrongfully or hurtfully.

Misen'try, *n.* An erroneous or false entry, as of bookkeeping.

Miser, (*mīz'er,*) *n.* [Lat. *miser,* miserable, wretched, probably akin to obsol. Heb. *mazar,* to separato; in a bad sense, of one who is thrust out from intercourse with others=*nazar,* to abstain from anything.] A sordid wretch; especially, an extremely covetous person; a niggard; a money-grubber; one who in wealth makes himself miserable by the fear of poverty, and denies himself the common comforts of life.

Miserable, (*mĭz'er-a-bl.*) *a.* [Fr.; Lat. *miserabilis,* from *miser,* miserable, pitiable, wretched.] Very unhappy, or in a deplorable state of mind from grief, pain, calamity, poverty, apprehension of evil, or other cause; in a state of sadness or distress; wretched.

"The *miserable* have no medicine but hope." — *Shaks.*

—Occasioning unhappiness, wretchedness, or misery.

"What's more *miserable* than discontent?" — *Shaks.*

—Very poor or mean; abject; despicable; worthless; barren.

"*Miserable* comforters are ye all." — *Job* xvi. 2.

Mis'erableness, *n.* State of being miserable; wretchedness; poorness.

Mis'erably, *adv.* In a miserable manner; very poorly or meanly; unhappily; calamitously; wretchedly; in misery; as, to live *miserably,* to be treated *miserably,* to be *miserably* paid.

Misere're, *n.* [Lat., have mercy.] (*Sacred Mus.*) In a general sense, any sacred composition of a penitential character. More particularly, in the Roman Catholic Church, it denotes a celebrated penitential hymn formed from the 50th Psalm of the Vulgate, which begins with the words "*Miserere mei, Domine.*" It is commonly understood to have been composed by David in the depth of his remorse for the double crime which the prophet Nathan rebuked in the well-known parable (2 *Sam.* xii.). Another opinion, however, attributes this psalm to Manasses, or to some of the psalm-writers of the Captivity. The *M.* is of frequent occurrence in the services of the Roman Church; and in the celebrated services of Tenebræ (*q. v.*), as performed in the Sixtine Chapel at Rome, it forms, as chanted by the pope's choir, one of the most striking and impressive pieces in the entire range of sacred music. It is sung on each of the three nights in Holy Week, on which the office of Tenebræ is held, with different music on each of the three occasions, the three composers being Bai, Baiui, and the still more celebrated Allegri.

(*Arch.*) Projecting brackets on the under side of the seats of stalls in churches; these, when perfect, are fixed with hinges so that they may be turned up, and when this is done the projection of the miserere is sufficient, without actually forming a seat, to afford very considerable rest to any one leaning upon it. They

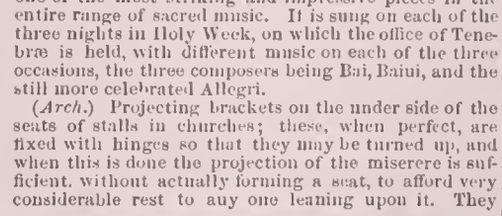


Fig. 1810. — MISERERE.

(Henry the Seventh's Chapel, Westminster; 13th cent.)

were allowed in the Roman Catholic Church as a relief to the infirm during the long services that were required to be performed by the ecclesiastics in a standing posture. They are always more or less ornamented with carvings of leaves (Fig. 1810), small figures, animals, &c., which are generally very boldly cut.

Mis'ericord, *n.* (*Arch.*) Same as MISERERE, *q. v.*

(*Law.*) An arbitrary amercement or punishment imposed on any person for an offence.

Mi'serly, *a.* Very covetous; avaricious; sordid; penurious; parsimonious; having the characteristic qualities of a miser or money-grubber.

Mis'ery, *n.* [Fr. *misère;* Lat. *miseria* — *miser,* wretched, poor, miserable.] Wretchedness; extreme unhappiness, or pain of body or mind; distress; woe.

"*Misery* acquaints a man with strange bedfellows." — *Shaks.*

—Natural evils causative of, and superinducing misery; calamity; misfortune.

"The voyage of this life is bound in shallows, and in *miseries.*" *Shaks.*

Misesteem', *n.* Disregard; slight; lack of esteem.

Mises'timate, *v. a.* To estimate wrongly or deficiently.

Misexplana'tion, *n.* A wrong explanation.

Misexplica'tion, *n.* Erroneous explication.

Misexposition, (*-zish'un,*) *n.* Wrong exposition.

Misexpound', *v. a.* To expound falsely or erroneously.

Misexpression, (*-prĕsh'un,*) *n.* Wrong or erroneous expression.

Misfaith', *n.* Want of faith or confidence; distrust.

Misfash'ion, *v. a.* To form or fashion wrongly.

Misfeasance, (*-fē'zans,*) *n.* [O. Fr. *mes,* wrong, and *faisance,* from Lat. *facere,* to do.] (*Law.*) The performance of an act which might lawfully be done, in an improper manner, by which another person receives an injury. The common law gives a remedy to the extent of the injury.

Misfit', *n.* A bad fit.

Misform', *v. a.* To put into an ill shape or form; to make of an ill fashion.

Misforma'tion, *n.* A deviation from a right or proper formation.

Misfor'tune, *n.* Ill-luck; ill-fortune; mishap; mischance; an evil or cross accident; harm; calamity; disaster.

Misframe', *v. a* To frame wrongly.

Misgive', *v. a.* (*imp.* MISGAVE; *pp.* MISGIVEN.) To fill with doubt; to deprive of confidence; to fail; — the heart is usually the predicate, and the reciprocal pronoun always follows.

"Yet oft . . . his heart *misgave* him." —*Milton.*

Misgiv'ing, *n.* Doubt; distrust; a failure of faith or confidence; as, to feel a *misgiving* respecting a person's probity.

Misgot'ten, *a.* Improperly or unjustly obtained.

Misgov'ern, *v. a.* To govern ill; to administer unfaithfully; as, to *misgovern* a state.

Misgov'ernment, *n.* Bad government; mal-administration of public or private affairs. — Irregularity of behavior; indecorum; disorder.

Misgraft', *v. a.* To graft amiss, or in a wrong manner.

Misground', *v. a.* To ground or establish erroneously.

Misgrowth', *n.* Ill growth; abnormal development.

Misguess', *v. a.* and *n.* To guess mistakenly.

Misguid'ance, (*-gīd-,*) *n.* False or erroneous direction or guidance.

Misguide', *v. a.* To guide amiss; to direct ill: to mislead; to conduct into error; as, a *misguided* man, *misguided* abilities.

Misguid'ingly, *adv.* In a way or manner to misguide or mislead.

Mis'gurn, Mis'gurn, *n.* (*Zoöl.*) A kind of eel-like fish.

Mishan'dle, *v. a.* To maltreat; to handle improperly; to treat wrongly or harmfully.

Mishap', *n.* Ill luck; ill chance; misfortune; mischance; evil accident; disaster.

"Master these *mishaps* with patient might." —*Spenser.*

Mishawa'ka, in *Indiana,* a post-town of St. Joseph co., on St. Joseph river and 3 R.Rs. *Pop.* (1895) 4,100.

Mishear', *v. a.* To hear imperfectly or incorrectly.

—*v. n.* To mistake a hearing.

Mish'icot, in *Wisconsin,* a post-village and township of Manitowoc co., about 12 miles North of Manitowoc.

Mish'-mash, *n.* A mingle, medley, mixture, or potpotch.

Mish'na, *n.* [Heb.] (*Theol.*) A digest of Jewish traditions and Scriptural explications, forming the text of the Talmud.

Mish'nic, *a.* Having reference, or pertaining to the Mishna.

Mishtegay'oe River, in *Michigan,* enters the Flint River in Saginaw co.

Misimprove', *v. a.* To improve to a bad purpose; to misuse; to misapply; as, to *misimprove* one's advantages.

Misimprove'ment, *n.* Failure or neglect of improvement: ill use or employment; improvement to a bad purpose; misapplication of gifts or advantages.

Misincline', *v. a.* To cause to have an erroneous tendency; to incline or affect wrongly.

Misinfer', *v. a.* To infer wrongly or incorrectly.

—*v. n.* To deduce an erroneous inference.

Misinform', *v. a.* To impart erroneous information to; to deceive by communicating a wrong or false statement of facts to.

—*v. n.* To communicate false information; — preceding *against.*

Misinform'ant, *n.* A communicator of false information.

Misinforma'tion, *n.* Erroneous information; false intelligence.

Misinform'er, *n.* One who communicates wrong information.

Misinstruct', *v. a.* To instruct amiss or erroneously.

Misinstruc'tion, *n.* Wrong or defective instruction.

Misintel'ligence, *n.* Erroneous information; contradictory intelligence.

Misinter'pret, *v. a.* To interpret wrongly or unfaithfully; to explain or to understand in an erroneous sense; to misconstrue.

Misinter'pretable, *a.* Susceptible of misinterpretation or exposition.

Misinterpreta'tion, *n.* Act of interpreting wrongly; a mistaken explanation or interpretation.

Misinter'preter, *n.* One who interprets wrongly or unfaithfully.

Misjoin', *v. a.* To join unfitly or improperly.

"Luther . . . *misjoins* the sacred body with the bread."—*Dryden.*

Misjoin'der, *n.* (*Law.*) The joining parties in a suit or action that ought not to be so joined. In equity, if the plaintiffs be misjoined, all the defendants may demur; if the defendants are misjoined, only those can demur who are improperly joined.

Misjudge, (*-jŭj',*) *v. a.* To judge erroneously; to come

to a mistaken conclusion; as, his motives are constantly *misjudged* by those who ought to know better.

Misjudge', *v. n.* To err in judgment; to form wrong opinions or notions; to draw erroneous conclusions.

Misjudg'ment, *n.* An erroneous or unjust conclusion or determiuation.

Misken', *v. a.* Not to ken or know. (Used chiefly as a Scottish provincialism.)

Miskin'dle, *v. a.* To kindle amiss; to inflame to an improper or unworthy purpose.

Mis'kolcz, (*-koltz,*) a town of Austria, in Hungary, co. of Borsod, 22 m. N.E. of Erlau. It has a considerable trade in wine. The iron obtained in the vicinity is manufactured into the best steel in Hungary. *Pop.* 19,500.

Mislay', *v. a.* (*imp.* and *pp.* MISLAID.) To lay in a wrong place.

"The fault is generally *mislaid* upon nature."—*Locke.*

—To lay in a place that is not recollected; to lose for an indefinite time; as, to *mislay* a letter.

Mislay'er, *n.* One who mislays or loses; one who sets aside a thing in a wrong place.

Misle, (*miz'l,*) *v. n.* and *n.* Same as MIZZLE, *q. v.*

Mislead', *v. a.* (*imp.* and *pp.* MISLED.) To gulde or lead astray, or into a wrong way or path; to conduct with error; to cause to mistake; to deceive.

Mislead'er, *n.* One who leads astray; one who guides into error.

Mislead'ing, *n.* A misguiding; a leading or conducting astray.

Mislearned', *a.* Imperfectly or wrongly learned.

Mis'leu, *n.* Same as MASLIN, *q. v.*

Mis'letoe, *n.* See MISTLETOE.

Mislike', *v. a.* or *n.* To dislike; to have antipathy to; to view with disapprobation; as, to *mislike* a person.

Mislike', *n.* Dislike; antipathy; aversion; disapprobation.

"Setting your scorns and your *mislike* aside." — *Shaks.*

Misluck', *n.* Ill-luck; calamity; disaster; misfortune.

Mis'ly, *a.* Same as MIZZLY, *q. v.*

Mismake', *v. a.* To make, shape, or form wrongly or defectively; to mar or spoil in making; as, *mismade* human nature.

Misman'age, *v. n.* To conduct illy or amiss; to manage wrongly or inefficiently.

—*v. a.* To administer erroneously or improperly; to manage or conduct in an imperfect or unsuitable manner; as, to *mismanage* the finances of a state.

Misman'agement, *n.* Bad, corrupt, or improper management; ill conduct; as, the *mismanagement* of a diplomatic or delicate business.

Misman'ager, *n.* One who manages ill.

Mismark', *v. n.* To mark erroneously.

Mismatch', *v. a.* To match unsuitably; as, a *mismatched* couple.

Mismeasure, (*-mĕzh'yur,*) *v. a.* To measure wrongly, or without exactness.

Mismeas'urement, *n.* Wrong or inexact measurement.

Misname', *v. a.* To address or call by the wrong name.

Misno'mer, *n.* [O. Fr. *mes*, and *nommer*, to name; L. Lat. *nommare*, from Lat. *nominare*. See NAME.] (*Law.*) The mistaking of the true or real name of a person. — A wrong, inapplicable, or inappropriate cognomen or title.

"The word 'synonym' is, in fact, a *misnomer.*" — *Alp. Whately.*

Misnurt'ure, *v. a.* To nurture or train wrongly, as children.

Misobserve', *v. a.* To mistake in observing.

Misobserv'er, *n.* One who observes faultily or inaccurately.

Misog'amist, *n.* [From Gr. *mesein*, to hate, and *gamos*, marriage.] A hater of marriage.

Misog'amy, *n.* [Fr. *misogamie.*] Hatred of, or aversion to marriage.

Misogynist, (*mis-oj'in-ist.*) *n.* [From Gr. *mesein*, to hate, and *gynē*, a woman.] A woman-hater.

Misog'yny, *n.* [Fr. *misogynie*; Gr. *misogonia.*] Hatred of womankind.

Misothe'ism, *n.* [From Gr. *mesein*, to hate, and *Theos*, God.] Hatred of God. (R.)

Mispell', *v. a.* Same as MISSPELL, *q. v.*

Mispend', *v. a.* See MISSPEND.

Mispercep'tion, *n.* Wrong or inaccurate perception.

Mispersuade', *v. a.* To persuade or induce wrongly.

Mispersua'sion, *n.* An erroneous persuasion; a false or wrong notion, idea, or opinion.

Mis'pickel, *n.* (*Min.*) Native arsenide with bisulphide of iron, of a tin-white color, with a metallic lustre. It occurs chiefly in lodes in crystalline rocks, and much of the white arsenic of commerce is obtained from it.

Mispil'lion, in *Delaware*, a creek flowing into Delaware Bay between Kent and Sussex cos.

—A hundred of Kent co.

Misplace', *v. a.* To put in a wrong place; to set or fix on an improper or unsuitable object; as, *misplaced* affection or confidence.

Misplace'ment, *n.* Act of putting in the wrong place state or condition of being misplaced.

Misplend', *v. n.* To err or mistake in pleading.

Misplead'ing, *n.* (*Law.*) An error in pleading.

Mispoint', *v. a.* To point or punctuate erroneously or improperly; to confuse sentences by defective punctuation.

Mispol'icy, *n.* Bad policy; impolicy.

Mispra'ctice, *n.* Malpractice; erroneous practice.

Misprint', *v. a.* To make an error in printing.

—*n.* A typographical error, hiatus, or blunder; a deviation from the copy.

Misprision, (*mis-prizh'un,*) *n.* [Fr. *mépris*, a neglect or contempt.] (*Law.*) A term applied to all such high offences as are under the degree of capital, but closely bordering thereon; and it is said that a misprision is contained in every treason and felony whatsoever, and that, if the state so please, the offender may be proceeded against for the *M.* only. *M.* are generally divided into two sorts: — *negative*, the concealment of something which ought to be revealed; and *positive*, the commission of something which ought not to be done. The latter, however, are now commonly described as contempts or high misdemeanors. *M.* of treason is the bare knowledge and concealment of treason, without any degree of assent thereto; for any assent makes the party a principal. *M.* of felony is the mere concealment of a felony, and in a public officer is punishable with imprisonment for a year and a day, and in a common person, imprisonment for a less, but discretionary time; and in both fine and ransom at the state's pleasure. Positive *M.*, contempts, or high misdemeanors, are such as the mal-administration of such high offices as are in public trust and employment, usually punishable by impeachment in Congress; embezzlement of the public money, punishable by fine and imprisonment; and such contempts of the executive magistracy as demonstrate themselves by some arrogant and undutiful behavior towards the executive and government. The term *M.* is also applied to mistakes arising from negligence or carelessness in the writing or keeping records, or what are commonly termed *clerical errors.*

Misprize', *v. a.* [Fr. *mépriser.*] To undervalue; to attach but slight estimation to.

Misproceed'ing, *n.* A wrong, faulty, irregular, or reprehensible proceeding.

Misprofess', *v. n.* To profess untruly or illegitimately; to make erroneous pretensions to skill or capacity.

—*v. a.* To make an erroneous profession.

Mispronounce', *v. a.* To err in pronunciation.

—*v. n.* To pronounce imperfectly or incorrectly.

Mispronuncia'tion, *n.* Faulty or incorrect pronunciation.

Mispropor'tion, *v.a.* To join without due proportion.

Misquotation, *n.* An erroneous or disjointed quotation; also, the act of quoting falsely or incorrectly.

Misquote', *v. a.* To cite erroneously; to quote loosely or incorrectly.

—*v. n.* To make a faulty or incorrect quotation or citation.

Misrate', *v. a.* To rate, value, or estimate erroneously.

Misread', *v. a.* To read defectively or wrongly; to misapprehend in reading.

Misreceive', *v. a.* To receive wrongly, or mistakenly.

Misrecit'al, *n.* An erroneous or inaccurate recital.

Misrecite', *v. n.* To deliver a faulty or wrong recitation.

—*v. a.* To recite incorrectly.

Misreck'on, *v. a.* To reckon inaccurately; to compute wrongly.

Misreck'oning, *n.* An inaccurate or imperfect computation.

Misrecollection, (*-lĕk'shon,*) *n.* Act or operation of recollecting wrongly.

Misreform', *v. a.* To reform erroneously or imperfectly.

Misregulate', *v. a.* To regulate improperly.

Misrehearse', *v. a.* To recite inaccurately; to rehearse or quote erroneously.

Misrelate', *v. a.* To relate or describe wrongly or imperfectly.

Misrela'tion, *n.* Erroneous or inaccurate relation or narrative.

Misreli'gion, *n.* Erroneous or spurious religion.

Misremem'ber, *v. a.* To mistake in exercising the memory; to remember imperfectly or incorrectly.

—*v. n.* To make an error in recollecting.

Misrepeat', *v. a.* To repeat wrongly; to render an erroneous version of.

Misreport', *v. a.* To give a false or incorrect account of; to report erroneously or vaguely.

"A man that never yet did *misreport* your grace." — *Shaks.*

—*v. n.* To make or circulate an erroneous report.

—*n.* A false, incorrect, or imperfect report, account, or relation made or circulated; a false or malicious misrepresentation.

Misrepresent', *v. a.* To represent that to be which is not; to give a false or erroneous representation or report of, either maliciously, negligently, or ignorantly; to falsify to disadvantage of the truth; as, to *misrepresent* a statement of facts, to *misrepresent* an individual's character, &c.

—*v. n.* To make a falsified or warped representation.

Misrepresenta'tion, *n.* Act of misrepresenting, or of making a false and inaccurate report or narration. — A false or erroneous account rendered, either through mistake, malice, or negligence.

Misrepresent'ative, *a.* Calculated to give a wrong impression; misrepresenting; tending to convey a false construction.

Misrepute', *v. a.* To repute erroneously or incorrectly; to hold in false estimation.

Misrule', *n.* Wrong, unjust, or unwise rule, regulation, or polity of government; disorder; confusion; anarchy; tumult from insubordination.—Unjust or impolitic domination.

Lord of misrule, formerly, in England, the master of the Christmas revels, held at court or in the castle or manor-house of a nobleman or great landed proprietor.

Miss, *n.* [Contracted from MISTRESS, *q. v.*; Fr. *mademoiselle.*] A young woman or girl; — principally used by way of compellation, prefixed to the name of an unmarried female of less degree than the higher orders of English nobility.

—Formerly, a courtesan; a kept mistress.

"The virtuous matron and the *miss*." — *Hudibras.*

(NOTE. This term, when applied to two or more spinsters of the same name, is used colloquially, in the form of a plural termination of the proper name to which it acts as prefix. Thus we say, the *Miss Howards;* while, on the other hand, when spoken of in writing, it is customary, by modern acceptation, to employ the phrase *Misses;* as, the *Misses Howard.*)

Miss, *v. a.* (*imp.* and *pp.* MISSED.) [A. S. *missian*, to mistake, err; Ger. *missen*, to feel the want of; D. *missen*, to fail, miss.] To fail of hitting or reaching a point or object aimed at; to fall short of accomplishing a purpose or intention; to fail of finding the right way; to err in endeavoring to find or obtain.

"Some muskets so contrive it,
As oft to *miss* the mark they drive at." — *Trumbull.*

—To learn or discover that something is wanting, or not where it was supposed to be; to feel or perceive the want or absence of: to note the omission of; to feel the loss of; to want; to require.

"He who has a firm, sincere friend, may want all the rest without *missing* them." — *South.*

—To do without; to dispense with; to forego.

"We cannot *miss* him; he does make our fire." — *Shaks.*

—To pass by: to ignore; to omit; to fail to have; to find wanting; as, to *miss* one's dinner.

—*v. n.* To fly wide; to fail to hit; to diverge from the true aim.

"Bullets . . . *miss* or sweep but common souls away." — *Waller.*

—To fail; not to succeed. — To err; to mistake. — To fail to obtain, learn, or find; — frequently with *of.*

"Grittus *missing of* the Moldavian fell upon Maylat." — *Knolles.*

Miss, *n.* Loss; want; sense of absence experienced.

"Oh, I should have a heavy *miss* of thee,
If I were much in love with vanity." — *Shaks.*

—Error; mistake.

"He died without any great *miss* in the hardest points of grammar." — *Ascham.*

Mis'sal, *n.* [Sp. *misál*; It. *messale*; Fr. *missel*; L. Lat. *missale*, from *missa*, the mass. See MASS.] The Roman Catholic mass-book. The *M.* consists of three principal parts; viz., 1. the *Proprium Missarum de Tempore* containing the formularies of the masses for the Sundays; 2. the *Proprium Missarum de Sanctis*, containing special formularies of mass for the festivals of a number of saints; 3. the *Commune Sanctorum*, containing general formularies for classes of saints (as apostles, martyrs, confessors, &c.), serving as an appendix to the second part for such saints as have no special service assigned them.

—*a.* Pertaining or having reference to the Roman Catholic mass-book. (R.)

Missay', *v. a.* To misstate; to slander; to depreciate

Misseem', *v. n.* To be misbecoming.

Mis'sel, Mis'sel-bird, Missel-thrush, *n.* [Ger. *misteldrossel.*] (*Zoöl.*) The *Turdus viscivorus*, a large European species of thrush, which feeds on the fruit of the mistletoe.

Mis'seltoe, *n.* (*Bot.*) Same as MISTLETOE, *q. v.*

Missend', *v. a.* To send wrongly or amiss.

Misserve', *v. a.* To serve unfaithfully.

"Great men who *misserved* their country." — *Arbuthnot.*

—*v. n.* To render ill service.

Misset', *v. a.* To set or place in a wrong position.

Misshape', *v. a.* (*imp.* and *pp.* MISSHAPED, also *pp.* MISSHAPEN.) To shape wrongly or inaccurately; to deform; to form badly.

"Pluto hates his own *misshapen* race." — *Dryden.*

Misshap'enly, *adv.* In a misshapen way or manner, deformedly.

Misshap'enness, *n.* State or quality of being misshapen.

Missheathed', *a.* Wrongly or unsuitably sheathed.

Missile, (*mis'sil,*) *a.* [Lat. *missile*, from *missus*, that may be thrown, from *mitto*, *missus*, to send. See MISSION.] That may be thrown, hurled, or sent; susceptible of being projected from the hand, or from any instrument or engine.

"We bend the bow, or wing the *missile* dart." — *Pope.*

—*n.* Any kind of weapon which is thrown or designed to be thrown to the injury of others; a projectile.

Miss'ing, *a.* Lost; wanting; absent from the place where it was expected to be found; not present when called and expected.

Miss'ingly, *adv.* At intervals; periodically.

Mission, (*mish'un,*) *n.* [Fr.; Lat. *missio*, from *mitto*, *missus*, to send, throw, hurl, launch; Sansk. *mi*, to throw forward. See MISSILE.] A sending or being sent, usually the latter; a being sent or delegated with authority, with certain powers for transacting business, commission; as, a foreign *mission.*

"The divine authority of our *mission*." — *Atterbury.*

—Commission; message; errand; that which forms the object dispatched for.

"How to accomplish best
His end of being on earth, and *mission* high." — *Milton.*

—Delegation; persons sent; any number of persons appointed by authority to perform any service, particularly of diplomacy; an embassy. — An organized body of missionaries, or persons sent to propagate religion; also, a station to which missionaries are appointed

(*Geog.*) The extensive districts formerly under the control of missionaries of the Church of Rome, on the borders of the Spanish and Portuguese settlements in America, were so called. These missionaries chiefly belonged to the orders of the Capuchins, Dominicans, and Jesuits; but the latter were the most celebrated and the most successful. Their settlements in Paraguay comprehended a vast province, which they governed with independent authority; in Brazil they had also extensive

districts under their control. The downfall of the order was followed by the destruction of these settlements; those of Paraguay were wholly ruined; those of Brazil, by regulations of the Marquis de Pombal, were taken from their spiritual governors and placed on a new footing. Trifling relics of the missions of the other orders are still found on the banks of the Upper Amazon and Orinoco; but they have undergone severe losses by the revolutionary wars. The success of the experiment of governing the American Indians by missionaries has been the subject of much controversy; the only fact generally admitted being that the Jesuits succeeded better than any other governors have done in rendering them industrious, and subjecting them to discipline.

Mis'sion, *v. a.* To dispatch or send forth on a mission.

Mis'sion, in *Illinois*, a township of La Salle county.

Missionaries Ridge, in *Georgia*, a hilly range extending to the middle of the county, between Lookout Mountain and West Chickamauga Creek. Here, Nov. 27, 1863, the Confederates under Gen. Bragg were defeated, after a severe struggle, by the National troops under Gens. Grant, Sherman, and Thomas. Gen. Grant reported the Union loss at 557 killed, 4,529 wounded, and 320 missing; while that of Bragg was about 3,100 in killed and wounded, and 6,000 prisoners.

Missionary, (*mish'un-,*) *n.* [Fr. *missionaire.*] One who is sent upon a mission; — specifically, one sent to propagate religion and good works.

—*a.* Pertaining, or having refereuce to missions; as, a *missionary* society.

Missionary Station, in *Georgia*, a village of Floyd co., abt. 185 m. N.W. of Milledgeville.

Mission Creek, in *Kansas*, a post-township of Wabounsee co.

Mission River, in *Texas*, euters Arkansas Bay from Refugio co.

Mission San José, in *California*, a post-village of Alameda co., abt. 30 m. S.S.E. of San Francisco.

Missis'quoi (or MISSISQUE, or MISSISQUI) **River,** rises in Orleans, Vermont, and flows N. into Canada, where, after a W. course of a few m., it turns S.W., and returning into Vermont, in Franklin co., euters Missisquoi Bay, an arm of Lake Champlain, abt. 15 m. N. of St. Albans.

Missis'quoi, a S. co. of Lower Canada, ndjoining Vermont; *area*, abt. 360 sq. m. *Cap.* Bedford.

Mississin'ewa, in *Ohio*, a township of Darke county.

Mississinewa, in *Pennsylvania*, a township of Westmoreland co.

Mississinewa River, rises in Darke co., Ohio, and entering Indiana in Randolph co., flows N.W. through Delaware, Grant, and Wabash cos., and joins the Wabash River near Peru, in Miami co.

Mississip'pi, [from an Indian word, signifying, "Father of Waters,"] a great river of the U. States, forming, with its various tributaries, one of the most extensive water systems in the world, and draiuing above 1-7th part of the N. American continent. It extends N. and S. between the 29th aud 48th parallels of N. Lat.; and from the sources of the Alleghany E. to those of the Missouri W., is a distance of 1,830 m., measured in a beeline between the 77th and 111th meridians of W. Lon. Length, from Lake Itasca, the source of the Mississippi Proper, 3,200 m.; but from the sources of the Missouri — the true head of this mighty river — 4,400 m. Estimated area of the basin drained by it and its constituents, abt. 1,100,000 sq. m. The *M.* divides the States of Minnesota, Iowa, Missouri, Arkansas, and Louisiana, lying on its west side, and those of Illinois, Kentucky, Tennessee, and Mississippi, all of which States lie on its east; but the entire basin receives the drainage, not only of these regions, but also of Ohio and Indiana, with parts of Pennsylvania, besides that of an immense extent of hitherto comparatively unsettled country in the "Far West." *M.* starting at Lake Itasca, (or, Lake Glazier, as may be determined), 1,330 ft. ab. sea-level, flows N.N.E. to Lake Cass, thence S.S.E., and pursues it, with deviations, to the junction of the Ohio. Its velocity during the passage through the lake region bordering on British America, is in many parts very considerable. There are several cataracts, the largest being the Big Falls, at a spot where the stream divides aud forms several islands; abt. 60 m. lower down, also, are the Falls of St. Anthony, 9 m. above the confluence of St. Peter's River; and here the stream, flowing in two channels, each between 200 and 300 yards broad, is precipitated over a lime-stone rock, 16 ft. in perpendicular height. At this point euds the upper course of the *M.*, though rapids occur for several miles further down, and even as low as the junction of the River Des Moines, in Lat. 40° 20′ N. It is here about a mile broad, with transparent, light-blue, though not very deep waters; numerous islands stud its surface, and the current averages 2 m. an hour. Its banks are in many places bounded by broken and precipitous bluffs, ranging from 150 to 750 ft. in height, intersected here and there by deep ravines, and covered with forests of pine, birch, maple, and cedar; but in some parts are rather extensive prairies, covered with the *zizania aquatica*, a species of the cerealia, commonly, though erroneously, called *wild rice*, which forms a considerable article of food among the native Indians. Its principal affluents here are the St. Peter's, St. Croix, Chippewa, Wisconsin, Rock, Des Moines, and Illinois rivers; the last being by far the most important, and admitting of batteau navigation as far as the rapids, 250 m. above its month. The waters of the Missouri join those of the *M.* in Lat. 38° 56′ N., and Lon. 90° W., from which point the latter entirely changes its character. It is here abt. 1½ m. broad, and the Missouri enters from the W., nearly at right angles, not being more than one-third the breadth of the streams into which it empties. The addition of the Missourian waters, while altogether changing the native purity of those of the *M.* by imparting to them its own muddy character, has not, however, the effect that might naturally be expected, of widening the surface of the main stream; for the united waters have only, from their confluence to the mouth of the Ohio, a medial width of about ¾ m. The junction of the Ohio seems also to produce no increase, but rather a decrease, of surface; and the river, in its natural state, is still narrower at New Orleans, which is only 120 m. from its mouth. Its depth, nevertheless, is so much increased, that, at the shallowest places, there are usually 6 ft. water when the river is lowest. The rapidity of the current is more than doubled; and it presents, except in the dry season, a turbid and dangerous volume of water, passing between jagged and continually falling shores, and leaving, wherever its waters have receded, large deposits of mud. Accidental circumstances often shift the current on to the islands or bends of the river, and every season makes great revolutions in the course of the channel. Sometimes entire bends are broken through by the impetuosity of the waters; often, too, large islands are completely melted away; at other places, again, they have been united to the main shore by myriads of logs that have floated down, and become cemented together by mud and debris. Thus, by continually shifting its course, the *M.* sweeps away, during a great portion of the year, considerable tracts of alluvium, which were gradually accumulated by the overflow of former years; and the matter now left by the spring floods will be, in its turn, at some future time, removed. About 190 m. below the confluence of the Missouri, the *M.* receives the Ohio (*La Belle Rivière* of the French), flowing, with its light-green stream, from the E. bank, bringing with it also the waters of its great tributaries, the Wabash, Cumberland, and Tennessee. At this point, not only does the stream turn S.W., but the bluffs on both sides retire, and a fine, well-timbered plain extends on both sides the river, ranging (except at the Iron-banks and Chickasaw Bluffs,

Fig. 1811. — ELLES'S CLIFFS.

on the E. shore) from 30 to 50 m. in breadth; still expanding as it approaches the mouth, where it is probably 3 or 4 times that width. Abt. 380 m. below the influx of the Ohio, is the junction of the Arkansas and White rivers, which enter the main stream close to each other, on the W. bank. Thence to the confluence of the Red River is a distance, S. by W., of 360 m., measured along the stream; and below this latter point the river trends S.E., and enters the Gulf of Mexico, after a course of 335 m. from the Red River, of 1,075 from the confluence of the Ohio, and of 1,270 m. from that of the Missouri. The lower part of the *M.* is so much flooded after the rainy season, that there is often a space of inundated woodland from 30 to 100 m. in width; large swamps and bayous, also, are found, during the whole year, on both sides the river; and, indeed, the whole country, nearly as far up as Natchez, 427 m. from its mouth, presents nothing but a swampy wilderness, the habitat of alligators, and subject to epidemic and other diseases most inimical to human life. The lower part of the *M.*, for 30 m. above its delta, as far as the head called Plaquemines, is a reedy marsh, without trees, and containing only a few fishermen's huts, and a residence for pilots at Balize; in fact, nothing can well be conceived more dreary than the aspect of the river, even as far as 70 m. above the mouth. For 100 m. from the gulf, the river has long been obstructed by bars, over which the depth of water was only 15 feet. Efforts were made to remove these obstructions by dredging, with the effect of increasing the depth to 21 feet. This depth, however, was difficult to maintain by the dredge, and in 1875 Captain Eads began the construction of a system of jetties. These have proved highly successful, giving a permanent depth of more than 30 feet. The tide rises only from 1½ to 2 ft. at Balize, and is not perceptible more than 30 m. above the mouth. The *M.* has 4 other outlets; one, called the Iberville, on the E. bank, flowing through the lakes Maurepas and Pontchartrain; the other being on the W. bank, viz., La Fourche, which leaves the main stream 186 m. from its mouth; Plaquemines, abt. 31 m. higher up; and the Atchafalaya, which deflects S.W. in Lat. 31° N., and Lon. 91° 42′ 30″ W. The last-mentioned branch partly empties into the bay of its own name, but also returns a portion of its waters into the main current, with which, indeed, all the minor branches of the delta are more or less interlaced. The *M.*, recipient of all the waters flowing E. from the Rocky Mountains, and W. from the Alleghanies, is subject to periodical inundations, the effect of which is greatly heightened by the flatness of the circumjacent country in the lower part of its course. It is intersected also, in every direction, by numerous natural canals, or *bayous*, which, during the floods, are constantly in motion, and render it impossible to carry on any internal intercourse except by means of boats. The waters, however, which are thus sent down from the colder regions of the W. and N., and the temperate region of the Ohio Valley, are not supplied simultaneously, — the S. rivers sending down their floods early in the year, while the N. keep up their supplies as late as midsummer. Hence, the *M.* appears to have two annual floods, the first, in ordinary seasons, beginning with the new year. Few years pass without a swell about this season. This first flood is invariably followed by a depression, previously to the great spring inundation, which begins in April, commencing with the *first* flood of the Missouri in March, on the breaking up of the ice. This is followed by that of the upper *M.*, and afterwards by those of the Ohio, Illinois, and all the other affluents. The *great* flood of the *M.* begins in June. About the middle of the same month the river attains its greatest height at Natchez, about 400 miles from its embouchure; and in the first week of July the flood at New Orleans is generally at its maximum. Considerable variations, however, occur in the periods, as well as extent, of the inundations. The swell of the *M.* during the floods is, near the sea, only 3 feet; at New Orleans, 120 miles from its mouth, 12 feet; at Baton Rouge, 138 miles higher, 25 feet; at Fort Adams, and generally thence to the Ohio, 45 feet; and in the upper *M.* the rise is from 18 to 22 feet, the diminution from the mouth being a consequence of the large expanse of the country over which the waters are spread. To secure the land from these inundations, immense embankments, or *levées*, as they are generally called, have been formed along the *M.*, and the canals or bayous through which its waters overflow. The principal of these levées commences at the head of the island of Orleans, and extends down the stream for about 130 miles. The river, however, not unfrequently bursts through this dyke, and submerges the adjoining country. The *M.* differs from most of the other great American rivers in the uniformity of its width and depth for many hundred miles. Indeed, it is navigable at every period of the year considerably above its junction with the Missouri, and for at least 2,000 miles above its month. The width of the main river averages about 900 yards below the Ohio; and its medial depth varies from 90 to 120 feet. The current of the lower *M.*, though strong, does not equal that of the Missouri. Its velocity may be ascertained from the progress made by boats descending the stream. When the water is low, a boat will float from 45 to 50 miles a day; when in a middle state, from 60 to 70 miles; and during the freshets, from 90 to 100 miles. This, however, applies only to that part of the river above the Arkansas; for, below this a small dilatation occurs, and the swamps also receive a vast body of water, by which means the current becomes less rapid. As soon as the river enters the delta, its rapidity is further slackened through the diffusion of its waters into various subordinate channels. From this point to New Orleans, no variation is perceptible; but between the Arkansas and the delta the velocity of the current is diminished nearly a third, and thence to the sea about one-half. Outside the bar the current sets to the E.; but there are counter-currents, which in no small degree perplex the mariner on entering or leaving the river. The white waters of the *M.* do not readily mix with the sea, and may be distinguished from 9 to 14 miles from Balize. By far the most dangerous obstruction to the navigation of this river arises from the multitude of large trees precipitated from its banks into the water. These frequently become firmly fixed in the river's bed. Some of them are called *planters*, or *snags*, because they are immovable, and constantly expose their pointed shafts above the stream. Others are denominated *sawyers*, from their alternately rising above and falling below the surface. It is dangerous for boats to run against either of these; and the best way of avoiding them is to steer a mid-channel course, where they seldom make their appearance; while, for further security, the steamers have frequently double bows. The number of trees visible to the eye is greater or less according to the high or low state of the water. But within the last few years steamers have been fitted up with machinery for removing these obstructions to navigation; and it is believed that in no very lengthened period this impediment will no longer exist, at least in any dangerous degree. The facilities afforded by the *M.* and its various tributaries for internal navigation are wholly unequalled, except, perhaps, by the Amazon and the Congo, with their feeders. In so far, indeed, as navigation is concerned, the *M.* should be regarded, from its great depth and comparative freedom from shoals and cataracts, not so much a river as a vast inland sea, — a Mediterranean, in fact, extending through all the central and most fertile portion of N. America, and enabling its remotest recesses, though 2,000 or 3,000 miles inland, to maintain a direct communication by water with the most distant quarters of the globe. It is but yesterday, as it were, since the valley of the Mississippi began to be occupied by civilized man and reclaimed from the wilderness; and its astonishing increase in population and wealth is principally ascribable to the facility afforded by this noble river for its intercourse with other parts of the N. American continent, and of the world at large. The trade and navigation of the *M.* is already indeed incomparably greater than that of any river in the E. hemisphere. And vast as are its natural capacities for navigation, they have been, and doubtless will continue to be, greatly extended by canals and artificial adjuncts. It is already united with the grand chain of lakes and the basin of the St. Lawrence; and goods taken on board at New York may be transported to New Orleans without being unshipped,

and conversely. De Soto (*q. v.*), 1541, was the first European who explored the *M.* He died upon it, and was buried in it. Marquette and Joliet in 1673, and La Salle in 1682, made explorations, the latter descending to its mouth.

Mississippi Scheme. The name of a commercial speculation started in Paris by John Law, (*q. v.*) in 1719. It consisted of a banking and commercial company, called the Western Company, Law being at the head of each. The whole province of Louisiana was put into their hands, and the trade with China and the East was also secured to them by royal decree. The name was then changed to The Company of the Indies, and it became in time the monopolist of almost the entire financial operations of France. Shares sold at enormous prices, pay being taken in the depreciated paper currency at par. The issue of paper money by this bank at one time reached nearly 3,000,000,000 livres. The Royal Bank was incorporated with this scheme in 1720, and a decree issued, reducing the value of the shares and notes one-half. A panic ensued, and wide-spread ruin and bankruptcy resulted. Shares originally issued at 500 livres, commanded as high as 10,000 livres.

Mississip'pi, one of the S. States of the American Union, between 30° and 35° N. Lat., and 88° and 91° W. Lon., is bounded on the N. by Tennessee; having E., Alabama; W., Arkansas and Louisiana; and S., the last-named State, and the Gulf of Mexico. Length, N. to S., 335 m.; average breadth, about 150 m. *Area*, 47,156 sq m., or 30,179,840 acres, with a coast-line of 88 m. on the Mexican Gulf. GEN. DESC. The surface of the State is generally of an undulating character; it is level in some tracts, but nowhere rises into mountains or hills of any altitude. North of Lat. 31° the W. boundary is wholly formed by the Mississippi River, the country along which is a continued swamp, occasionally interspersed with patches sufficiently elevated to admit of cultivation. From this low plain the surface gradually rises towards the E., where a tract of moderately high land, stretching from S.W. to N.E., forms the water-shed between the rivers joining the Mississippi in this State, and those embouching into the Gulf of Mexico. The Mississippi bed is marked by two ranges of bluffs, irregularly outlined, and sometimes approaching the river, overhanging it in cliffs 200 feet high, and then receding, leaving the intervening space, a low, flat plain, overflowed by annual freshets, and resulting in the swampy areas before mentioned, one of which, extending from below the Yazoo River to Memphis, Tenn., has a maximum width of 100 m., and occupies a superficies of 700 sq. m. Owing to the frequent inundations, this region, forming the N.E. part of the State, is mostly prairie, there rarely being found a tree to break the monotony of the surface, which is level, dotted with lagoons and marshes, and irrigated by dull, sluggish streams. The soil generally consists of a dark, heavy loam, highly impregnated with lime, and the surface is covered with a luxuriant growth of grass. This fertile region embraces a portion of the great cotton-growing belt in Alabama. Various kinds of grain grow here, and yield abundant crops. From Vicksburg, along the Mississippi River line to the S. limit of the State, the lands consist, for the most part, of alluvial bottoms, extending to the bluff-formation, which in some places closely approaches the river, overhanging it in cliffs of considerable elevation. The country extending back from these bluffs rises imperceptibly higher in penetrating the interior of the State, and finally spreads into extensive plains, intersected by numerous streams. The surface of country bordering on the Gulf of Mexico consists of a sandy soil, very productive, but little elevated above the highest tides, and the surface to the water's edge is covered with a heavy growth of magnolia, white-pine, and live-oak, interspersed. Extensive swamps are found at the confluence of the Pearl and Pascagoula rivers, while the country intervening, and comprising the valleys, is watered by numerous small streams, and generally level, with dry, rich soil, producing a luxuriant development of yellow-pine and pasturage; the more elevated portions being intermingled with lofty canes. Off the coast, at a distance of 5 or 6 m., is a chain of low islands, or keys, covered with pines and coarse herbage, at one of which, Ship Island, there is a good harbor. The S.E. section of the State comprises a varied soil and surface, — some parts being broken, with a poor soil, while others are fertile valleys. It is, on the whole, a fine grazing region, and cattle-rearing forms an important branch of industry. Some cotton is produced; corn, also, and the minor kinds of cereals, are profitably cultivated.—*Rivers.* Next to the Mississippi, the Yazoo, Pearl, and Pascagoula rivers are the principal, and lie wholly within the State; the two latter emptying into the Mexican Gulf, while the Yazoo and Big Black have their outlets in the Mississippi. The Yazoo, flowing in a general S.W. direction, has an entire length of 240 m., 50 of which are navigable. The Pearl and Pascagoula are also navigable to a considerable distance from their mouths.

Fig. 1812.— SEAL OF THE STATE.

Pascagoula is the only tolerably good harbor on the coast, those of Mississippi City, Biloxi, and Shieldsboro being too shallow for purposes of practical utility.—*Clim.* The climate of *M.* partakes very strongly of some of the characteristics of the torrid zone. Its winters, however, like those of Louisiana, have an average temperature a few degrees below the same seasons on the Atlantic coast, in the same parallels. It is, generally, held to be, on the whole, a healthier State than Louisiana, the temperature being more equable. During the summer solstice, however, fevers and bilious affections are more or less prevalent in all parts of the State.—*Geol. and Min.* The mineralogical aspect of this State is, as yet, undeveloped. Iron, coal, and marble have, so far, been found, but only in small quantities; the geological character of the bluffs contiguous to the Mississippi River are, however, regarded as of the age of the Rhenish loess, consisting of beds of yellowish loam, sand, and clay. The superficial deposit of yellow silicione marl was accumulated just prior to the existing geological period, after the surface had received its present outline by erosion, and contains numerous fresh-water and land-shells identical with species now living, together with bones of extinct mammalia, mingled with bones of species still existing. This formation is superimposed on beds of the Eocene period, which makes its appearance at the foot of the bluffs near Vicksburg. There are several medicinal springs in the State, among which is Cooper's Well, in Hinds co., 12 m. from Jackson. The waters of this spa are strongly impregnated with sulphur, also iron, and are considered beneficial in cutaneous and intestinal diseases. Lauderdale Springs, in the co. of that name, are charged with white sulphur and chalybeate.— *Soil, Agric., and Veg. Prod.* *M.* is essentially an agricultural State. The larger proportion of the soil is highly fertile. The average fertility of the State is, indeed, of a very advanced standard. The N. and central valleys, though subject, in places, to severe sand-washing, are extremely productive. Excessive cotton culture has, nevertheless, in some degree, impaired the soil of this region, which is now devoted, in general, to lighter and less exhausting staples. The prairie tracts of the N.E. portion of the State possess a rich, black, adhesive mould, impregnated with lime, and very prolific in cotton and maize. In the S.E. districts, fruits flourish in sandy soil, which, with the exception of a few valleys, is not sufficiently strong to support the heavier crops. The greater part of the surface is thickly timbered; oak, hickory, black-walnut, maple, and pine, being the principal forest-trees. The S. part of the State abounds in yellow-pine of matured growth, from which large supplies of naval stores are obtained. In the swamps and on the periodically overflowed lands, black- and white-cypress occur; the latter being an excellent description of lumber for domestic purposes. The timber in the N. section of the State is, mainly, oak and hickory; and the other species (besides those already mentioned) include gum, poplar, magnolia, beech, buckeye, dogwood, persimmon, tulip, and pawpaw. The pine forests in the S. portion of the State furnish considerable quantities of tar, pitch, and turpentine, but the land in these localities does not possess any especial agricultural capacity. The "bottoms" of the Mississippi, with their immeasurable depths of black mould, constitute, "par excellence," the most productive lands of the State. Their inexhaustible richness, in fact, will outlast even the encroachments of the cotton-plant, which has almost absorbed the fertilizing principles of the soil of the central valleys. The sugar-cane grows in the S., and the orange on the lower banks of the Pearl and Pascagoula rivers; in the central region, maize, rice, tobacco, indigo, figs, grapes, melons, and sweet-potatoes, attain to excellence; while apples and pears flourish well in the N. Vegetables, comprising a very extensive variety, also yield an ample product. Among the field-crops, cotton has been the ruling staple for many years, the average yield comparing favorably with any State in the Union. The soil and climate are equally well adapted to the culture of the principal cereals, which are, year by year, becoming a more important feature of husbandry than was the case in the period anterior to the Civil War. Among other agricultural items are, hay, clover, and grass-seed, pulse, flax and flax-seed, tobacco, hops, and the sugar-cane. The grape is successfully raised in most localities. Silk-culture has received some attention, and the experiments, though on a limited scale, have proved satisfactory. Tobacco and indigo were, primarily, the great staples of the State. These, however, gave place to the growing demand for cotton, and, until the outbreak of the late war, the cultivation of the latter article engrossed, by far, the greater portion of the attention of the planter. Most estates raise enough of Indian corn for their own consumption, and rear hogs sufficient to supply them with pork-flesh. Cattle abound in such numbers that *M.* has been often called the "cow-country." The occasional overflows of the Mississippi river, which no system of levees yet devised seems capable of preventing in times of phenomenal rise, are apt to produce great loss to the planters on the bottom lands, though this loss is in a measure redeemed by the deposits of fertilizing mud made by the subsiding waters, which effect a natural fertilization of great value to the soil. That of the spring of 1897, the year of greatest rise on record, and which persisted long into the growing period, is said to have repaid the injury done by it through its utility in adding to the fertility of the soil. Since the close of the Civil War there has been a very notable increase in the acreage of land under cultivation in this State, and in the value of farms and agricultural implements, as also in the yield of such animal products as butter, cheese, honey, wool, and meats. The reorganization of the system of field-labor since the days of slavery, embracing an entire revolution in the industrial conditions of the State, has had its repressive effect on the development of its agricultural interests; but this has been fairly effected, and *M.* is taking rank among the great productive communities of the United States. In its cotton yield this State ranks third among the great cotton States of the South, being very nearly equal to Georgia in its annual yield, and largely surpassed only by Texas. Its product in the last census year was 1,154,406 bales, those of Georgia and Texas being respectively 1,191,919 and 1,470,353. In 1895 its yield was estimated at 1,200,000, equal to that of Georgia, while Texas had increased to 3,114,000 bales. In cereal crops its principal product is that of Indian corn, to which, in 1895, an area of 2,277,036 acres was devoted, with a yield of 35,977,169 bushels, valued at $13,311,553. The yield of oats was 2,076,812 bushels, and that of wheat only 37,184, grown on 4,648 acres. Though adjoining the great sugar State of Louisiana, very little sugar-cane is grown, the annual product being less than 10,000 pounds. Of the 29,958,400 acres of the State, only 6,849,390 were under cultivation in 1890, these being divided into 144,318 farms. The farms embraced also 10,723,157 acres of unimproved land, making a total of 17,572,547. The size of farms has been steadily decreasing, averaging 370 acres in 1860, 193 in 1870, 156 in 1880, and 122 in 1890, thus indicating a change from the old system of large plantations to one of small farms. The value of farm lands and buildings at the period named was $127,423,157; of implements and machinery, $5,968,865; of live stock, $33,936,435, and of farm products, $73,342,995. As regards manufactures, *M.* manifests little activity, being considerably below the neighboring States of Louisiana and Alabama. In 1890 its products were valued at $18,705,834, about one-third of each of the other States named. There is, however, some activity in cotton manufacture, factories being located at Wesson, Columbus, Natchez, Enterprise, Meridian, Water Valley, Carrollton, and Corinth. Woodworking factories exist at Jackson and Meridian.—*Pol. Div.* The State is divided into 75 counties, as follows:

Adams,	Grenada,	Lowndes,	Sharkey,
Alcorn,	Hancock,	Madison,	Simpson,
Amite,	Harrison,	Marion,	Smith,
Attala,	Hinds,	Marshall,	Sunflower,
Benton,	Holmes,	Monroe,	Tallabatchee,
Bolivar,	Issaquena,	Montgomery,	Tate,
Calhoun,	Itawamba,	Neshoba,	Tippah,
Carroll,	Jackson,	Newton,	Tishomingo,
Chickasaw,	Jasper,	Noxubee,	Tunica,
Choctaw,	Jefferson,	Oktibbeha,	Union.
Claiborne,	Jones,	Panola,	Warren.
Clark,	Kemper,	Pearl River,	Washington,
Clay,	La Fayette,	Perry,	Wayne,
Coahoma,	Lauderdale,	Pike,	Webster,
Copiah,	Lawrence,	Pontotoc,	Wilkinson,
Covington.	Leake,	Prentiss.	Winston.
De Soto,	Leflore,	Quitman,	Yalahusha,
Franklin,	Lee,	Rankin,	Yazoo.
Greene,	Lincoln,	Scott,	

Cities and Towns. The principal are Natchez, Jackson (State cap.), Vicksburg, Columbus, Aberdeen, Holly Springs, Canton, Grenada, Woodville, Meridian, Grand Gulf, Yazoo City, Princeton, Tallalula, Greenville, Bolivar, Biloxi, Pascagoula, &c. The facilities of internal navigation are scarcely less extensive and valuable than those of Louisiana, while the same causes have retarded the development of railroad enterprise in that State.—*Govt., &c.* The Constitution, reconstructed in 1870, is based upon the enactments of 1817 and amendments thereto. The right to vote is enjoyed by every male of 21 years of age who is a citizen of the U. S., with the usual requirements of local residence, &c. The legislature, since 1877, meets biennially. Senators are elected for four years and members of the House of Representatives for two years. The governor, lieutenant-governor, secretary of State, treasurer, auditor, attorney-general, and superintendent of public instruction are all elected by the people for the term of four years. A commissioner of agriculture and immigration is elected by the legislature, also for four years—*Judiciary.* Consists of a Supreme Court, composed of three judges, appointed by the governor for nine years. This court has appellate jurisdiction only, and holds session twice a year, at Jackson. The State is divided into 15 judicial districts, each with a judge appointed for four years. There are also 20 chancery districts, each with a chancellor appointed for four years. Mississippi has seven representatives in the U. S. Congress.—*Finances.* In 1890 the total indebtedness of Mississippi was $6,011,347, representing a sum of $4.66 per capita of population. Of this, the State debt was $3,503,009; county debt, $1,230,299; municipal debt, $1,278,039. In this respect *M.* ranks low among the Southern States.—*Education.* The public schools are maintained 4 months annually by the State, but graded schools are maintained for 10 months of each year by some 40 cities and towns. There are separate schools for colored pupils. The amended Constitution directs the legislature to establish free schools, open to all the children, and also marks out a complete system, with State and county superintendents, authorization of additional taxes for educational purposes, &c. There were enrolled in 1894 345,584 children, with an average attendance of 206,247, somewhat more than one-half being colored. The principal institutions for the higher education assisted by the State are the University of Mississippi, at Oxford; an agricultural and mechanical college, at Starkville; an industrial insti-

MISSISSIPPI
SCALE OF MILES
10 5 0 10 20 30 40
State Capital ✻ County Seats ⊙
Places of 10,000 and over NATCHEZ
" " 3,000 to 10,000 Biloxi
" " 1,000 to 3,000 Tupelo
" " 500 to 1,000 Hernando
Hammond's 8 x 11 Map of Mississippi
Copyright, 1904, by C. S. Hammond & Co., N. Y.
Longitude B West 91° from C Greenwich
LOUISIANA
ARKANSAS
TENNESSEE
ALABAMA
GULF OF MEXICO
MISSISSIPPI SOUND
LAKE PONTCHARTRAIN
Lake Maurepas
MOBILE BAY
TUNICA
DE SOTO
MARSHALL
BENTON
TIPPAH
ALCORN
TISHOMINGO
COAHOMA
TATE
PANOLA
LA FAYETTE
UNION
PONTOTOC
LEE
ITAWAMBA
PRENTISS
QUITMAN
TALLAHATCHIE
YALOBUSHA
CALHOUN
CHICKASAW
MONROE
BOLIVAR
SUNFLOWER
LEFLORE
GRENADA
WEBSTER
CLAY
OKTIBBEHA
LOWNDES
WASHINGTON
CARROLL
MONTGOMERY
CHOCTAW
HOLMES
ATTALA
WINSTON
NOXUBEE
ISSAQUENA
SHARKEY
YAZOO
MADISON
LEAKE
NESHOBA
KEMPER
WARREN
HINDS
RANKIN
SCOTT
NEWTON
LAUDERDALE
CLAIBORNE
COPIAH
SIMPSON
SMITH
JASPER
CLARKE
JEFFERSON
LINCOLN
LAWRENCE
COVINGTON
JONES
WAYNE
ADAMS
FRANKLIN
WILKINSON
AMITE
PIKE
MARION
PERRY
GREENE
PEARL RIVER
HANCOCK
HARRISON
JACKSON

MISSISSIPPI

Land surface, Sq. m. 46,340
Water surface, Sq. m. 470
Pop. 1900..1,551,270
White.....641,200
African...907,630
Indian 2,203
Chinese..... 237
Native-born, 1,543,289
Foreign-born, 7,981
Males.....781,451
Females..769,819

COUNTIES.

Adams.....B 8
Alcorn ..... G 1
Amite .....C 8
Attala.....E 4
Benton. .....F 1
Bolivar.....C 3
Calhoun.....F 3
Carroll .....E 4
Chicasaw.....G 3
Choctaw.....F 4
Claiborne .....C 7
Clarke .....G 5
Clay ....G 3
Coahoma.....C 2
Copiah .....D 7
Covington ....E 7
De Soto .....E 1
Franklin .....C 8
Greene .....G 8
Grenada.....E 3
Hancock.....E10
Harrison .....F 9
Hinds.....D 6
Holmes .....D 4
Issaquena.....B 5
Itawamba.....H 2
Jackson.....G 9
Jasper.....F 6
Jefferson .....B 7
Jones.....F 7
Kemper.....G 5
Lafayette .....E 2
Lauderdale....G 6
Lawrence .....D 7
Leake .....E 5
Lee.....G 2
Leflore.....D 3
Lincoln .....D 7
Lowndes.....H 4
Madison .....D 5
Marion.....E 8
Marshall.....F 1
Monroe .....H 3
Montgomery . E 4
Neshoba.....F 5
Newton.....F 6
Noxuhee .....G 4
Oktihbeha ....G 4
Panola .....E 2
Pearl River...E 9
Perry.....F 8
Pike.....D 8
Pontotoc .....F 2
Prentiss.....G 1
Quitman.....D 2
Rankin..... E 5
Scott .....E 5
Sharkey. .... C 5
Simpson.....E 7
Smith .....E 6
Sunflower .....C 3
Tallahatchie..D 3
Tate.....E 1
Tippah.....G 1
Tishomingo...H 1
Tunica .....D 1
Union.....F 2
Warren.....C 6
Washington ..C 4
Wayne .....G 7
Webster ..... F 3
Wilkinson.....B 8
Winston... ...F 4
Yalohusha... E 2
Yazoo .....D 5

CITIES-TOWNS

Pop.	Thousands.
14	Vicksburg..C 6
14	Meridian...G 6
12	Natchez....B 8
7	Jackson. ...D 6
7	Greenville...B 4
5	Columbus.. H 4
5	Biloxi. F10
4	Yazoo City..D 5
4	McComb ...D 8
4	Hattiesburg F 3
3	Water ValleyE 2
3	Corinth .....G 1
3	Aberdeen...H 3
3	Canton.....D 5
3	Wesson.....D 7
3	Laurel.....F 7
3	West Point..G 3
3	Greenwood..D 3
2	Bay St. Louis F 10
2	Holly Springs F 1
2	Brookhaven D 7
2	Grenada.....E 3
2	Winona .....E 4
2	Okolona ....G 2
2	Tupelo .....G 2
2	Port Gibson. C 7
2	Kosciusko...E 4
2	Macon .....G 4
2	Pass Christian F10
2	Scranton ... G10
1	Starkville...G 4
1	Mosspoint .. G10
1	Ellisville ....F 7
1	Oxford .. ...E 2
1	Clarksdale ..C 2
1	Durant .....E 4
1	Gloster.....B 8
1	Hazlehurst .D 7
1	Lexington ..D 4
1	Lumberton, F 9
1	Summit.....D 8
1	Fostoria.....C 6
1	Ocean Sprs.G 10
1	Amory .....H 3
1	Senatobia...E 1
1	Crystal Sprs.D 7
1	Gulfport... F10
1	Booneville ..G 1
1	Woodville...B 8
1	Magnolia... D 8
1	New Albany.F 1
1	Pontotoc ....F 2
1	Sardis.....E 2

Pop.	Hundreds.
9	Poplarville..E 9
8	Iuka .....H 1
8	Handsboro..F10
7	Osyka. .....D 8
7	Brandon ....E 6
7	Leland .....C 4
7	Forest.....F 6
7	Byhalia .....E 1
7	Friarpoint...C 2
7	Enterprise..G 6
7	Eupora.....F 3
7	Pascagoula .G10
7	Ackerman...F 4
6	Houston.....G 3
6	Ripley .....G 1
6	Indianola....C 4
6	Hickory.....G 6
6	Rosedale ...B 3
6	Brooksville .G 4
6	Fayette.....B 7
6	Bolton.....D 6
6	Shuqualak G 5
5	Centerville..B 8
5	Edwards.....C 6
5	Bogue Chitto D 8
5	Blue Mtn....F 1
5	Nettleton ...G 2
5	Purvis.....F 8
5	Hernando...E 1
5	Baldwyn ....G 2
5	Coldwater...E 1
5	Batesville...E 2
5	Utica.....C 6
5	Carrollton...E 4
5	Boyle.....C 3
5	Newton.....F 6
5	Gunnison....C 3
5	Waveland...F10
5	Columbia....E 8
5	Louisville....F 4
5	Pickens.. ...E 5
4	Quitman.....G 6
4	Tunica .....D 1
4	Raymond...D 6
4	Charleston..D 2
4	Cleveland...C 3
4	Como .....E 2
4	Vaiden .....E 4
4	Coffeeville . E 2
4	Verona ... G 2
4	Shuhuta.....G 7
4	Rodney..... B 7
4	Goodman.....E 5
4	Moorhead...C 4
4	Waynesboro G 7
4	Orvisburg ..E 9
4	Shaw.....C 3
4	Carthage ....E 5
4	Ittahena .. D 4
4	Estahutchie F 8
3	Tchula .....D 4
3	Liberty .....C 8
3	Crawford ...G 4
3	Sandersville G 7
3	Clinton .....D 5
3	Norfield.....D 8
3	Artesia .....G 4
3	Beauregard.D 7
3	Pelahatchee E 6
3	Hollandale..C 4
3	Guntown....G 2
3	Madison .... D 5
3	Jonestown.. D 2
3	McCool.. ....F 4
3	Potts Camp..F 1
3	Flora.....D 5
3	Baird.....C 4
3	Sherman....G 2
3	Pheba..... .G 3
2	Lauderdale .G 5
2	Mound Bayou C 3
2	Scooba .....H 5
2	Harriston...B 7
2	Courtland...E 2
2	Arkahutla ..D 1
2	Belzoni..... D 4
2	French Camp.F 4
2	Ahbeville....E 1
2	Pittshoro....F 3
2	Mayersville .B 5
2	Paulding....F 6
2	Toccopola...F 2
2	Duckhill ....E 3
2	Pleasanthill.E 1
2	Rienzi.....G 1
2	Hermanville C 4
2	Heidelberg..G 7
2	Kilmichael..E 4
2	Buenavista..G 3
2	Burnsville...H 1
2	Roxie. .....B 7
2	Oakland.....E 2
2	Saltillo.....G 2
2	Walnutgrove F 5
2	Hickory Flat F 1
2	Morton .....E 2
2	Knoxville ...B 8
1	Bluesprings.G 2
1	West.....E 4
1	Sallis. .... E 4
1	Cedarbluff ..G 3
1	Nesbitt.....D 1
1	Gallman ....D 7
1	Slate Spring.F 3
1	Northcarrollton E 3
1	Plantersville G 2
1	Harrison ....E 2
1	Beleu.....D 2
1	Lula.....D 2
1	Sharon..... G 5
1	Sarepta.....F 2
1	Pope.....E 2
1	Duncan.....C 2
1	Coahoma....C 2
1	Fulton .....H 2
1	Walthall.....F 3
1	Ehenezer....D 5
1	Mathiston...F 3
1	Bentonia... D 5
1	Lyon.....C 2
1	Cascilla .....E 2
1	Myrtle.....F 1
1	Stewart.....E 4
1	Randolph....F 2
1	Ashland.....F 1
1	Kossuth.....G 1
1	Martin.....C 7
1	Smithville. H 2
1	Conehatta...F 6
1	Sidon.....D 4
1	Satartia .... C 5
1	Scohy .....E 3
1	Hardy. .....E 3
1	Troy.....G 2
1	Austin.....D 1
1	Tutwiler ....D 2
1	Mayhew.... G 4
1	Mt. Pleasant E 1
1	Learned.....C 6
1	Chester..... F 4
1	Pachuta.... G 6
1	Love.... ....E 1
1	Harperville. E 5
1	Waterford...F 1
1	Webb .....D 3
1	Blackhawk .D 4
1	Lafayette Springs..F 2
1	Tula..... ...F 2
1	Tillatoba....E 3
1	Banner..... F 2
1	Howard.....D 4
1	Tocawa .....D 2
1	Chesterville.G 2
1	Gattman H 3
1	Olivebranch E 1
1	Paris. .....F 2
1	Houlka.....G 2
1	Taylor .....E 2
1	Eudora .....D 1
1	Weir..... ...F 4
1	Poplar Sprs.G 2
1	Cumberland F 3
1	Tomnolen...F 4
1	Redbanks...E 1
1	Wallhill .... E 1
1	Chulahoma..E 1
1	Thornton ..D 4
1	Lodi ..... E 3

tute and college at Columbus (for white girls); a college for colored youth, at Rodney, and a normal school for colored pupils, at Holly Springs. There are also private universities and colleges for both white and colored youths, a large number of high schools and academies, an institution for the deaf and dumb and one for the blind at Jackson; also a lunatic asylum. —*History.* *M.* was first settled by the French in 1716, and and originally formed part of the colony of Louisiana. In 1728 the settlers were nearly exterminated by the Indians; but, receiving a reinforcement of French colonists who had been driven out of Nova Scotia upon the English conquest of that peninsula, they succeeded in holding and extending their territory. The admirable agricultural promise of the country, however, soon began to attract immigration from the British colonies on the Atlantic seaboard, and they succeeded in ousting the French; the territory was in 1763 ceded to Great Britain. After being organized as a Territory of the United States in 1798, it was admitted to the Union as a Federal State Dec. 10, 1817. In 1861 it passed an ordinance of secession, took a prominent part in the Civil War, and finally, in January, 1869, was readmitted to representation in Congress, after ratifying the 15th amendment. Amendments to the State Constitution were made in 1875 and in 1877; at the latter, sessions of the legislature were made biennial. *Pop.* (1820) 75,448; (1850) 605,948; (1880) 1,131,597; (1890) 1,289,600, of whom 744,749 were colored—being the largest number in any State except Georgia. In 1900 the population was 1,551,270.

Mississ'ipi City, in *Mississippi*, a post-village of Harrison co.

Mississippi (or **English**) **River,** rises in La Crosse Lake, British N. America, abt. Lat. 55° 30′ N., Lon. 108° W., and enters Hudson Bay at Fort Churchill. The lower part is commonly called Churchill River. *Length*, abt. 630 m.

Mis'sive, *a.* [Fr., from Lat. *mitto*, *missus*, to send.] Expedited or sent, or such as may be sent; as, a letter *missive*. — Missile; made to be thrown, hurled, or projected.

"Short, and more short, the *missive* weapons fly." — *Dryden.*

—*n.* A message; a letter sent, or a messenger; a despatch.

Missolonghi, (*me-so-lon'gi,*) a town of Greece, nomarchy of Ætolia, on the N. shore of the Gulf of Patras, 24 m. W. of Lepanto. This small town became celebrated for the siege it sustained against the Turks during the war of Greek independence. Here Lord Byron died, April 17, 1824. *Pop.* 4,000.

Missou'ri, a river of N. America, and by far the largest tributary of the Mississippi, rises in two branches which collect all the water flowing from the Rocky Mountains between 42° and 48° N. Lat. The most N. of these sources, or the *Missouri Proper*, rises in abt. Lat. 45° N., and Lon. 110° 30′ W., taking an E. course, inclining to the N. for abt. 620 m.; receiving in its flow many considerable affluents, and having a stupendous fall of 170 feet, abt. 300 m. from its source. The other branch, called the *Yellowstone River*, rises by several heads between Lat. 42° and 44° N., and after a N.N.E. course of more than 900 m., joins the Missouri proper in Lat. 48° 10′, and Lon. 104° W.; where its stream is 860 yards wide. The united river flows hence through a fine open prairie, and after reaching its utmost N. bend, in Lat. 48° 30′, curves S. past Fort Mandan, maintaining the same course to the confluence of White River, in Lat. 43° N., below which it takes a general S.S.E. course, by Council Bluffs, to the junction of the Kansas, and then runs nearly E. to its union with the Mississippi; its entire length from the source of the Yellowstone to this point being 3,130 m. Its largest tributaries are the Platte, Kansas, and Osage, all rising on the E. offsets of the Rocky Mountains, and joining the *M.* on its W. bank; the E. affluents, except the Grand River and Chariton, are quite inconsiderable. The navigation of the *M.*, from the Mississippi to the Falls, a distance of 2,575 m., may be generally deemed good, though the season be short, and the steamers run only during daylight. The main difficulties of navigation arise from its falling banks, the timber imbedded in the mud of its channel, its sand-bars and rapids, and the rapidity of its current, which ranges from 5 to 8 m. an hour. All these may be overcome by using the necessary precautions; but the Falls entirely interrupt the navigation, and a portage becomes necessary at the point where, for abt. 2¾ m., the *M.* rushes down a succession of tremendous cataracts and rapids. Above the Falls, the current is frequently impeded by shoals and rapids; and as the river issues from the Rocky Mountains, its banks are shut in on both sides for more than 5 m. by rocks rising perpendicularly from the water's edge to the height of nearly 1,200 feet, forming a sublime spectacle. This stupendous range of rocks was denominated the "Gates of the Rocky Mountains." In the lower parts of the river well-wooded valleys occur; but above the Platte, open prairies develop themselves, stretching indefinitely on either side in naked grassy plains, forming the home of buffaloes, elks, white bears, antelopes, and mountain-sheep. The principal places on its banks are Fort Benton in Montana, Yankton in Dakota, Sioux City and Council Bluffs in Iowa, Omaha in Neb., Atchison and Leavenworth in Kan., and St Joseph, Kansas City, Lexington, Booneville, Jefferson City, and St. Charles in Mo.

Missou'ri, one of the W. central States of the American Union, lies between Lat. 36° 30′ and 40° 30′ N., and Lon. 89° and 95° 30′ W. Its greatest length from east to west is 318 m., and its maximum width 280 m., comprising a total area of 65,350 sq. m., or 41,824,000 acres, being equal in size to Virginia, Connecticut, and West Virginia combined, or to Georgia and Massachusetts. This State, occupying a central position in the Union, is bounded by Iowa in the N., with the Mississippi River separating it on the E. from Illinois, Kentucky, and Tennessee; Arkansas forms its S. frontier, while the Indian country, together with the States of Kansas and Nebraska, constitute its limits W. — *Gen. Desc.* *M.* comprises almost every variety of surface except the extreme mountainous. The Ozark Mountains occupy a large portion of the interior S. of the Missouri River, extending to the S.W. corner of the State; but they are rather high hills and ridges than positive mountains, with prairies intervening. In the S.E. the country is low, flat, and marshy. W. of the Ozark the surface spreads out with broad rolling prairies, extending to the western boundary. N. of the Missouri, the country attains the highest altitude in the N.W., gradually inclining to the S. and E. — all the streams flowing S. The divide between the waters emptying into the Mississippi and those confluent with the Missouri from the N., constitutes an elevated plain, and is traversed by the N. Missouri line of railroad. Besides these general undulations there are frequent local irregularities of surface, which give the whole area its rolling character. The numerous water-courses everywhere intersecting the country have worn deep valleys, giving some places a rough and broken appearance. The general surface is, however, level. The valleys form an important feature in the physical structure of the State, and exercise a material influence upon its climate. The bottom lands are exceedingly fertile, and, on the large streams, vary in width from 2 to 10 m., those on the smaller streams being of a proportionate width. — *Rivers.* Besides the Mississippi, which for 500 m. serves as the E. limit of the State, another principal stream is the Missouri, forming 250 m. of its W. border, and separating it from Nebraska and the N.E. part of Kansas to the mouth of the Kansas River, which, then trending to the E., flows 400 m. through the central section of the country in a S.E. direction to the Mississippi. In the E. part the rivers flow in a general easterly course and unite with the Mississippi, the largest of which are the Wiaconda, North Fabius, South Fabius, Salt, Au Cuivre, and Maramec. In the S. region, the streams flow S. into Arkansas, and among these are the St. Francis, Big Black, Current, Spring, Eleven Points, White River and its N. fork, and James River. In the extreme S.W. section the Elk and Spring rivers take a S.W. course, uniting with Grand River, an affluent of the Arkansas. The principal branches of the Missouri from the S. are the Gasconade, Osage, and La Mine, while the Platte, Chariton, and Grand rivers flow from the N., and are all navigable at certain seasons of the year by light-draught steamers. Small streams and excellent springs are found in various localities throughout the State. Water-power is abundant on nearly every stream, but the most valuable is afforded by the large springs so numerously diffused through the S. part of the State.— *Geol., Min., &c.* The geological structure of *M.* presents a wide range of formations and systems, including a rich endowment of mineral wealth. The surface deposits of the quaternary system are well developed, and include the alluvial bottom, prairie, bluff, and drift formations, constituting the principal basis of the soils of the State. The tertiary system embraces the beautiful variegated sands, clays, shales, and iron ores, which prevail in the S.E. in the bluffs from a short distance below Cape Girardeau to the Chalk Bluffs in Arkansas; while the variegated sandstone, clays, and the ruptured and inclined bed of hornstone on the bluffs above Cape Girardeau are reckoned as belonging to the cretaceous system. The carboniferous system is made up of the coal measures, Kaskaskia, encrinital, St. Louis, and Archimedes limestone, and ferruginous sandstone. The Devonian system is represented by the vermicular and Oriskany sandstones, the lithographic, Onondaga, and Chouteau limestones, and Hamilton shales. The Niagara group, Lower Helderburg, and Cape Girardeau limestones occur in the upper Silurian series, while the Hudson River group, Trenton, Black River, and birdseye limestones, both alternating formations of magnesian limestone and sandstone, are found here representing the lower Silurian series. Below these formations, a series of metamorphosed slates occurs. The undulations of stratified rocks throughout *M.* are very gentle, approaching to an horizontal position. Valuable deposits of coal have long been known to exist, and their progress has added largely to the progress and wealth of the State. Estimates, based upon the results of geological reconnoissances, place the area of the coal-fields of *M.* at 26,887 sq. m., falling in thirty-six counties, principally in the central and W. sections. The extent of these deposits is estimated at 130,000,000,000 tons. There are also other extensive local deposits of cannel and other bituminous coals in several counties outside of the regularly defined coal-fields, which produce some of the best coal in the State. Iron ores of the best quality exist in almost inexhaustible quantities, of which the specular oxide ore is the most abundant. The most extensive deposit of this ore is at Iron Mountain in Iron county. It is estimated that this mountain will yield 230,187,375 tons above the valley, and 3,000,000 tons to each foot beneath that surface. This ore also occurs extensively in Dart, Phelps, Pulaski, and other counties. Vast deposits of silicious specular oxide of iron exist in Pilot Knob, abt. 6 m. E. of Iron Mountain, where it has been mined since 1847. It is 518 feet high, covers an area of 360 acres, and its yield is estimated at 13,972,773 tons above the level of the valley. Shepherd Mountains, 1 m. W. of Pilot Knob, contain vast quantities of pure specular and magnetic oxides. Hematite of good quality occurs in large quantities in the magnesian limestone rocks. It also occurs abundantly in the ferruginous sandstone and tertiary rocks, but generally of inferior quality. It abounds, too, in Scott and Stoddard counties, and the counties adjoining Iron Mountain, as well as in several counties in the W. part of the State south of the Missouri; large quantities of bog-ore exist in the swamp districts in the S.E., while spathic ore is found everywhere in the coal-measure rocks; but the most valuable deposits of both these ores are in Scott county. Among the other important minerals found in this State, lead is perhaps the most abundant and valuable. It occurs in some six hundred localities, embracing 31 counties. The principal lead regions are the counties S.W. of St. Louis, in the valley of the Osage, in Jasper and Newton, and in Webster, Christian, and Taney cos., near the S. boundary. The whole area embracing lead deposits in workable quantities includes 6,300 sq. m., while the lead-bearing rocks absorb an area of 15,000 sq. m. Copper is found extensively deposited, being most abundant near La Motte mines. It is also found with nickel, manganese, iron, cobalt, and lead, in combinations yielding from 30 to 40 per cent. of ore. Zinc occurs principally in the S.W., and in the lead regions chiefly as sulphurets, carbonates, calamites, and silicates, but, hitherto, no important mining has been done. It is represented that valuable deposits of tin ore, also, have lately been discovered. Cobalt and nickel have been found in several localities in considerable quantities, and peroxide of manganese exists in limited extent in the E. part of the State. Silver occurs in several places in juxtaposition with sulphuret of lead, while gold has been found in small quantities in a few localities. Antimony and saltpetre have also been discovered in different places. All these rich mineral deposits occur in close connection with vast quantities of coal, timber, and water. The entire mining system of this State is yet comparatively in its infancy, but will, of course, increase with the expansion of settlements and extension of facilities for communication and transportation. Building material of all descriptions abounds throughout the State, including vast quantities of the most valuable timber, an extensive variety of sandstone and limestone, and materials for the manufacture of bricks and tiles. There are also several beds of superior marble, of various colors and textures, in different sections of the State, with materials for paints and cements. — *Clim.* The climatic character of *M.* is noted for extremes of temperature. In the winter the rivers are often frozen so as to admit the crossing of heavily loaded vehicles, while in summer it is extremely warm, its enervating effects being counteracted by a very dry, pure atmosphere, generally favorable to health and longevity. —*Soil, Prod., and Agric.* The soils include an extensive variety, affording facilities for a remarkably varied agriculture. The alluvial regions include the high and low bottoms, swamp, and cypress lands. The high bottoms have light, deep, porous, silicious soils, and are very productive, being little effected by the wet and dry seasons. These lands are above the ordinary high-water level, and embrace nearly one-eighth of the whole area of the State; the low bottoms differ from the high bottoms only in being subject to inundation at the ordinary rises in the rivers, which occur on all the streams, but principally in the S.E. The soils of the swamp localities are very similar in composition to the two preceding classes, yet differ in being so situated as to be overflowed; while the cypress lands are still lower, and are covered with standing water during a portion of the year. These lands are principally in the S.E. The soil is exceedingly rich, supporting a luxuriant growth of vegetation. The greater part of the swamps may be made available for agricultural purposes by an extensive system of drainage; but the cypress swamps are generally valuable only for their superabundant yield of timber. The uplands possess a greater variety of soils and surface, and are available for a wider range of agriculture. Some of these lands are very fertile, and susceptible of high cultivation. Considerable portions, particularly in the S. part of the State, are superiorly adapted to fruit-culture. Here the grape grows in perfection, and it is estimated that there are 15,000,000 acres especially suitable to vine propagation. In the mountainous region there are rich valleys, and those tracts reported as inarable are clothed with valuable growths of white pine. The marshes of the S.E., when properly drained, will, eventually, constitute the prime farming lands of the State. The river-bottoms are richly timbered with oak, elm, ash, hickory, cotton-wood, linden, and black and white walnut. Thinner soils throw out white and pine oak, and are occasionally draped with heavy forests of yellow pine, crab-apple, pawpaw, hazel, and wild vines of spontaneous growth. The State is nearly equally divided between prairie and woodland. The prairies exhibit an exuberant growth of excellent, nutritious, native grasses, which also exist in the woodlands, and, also, on the uplands and billy slopes in the S part of the State,

Fig. 1813. — SEAL OF THE STATE.

rendering this section a preëminently excellent grazing region. The truly splendid agricultural capacities of *M.* are naturally attracting increased attention. The great staple is Indian corn, to the production of which the rich prairies and hot summers of *M.* are peculiarly adaptod. In 1900 its crop of this staple aggregated 208,844,870 bushels, it ranking in corn fifth among the States. The crop of wheat was 23,072,768, and of oats 20,545,350 bushels. About 10,000,000 acres were devoted to cereal cultivation. More hemp is produced in this State than any other, with the exception of Kentucky. Other crops include tobacco, rice, hay, potatoes, and fruits, while there is a large yield of wine, honey, wax, and the products of the dairy. Cotton is cultivated in the south, though not largely. The yield of tobacco was valued at $218,991. In 1900 *M.* possessed 284,886 farms, embracing in all 33,997,873 acres of cultivated and uncultivated land; the land, fences and buildings being estimated at $843,976,213; implements and machinery at $28,602,680. The value of live stock was estimated at $160,540,363. In brief, it may be said that *M.* holds a high rank as an agricultural state, more than 42,000,000 of her 44,000,000 acres being devoted to agriculture and horticulture, while nowhere in the country are the lands generally richer and more productive. In addition to the culture of the soil, grazing has received much attention, the number of animals having largely increased, with the exception of sheep. Dressed beef and pork are shipped in large and rapidly increasing quantities to home and foreign markets. In addition to meat packing, there are many manufacturing industries, St. Louis being an active center of industrial production. The total manufactured products of the State in 1900 aggregated $385,492,784.—*Minerals.* The mineral resources, already described, are very great, and have been to some extent developed. The immense deposits of iron ore are not largely worked, mining being as yet chiefly confined to Iron and St. François counties, in the southwest. The coal yield for the year 1900 was 3,802,088 tons. Many other products are mined, though as yet the vast mineral wealth of the State remains in great measure undeveloped, including, in addition to its coal and iron, lead, zinc, copper, cobalt, nickel, and fine building marbles, granites, and limestones.—*Commerce.* The Mississippi offers an admirable channel for commerce, and the export of breadstuffs and other products from St. Louis to New Orleans, for re-shipment to Europe, is very large. The State occupies a most advantageous position with reference to commerce, being crossed by lines of inter-oceanic railroads, and others converging toward St. Louis, the commercial metropolis of the Mississippi valley, while the great highway of trade sweeping along its eastern boundary offers ready and economical transportation for its agricultural and mineral merchandise to the best markets, domestic and foreign. To conclude, *M.* offers many inducements and advantages to immigrants from every quarter, and of every calling and condition in life. To the agriculturist it reveals regions of superior fertility, capable of growing a wide range of the choicest products—floral, cereal, and pomological—and at nominal rates, with ready markets accessible to all. To the miner it presents a wide range of valuable mineral productions, promising a rich return to all well-directed applications of labor and capital. And, finally, to the manufacturer it offers a readily available proximity to vast stores of useful minerals, and the products of rural industry, besides fuel and timber in plenty and excellence.—*Pol. Div.* The State is divided into 114 counties, viz.:

Adair,	Dade,	Linn,	Ralls,
Andrew,	Dallas,	Livingston,	Randolph,
Atchison,	Daviess,	McDonald,	Ray,
Audrain,	De Kalb,	Macon,	Reynolds,
Barry,	Dent,	Madison,	Ripley,
Barton,	Douglas,	Marion,	St. Charles,
Bates,	Dunklin,	Maries,	St. Clair,
Benton,	Franklin,	Mercer,	St. Francois,
Bollinger,	Gasconade,	Miller,	St. Genevieve,
Boone,	Gentry,	Mississippi,	St. Louis,
Buchanan,	Greene,	Moniteau,	Saline,
Butler,	Grundy,	Monroe,	Schuyler,
Caldwell,	Harrison,	Montgomery,	Scotland,
Callaway,	Henry,	Morgan,	Scott,
Camden,	Hickory,	New Madrid,	Shannon,
Cape Girardeau,	Holt,	Newton,	Shelby,
	Howard,	Nodaway,	Stoddard,
Carroll,	Howell,	Oregon,	Stone,
Carter,	Iron,	Osage,	Sullivan,
Cass,	Jackson,	Ozark,	Taney,
Cedar,	Jasper,	Pemiscot,	Texas,
Chariton,	Jefferson,	Perry,	Vernon,
Christian,	Johnson,	Pettis,	Warren,
Clarke,	Knox,	Phelps,	Washington,
Clay,	Laclede,	Pike,	Wayne,
Clinton,	La Fayette,	Platt,	Webster,
Cole,	Lawrence,	Polk,	Worth,
Cooper,	Lewis,	Pulaski,	Wright.
Crawford,	Lincoln,	Putnam,	

Cities and Towns. St. Louis, the metropolis of *M.*, with a population in 1900 estimated at 575,238, is one of the greatest manufacturing, commercial, and railroad centers of the country. No less active, though on a smaller scale, is Kansas City (*pop.* 163,752). Other important urban centers include Jefferson City (the capital), St. Joseph, Springfield, Hannibal, Sedalia, Chillicothe, Mexico, Moberly, Booneville, Nevada, Marshall, Kirksville, Carrollton, Lexington, and Carthage.—*Govt.* The legislature consists of a Senate of 34 and a House of Representatives of 140 members, both being elected by male citizens 21 years of age, who have been resident in the State for a year previous to the time of election; but the electors of representatives must also have resided for 3 months in the county for which they vote. The senators are elected for 4 years, and the representatives for 2; the General Assembly convenes every 2 years. The governor and lieutenant-governor are chosen by the people every 4 years, and are not again eligible till after the lapse of a similar period. The State is divided into 4 judicial districts, in each of which the Supreme Court sits twice a year. There are 11 circuit courts, exercising civil and criminal jurisdiction, and a superintending control over the county courts. The judges are nominated by the governor, and confirmed by the Senate. They hold office for 8 years; but are removable when 65 years of age, or through malfeasance of conduct.—*Educ.* Education in *M.* is extensively ramified throughout the State. One-sixteenth of the land of every township is appropriated by Act of Congress for the support of primary schools; and the "Saline Fund," derived from the sale of salt springs and other special sources, is devoted to purposes of public instruction. The General Assembly is directed to establish and maintain free schools, and permission is given to raise, by local taxation, money enough, with the sum arising from the distribution of the school fund, to keep the schools 4 months in the year, which period of service is requisite to entitle the town to a share of the fund. A superintendent and Board of Education are provided for, and the method of investing the school fund directed. Separate schools are allotted to children of African descent; but the fund is, nevertheless, applicable for all. Ability to read and write is an essential qualification of voters in this State. The school fund of the State amounts to over $12,000,000, with a property in school houses valued at as much more. The whole number of pupils enrolled is nearly 700,000, with an average attendance of about 475,000 and 15,000 teachers. In addition to its public schools, the State possesses 4 normal schools, a school of mines, and a State university. All public schools are supported by State appropriations, local taxation, and interest on the school funds of State, counties, and townships, the burden of taxation being reduced by the fact that the permanent school fund of *M.* is larger than that of any other State in the Union. The State system of education is supplemented by various private institutions, including more than 30 academies, seminaries, denominational colleges and universities, several of them being of a high order of excellence.—*Finances.* The total State, county, municipal, and school district debts of *M.* aggregate $51,557,568; of which the State debt amounts to $11,759,832; county debt, $10,240,082; municipal, $28,092,103; and school district, $1,465,551. Of the municipal debt, St. Louis is credited with $20,647,711.—*History.* De Soto, in 1541–42, and Marquette, in 1673, were the first to visit the territory of *M.*, in which, at the beginning of the 18th century, a brisk trade in furs and peltries between the French and the Indians led to French settlement in this region. St. Louis, St. Genevieve, and other towns were founded by the French about the middle of the century, but in 1762, after the conquest of New France by the English, this country was transferred to Spain. It was restored to France in 1800, and purchased by the U. S. in 1803, *M.* becoming part of the District of Louisiana, organized in 1805. In 1812, a portion of Louisiana was set aside as the Territory of *M.*, and in 1821 it was admitted into the Union as a State. The question of its admission gave rise to a long and bitter political controversy in the halls of Congress, the South wishing to make of it a slave State and the North vigorously resisting. The dispute was at length settled by a compromise offered by Henry Clay, to the effect that slavery should be permitted in *M.*, but forever excluded from all other parts of the Louisiana purchase N. of Lat. 36° 30′. This was the famous "Missouri Compromise" (*q. v.*). In 1836, *M.* was reduced from its Territorial to its present State limits. On the outbreak of the Civil War the people of *M.* were divided in sentiment, and both sides took up arms. Many conflicts took place in the State, but the activity of the Union party saved it from secession. During the war 109,000 men were furnished by this State to the Union army, and about three-fourths this number to the Confederate. After the war bitter feeling soon died away, improvements began, and the State entered upon a career of prosperity which has since continued. *Pop.* (1890) 2,679,084; (1900), by the census of that year, 3,106,665.

Missou'ri, in *Illinois*, a township of Brown co.

Missouri City, in *Missouri*, a post-town of Clay co., on the Wabash R.R., 20 m. E. by N. of Kansas City; a prosperous community, located in the midst of a productive agricultural country. *Pop.* (1897) 550.

Missouri Compromise. (*Am. Pol.*) A term given to a compromise under an act of Congress passed Feb., 1821, at which time Missouri was admitted into the Union as a slave State, declaring that all territory W. of Missouri and N. of Lat. 36° 30′ (the S. boundary of Missouri) should forever be free from slavery. This compromise was virtually repealed in 1854, when territorial governments were established for Kansas and Nebraska. Thus commenced the "Kansas" troubles.

Misspeak', *v. n.* To err or blunder in speaking.
—*v. a.* To utter wrongly or imperfectly

Misspell', *v. a.* To write or utter with wrong letters.

Misspell'ing, *n.* Incorrect spelling; false orthography.

Misspend', *v. a.* (*imp.* and *pp.* MISSPENT.) To spend amiss; to waste; to squander; to consume to no purpose, or to a bad one; as, a *misspent* life.

Misspend'er, *n.* One who squanders; one who consumes improperly.

Misstate', *v. a.* To state wrongly; to make an erroneous representation of facts; to misrepresent.

Misstate'ment, *n.* A wrong statement; an erroneous representation, verbal or written.

Misstayed', (*mis-stād'*,) *a.* (*Naut.*) Having missed stays, as a ship.

Misstep', *n.* A wrong step; a false step or undertaking.
—*v. n.* To make a false or wrong step.

Missuggestion, (*-sŭj-jest'yun,*) *n.* An evil intimation; a wrong insinuation or suggestion.

Missumma'tion, *n.* A wrong summation.

Misswear', *v. n.* To swear falsely.

Mis'sy, *n.* (*Min.*) See MISY.

Mist, *n.* [A. S., Du., and Sw. *mist.*] That which partially darkens, dims, or obscures the sight or light; anything which darkens or obscures.
—Water falling in very numerous, but fine and almost imperceptible drops; mizzle; thin rain.
(*Meteor.*) The vapor of water rendered visible by the lowering of the temperature of the atmosphere. At ordinary temperatures, at all times, water is rising into the air in the state of vapor; and when the air is of the same or a higher state of temperature, it is invisible. The sole cause of the evaporation of water is heat; the amount of vapor produced is consequently in proportion to the temperature; and it therefore follows that there is more water-vapor in the air in summer than in winter, and in hot countries than in temperate climates. As the quantity of vapor which the atmosphere will contain at any given temperature is limited, whenever that quantity approaches the point of saturation, a slight reduction in temperature produces *mist*, while a further reduction converts the vapor into rain. When the mist is very dense, it is generally called a *fog.* When the vapors in the upper portion of the atmosphere are condensed and become visible, they are called *clouds.*

Mist, *v. a.* To cloud; to cover with vapor or steam.
—*v. n.* To rain in almost imperceptible drops.

Mistak'able, *a.* That may be mistaken.

Mistake', *v. a.* To take wrongly; to conceive or understand erroneously; to misunderstand or misapprehend.
—To take, as one thing or person for another.
—*v. n.* To err in opinion or judgment.
—*n.* An error in opinion or judgment; an error of any kind, as of fact, statement, or computation; misconception; misapprehension; blunder; slip; oversight.
(*Law.*) The law carefully distinguishes between mistakes of law and mistakes of fact. As regards the former, it is an ancient and well-known maxim, *ignorantia legis neminem excusat* (ignorance of the law excuses no one). To this rule, however, there are some important qualifications; thus, if a person ignorant of a settled principle of law is induced to give up a right or a position of his indisputable property, equity will step in and protect him. In general, too, equity will grant relief against an act done under a mistake or ignorance of a material fact, *i. e.*, a fact essential to the character of the act. Obvious mistakes in a will or other deed will be rectified or supplied in equity when they are apparent on its face, or may be made out on a due construction of its terms. In criminal cases, a mistake of fact is an excuse, as where a man intending to do a lawful act, does one which is not lawful; but it must be an ignorance or mistake of fact, and not an error in point of law.

Mistak'en, *a.* Erroneous; incorrect.

Mistak'enly, *adv.* By mistake.

Mista'ken Point, forms the S.E. extremity of Newfoundland, abt. 65 m. S.S.W. of St. John's.

Mistak'er, *n.* One who mistakes.

Mistak'ing, *n.* A mistake; an error.

Mistak'ingly, *adv.* Erroneously; falsely.

Mistassin'nie, or MISTISSIN'NY, a lake of British N. America, in Lat. 51° N., Lon. 72° W. It is abt. 60 m. in length by an average breadth of 20 m. It contains several large islands, and communicates with James Bay (of Hudson Bay) by Rupert River.

Misteach', *v. a.* To teach wrong; to instruct erroneously.

Mistell', *v. a.* To tell unfaithfully or inaccurately.

Mistem'per, *v. a.* To temper ill; to disorder.

Mis'ter, *n.* Sir; master; — a title given to any adult male, and usually written *Mr.*

Mistern', *v. a.* To term erroneously.

Mist'ful, *a.* Obscure, or clouded with mist.

Misthrive', *v. n.* To thrive ill or poorly.

Misthrow', *v. a.* To throw or cast wrongly.

Mis'tie, *n.* (*Naut.*) A kind of boat; a mystic.

Mist'ily, *adv.* With mist; darkly; obscurely.

Mistime', *v. a.* To time wrongly; not to adapt to the time.
—*v. n.* To neglect the proper time.

Mist'iness, *n.* A state of being misty; a state of thick rain in very small drops.

Misti'tle, *v. a.* To call by a wrong title or name.

Mistle, (*miz'l.*) *v. n.* To rain in very fine drops.

Mistletoe, MISLETOE, and MISSELTOE, (*miz'l-to,*) *n.* [A. S. *mistelta.*] (*Bot.*) See VISCUM.

Mistrain', *v. a.* To educate or train improperly.

Mis'tral, *n.* [Fr.] A cold north wind, which, blowing from the Alps, forms one of the scourges of Provence and the valley of the Rhine. It blows with great violence during the winter and spring months.

Mistranslate', *v. a.* To translate erroneously.

Mistransla'tion, *n.* An erroneous translation or version.

Mistread'ing, *n.* Wrong treading; misconduct.

Mistreat', *v. a.* To abuse; to treat ill.

Mistreat'ment, *n.* Abuse; unkind treatment.

Mis'tress, *n.* [Fr. *maîtresse*; Lat. *magistra*, from *magister*, master.] The female head of a family. — She that governs; a sovereign; she who commands, or has possession and sovereignty; a female teacher; an instructress of a school. — A female who is well skilled

MISSOURI

SCALE OF MILES

0 10 20 30 40

State Capital ☆ County Seats ○

Places having 100,000 or more – KANSAS CITY

" " 10,000 to 100,000 Sedalia

" " 5,000 to 10,000 – Independence

" " 2,000 to 5,000 – Liberty

SOUTH EAST CORNER OF MISSOURI Same scale as large map.

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MISSOURI.

Land surface, Sq. m. 68,735
Water surface, Sq. m. 680
Pop. 1900...3,106,665
White 2,944,843
African...161,234
Indian 130
Chinese.....449
Japanese 9
Native-born, 2,890,286
Foreign-born, 216,379
Males ..1,595,710
Females1,510,955

COUNTIES.

Adair .....G 1
Andrew..... C 2
Atchison..... B 1
Audrain ..... J 3
Barry .....E 8
Barton.... ... D 6
Bates .....D 5
Benton..... F 5
Bollinger . ..M 7
Boone.....H 3
Buchanan.....C 2
Butler..... ....M 8
Caldwell ..... E 2
Callaway.....J 4
Camden.....G 5
Cape Girardeau N 7
Carroll.....F 3
Carter .....L 8
Cass .....D 4
Cedar .....E 6
Chariton ....G 2
Christian .....F 8
Clark .....J 1
Clay .....D 3
Clinton..... D 2
Cole ....H 5
Cooper.....G 4
Crawford..... K 6
Dade ... . E 7
Dallas.....F 6
Daviess.....D 2
Dekalb ....D 2
Dent .....K 6
Douglas ... ...G 8
Dunklin .....M 8
Franklin . ..K 5
Gasconade.....J 5
Gentry .....D 1
Greene ..... F 7
Grundy..... E 1
Harrison .....D 1
Henry .....E 5
Hickory..... F 6
Holt .....B 1
Howard ..... G 3
Howell ..... J 8
Iron .....L 6
Jackson .....D 4
Jasper.....D 7
Jefferson .....L 5
Johnson.....E 4
Knox.....H 1
Laclede ..... G 6
Lafayette ... E 3
Lawrence ....E 7
Lewis ... .J 1
Lincoln.....K 3
Linn.....F 2
Livingston....E 2
McDonald ....D 8
Macon .....G 2
Madison.....M 7
Maries.....J 5
Marion.....J 2
Mercer..... E 1
Miller ....H 5
Mississippi ....O 8
Moniteau .....G 4
Monroe .... ..H 2
Montgomery..J 4
Morgan ..... G 5
New Madrid.. N 8
Newton .....D 8
Nodaway.... C 1
Oregon.....K 8
Osage .....J 5
Ozark.....H 8
Pemiscot .....B 8
Perry.....N 6
Pettis..... F 4
Phelps ... .J 6
Pike .....K 3
Platte..... C 3
Polk..... F 6
Pulaski..... H 6
Putnam .....F 1
Ralls ..... J 2
Randolph.....G 3
Ray..... .E 3
Reynolds..... L 7
Ripley. ... ...L 8
St. Charles....L 4
St. Clair.....E 5
St. Genevieve M 6
St. Francois...M 6
St. Louis.....M 4
Saline.....F 3
Schuyler.....G 1
Scotland.....H 1
Scott .....N 7
Shannon .....K 7
Shelby ... .H 2
Stoddard.....N 8
Stone..... F 8
Sullivan .....F 1
Taney ... .F 8
Texas .....J 7
Vernon . ..... D 6
Warren .....K 4
Washington...L 5
Wayne.....M 7
Webster.....G 7
Worth ..... D 1
Wright ..... H 7

CITIES-TOWNS

Pop. Thousands.		
575	St. Louis	M 4
163	Kansas City	C 3
102	St. Joseph	C 2
26	Joplin	C 7
23	Springfield	F 7
15	Sedalia	F 4
12	Hannibal	K 2
9	Jefferson City	H 4
9	Carthage	D 7
9	Webb City	D 7
8	Moberly	H 3
7	St. Charles	M 4
7	Nevada	D 6
6	Independence	D 3
6	Chillicothe	E 2
6	Aurora	E 8
5	Kirksville	G 2
5	Columbia	H 4
5	Desoto	L 5
5	Brookfield	F 2
5	Trenton	E 1
5	Louisiana	K 3
5	Mexico	J 3
5	Marshall	F 3
5	Clinton	E 5
4	Fulton	J 4
4	Cape Girardeau	N 7
4	Warrensburg	E 4
4	Maryville	C 1
4	Carterville	D 7
4	Boonville	G 4
4	Poplarbluff	M 8
4	Lexington	E 3
4	Macon	H 2
4	Richhill	D 5
3	Carrollton	F 3
3	Richmond	E 3
3	Butler	D 5
3	Monett	E 8
3	Washington	K 4
2	Cameron	D 2
2	Westplains	J 8
2	Kirkwood	M 4
2	Higginsville	E 3
2	Lamar	D 7
2	Neosho	D 8
2	Fayette	G 3
2	Stanberry	C 1
2	Marcelline	G 2
2	Slater	F 3
2	Liberty	D 3
2	Canton	J 1
2	Palmyra	J 2
2	Caruthersville	C 8
2	Granby	D 8
2	Memphis	H 1
2	California	G 4
2	Pierce City	E 8
2	Eldorado Sprs.	D 6
2	Holden	E 4
2	Lebanon	G 6
2	Bethany	D 1
2	Orongo	D 7
2	Unionville	F 1
2	Montgomery	J 4
2	Albany	D 1
2	Pleasanthill	D 4
1	Monroe City	J 2
1	Bowling Green	K 3
1	Tarklo	B 1
1	Webster Groves	M 4
1	Charleston	O 8
1	Savannah	C 2
1	Excelsior Sprs.	D 3
1	Plattsburg	D 2
1	Bollvar	F 6
1	Dexter	N 8
1	Salisbury	G 3
1	Harrisonville	D 4
1	Kahoka	J 1
1	Bevier	G 2
1	Huntsville	G 3
1	Hamilton	E 2
1	Gallatin	E 2
1	Farmington	M 6
1	Milan.	F 1
1	Shelbina	H 2
1	Centralia	H 3
1	Ste. Genevieve	M 6
1	Mound City	B 1
1	Glasgow	G 3
1	Jackson	N 7
1	Edina	H 1
1	Rolla	J 6
1	Fredericktown	M 6
1	Princeton	E 1
1	Hermann	K 4
1	Duenweg	D 7
1	Kennett	B 8
1	Doniphan	L 8
1	Lagrange	J 1
1	Windsor	E 4
1	New Madrid	N 8
1	Salem	J 6
1	Bloomfield	N 8
1	Malden	M 8
1	Lees Summit	D 4
1	Odessa	E 4
1	Grant City	D 1
1	Greenfield	E 7
1	Brunswick	F 3
1	Paris	J 3
1	Laplata	H 1
1	Tipton	G 4
1	Marionville	E 7
1	Thayer	J 8
1	Perryville	N 6
1	Festus	M 5
1	Versailles	G 5
1	Pacific	L 5
1	Mt. Vernon	E 7
1	Deepwater	E 5
1	Norborne	E 3
1	Clarence	H 2
1	Carl Jc.	C 7
1	Vandalia	K 3
1	Wellsville	J 3
1	New Franklin	G 3
1	Troy	L 4
1	Higbee	G 3
1	Appleton	D 5
1	Keytesville	G 3
1	Sarcoxie	D 7
1	Eminence	K 7
1	Lathrop	D 2
1	Sweetsprings	F 4
1	Rockport	A 1
1	Willowspring	J 8
1	Sikeston	N 8
1	Pattonsburg	D 1
1	Humausville	E 6
1	Greenville	M 7
1	Seneca	C 8
1	Ashgrove	E 7
1	Osceola	E 5
1	Oregon	B 2
1	Weston	C 3
1	Ferguson	M 4
1	Breckenridge	E 2
1	Belton	C 4
1	Mountaingrove	H 7

Pop. Hundreds.		
9	Lancaster	G 1
9	Labelle	J 1
9	Marshfield	G 7
9	Parkville	C 3
9	Maysville	D 2
9	Hopkins	C 1
9	King City	C 1
9	Stotts City	E 7
9	Morehouse.	N 8
9	Aurora Sprs.	G 5
8	Concordia	E 4
8	New London	K 2
8	Linneus	F 2
8	Golden City	D 7
8	Piedmont	L 7
8	Republic	F 7
8	Bunceton	G 4
8	Graniteville	L 6
8	Clarksville	L 3
8	Ozark	F 7
8	Elsberry	L 3
8	Maitland	B 1
7	Ironton	L 6
7	Shelbyville.	H 2
7	Craig	B 1
7	Queen City	G 1
7	Laclede	F 2
7	Warrenton	K 4
7	Braymer	E 2
7	Meadville	F 2
7	Burlington Jc.	B 1
7	Buffalo	F 6
7	Lockwood	E 7
7	Union	K 5
7	Platte City	C 3
7	Warsaw	F 5
7	Cainesville	E 1
7	Richland	H 6
7	Florissant	M 4
7	Jamesport	E 2
7	Chamois	J 4
7	Browning	F 1

in anything. — A woman beloved and courted; a sweetheart. — A woman kept as a concubine. — Madam; — a term, generally abbreviated *Mrs.* in writing.

Mistri'al, *n.* (*Law.*) A trial which is erroneous on account of some defect in the persons trying; as if the jury come from the wrong county, or because there was no issue formed, as if no plea he entered, or some other defect of jurisdiction.

Mistrust', *n.* Want of confidence or trust; suspicion. —*v. a.* To distrust; to suspect; to doubt; to regard with jealousy or suspicion.

Mistrust'er, *n.* A suspicious person; a person who mistrusts.

Mistrust'ful, *a.* Diffident; doubtful; suspicious.

Mistrust'fully, *adv.* With suspicion; with mistrust.

Mistrust'fulness, *n.* Diffidence; doubt; suspicion.

Mistrust'ingly, *adv.* With suspicion or mistrust.

Mistrust'less, *a.* Confident; unsuspecting; unconscious.

Mistune', *v. a.* To tune wrong; to put out of tune or confuse.

Mistu'ra, *n.* [Lat., from *misceo, miscere,* to mix.] (*Med.*) A mingled compound, in which different ingredients are contained in a liquid state; it is also understood to mean a liquid medicine, which contains very active substances, and can only be administered by drops.

Mistu'tor, *v. a.* To teach amiss; to instruct improperly.

Mist'y, *a.* Overspread with mist; filled with very minute drops of rain.

—Dim; obscure; clouded.

Misunderstand', *v. a.* To misconceive; to mistake; to take in a wrong sense.

Misunderstand'er, *n.* A person who misunderstands.

Misunderstand'ing, *n.* Misconception; misapprehension; mistake of meaning; error.

Disagreement difference; dissension.

Misura'to, *a.* [It.] In measured or strict time.

Misusage, (*mis-yuz'ej.*) *n.* Abuse; ill usage; bad treatment.

Misuse, (*mis-yuz',*) *v. a.* To treat or use improperly; to use to a bad purpose; to misapply. — To treat ill or unkindly; to maltreat; to abuse.

—*n.* Improper use; employment to a bad purpose; wrong application; misapplication; erroneous use. — Abuse; ill treatment.

Misuse'ment, *n.* The same as MISUSE.

Misus'er, *n.* A person who misuses.

(*Law.*) The abuse of any liberty or benefit.

Misval'ue, *v. a.* To undervalue.

Misvouch', *v. a.* To vouch falsely.

Miswed', *v. a.* To wed improperly; to marry a person of inferior rank or station.

Miswor'ship, *n.* False worship.

Miswor'shipper, *n.* A person who worships wrongly.

Mi'sy, *n.* (*Min.*) An impure sulphate of iron, occurring in opaque pulverulent masses of a yellow color, at the Rammelsberg mines in the Hartz.

Misyoke', *v. a.* To join or yoke improperly.

Mita, (*mee'ta,*) a town of Guatemala, Central America; *pop.* 4,000.

Mitch'ell, ORMSBY MACKNIGHT, astronomer, was born in Union co., Ky., in 1810; was the first director of the observatory in Cincinnati, which establishment was founded in 1845, on his proposition, and mainly by his own exertions. In 1859, he became director of the Dudley Observatory at Albany, retaining, however, his connection with that of Cincinnati. He was not less distinguished for his mechanical skill than eminent as a popular lecturer on astronomy. *M.* was the inventor of many valuable apparatus. Among his discoveries are the exact period of rotation of Mars and the comparison of Antares or Cor Scorpii. He was the author of a *Popular Astronomy*, and published a collection of his earlier public lectures under the title of *Planetary and Stellar Worlds.* During the Civil War Dr. *M.* was appointed brigadier-general in Aug., 1861, and afterward commander of the department of the South. Died 1862.

Mitchell, in *Georgia,* a S.W. co.; *area,* 507 sq. m. *Rivers,* Flint and Chickasaw rivers, besides some smaller streams. *Cap.* Camilla. *Pop.* (1890) 10,906.

Mitchell, in *Indiana,* a post-town of Lawrence co., 61 m. N.W. of New Albany. *Pop.* (1897) 2,050.

Mitchell, in *Iowa,* a N.N.E. co., adjoining Minnesota; *area,* 480 sq. m. *Rivers,* Cedar river, and several streams. *Surface,* generally level; *soil,* fertile. *Cap.* Osage. *Pop.* (1895) 14,431.

—A post-village and township of Mitchell co., abt. 90 m. W. of Lansing.

Mitchell, in *Wisconsin,* a township of Shehoygan co.

Mitchel'la, *n.* (*Bot.*) A genus of plants, order *Cinchonaceæ.* They are evergreen herbs, smooth and creeping, with opposite leaves. *M. repens,* the Partridge-berry, is a little prostrate plant found in woods throughout Canada and the U. States, distinguished by its flat, coriaceous, dark-green leaves, and small bright-red berries remaining on the plant through the winter. The corolla is white or tinged with red, and very fragrant. Fruit well flavored, but dry and full of stony seeds.

Mitch'ell's, in *Iowa,* a village of Jasper co., abt. 65 m. W. of Iowa City.

Mitchell's Mills, in *Kentucky,* a village of Boyle co., abt. 45 m. S.W. of Lexington.

Mitchell's Peak, in *N. Carolina.* See MT. MITCHELL.

Mitch'ellsville, in *Tennessee,* a post-village of Robertson co., abt. 35 m. N. of Nashville.

Mitch'elstown, a market-town of Ireland, in co. Cork, Munster, abt. 25 m. N.N.E of Cork.

Mitchelstown Caves, a large and very fine series of stalactitic caverns of Ireland, in the co. Tipperary, Munster, abt. 7 m. E.N.E. of Mitchelstown.

Mite, *n.* [A. S. and Fr. *mite;* Ger. *miete.*] Anything proverbially very small; a very little particle or quantity. — A small piece of money of the Hebrews, two of which made a *kodrantes,* or the fourth part of the Roman *as,* q. v. In modern times, *M.* was the name of a small coin that once was current in England, equal to about one-third of a farthing. The moneyers also use a small weight bearing the same name, and equal to the 20th part of a grain, and divided into 24 doits.

(*Zool.*) See ACARUS.

Mitel'la, *n.* [Lat. dim. of *mitra,* a mitre.] (*Bot.*) A genus of plants, order *Saxifragaceæ.* They are perennial herbs, very common in the Atlantic States and Canada. *M. diphylla,* the Currant-leaf, or Bishop's-cap, is a well-known plant growing in woods, with flowers on short pedicels, arranged in a long, thin spike or raceme, and most beautifully distinguished by the finely divided white petals. Seeds black and shining. *M. nuda,* the Dwarf mitella, another species, is a very delicate little plant, found in damp, shady woodlands from New York to Maine.

(*Med.*) A scarf for suspending the arm when hurt; a sling.

Mith'ras, *n.* (*Myth.*) The sun-god of the Persians, to which they paid adoration as the purest emblem of the divine essence. The worship of Mithras was introduced into Rome, seemingly not long after the fall of the republic, and soon spread over all parts of the empire. It was one of those which resisted Christianity the longest. The god is commonly represented as young, and kneeling on a bull which he has thrown on the ground, and which is also attacked by a dog, a serpent, and a scorpion.

Mithrida'tes, surnamed EUPATOR, and THE GREAT, king of Pontus, and the 16th of the name, was B. about B.C. 131. He was the son of Mithridates Energetes, was brought up at Sinope, and displayed in his youth the extraordinary daring and tact which distinguished him through life. He diligently cultivated his mind by study and travel, and is said to have been master of more than twenty languages. He succeeded his father B.C. 120, and his first acts were the murder of his mother and his brother. He then began his career of conquest by making himself master of Colchis and the Tauric Chersonese. The kingdoms of Bosporus, Cappadocia, and Bithynia were successively added to his dominions. Friend and ally, as he professed to be, of the Romans, he obeyed the decree of the senate, to restore the two last-named countries to their lawful sovereigns. But in 88 he again expelled those kings, and did not shrink from a war with the Romans; took Phrygia and Galatia, almost all Asia Minor, and occupied Thrace and Athens. All hope of reconciliation with Rome was taken away by the massacre, which he is said to have ordered, of all the Romans found in Asia. Eighty thousand are said to have been slain. Sulla was then sent against him, who, after taking Athens, and defeating his general, Archelaus, at Chæonea and Orchomenos, reconquered Ionia, Mysia, and Lydia. After four years of war, *M.* was compelled to give up his conquest and his fleet, and pay a heavy contribution to the Romans. More fighting took place in 83 and 82, between *M.* and the Roman commander Murena; and on the death of Nicomedes, king of Bithynia, in 74, the possession of his kingdom was disputed, and war again broke out. *M.* invaded Bithynia, defeated the Romans at Chalcedon, and besieged Cyzicus. Lucullus soon compelled him to raise the siege, defeated him in Pontus, and drove him into Armenia, where he obtained the aid of Tigranes, his son-in-law. Lucullus, however, defeated the allied sovereigns again and again, and but for the mutiny of his troops, which compelled him to retire, would probably have ended the war. Again the tide turned, and *M.* recovered a large part of his dominions. In 66, Pompey was sent to carry on the war, and defeated him near the Euphrates, so that he had no choice but to retire into the kingdom of Bosporus. His spirit was still unbroken, and he formed the bold plan of invading Italy from the north; but, eventually, his son Pharnaces was proclaimed king by the soldiers, and the great warrior, who had withstood the power of Rome for 25 years, took poison to end his life. This proved ineffectual, from the frequent use he had before made of poisons and antidotes, and he was put to death by a faithful Gaul in his service, B.C. 63.

Fig. 1814.
TETRADRACHM COIN OF MITHRIDATES.

Mithrida'tes Confec'tion, *n.* (*Pharmacy.*) An electuary, supposed to be the oldest compound known, is said to have been invented, B.C. 70, by Damocrates, physician to Mithridates XVI. (*q. v.*), containing 72 ingredients, and said to be an antidote to all effects of poison and contagion. The confection of opium was formerly called by this name, from its supposed efficacy in many forms of disease.

Mithridat'ic, *a.* Pertaining to Mithridate, or Mithridates.

Mit'igable, *a.* Capable of mitigation.

Mit'igant, *a.* [Lat. *mitigans.*] Lenient; lenitive; diminishing; easing, as pain.

Mit'igate, *v. a.* [Lat. *mitigo, mitigatus,* from *mitis,* soft, and *ago,* for *facio,* to make.] To soothe; to alleviate, as suffering; to assuage; to lessen; to allay; to make less severe; to abate. — To make less rigorous; to moderate; to temper; to soften in harshness or severity; to calm; to appease. — To render more tolerable; to diminish. — To reduce in amount or severity; to soften, or make mild and accessible.

Mitiga'tion, *n.* [Lat. *mitigatio.*] Act of mitigating; alleviation; abatement or diminution of anything painful, harsh, severe, afflictive, or calamitous.

Mit'igative, *a.* [Lat. *mitigativus.*] Tending to alleviate or mitigate.

Mit'igator, *n.* A person or thing that mitigates.

Mit'igatory, *a.* Tending to mitigate; alleviating.

Mit'la, a village of Mexico, abt. 26 m. E. of Oajaca. It is built upon the table-lands of Mixtecapan, 5,000 feet above sea-level, and is surrounded by extensive remains of ancient architecture.

Mi'tral, *a.* Pertaining to a mitre; resembling a mitre.

M. valve. (*Anat.*) The valve situated at the left ventricle of the heart, and guarding the entrance from the left auricle; — so called from its fancied resemblance to a bishop's mitre.

Mitre, (*mi'tr,*) *n.* [Gr. *mitra.*] (*Eccl.*) A sacerdotal ornament, (Fig. 1815,) worn on the head by archbishops and bishops of the Roman Catholic and Greek churches, and also by abbots of certain orders. It consists of a stiff cleft cap, rising in two points, one before and the other behind, and having two ribbon-like pendants, which fall upon the shoulders. The high-priests among the Jews wore mitres, (Fig. 1816,) and we find similar head-ornaments among various nations of antiquity. It is much disputed whether mitres were worn in the early ages of the Church, or when they were introduced. The mitre of the Pope is of a peculiar form, and is called *tiara,* (q. v.)

Fig. 1815.
BISHOP'S MITRE.

Fig. 1816. — MITRE, OR SACRED TURBAN OF THE JEWISH HIGH-PRIEST.

(*Arch.*) The line formed by the meeting of mouldings or other surfaces, which intersect or intercept each other at an angle, as A B, (Fig. 1817.)

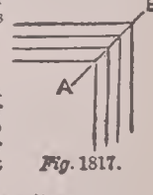


Fig. 1817.

Mi'tre, *v. a.* To adorn with a mitre.

(*Arch.*) To join with a mitre.

Mi'tre-wheel, *n.* (*Machinery.*) A term applied to wheels that have their teeth set at 45° within the spindle, so as to transmit the motion to another mitre-wheel and shaft placed at right angles to the first wheel.

Mit'riform, *a.* Having the form of a mitre.

(*Bot.*) Mitre-shaped.

Mitrowiez, Mitrovicz, or **Mitrowitz,** (*mit'rovitz.*) a town of Austria, on the Slavonian military frontier, on the river Save, 24 m. S.S.W of Peterwardein; *pop.* 5,500.

Mitt, *n.*; *pl.* MITTS. A mitten; — particularly, a covering for the hand or arm only, and not for the fingers.

Mit'tau, or **Mit'au,** a town of European Russia, cap. of the govt. of Courland, on the Aa, 2 m. S.W. of Riga. It was founded by the Teutonic Knights in 1271, and

annexed to Russia in 1795. *Manuf.* Linen goods and soap. It has also a considerable trade in japanned iron, tin, hemp, flax, and corn.

Mit'ten, *n.* [Fr. *mitaine*, a sort of glove; Gael. *mutain*; Ir. *mutinide.*] A cover for the hand, worn to defend it from cold, or other injury, and differing from a glove in not having a separate portion for each finger; a cover for the hand and arm only, and not for the fingers.

Mit'timus, *n.* [Lat.] (*Law.*) A warrant by which a justice commits an offender to prison. The term is also applied to a writ for removing and transferring records from one court to another.

Mittweyda, (*mit-vī'da,*) a town of Saxony, dist. of Zwickau, on the Zschoppau, a tributary of the Mulde, 35 m. S.E. of Leipsic. *Manuf.* Woollen, cotton, and linen fabrics. *Pop.* 7,500.

Mi'ty, *a.* Having mites; abounding with mites.

Mityle'ne, or **Metelin',** (anc. *Lesbos,*) an island of the Grecian Archipelago, belonging to Turkey, 7 m. from the coast of Asia Minor, between Lat. 39° and 39° 20′ N., Lon. 25° 50′ and 26° 35′ E. *Area*, 276 sq. m. It is traversed by a range of mountains attaining the height of 3,000 ft., and covered with pine forests. The soil is generally fertile. Two bays indent it on the S. side, and there are several good harbors. *Prod.* Corn, wine, oil, cotton, pitch, and fruits. The chief towns are, Castro, or Mitylene, Molivo, and Culoni. *Pop.* 40,000. Lesbos is said to have been peopled by the Pelasgians, who were followed by the Ionians and the Æolians. It was made a Roman province abt. B. C. 48; and during the Middle Ages received the name of *M.*, from its chief city. Mohammed II. conquered it, and annexed it to the Turkish empire, in 1462. During the War of Independence, the Turkish and Greek squadrons fought a battle off *M.*, Oct. 7, 1824, on which occasion the Turks were defeated and their fleet was destroyed.

Mix, *v. a.* [A.S. *miscan*; Ger. *mischen*; Lat. *misceo.*] To unite or blend promiscuously, as two or more ingredients into a mass or compound. — To join; to associate: to unite with in company; to mingle; to unite with a crowd or multitude.

—*v. n.* To become united or blended promiscuously in a mass or compound. — To be joined or associated.

Mix'uble, *a.* Capable of being mixed.

Mix'co, a village of Guatemala, Central America, abt. 5 m. S.W. of the town of Guatemala.

Mixedly, (*miks'ĕd'ly,*) *adv.* In a mixed manner.

Mixen, (*miks'n,*) *n.* [A.S. *mixen, myxen.*] A compost heap; a dung-hill; a midden.

Mix'er, *n.* One who mixes.

Mixteenpam', an extensive table-land of Mexico, occupying the most part of the department of Oajaca. It has an average elevation of 5,000 ft.

Mixtilin'eal, Mixtilin'ear, *a.* [Lat. *mixtus*, mixed, and *linea*, a line.] Containing a mixture of lines, part straight and part curved.

Mixture, (*miks'tyur,*) *n.* [Lat. *mixtura*, from *misceo, mixtus*, to mix.] A mass or compound, consisting of different ingredients blended without order. — The act of mixing; state of being mixed. — The ingredients thus added and mixed.

(*Med.*) A name applied to any liquid form of medicine taken internally, whether merely a collection of fluids, or containing substances which have to be first triturated, or brayed in a mortar.

(*Chem.*) The blending of several ingredients with chemical alteration of the substance.

(*Mus.*) A compound stop in the organ.

Mix'ville, in *New York*, a village of Alleghany co., abt. 14 m. N. of Angelica.

Miz'antla, a ruined town of Mexico, abt. 35 m. N.E. of Jalapa.

Miz'en, *n.* (*Naut.*) See MIZZEN.

Miz'en-head, a cape of Ireland, on the coast of Munster; Lat. 51° 27′ N., Lon. 9° 50′ W.

Mizque, (*mees'kā,*) a town of Bolivia, abt. 32 m. S.E. of Oropesa.

Miz'zen, Miz'en, *a.* [It. *mezzena*, from *mezzo*, middle; Lat. *medius.*] (*Naut.*) The mast which supports the after sails, being nearest the stern of the ship, in a three-masted vessel, or in a ketch or yawl.

Miz'raim, (*Script.*) A son of Ham, and father of various African races (*Gen.* x. 6), but particularly of the Egyptians, to whom his name was given. Mizraim is also the Hebrew word for Egypt in the Bible, and that country is still called Misr in Arabic.

Miz'zle, *v. n.* To rain in very fine drops.

—*n.* Small rain; mist: drizzle.

Mnemonic, Mnemon'ical, (*ne-mon'ik,*) *a.* Assisting the memory.

Mnemoni'cian, *n.* One who teaches the art of using or improving the memory.

Mnemonics, *n. sing.*; **Mnemoteehny,** (*ne-mon'iks, ne-mo-tek'ne.*) [Gr. *mneme*, memory, and *techne*, art.] The art of improving the memory by artificial means. According to the account of the ancients, the discoverer of this art was Simonides, the poet, who flourished abt. B.C. 500; the story being that during his temporary absence from a feast, the house in which they were assembled fell, killing all that were present, and mutilating their bodies so that they could not be recognized; but Simonides, recollecting the place that each had occupied at the feast, was able to distinguish them. His attention is said to have been thus directed to the important aid afforded to memory by the observation of material objects. This art was recommended by Cicero, Quintilian, and others of antiquity; but in modern times it does not seem to have met with that degree of general attention which its importance demands. This is, doubtless, mainly owing to the fact that its advocates have been chiefly desirous of exhibiting mere feats of memory, which Lord Bacon says, that he esteems "no more than rope-dauciug, antic postures, and feats of activity; and, indeed, they are nearly the same things, — the one being the abuse of the bodily, as the other is of the mental powers; and though they may cause admiration, they cannot be highly esteemed." The value of any system of mnemonics must necessarily depend upon the extent to which it is based on the principles and laws of memory. (See MEMORY.) Ideas recall or reproduce each other in the mind according to certain laws, known as the laws of association. Some ideas are much more easily retained and recalled than others. The mind is first awakened to consciousness by sensations; and ideas connected with them are ever the most easy of retention and reproduction. Most persons may have observed how the sight of some particular object may recall a long train of ideas; as, for iustance, the return to the scenes of one's childhood after a long absence will recall, in a most marked manner, long-faded ideas. Taking advantage of this principle, then, mnemonicians associate with some material object those ideas which they wish to remember. A person wishing to remember the heads or principal points of a discourse, would connect each of them in his mind with some object before him, so that the sight of the object would immediately recall the idea connected with it. In carrying out this principle, the system now generally adopted is to have a series of rooms, each so divided in the imagination as to present fifty places. Thus, in the first room, the front wall (*i. e.*, that opposite the entrance) is divided into nine equal parts, or squares, three in a row, for containing the units; the right-hand wall the tens, left the twenties, fourth wall the thirties, and the floor, similarly divided, the forties. The numbers 10, 20, 30, and 40, are placed in the roof above the four walls, while 50 stands in the centre. Other rooms are divided in the same way, to the number required. The learner has then to fix the different places accurately in his mind, so that on a number being given he may at once be able to recollect its place. When he has mastered this, he has then to associate each place with some familiar object; so that, on the object being suggested to his mind, its place may be recalled, or, when the place is before the mind, the object may spring up. Of course, any object will do, provided they are familiar and easily recalled. Some may find it of advantage to classify them; as on one wall or room to have articles of dress, another articles of furniture, another birds; and so on. When these are thoroughly mastered, so that they may be run over in any order, then all that is necessary is to associate the ideas we wish to remember with the objects in the different places, so that, by thinking upon the objects we will be able to recall the respective ideas in any order that may be required. In this way, some are able to repeat, after hearing only once, several hundred disconnected or unmeaning words — backwards, forwards, or in any other order. Next, as to the manner of connecting ideas together, so as to be able to recall them at will; for remembering, or recollecting, is merely the bringing up ideas before the mind similar to those that were before it on a previous occasion. Ideas, or notions, as they are sometimes termed, are of two kinds — *familiar* and *non-familiar*. A familiar notion is one that has been frequently before the mind, and readily recalls a number of others. Thus, a watch is a familiar notion, because in thinking about it, a number of connected circumstances recur to the mind: but to many persons a Roman *As* would be a non-familiar idea, as they never heard of it before. In attempting to connect together in the mind two familiar notions, the way is to compare them together and seek out some notion common to both. The effort of the mind in effecting this strengthens the attention, while the common notion serves infallibly to connect the one idea with the other. Thus, in connecting together the two ideas *tallow* and *knowledge*, we compare them, and find that tallow enlightens, and so does knowledge. In order to avoid confusion and perplexity, one must take care to have no more than the two ideas before the mind at the same time. When we have to connect a familiar with a non-familiar notion, or two notions which present us nothing in common, then the non-familiar notion has to be converted into a familiar one, and the two then united; and in the same way, when both notions are non-familiar, they require to be converted into familiar ones. As a general rule, the more closely two ideas are brought together in the mind, the more strongly will they be associated, and the greater their power of reproducing one another. Hence, proximity is another principle available in mnemonics, it being said that "the rapidity and strength with which two given notions stick together is in the inverse ratio of their phrenotypic distance," *i. e.*, the time that elapses between the two notions acting upon the brain. It is upon this principle that what is called the Hamiltonian system of teaching languages is constructed; that, namely, of bringing the foreign word and the English equivalent into the nearest possible proximity. "The rapidity and strength with which two given notions stick together is in the ratio of their joint familiarity." In remembering dates or sums, the way is to substitute letters for figures and form them into words, for the sake of euphony, the vowels being of no value. Thus, $t=1$; $n=2$; $m=3$; $r=4$; $l=5$; $d=6$; $c, k, g, q=7$; $b, h, v, w=8$; $p, f=9$; $s, x, z=0$. For the application of *M.* to the various departments of learning, we must refer to some of the various books on the subject. An account of the more important works on *M.* is to be found in Feinaigle's *New Art of Memory* (1813); or in Reventlow's *Lehrbuch der Mnemotechnik* (1843).

Mnemosyne, (*ne-mos'y-ne,*) *n.* (*Myth.*) The goddess of memory, the daughter of Coelus and Terra, and mother of the nine Muses, by Jupiter.

Mnemoteehny, (*ne-mo-tek'ny,*) *n.* [Fr. *mnemotechnie.*] The same as MNEMONICS, *q. v.*

Mo'a, an island in the Gulf of Mexico, off the N. coast of the island of Cuba, abt. 40 m. N.W. of Baracoa.

Mo'a, (Sie'rra de,) a mountain range on the island of Cuba, abt. 30 m. W. of Baracoa.

Mo'abites, (*Script.*) The descendants of Moab, the offspring of Lot's incestuous connection with his eldest daughter (*Gen.* xix. 37), B. C. 1897, dwelt in the land of Ar, from which they expelled the Emims, a race of giants (*Deut.* ii. 9–11). The Israelites occupied part of the country; and Eglon, its king, oppressed them for the space of 18 years (*Judges* iii. 12, &c.), B.C. 1343. David subdued the Moabites (2 *Sam.* viii. 1, 2) B. C. 1040, and they invaded Israel B. C. 835.—See KIR-MOAB.

Moan, (*mōn.*) *v. a.* [A. S. *mœnan*, to lament.] To lament; to deplore; to bewail with an audible voice.

—*v. n.* To make lamentations; to grieve; to lament; to mourn; to wail.

—*n.* A lamentation; a groan; an audible expression of sorrow or suffering; grief expressed in words or cries.

Moan'ful, *a.* Sorrowful; expressing sorrow.

Moan'fully, *adv.* With lamentation.

Moat, *n.* [L. Lat. *mota*; Fr. *motte*; It. *mota.*] (*Fort.*) A deep ditch or trench round the rampart of a castle, or other fortified place.

—*v. a.* To surround with a ditch for defence.

Moate', a town of Ireland, in Leinster, county Westmeath, abt. 9 m. E.S.E. of Athlone; *pop.* 2,000.

Mob, *n.* [Lat. *mobilis*, movable, from *moveo*, to move.] A crowd or promiscuous multitude of people, rude, tumultuous, and disorderly; an heterogeneous assembly. —A kind of female dress for the head.

—*v. a.* To attack in a disorderly crowd; to harass tumultuously.

Mob'bish, *a.* Mean; done after the manner of a mob; tumultuous.

Mob'-cap, *n.* A kind of female head-dress.

Mobile', *a.* [Lat. *mobilis.*] Capable of being moved, or excited; as, *mobile* features.

Mobile, (*mo-beel',*) in *Alabama*, a river formed by the union of the Tombigbee and Alabama rivers, 50 m. above Mobile, which lies at its mouth. It is a sluggish stream, with low banks, and several channels. The bay is 30 m. from N. to S., and 10 or 12 from E to W. The entrance from the Gulf of Mexico, 3 m. wide, is defended by Fort Morgan and Fort Gaines.— See ALABAMA RIVER, and MOBILE POINT.

—A S.W. co., adjoining Mississippi on the W., and washed by the Gulf of Mexico and Mobile Bay on the S.; *area*, about 1,234 sq. m. *Rivers.* Mobile and Tensaw rivers. *Surface*, mostly level; *soil*, fertile. *Cap.* Mobile. *Pop.* (1897) 65,450.

—An important city, port of entry and the cap. of Mobile co., on the Mobile River, at the head of a bay of the same

Fig. 1818. — MOBILE.

name, abt. 330 m. S.W. of Montgomery; Lat. 30° 41′ 48″ N., Lon. 87° 59′ W. In wealth, population, and commerce, *M.* is the most important city in the State, and is its only seaport, exporting largely of cotton. The city is conveniently located on a level plateau abt. 15 ft. above the bay; the streets are generally well laid out, and the houses substantially built. *M.* has a fine Custom-house and Post-office, City Hall and Market-house, Theatre, Odd Fellows' Hall, Cathedral, numerous churches, 3 orphan asylums, several hospitals, a medical college; and in the suburbs, St. Joseph's College, under the direction of the Jesuits, a convent of the Visitation, and academies for young ladies. — *Hist.* A town with this name was founded at the mouth of Dog River, by Bienville, in 1702. It was almost destroyed by inundations, and another town, at the mouth of Mobile River, was founded in 1711. Mobile was ceded to England by the French at the peace of Paris, Feb. 10, 1763. The Spaniards captured it in 1780, and it was ceded by them to the U. States in 1813. Admiral Farragut defeated the Confederate fleet in Mobile Bay, Aug. 5, 1864. *Pop.* (1897) 39,500.

Mobile Bay, in *Alabama*, an extensive arm of the Gulf of Mexico, extending abt. 35 m. inland, by an average breadth of 8 m.

Mobile Point, in *Alabama*, the eastern limit of the entrance into Mobile Bay, forming the apex of a long, low, narrow, sandy peninsula between the Gulf of Mexico on the S., and Bon Secours Bay and Navy Cove on the N. It is the seat of Fort Morgan, which was built on the site of Fort Bowyer, celebrated for the

repulse of an attack by the British, Sept. 14, 1814. After the battle of New Orleans, Fort Brower was again invested, Feb. 12, 1815, by the whole British force, to which the small garrison surrendered.

Mobil'ity, *n.* [Fr. *mobilité;* Lat. *mobilitas.*] Susceptibility of motion; capacity of being moved. — Aptitude to motion; activity; readiness to move. — Fickleness; inconstancy.

(*Physics* and *Chem.*) One of the general properties of matter, in virtue of which every body at rest can be put in motion by the action of a source adequate to overcome its inertia. — The term is also frequently used to denote the absence of viscosity or oiliness in liquids; thus water, alcohol, and ether are said to be mobile, while castor-oil and molasses are viscid liquids.

Mobiliza'tion, *n.* [Fr. *mobilisation.*] The collecting or calling into active service the troops of a country.

Mo'bilize, *v. a.* To bring into active service, — applied to enlisted soldiers.

Mobocr'acy, *n.* [Eng. *mob,* and Gr. *krateo,* to rule.] The government, or rule, of the mob or disorderly classes.

Mobocrat'ic, *a.* Relating to a mobocracy.

Mocc'asin, or **Moc'cason,** *n.* The native name for the shoe of the N. American Indians. They are generally made of deer-skin or other soft leather, without a sole, but ornamented on the upper side.

(*Zoöl.*) See TOXICOPHIS.

Moc'casin Creek, in *N. Carolina,* enters the Contenting Creek in Greene co.

Mocha, or **Mokha,** (*mo'ka,*) a city and seaport of Arabia, prov. of Yemen, on the Red Sea, 40 m. N. of the Strait of Bab-el-Mandeb; Lat. 13° 19′ 30″ N., Lon. 43° 20′ E. *M.* is the principal port of the Red Sea frequented by Europeans. It is walled, and has an imposing appearance from the sea, but internally is poor and mean. The great article of export is coffee, for which this port is famed; also gum-arabic, myrrh, sharks' fins, rhinoceros' horns and hides, ivory, gold dust, balm of Gilead, aloes, &c. *Pop.* 7,000.

Mo'cha, an island of Chili, in the Pacific Ocean, off the coast of Araucania; Lat. 38° 24′ S., Lon. 74° W.

Mo'cha Stone, *n.* [Probably a corruption of *Moschus* (or moss) *stone.*] (*Min.*) A white, translucent kind of agate, with brown markings resembling trees and vegetable filaments.

Moche, (*mosh,*) *n.* [Fr.] A bale or package of raw silk, as imported.

Mock, *v. a.* [Fr. *moquer;* Gr. *mokaomai,* from *mokos,* mockery.] To mimic or imitate in contempt or derision; to deride by mimicry. — To deride; to ridicule; to laugh at; to treat with scorn or contempt. — To defeat; to elude; to deceive; to subject to disappointment, as one's expectations; to tantalize; to play upon in contempt.

—*v. n.* To make sport in contempt or in jest, or to speak jestingly.

—*n.* Ridicule; derision; a sneer; an act manifesting contempt.

—*a.* Imitating reality, but not genuine; false; counterfeit; assumed.

Mock'able, *a.* Exposed to derision. (R.)

Mock'er, *n.* One who mocks; a scorner; a scoffer; a derider. — A deceiver; an impostor.

Mock'ery, *n.* [Fr. *moquerie.*] Act of mocking, or of deriding and exposing to contempt, by mimicking the words or actions of another; derision; ridicule. — Sportive insult or contempt; contemptuous merriment at persons or things. — Sport; subject of laughter. — Vain imitation or effort: that which deceives, disappoints, or frustrates; imitation; counterfeit appearance; false show.

Mock-heroic, *a.* Burlesquing the heroic, in action, in character, in poetry, &c.

Mock'ing, *n.* Mimicry; mockery. — Scorn; derision.

Mock'ing-birds, *n. pl.* (*Zoöl.*) A group of birds forming the family *Liotrichidæ,* order *Insessores.* This family, very extensive, embraces forms which at first seem to differ greatly, but the species have in common a bill as long or longer than the head, slightly notched, or not at all; the wings short, concave, and rounded, the tarsi long, and generally strongly scutellate. The Mocking-bird, or Mocking-thrush, *Mimus polyglottus,* of our Southern States (Fig. 1819), is the type of the fam. This remarkable bird receives its name from its amazing powers of voice, being able to imitate that of almost every species of animal, as well as many noises that are produced artificially. But its notes are not entirely imitative: its own song is bold, full, and exceedingly varied; and in confinement it loses little of its energy. Its general color is cinereous, paler beneath; but though it cannot vie with most of the American birds in brilliancy of plumage, its own sweet and varied notes, no less than its peculiar faculty of imitation, render it an especial favorite, and a large price is often obtained for it. To use the words of Wilson, "He whistles for the dog; Cæsar starts up, wags his tail, and runs to meet his master. He squeaks out like a hurt chicken; and the hen hurries about, with hanging wings and bristled feathers, clucking to protect her injured brood. The barking of the dog, the mewing of the cat, the creaking of the passing wheelbarrow, follow with great truth and rapidity. He repeats the tune taught him by his master, though of considerable length, fully and faithfully. He runs over the quiverings of the canary, or the clear whistlings of the Virginia nightingale or redbird, with such superior execution and effect, that the mortified songsters feel their own inferiority, and become altogether silent; while he seems to triumph in their defeat, by redoubling his exertions." It builds its nest in fruit-trees, feeds on berries and other fruits, and is easily tamed. The female lays from four to five eggs, of an ash-blue color, marked with patches of brown; she incubates fourteen days, and is extremely jealous of her nest, being very apt to desert it if much disturbed.

Fig. 1819. — MOCKING-BIRD, (*Mimus polyglottus.*)

Mock'ingly, *adv.* By way of derision; in contempt.

Mock'ing-stock, *n.* A butt for merriment.

Mockle, (*mok'l,*) *a.* See MICKLE.

Mocks'ville, in *N. Carolina,* a post-village, cap. of Davie co., abt. 140 m. W. of Raleigh; *pop.* abt. 750.

Mock'-turtle, *n.* A soup made with calf's-head, veal, and condiments.

Mo'dal, *a.* [Fr. *modale.*] Consisting in mode only; relating to form; having the form without the essence or reality.

Mo'dalist, *n.* (*Theol.*) One who maintains the modal form of existence.

Modal'ity, *n.* [Fr. *modalité.*] (*Logic.*) A proposition in which the copula is accompanied by some phrase which adds to or restricts its meaning. Some of those phrases may be thrown into a logical shape by altering the form of the proposition. Thus the modality expressed by *must* is only the expression of a universal statement, "Body must occupy space" being equivalent to the proposition "All bodies occupy space."

(*Phil.*) A term used to denote the most general points of view under which the different objects of thought present themselves to the mind. These are possibility and impossibility, existence and non-existence, necessity or contingency.

Mo'dally, *adv.* In a modal manner.

Mode, *n.* [Fr. *mode;* Lat. *modus.*] Manner of existing or being; manner; method; form; way; course. — Fashion; style of fashion; custom. — Gradation; degree; state; quality.

(*Gram.*) See MOOD.

(*Phil.*) A term used by Locke to denote "such complex ideas which, however compounded, contain not in them the supposition of subsisting by themselves, but are considered as dependencies on or affections of substances." Of these modes there are two kinds — *simple* and *mixed. Simple modes* are "only variations or different combinations of the same simple idea, without the mixture of any other, as *a dozen,* or *a score,* which are nothing but the ideas of so many distinct units added together." *Mixed modes* are those "compounded of simple ideas of several kinds put together to make one complex one — e. g. *beauty;* and consisting of a certain composition of color and figure, causing delight in the beholder." It need hardly be said that this distinction is founded on a very imperfect and false analysis. The term is now universally laid aside by writers on mental philosophy.

(*Mus.*) The melodious arrangement of the octave, which consists of seven essential natural sounds besides the key or fundamental. Although, in ancient music, the terms mode and key were synonymous, there is a great difference between them at the present day, the one denoting an octave with respect to the manner of its division, while the latter term is used with regard to its place in the scale of music. There are two modes only in modern music, — the *major* and the *minor.* The major mode is that by which the intervals between the second and third, and fifth and sixth, become half tones, and all the others whole tones. In the minor mode, the intervals between the second and third, and fifth and sixth, become half tones. Between these two modes there is also another distinction, — the major being precisely the same whether ascending or descending, while the minor, in ascending, sharpens the sixth and seventh, thus removing the half tone between the fifth and sixth to between the seventh and eighth. In the Gregorian Chant there are eight modes (or, as we should now call them, keys), four of which are called *authentic* and four *plagal.* The authentic modes are the Dorian, Phrygian, Lydian, and Mixo-Lydian; these, according to Dr. Burney, answer to our D and A minor and C and D major. The plagal modes are the Hypo-Dorian, the Hypo-Phrygian, the Hypo-Lydian, and the Hypo-mixo-Lydian, which are also synonymous with our G and A minor and F and G minor.

Mod'el, *n.* [Fr. *modèle;* Lat. *modulus,* from *modus,* a measure.] A measure. — Anything of a particular form, shape, or construction intended for imitation; a small pattern; a form in miniature. — A mould; something intended to give shape to castings. — Example; standard; that by which a thing is to be measured; that which is to be copied or imitated; a pattern; anything to be imitated; a copy. — Representation; something made in imitation of real life.

—*v. a.* To form or fashion according to a model; to form a plan in a particular manner; to shape; to imitate in planning or forming.

—*v. n.* (*Fine Arts.*) To make a model or pattern from which some work is to be executed, as in the fine arts; — also, to form a work of some plastic material; as, to *model* in wax.

Mod'eller, *n.* One who models; a planner; a contriver.

Mod'elling, *n.* (*Fine Arts.*) The art of forming a design in clay, or of making a mould from which works in plaster are to be cast. Modelling is essentially a practical art, and depends greatly upon the experience and artistic skill of the modeller. It is mostly executed with the fingers; and the tools employed are generally made of wood and wire, and so constructed as to be able to do what the fingers cannot perform. As wire tools can be fashioned into loops of various sizes and shapes, they are the most useful, and accomplish any required form without moving the clay on to any already finished part, the superfluous clay remaining in its place while the wire passes under it. Wire tools are most effective in working upon concave surfaces, such as the narrow folds of draperies. The wooden tools employed are of various shapes, and are composed of box and ebony. The wooden tools used in fine modelling are usually kept steeped in oil, as by that means the clay is less liable to adhere to them. Common potters' clay of the best quality is the clay used in modelling. It ought to be so wet as to be able to stand in a mass much higher than its own width without support, as it is then much more easily and quickly worked. The support of a figure in modelling is of great importance; the main parts of the trunk and limbs are built upon supports of wood-work; the arms, when not covered with drapery, may be made of twisted thick copper wire, with small pieces of wood twisted in with it at short intervals, like the tufts in the tail of a kite. The whole model, indeed, should be built up on a complete skeleton of supports. Very little support is required in modelling a bust. The preservation of the uniform moisture of the clay is another essential part of modelling; it should never be allowed to dry, and while the modeller is at work, and the figure exposed, especially in warm weather, it should be frequently sprinkled with water. A plasterer's brush is best adapted for this purpose, and superior to a syringe. In Smith's biography of Nollekens, it is stated that when that sculptor was modelling a bust of George III. in the king's own presence, he kept his clay moist by dexterously using his mouth as a squirt at intervals. After the model is complete, the cast is taken from which the marble is sculptured or other casts made. The whole model, while wet, must be covered with three or four masses, or more, if necessary, of plaster of Paris. When fixed and dry, the whole may be separated at the joints; and when the component parts are placed again together, the place of the original model is filled with plaster of Paris; and when the cast is well set, the mould can be carefully broken off in fragments. The cast is then exposed complete and finished. The ancient sculptors baked their clay models; but clay shrinks and cracks in drying: this plan is not so good as making plaster casts from the models. In making small models for bronzes, the ancients used wax, which is still the modelling material used by goldsmiths and medallists. It is prepared by melting virgin wax with a small quantity of Venice turpentine and flake-white in fine powder. When colored wax is required, a color in fine powder must be substituted for flake-white. The tools employed are made of wood and ivory, and are similar in shape to those used in modelling in clay.

Mode'na, a province of North Italy, and formerly an independent grand-duchy, bounded N. by the river Po, E. by the States of the Church, S. by the Apennines, and W. by Parma. *Area,* including recent additions, 2,073 square miles. It is traversed by the Apennines, a point of which, Monte Cimone, attains the height of 6,976 feet. The soil is fertile in the plains. The principal rivers are the Crostolo, the Panaro, and the Secchia. *Prod.* Corn, wine, olives, hemp, and fruit. *Min.* Iron and marble. — In 1796, the grand-duke of *M.* was expelled from his dominions by the French. In 1814, the congress of Vienna restored to his son, the archduke Francis of Este, the territory of *M.* In August, 1859, the National Assembly, by a unanimous vote, declared the forfeiture of Francis V., and any other prince of the house of Hapsburg-Lorraine, to the ducal throne, after which the assembly decreed the annexation of the Modenese State to the new kingdom of Italy. *Pop.* 273,231.

Mode'na, a city of N. Italy, cap. of the prov. of Modena, in a fine plain between the Panaro and the Secchia, 24 miles W.N.W. of Bologna. It is surrounded with ramparts more remarkable for beauty than strength. The general architecture of *M.* is striking and agreeable. Almost all the streets are bordered with arcades over the footways. The principal public buildings are the former ducal palace and the cathedral, a Gothic edifice, the only remarkable feature of which is a square marble tower, one of the loftiest in Italy, in which is kept the famous bucket, once the cause of a serious feud between *M.* and Bologna, and which has been immortalized by Tassoni. The public (formerly ducal) library, known as the Biblioteca Estense, contains 60,000 vols. There is also another public library of 80,000. *M.* is supplied with water by numerous subterranean cisterns. *Manuf.* Woollen and hempen cloths, hats, leather, glass, and silk.

Mode'na, in *Illinois,* a post-village of Stark co., about 33 m. N.N.W. of Peoria.

Mode'na, in *Missouri,* a post-village of Mercer co., abt. 80 m. E.N.E. of St. Joseph.

Mode'na, in *New York,* a post-village of Ulster co., about 80 m. S. of Albany.

Mod'erantism, *n.* [Fr. *modérantisme.*] Moderation in politics or religion.

Mod'erate, *a.* [Lat. *moderatus,* from *moderor.*] Limited; restrained or kept within due limits or bounds; temperate; observing reasonable bounds in indulgence; limited in quantity; not excessive or expensive. — Restrained in passion, ardor, or temper; not violent; not extreme in opinion; holding the mean or middle place not extreme, violent, or rigorous. — Of a middle rate middling.

—*v. a.* To keep within bounds; to restrain from excess of any kind; to reduce from a state of violence; to

lessen; to allay; to repress; to temper; to regulate; to make temperate.
—*v. n.* To become less violent, severe, rigorous, or intense.
Mod'erately, *adv.* Temperately; mildly; without violence.
—In a middle degree; not excessively.
Mod'erateness, *n.* Temperateness; a middle state between extremes.
Modera'tion, *n.* [Fr. *modération;* Lat. *moderatio.*] State of being moderate, or of keeping a due mean between extremes or excess of violence; temperance.—Restraint of violent passions or indulgence of appetite; frugality in expenses.—Calmness of mind.
Mod'eratism, *n.* Moderate principles, either in religion or in politics.
Modera'to, *a.* [It.] (*Mus.*) Neither quick nor slow; a little quicker than *andante.*
Mod'erator, *n.* [Lat.; Fr. *modérateur.*] The person or thing that moderates or restrains.—A president or chairman; one who presides over an assembly.
Modera'torship, *n.* The office of a moderator.
Mod'eratress, MOD'ERATRIX, *n.* A female moderator.
Modern', a town of Austria, in W. Hungary, co. of Presburg, 16 m. N.E. of Presburg; *pop.* 5,000.
Mod'ern, *a.* [Fr. *moderne.*] Pertaining to the present time, or time not long past; not ancient or remote in past time; late; recent; new.—This word is frequently used in contradistinction to ancient or classical; as, *modern* philosophy, *modern* languages. Modern authors are said to be those who have written since Boethius; modern philosophy to have commenced with Galileo; and modern astronomy with Copernicus. "Modern civilization," says A. W. Schlegel, "arose from the blending together of the elements of northern origin and the fragments of antiquity." Modern history is sometimes applied to the whole period from the destruction of the Roman empire down to the present time; at other times, the term Middle Ages, or Mediæval History (see MIDDLE AGES), is applied to the earlier portion of this period, and the term Modern only to the latter. The Germans often date the end of modern history with the French Revolution, and call the subsequent period "most recent history." Shakspeare uses the term for *vulgar* or *common.*
—*n.* A person of modern times;—opposed to *ancient.*
—*pl.* Those who live or have lived in recent or modern times.
Mod'ernism, *n.* Modern practice; something recently formed, particularly in writing.
Mod'ernist, *n.* One who admires the moderns.
Mod'ernize, *v. a.* To render modern; to adapt, as ancient compositions, to modern persons or things, or rather, to adapt, as the ancient style or idiom, to modern style and taste.
Mod'ernized, *p. a.* Rendered conformable to modern usage or style.
Mod'ernizer, *n.* He who renders modern.
Mod'est, *a.* [Fr. *modeste;* Lat. *modestus,* from *modus,* to measure, bound, limit.] Keeping due measure or limits; moderate, restrained by a sense of propriety; not forward or bold; not presumptuous or arrogant; not boastful; diffident; bashful; shy; unobtrusive; not loose; not lewd; decent; chaste; virtuous; not excessive or extreme; not extravagant.
Mod'estly, *adv.* Not badly; not arrogantly or presumptuously; with due respect; not loosely or wantonly; decently; not excessively; not extravagantly.
Mod'est Town, in *Virginia,* a post-village of Accomack co., abt. 10 m. E. of Accomack.
Mod'esty, *n.* [Fr. *modestie;* Lat. *modestia.*] Quality of being modest; moderation; decency; that lowly temper which accompanies a moderate estimate of one's own worth and importance; unassuming conduct; unobtrusive deportment; sobriety of behavior; shamefacedness; chastity; purity of conduct and manners.
Mod'ica, a town of Italy, in Sicily, prov. of Syracuse, near the river Scieli, 30 m. W.S.W. of Syracuse. It exports grain, oil, wine, and cheese.
Modicum, (*mod'i-kum,*) *n.* [Lat., from *modus,* a measure, limit.] A little: a small quantity.
Mod'ifiable, *a.* That may be modified, or diversified by various forms and differences.
Modifica'tion, *n.* [Fr.; Lat. *modificatio.*] Act of modifying, or giving to anything new forms, or differences of external qualities or modes; particular form or manner.
Mod'ified, *p. a.* Changed in form or external qualities; varied; diversified; moderated; tempered; qualified in exceptionable parts.
Mod'ify, *v. a.* [Fr. *modifier;* Lat. *modificor*—*modus,* and *facio.* See MODE.] To measure off; to set a measure or bounds to; to moderate; to qualify; to reduce in extent or degree; to change, as the form of external qualities of a thing; to shape; to give a new form of being to; to vary; to give a new form, as to anything.
—*v. n.* To extenuate.
Mod'ifying, *p. a.* Changing the external qualities; giving a new form to; moderating.

Fig. 1820. — MODILLION.

Modil'lion, *n.* [Fr. *modillon,* from Lat. *modiolus.*] (*Arch.*) A projecting bracket (Fig. 1820) under the corona of the Corinthian and Composite, and occasionally also of the Roman Ionic orders.
Modi'olar, *a.* [Lat. *modius,* a measure.] (*Geol.*) Bushel-shaped.
Modi'olus, *n.* [Lat., the nave of a wheel.] (*Anat.*) A bony protuberance in the temporal bone, appertaining to the cochlea, or shell of the internal ear.
Mo'dish, *a.* According to the mode or customary manner; fashionable.
Mo'dishly, *adv.* Fashionably; in the customary mode.
Mo'dishness, *n.* Affectation of the fashion.
Mo'dist, *n.* A follower of the mode, or fashion.
Modocs. See SECTION II.
Mod'ular, *a.* Pertaining to modulation, or to a module.
Mod'ulate, *v. a.* [Fr. *moduler;* Lat. *modular, modulatus,* from *modulus,* a little measure, dimin. of *modus,* a measure.] To measure off properly; to measure; to manage suitably; to regulate.
(*Mus.*) To form, as sound, to a certain key, or to a certain proportion; to vary or inflect, as sound in a natural, customary, or musical manner.
Mod'ulated, *p. a.* Formed to a certain key; varied; inflected.
Modula'tion, *n.* [Fr.; Lat *modulatio.*] Act of modulating; act of forming anything to a certain proportion; act of inflecting or varying the pitch of voice in reading or speaking; a rising or falling of the voice.
(*Mus.*) The diversified and proper change of the key or mode in conducting the melody in music; the transition from one key to another; sound modulated; melody.
Mod'ule, *n.* [Fr.; Lat. *modulus,* from *modus,* a measure.] (*Arch.*) A measure of proportion by which the parts of an order or of a building are regulated in classical architecture; it has generally been considered as the diameter, or semi-diameter, of the lower end of the shaft of the column, but different architects have taken it from different parts, and subdivided it in various ways.
Mod'ulus, *n.* [Lat.] (*Math.*) A term often, sometimes loosely, used. In general, it denotes some constant, multiplier, coefficient, or parameter, involved in a given function.
Mo'dus operan'di. [Lat.] Manner of operating.
Mo'en, an island of Denmark, in the Baltic, separated from Zealand by the Ulf Sound, and from Falster by the Groen Sound; Lat. 54° 57′ N., Lon. 12° 36′ E. *Area,* 87 sq. miles. The surface is mostly level, except on the E. coast. The chief town is Stege, with a good harbor, on the N.W. coast. *Pop.* 13,500.
Mœris Lake, or **Bir'ket-el-Keroon',** (*me'ris,*) a lake of central Egypt, prov. of Fayoum, and occupying the N. part of its valley; Lat. 29° 30′ N., Lon. bet. 32° 30′ and 33° E. *Ext.* 30 m. long, and 6 broad. The S. shore is low and sandy, but elsewhere it is abrupt and rocky. It communicates by two channels with the Nile, and with the canal Joseph. According to Herodotus, Lake *M.*, so celebrated in antiquity, and much larger than it is now, was the result of an artificial excavation executed during the reign of a king Mœris, who lived 1350 B.C. It supplied with water the valley of Fayoum, with all parts of which it communicated by canals.
Mœsia, (*mē'zha.*) (*Anc. Geog.*) A country of Europe, bounded on the N. by the Danube, S. by Macedonia and Thrace, E. by the Euxine, and W. by Pannonia and Illyricum. Mœsia was finally reduced to a Roman province under Augustus, and divided into Mœsia Superior and Mœsia Inferior, or what are now called the provinces of Servia and Bulgaria.
Moffat, a small town of Scotland, in Dumfriesshire, 20 m. from Dumfries; celebrated for its mineral waters. *Pop.* 2,400.
Moffat Hills, a mountain chain of Scotland, between the cos. of Dumfries on the S., and Lanark and Peebles on the N.; the elevation of Hartfell, the principal summit, is 2,685 feet. The rivers Tweed, Clyde, and Annan have their source in this chain.
Moffat's Creek, in *Virginia,* a post-vill. of Augusta co.
Moffetsville, in *S. Carolina,* a post-village of Anderson dist., abt. 117 m. W.N.W. of Columbia.
Mogadore, in *Ohio,* a post-village of Summit co., abt. 14 m. S.W. of Raveuna.
Mo'ghi, *n.* [Chinese, ears of trees.] (*Bot.*) See EXIDIA.
Mo'gi-das-Cru'zes, a town of Brazil, about 35 m. E.N.E. of São-Paulo.
Mo'gi-Gua'çu, a town of Brazil, abt. 170 m. N. of São-Paulo.
Mo'gi-Mirim', a town of Brazil, abt. 115 m. N.N.E. of São-Paulo.
Moguer, (*mo-gair',*) a town of Spain, prov. of Huelva, on the Tinto, 5 m. E. of Huelva; *pop.* 6,700.—Near *M.* is the port of Palos, whence Columbus set sail in 1492.
Mo'hair, *n.* [Ger. *mohr;* Fr. *moire.*] A material for textile manufactures, consisting of the hair of the Angora goat. The goats, after completing their first year, are clipped annually in April and May, and yield progressively from one to about four pounds' weight of hair. That of the female is considered to be of more value than that of the male, but both are mixed together for the market. *M.* is extensively spun and manufactured in France, in England (chiefly at Bradford), and in Scotland. A large variety of articles are made from *M.;* among others, many kinds of camlets, which exhibit great beauty and brilliance of surface. It is manufactured into plush, and is also used for coach and decorative laces, for buttons, braidings and other trimmings for gentlemen's coats. It is, moreover, made up into a light and fashionable cloth, suitable for paletots, &c. *M.* dresses were worn by ladies a few years ago, but they have been superseded by alpaca-cloths and other similar materials.
Mo'gul Em'pire, a name commonly applied to the empire founded in Hindostan in 1526, by BABER, *q. v.,* a descendant of Tamerlane, and comprising the provs. of Delhi and Agra. Among the successors of Baber the most celebrated were Akbar (1556–1605), Jehanghir, (1605–1627), and Aurungzebe (1658–1707), who were

Fig. 1821. — TOMB OF BABER.

known in Europe under the title of "Great Mogul." In 1803 the Great Mogul was deprived of his throne; in 1827, of even the appearance of authority, becoming a mere pensioner of the British; and in 1858, Mohammed Bahadoor, the last of the dynasty, was condemned, and exiled for complicity in the Indian mutiny.
Mohacs, or MOHACZ, (*mo-hats',*) a town of Hungary, on the W. arm of the Danube, 25 m. E.S.E. of Fünfkirchen; *pop.* 10,000.—Solyman I., at the head of a Turkish army, defeated the Hungarians in the plain near the town of *M.*, in 1526. Their king, Louis II., was killed, and 30,000 Christians are said to have fallen in the battle. The Duke of Lorraine and the Imperialists gained a victory over the Turks at the same place, in 1687.
Moham'med, or **Ma'homet,** ABUL KASEM IBN ABDALLAH, the Arabian prophet, and the founder of Islam, was B. at Mecca, A.D. 570 or 571. He was the only son of Abdallah and Amina; his father, celebrated for his singular beauty, being of the family of Hashem, the most illustrious in the noble tribe of Koreish, princes of Mecca, and guardians of the Caaba. Left an orphan in infancy, he was brought up by his uncle, Abu Taleb, who trained him to commerce, and took him to the great fairs of Arabia and Syria. The theory of his high cultivation is now exploded. Some of the greatest orientalists—Sprenger, Renan, Cousin de Perceval—hold that he could neither read nor write, and that he knew the *Rabbinical traditions* and *Apocryphal Gospels* only by hearsay. When 25 years of age, *M.* married Khadija, a rich and noble widow of Mecca, and the following 15 years of his life were passed in domestic quietness, only interrupted by occasional retirement into the mountain solitudes. From his youth the future prophet had shown a fondness for seclusion and serious meditation, and having attained a ripeness of character and distinctness of aim and views, he began, at 40 years of age, to announce himself as an apostle, and to proclaim the doctrine of *Islam* (salvation), that "There is no God but Allah, and Mohammed is his Prophet." His wife Khadija was one of the first to believe in him, and among other members of his family who readily acknowledged his mission was his cousin, the heroic, illustrious Ali, son of Abu Taleb. After three years, he made a more public announcement of his doctrine, especially insisting on the unity of God, and denouncing all kinds of idolatry; but his followers were very few for years, and the opposition of the elders and people of Mecca growing more and more bitter and violent, some of his disciples retired into Ethiopia. In A.D. 621, *M.* lost his faithful and beloved Khadija, who during the 24 years of their marriage had retained his love, and met no rival. The death of Abu Taleb took place about the same time; and soon after, the Koreishites, headed by Abu Sophian, resolved to put the Prophet to death. He fled from Mecca, hid himself in a cave for three days, and then, with his only companion, Abubekr, withdrew to Medina (then called Yatreb). From this flight of *M.* commences the æra of the *Hegira* (16th July, 622). He made a public entry into Yatreb amid the loudest welcomes of the citizens, and at once assumed the offices of king and priest. He also there married his second wife, the beautiful Ayesha, daughter of Abu-bekr, who long survived him. He had, however, many other wives, all widows except Ayesha; and, besides, indulged without restraint his sensual propensities. Persuasion, long tried with little success, at length gave place to force and war, and in the battle of Beder—first of the long series of battles by which the faith of Islam was established over so large a portion of the world, and gained a hold which twelve centuries have not broken—he defeated Abu Sophian and the Koreish (A.D. 623). He was defeated by them in A.D. 625; they unsuccessfully besieged Medina, and a truce for ten years was agreed on. Wars with Jewish tribes followed; many Arabian tribes submitted themselves; and in 630 the conquering prophet marched to Mecca, received the keys of the city, and was acknowledged as

prince and prophet. He showed no malice against his former enemies, performed the pilgrimage with the customary observances, purified the Caaba, (Fig. 1745,) destroyed its 360 idols, and decreed that no infidel should enter the holy city. The whole of Arabia was soon after conquered, and ambassadors with arrogant claims were sent to the Emperor Heraclius, the king of Persis, and the king of Abyssinia. War with the Roman empire was begun; an expedition for the conquest of Syria was prepared; when *M.*, believed to be immortal by some of his disciples, fell into a fever, and after 14 days of sufferiug, D. at Medina, June 7, 632, in the 63d year of his age. He was buried in a simple tomb on the spot where he died. The history of this extraordinary man has been, as was natural, overlaid and obscured by an immense mass of falsehoods and exaggerations: inventions to magnify him on the part of his followers, and inventions to disgrace and discredit him on the part of Christian writers. These fictions, friendly and hostile, we have not space to recite. But through praise and blame, through the fact and the legend, it is not difficult now to see the man of clear insight and deep reflection, without book-learning, but with profound knowledge of himself and of the works of God, familiar with Bible narratives and Eastern legends, endowed with imagination, and seeing, with a clearness of spiritual vision at that time peculiar to himself, the first truth and eternal ground of all religion. The announcement of this with a prophet's earnestness and persistency, and the accompanying denouncement of the world-wide lies and idolatries of his age, gave him the great place he holds in the history of the human race. — See KORAN, and MOHAMMEDANISM.

Moham'med I., Emperor of the Turks, succeeded his brother Monsa in 1413; he re-established the glory of the Ottoman empire, which had been ravaged by Tamerlane; and fixed the seat of government at Adrianople, where he died in 1421, aged 47.

MOHAMMED II., B. 1430, succeeded to the throne in 1451; he was the first who received the title of Grand Seignior. He died after a long and victorious career as he was about to lead an attack against the Knights of St. John, A. D. 1481.

MOHAMMED III. succeeded his father Amurath III. In 1595. His first act on coming to the throne was to strangle nineteen of his brothers, and drown ten of his father's wives; he then entered Hungary, and massacred the whole garrison of Agram, and next gained a victory over the Archduke Maximilian. After this, his success left him, and he finally had to sue for peace to the Christian princes whose states he had ravaged. D. 1603.

MOHAMMED IV., B. 1642, became emperor in 1648, succeeding his father Ibrahim I., who was deposed and strangled by the Janissaries. Mohammed Kuperli or Kuprili was made Grand Vizier, and to him, and to his equally distinguished son who succeeded him, the reign of *M.* IV. owes all its celebrity. In 1672, the Sultan marched against Poland; but he made peace with that country on condition of an annual tribute being paid to him. John Sobieski, irritated at this ignominious treaty, raised an army, and defeated the Turks near Choczim, upon which a new treaty, favorable to Poland, was signed in 1676. In 1683 the Turks laid siege to Vienna, on which Sobieski marched to its relief, and routed the besiegers. The Janissaries, attributing their misfortunes to the indolence of the king, deposed him in 1687, and sent him to prison, where he died in 1691.

MOHAMMED V. See MAHMOUD I.

Moham'med Bah'adoor. See MOGUL EMPIRE.

Moham'medan, *a.* Pertaining to Mohammed or Mahomet.

—*n.* A follower of Mohammed; a Moslem.

Mohammedanism, (*mo-ham'me-dan-izm,*) *n.* The name commonly given, in Christian countries, to the religion established by Mohammed, born at Mecca, in August, A. D. 570, died at Medina, 8th June, 632. Mohammedans call themselves by the name of Moslem, and their creed Islam, which means, "full submission to God." The doctrine of Mohammedanism may, in large measure, be traced to the national religion of the Arabs, and to those forms of Judaism and Christianity which existed in Arabia at the time of the Prophet. The old belief that Mohammed was a base, heartless impostor, has, by the recent labors of Möhler, Carlyle, Irving, and others, been very much shaken, if not entirely dispelled. Notwithstanding the many bad features of his character, if we look to the simplicity of his mode of life to the very last, his endurance for twelve years of every species of insult and persecution, his steady resistance to every offer of wealth and power made on the condition of his desisting from his endeavors, the conviction wrought upon those nearest him, we cannot think otherwise than that the man believed in what he taught. It is impossible to say how far an ardent imagination, acting under the belief of divine inspiration, and too little controlled by an intellect in many respects but narrow and limited, will lead one into all manner of wickedness. "I maintain," says Möhler, "that if one admits the possibility of any man's being able to give out his own individual religious impressions, ideas, and thoughts, without suspicion, for divine inspiration, I cannot perceive the impossibility of his considering God also to be the author of all his other inward impulses." Further, we cannot think that Mohammed would have acted as his own recording angel and immortalized his offences in the Koran, had he been conscious of their wickedness. Mohammedanism is commonly regarded as half-way between Paganism and Christianity; but it approaches much more nearly the latter than the former, and must be viewed as a great improvement upon the religions which it supplanted. It is a stern monotheism, opposed alike to pantheism and idol-worship, and throws aside with disdain all those gradations of eons or emanations by which God is approximated to man and man to God. Nothing exists but the Creator and the creation, the latter comprehending angels, devils, genii, and every being intermediate between God and man. Regarding the connection between Mohammedanism, Judaism, and Christianity, we quote from Dean Milman's *Latin Christianity.*—"The creation," he says, "as affirmed in Islam, was strictly biblical; the history of man was that of the Old Testament recognized in the New, though not without a large admixture of Jewish legend. The forefathers of the Mohammedan, as of the Jewish and Christian religions, were Adam, Noah, Abraham; and to the old prophets of God, among whom were included Moses and Jesus, were only added two local prophets sent on special missions to certain of the Arab tribes, to Ad and to Thamud. Even Mohammedan fable has none of the inventive originality of fiction. There is scarcely a legend which is not either from the Talmud, or rather the source of most of the Talmud, the religious tradition of the Jews, or the spurious (not the genuine) gospels of Christianity. The last day, the judgment, the resurrection, hell, and paradise, though invested in a circumstantiality of detail, much of it foreign, so far as we can judge, to the Pharisaic notions of our Saviour's day, and singularly contrasting with the modest and less material images of the New Testament, were already parts of a common creed. The Koran has scarcely surpassed the grosser notions of another life which were already received by the Talmudic Jews and the Judaiziug Christians, — the Chiliasts of the early ages. It only adapted this materialism to the fears and hopes of a Bedouin and a polygamous people. It may be doubted whether it goes beyond the terrific imaginations of the Talmudists in those minute and particular accounts of hell-fire which glare in all its pages. In its paradise it dwells on that most exquisite luxury to a wanderer in the desert — perennial rivers of cool pure water,—and it adds a harem to the joys of the blessed." The six great articles in the faith of Islam are neither repugnant to human reason nor to prevalent habits of thought, and, indeed, are the elemental truths of all religions. There are — 1. Belief in a Supreme Being; 2. in his angels; 3. in divine revelation; 4. in his prophets; 5. in the resurrection and day of judgment; 6. in God's absolute decree, and predestination of good and evil. The new and startling doctrine was the divine mission of Mohammed, the apostle of God. (See KORAN.) Besides the Koran, Mohammedans generally receive the Sonna, or traditious, which comprises acts and sayings of Mohammed not contained in the Koran. Mohammedanism, like Christianity, has numerous different sects, who differ from each other in their doctrines and forms of worship. There are five fundamental points of religious practice which are specially enjoined on Mohammedans; viz., purification, prayer five times a day, fasting, almsgiving, and the pilgrimage to Mecca. Washings and purifications are enjoined as necessary preparations for the duty of prayer, and for reading or touching the Koran, &c., for "practice of religion is founded upon cleanliness, which is the one half of faith and the key of prayer." In every town the faithful are invited to prayer by the public crier, or muezziu, when the Moslem may perform his prayers in any decent place, except on Friday, when he is bound to perform them in the mosque. Fasting is regarded as a duty of such great moment, that the Prophet used to say that it was the gate of religion, and that "the odor of the mouth of him that fasteth is more grateful to God than that of musk." Almsgiving is not strongly inculcated in general; but every Moslem who is not poor is obliged to give the fortieth part of his property to the poor. The pilgrimage to Mecca is deemed so necessary that it is said that he who dies without performing it "may as well die a Jew or a Christian." They are forbidden the use of wine and swine's flesh, and are prohibited from gaming and usury. On its first promulgation, the doctrines of Islam spread with amazing rapidity; and in twelve years the whole of Arabia had embraced that faith. The extension of the power of the Arabs soon carried this religion into other countries; and Syria, Persia, and Northern Africa were compelled to submit to their power and to receive their faith. At the beginning of the 8th century they crossed over into Spain, one province after another was speedily subdued, and for nearly 800 years the Saracens retained a dominion in that country. In Asia they advanced eastward to India and China; and in the former country they founded vast empires on the shores of the Indus and Ganges, which for a long time were strongholds of Islamism; but in the "Flowery Land" their progress was soon stayed. Fresh energy was infused into the Moslem communities by the accession of the Seljook Turks, — both they and their successors, the Osmanlis, voluntarily receiving Islamism from the very people they had conquered. The Ottoman rulers gradually undermined the Byzantine empire, which at length fell with the taking of Constantinople in 1453. The power of Islam was now at its height; and for a time the Turks were the terror of Italy, Hungary, and Germany. Their power, however, soon began to fail. Sicily was lost to them; and in 1492 their last strongholds in Spain were taken. In the interior of Africa, Mohammedanism has long been making peaceable conversions. But while advancing among races inferior in civilization to the Mohammedans, this religion has been losing power wherever it has been brought into contact with Christianity. The consciousness of this superiority of the Christian nations has been spreading for years throughout the extent of the Mohammedan world, and has gradually kindled those sentiments of fierce and uncompromising hostility to the Christian name which have manifested themselves within the last few years in so bloody a manner in India, Arabia, Northern Africa, and Syria. These feelings, however, are not participated in by the more enlightened among the Mohammedans, — those who have seen and tasted the fruits of Christian civilization. They no longer exhibit any confidence in the power of Islam. The total number of Mohammedans at the present time is estimated at about 160,000,000. In Europe they are almost confined to Turkey; and even there they form, in the European part of it, a minority of the population. They prevail in Asiatic Turkey, Persia, Afghanistan, Beloochistan, Arabia, and Tartary, and are largely represented in India, Asiatic Russia, and the Malay Archipelago, and to some extent in China. Their number in Asia is estimated at about 50,000,000. In Africa, Mohammedanism is still the prevailing religion in the entire north; and its rule extends far down eastward and into the centre of the continent, numbering, it is believed, not fewer than 100,000,000 souls.

Mo'have, or **Mogave,** in *Arizona*, a W. by N. co. adjoining Nevada and California; *area*, about 11,332 sq. m. *Rivers.* Colorado river, and Bill Williams creek. *Surface*, mountainous; *soil*, mostly sterile. *Min.* Gold and silver. *Cap.* Kingman. *Pop.* (1890) 1,444.

Mohave City, in *Arizona*, a town, former cap. of Mohave co., abt. 125 m. N. of La Paz.

Mo'hawk, in *New York*, a river which rises in Oneida co., 20 m. N. of Romo, and runs E.S.E. into the Hudson at Waterford, 10 m. above Albany. It is 135 m. long, and has numerous and picturesque waterfalls, especially at Little Falls, Cohoes, and Waterford, affording abundant water-power. Through its populous valley run the Erie Canal and New York Central Railroad.

—A post-village of Herkimer co., abt. 80 m. W.N.W. of Albany. — A twp. of Montgomery co.

Mo'hawks, *n. pl.* A once powerful tribe of North American Indians, a branch of the great Iroquois nation, who derived their name from dwelling on the banks of the Mohawk River. The Mohawks, when broken up as a people, emigrated north, and took up their abode in the Canadas, where the remnant of this renowned tribe of red-skins is still to be found in small villages in the midst of their white brethren, devoting themselves to agriculture.

Mo'hegan Moun'tains, in *New York*, the former name of the ADIRONDACK MOUNTAINS, *q. v.*

Mo'hegans, or **Mo'hicans,** a tribe of Indians of the great Algonquin family, which, in the 17th century, inhabited the country now forming the S.W. part of New England, and that portion of New York E. of the Hudson. Being compelled to give way to the conquering Iroquois confederacy, they retired to the valley of the Housatonic River in Connecticut, and were consequently one of the first tribes who came into collision with, and were dispossessed of their territory by the early British settlers. They subsequently lived dispersed among the other tribes, and all traces of them have now nearly disappeared. Fenimore Cooper's celebrated novel, *The Last of the Mohicans*, will cause their name to survive perhaps any other of the Indian tribes.

Mohic'an, in *Ohio*, a prosperous township of Ashland co.

Mohican River, in *Ohio*. See WALHONDING.

Mohic'anville, in *Ohio*, a village of Ashland co., abt. 80 m. N.N.E. of Columbus.

Mohilev, or **Mohilef,** (*mo-he'lef,*) a govt. of European Russia, between Lat. 52° and 55° 15′ N., Lon. 28° 35′ and 32° 35′ E., inclosed N. by Vitebsk, E. by Smolensk, S. by Tchernigov, and W. by Minsk; *area*, 17,470 sq. m. The surface is mostly an extensive plain, partly covered with forests. The soil is generally fertile, but agriculture is backward. The principal rivers are the Dnieper, Soja, and the Dronetz. The climate is mild and dry. *Prod.* Rye, barley, oats, hemp, and flax; and large quantities of timber are floated down the rivers to the Black Sea. The chief towns are Mohilev, the cap., and Mstislavl. *Pop.* 924,080.

MOHILEV, or MOHILEF, cap. of the above govt., on the Dnieper, 85 m. S.W. of Smolensk, and 110 S.E. of Minsk. *M.* has a better appearance than most Russian towns, the houses being built of stone or other solid material. *M.* is the headquarters of the Russian "Army of the West," and the seat of Greek and R. C. archbishoprics, the latter having authority over all the Roman Catholics of Poland and Russia. It has an extensive trade with Riga, Königsberg, Dantzic, and Odessa.

Mohilev, a town of European Russia, prov. of Podolia, on the Dniester, 50 m. S.E. of Kaminetz. *Pop.* 8,930.

Mo'hill, a town and parish of Ireland, abt. 9 m. E.S.E. of Carrick-on-Shannon. They are situated upon the boundary line between the cos. of Leitrim and Longford, and the provinces of Connaught and Leinster.

Möhler, JOHANN ADAM, a Roman Catholic theologian, B. at Igersheim, Würtemberg, 1796; professor of theology at Tübingen, and author of many learned works in theology and church history. D. 1836.

Mohrs'ville, in *Pennsylvania*, a post-village of Berks co., abt. 10 m. W.N.W. of Reading.

Mo'hur, a gold coin of British India, of the value of 15 rupees, or $8.75.

Moi'dore, [Pg. *moeda d'ora,*] an old gold coin of Portugal, equivalent in value to about $6.75.

Moiety, (*moi'e-ti,*) *n.* [Fr. *moitié*; Lat. *medietas*, from *medius*, middle. See MEAN.] The middle; the half; one of two equal parts.

Moil, *v. n.* [From *moyle*, the old spelling of *mule*, q. v.] To work like a mule; to exert one's self; to labor, to toil; to work with painful efforts.

Moi'ra, a market-town of Ireland, in Ulster, abt. 14 m. S.W. of Belfast. *Pop.* about 1,200.

Moira, in *New York,* a post-village and township of Franklin co., abt. 47 m. E. of Ogdensburg; *pop.* of township, abt. 3,000.

Moire, (*moyre,*) *n.* [Fr., clouded or watered.] (*Manuf.*) A term applied to a variety of manufactured textile goods. The production of this watered effect is usually called *moire antique,* and is principally used in making the broad silk for ladies' dresses. It is a superior kind of *watering,* and the different modes by which it is effected are kept secret by the *moireurs,* or calenderers. The effect is not produced during the spinning, weaving, or dyeing, but by passing the fabric through cylinders, hot or cold, embossed or plain, and, sprinkling the silk with water or not, by folding layers of silk over each, either rectangularly or diagonally, and other methods by which various degrees of moire can be produced. Certain threads, either of the warp or weft, which happen to receive most pressure, have the most gloss; some are flattened, and the reflection from their surfaces becomes more or less glossy, according to the angle from which it is viewed. This produces the brilliant play of light and shade called *moire,* or *watering.*

Moiré Metallique, (*moy're met-al-leek',*) *n.* [Fr.] (*Applied Chem.*) A beautiful crystalline appearance given to tin plate by brushing over the heated metal a mixture of 2 parts of nitric acid, 2 of hydrochloric acid, and 4 of water. As soon as the crystals appear, the plate is quickly washed, dried, and varnished.

Moist, *a.* [Fr. *moite;* Lat. *madidus,* from *madeo,* to be wet or moist.] Moderately wet; damp; containing water or other liquid in a perceptible degree.

Moisten, (*mois'n,*) *v. a.* To make moist or damp; to wet in a small degree.

Moist'ness, *n.* State of being moist; dampness; a small degree of wetness; humidity.

Moist'ure, (*-yur,*) *n.* [Fr. *moiteur.*] State of being moist; a moderate degree of humidity; a small quantity of any liquid.

Mo'jos, in Bolivia. See MOXA.

Mokelumne Hill, in *Cal.* See MOQUELUMNE HILL.

Mo'la, a town of S. Italy, prov. of Terra di Bari, on the Adriatic, 13 m. S.E. of Bari: *pop.* 11,078.

Molal'la River, in *Oregon,* enters the Willamette River from Clackamas co.

Mo'lar, Mo'lary, *a.* [Lat. *molaris,* from *mola,* a mill. See MILL.] Belonging to a mill or to grinding; having power to grind; grinding; used for grinding; as, the *molar* teeth.

—*n.* (*Anat.*) One of the double or grinding teeth. The molares, or molars, are the most important of the permanent teeth, as they comminute and reduce to a pulp the food cut and broken down by the incisors and canine. See TEETH.

Molar Gland, *n.* (*Anat.*) One of the two salivary glands situated on each side of the mouth, between the masseter and buccinator muscles, the excretory ducts of which open near the last molar tooth.

Molas'ses, *n. sing.* [It. *melassa;* Fr. *mélasse,* from Gr. *meli,* honey.] The brown, viscid uncrystallized sirup produced in the manufacture of sugar. It is allowed to drain from the casks into a cistern before the sugar is sent away from the plantation. Molasses is employed in the preparation of spirits of wine. The sirups which remain after sugar passes through the processes of a refining-house are sometimes called *molasses,* but are more generally known as *treacle.* The imports of *M.* into the United States, in the fiscal year ending June 30, 1897, amounted to 4,354,410 gallons, a great decrease since 1870, when it was 55,000,000 gallons.

Molay', JACQUES DE, the last grand-master of the Knights Templars, was a native of Burgundy. He was admitted into the order about 1265, and having signalized himself by his valor in Palestine, was unanimously elected grand-master on the death of William de Beaujeu. The great wealth and power of the Templars, their pride and their dissolute manners, created them a multitude of enemies, and at length Philippe le Bel, king of France, and Pope Clement V., formed a plan for their extermination. They were accused of heresy, impiety, and various crimes revolting to human nature. In October, 1307, all the Templars throughout France were arrested at the same hour, and they were tried and convicted, some on their own confessions, and others on such evidence as could be procured. Fifty-seven were committed to the flames in 1311; and after an imprisonment of seven years, De Molay shared their fate at Paris, in 1314, declaring the innocence of his order to the last.

Mold, *n.* and *v.* See MOULD, the more correct spelling.

Mold, a manufacturing town of Wales, co. of Flint, on the Alyn, 12 m. W.S.W. of Chester; *pop.* 4,000.

Mol'dau, a river of Bohemia, rising in the Böhmerwald Mountains, on the S.W. frontier, at an elevation of 3,750 feet above the sea, and after a N.E. course of 276 m., joining the Elbe at Melnik, 20 m. N. of Prague.

Molda'va, a river of Austrian Poland and Moldavia, rising in the Carpathian Mountains, and after a S.E. course of 110 m. joining the Sireth, 36 m. S.W. of Jassy.

Molda'via, one of the two Danubian principalities now united under the name of Roumania. It lies bet. 26° 10′ and 28° 30′ E. Lon., and bet. 45° 25′ and 48° 13′ N. Lat.; is bounded N. by the Austrian territories of Buckowina and Galicia, S by the Danube and Wallachia, E. by the Russian govt of Bessarabia with the intervening Pruth, and W. by Transylvania. It has an extreme length of 200 *m.*, by a breadth varying from 30 to 130; estimated area, 17,000 sq. m. Its chief rivers are the Dniester, the Pruth, and the Sireth. The soil is so exceedingly fertile that, notwithstanding the rude and primitive husbandry prevailing, the land yields immense crops of wheat, rye, and barley, with pulse of every kind, vegetables, and abundance of fruits. In the west, the country is mountainous and has some desert tracts, and immense forests yielding a large supply of excellent timber. The pasture-lands are especially luxuriant, and afford the most abundant food for large droves of cattle reared upon them. From its proximity to the Carpathian Mountains, the mineral wealth of Moldavia must be very great; but the perpetual wars, of which it has been the theatre for ages, have hitherto prevented them from being worked with that attention their importance demands. Rock-salt, saltpetre, and asphaltum are the chief articles under this category produced; a small quantity of gold has been found in the sands of the river Bistritza, but the metals can hardly be said to be worked at all. Moldavia,

Fig. 1822.—MOLDAVIAN COUNTRY-WOMAN.

up to the year 1777, embraced a much larger region than is now known by that name, Austria appropriating all the district known as Buckowina; while, in 1812, the Porte was compelled to cede to Russia all the N.E. of the province, called Bessarabia. The inhabitants are chiefly Armenians, Wallachians, Jews, and Gipsies. *Cap.* Jassy. *Pop.* estimated at 1,600,000. See ROUMANIA.

Mold'ing, *n.* See MOULDING.

Mol'dop, in *Oregon,* a village of Washington co., abt. 22 m. W.S.W. of Portland.

Mole, *n.* [A.S. *maal, mal;* Ger. *mahl, maal;* Lat. *macula,* a spot, blemish, mole.] A spot, mark, or small permanent protuberance, often hairy, but generally of a grayish-brown color, seen on the skin of persons in various parts of the body, and always congenital, or from their birth.

Mole, *n.* [Lat. *mola.*] (*Med.*) A deposit of fleshy matter in the uterus.

Mole, *n.* [Fr. *môle;* It. *molo;* Lat. *moles.* Etymol. unknown.] A mound, embankment, or pier, constructed of solid masonry laid in the sea at the entrance to a port, which it serves to defend from the force of the waves; also, frequently, the port or haven thus formed.

(*Agric.*) A plough used in underground draining.

Mole, *n.* [D. *mol;* Ger. *maulwurf;* Dan. *muldvarp*—*muld,* a mould, and *varp,* to heave.] The Mouldwarp, a small insectivorous quadruped, family *Talpidæ,* of which it may be taken as the type. The common mole of the U. States, the Screw mole, *Scalops aquaticus* (Cuvier), is admirably fitted for a subterranean life. It is from five to six inches in length; the body is thick and cylindrical; the head is much prolonged, especially the muzzle, which projects far beyond the jaws, and is very flexible, strong, and tendinous, serving to convey food to the mouth; it has no external ears, but the auricular apparatus is highly developed, and the sense is very acute; its eyes are so very minute, and concealed by its fur, that it is a vulgar opinion that it is deficient in these important organs. The head is not distinguished from the body by any appearance of neck; the legs are so short as scarcely to project perceptibly from the body; the fore-feet, situated obliquely outwards, are excessively strong and broad, and furnished with very large and stout claws, so as to give the animal the power of working under the surface with the utmost rapidity; the hind-feet are small in proportion to the fore-feet, and are calculated for throwing back with ease the

Fig. 1823.—AMERICAN MOLE, (*Scalops aquaticus.*)

mould from behind, during the animal's subterranean labors. The rapidity with which the mole can make its way through a favorable soil would be quite astonishing, did not its whole conformation and great muscular strength account for it. The tail is short and small; the skin is much thicker and tougher in proportion than in other quadrupeds, and the fur with which it is covered is close-set and soft as the finest velvet. The food of the mole consists chiefly of earth-worms and the larvæ of insects; but it is not confined to these; for during the summer months it not unfrequently leaves its subterranean retreat, and wanders upon the surface in quest of prey, such as birds, mice, frogs, snails, &c.; and during these nocturnal excursions it often meets with a vigilant and successful enemy in the owl. Moles are extremely voracious. We are told, that if two are shut up together without food, the strongest will devour the weakest, even to the bones; nothing but the skin is left, which they never eat, and which, when one has killed the other, is always seen to be ripped up along the belly. They are incapable of long fasting; if kept ten or twelve hours without food, it is said they die of starvation.

Mole, *v. a.* To clear of mole-hills. (Used as prov. Eng.)—To form holes in, as a mole; to burrow.

Mole'-cast, *n.* A small elevation of earth thrown up by a mole.

Mo'lech, Mo'loch, or **Mil'com.** (*Script.*) A heathen deity (Fig. 1824), chiefly found in the Old Testament as the national god of the Ammonites, to whom children were sacrificed by fire. There is some difficulty in ascertaining at what period the Israelites became acquainted with this idolatry; yet various reasons render it probable that it was before the time of Solomon, the date usually assigned for its introduction. Nevertheless, it is for the first time directly stated that Solomon erected a high-place for Molech on the Mount of Olives (1 *Kings* xi. 7); and from that period his worship continued uninterruptedly there, or in Tophet, in

Fig. 1824.—MOLECH, OR MOLOCH.

the valley of Hinnom, until Josiah defiled both places, (2 *Kings* xxiii. 10, 13.) Jehoahaz, however, the son and successor of Josiah, again "did what was evil in the sight of Jehovah, according to all that his fathers had done," (2 *Kings* xxiii. 32.) The same broad condemnation is made against the succeeding kings, Jehoiakim, Jeboiachin, and Zedekiah; and Ezekiel, writing during the captivity, says, "Do you, by offering your gifts, and by making your sons pass through the fire, pollute yourselves with all your idols *until this day,* and shall I be enquired of by you?" (xx. 31.) After the restoration, all traces of this idolatry disappear.

Mole'-cricket, *n.* (*Zoöl.*) The *Gryllotalpa borealis,* (Fig. 1825,) an interesting species of the *Gryllides,* or Cricket family (see CRICKET). Its habits are very singular, and greatly resemble those of the animal from which it is named. In its structure, too, there is a remarkable similarity. This insect is continually engaged in excavating galleries under the earth, some of which are of considerable dimensions. To enable it to do this with perfection, its anterior limbs are connected with a pair of flat fossorial organs, which are in appearance much like the hand of the mole. In its burrowing processes, it does great injury to the roots of plants. With regard to its diet, little is positively known; and whether it lives on animal or vegetable food, is still a matter of uncertainty. By some authorities, however, it is said to feed on both roots and insects. The female of this species prepares a large chamber wherein to lay her eggs, which are said to be from 200 to 400 in number. Until after the first moult, the young remain together, but then take their departure, and commence burrowing on their own account. The *M. C.* is usually about two inches in length, and is of a brown color.

Fig. 1825.—MOLE-CRICKET.

Molière

[JEAN BAPTIST POQUELIN]

1622–1673

Mol'ecular, *a.* [Fr. *moléculaire.*] Belouging, or having reference to, or consisting of molecules or minute particles; as, *molecular* attraction.

M. attraction. (*Chem.*) It is conceived that bodies can be divided into indivisible atoms each having a definite uniform weight and general character. These ultimate particles are generally called *atoms*, while those groups of atoms which form the constituent elements of bodies are called *molecules.* If the specific character of these molecules, and the laws of the forces, whether of attraction or repulsion, which hold them together, were known, it is evident that we should have the true key to tell the changes and sequences of the material universe. A number of attempts have been made to construct theories on this ground, sufficiently general to enable the inquirer to avoid restrictive conditions, and at the same time to afford a base for wide and important conclusions. One of the earliest explorers in the field of molecular theories was Bascovich, who asserted that matter did not consist of solid particles, but of mere mathematical centres of forces. Each body is supposed by his theory to be made up of a number of geometrical points, from which emanate forces following certain mathematical laws, in virtue of which the forces become at certain small distances attractive, and at certain other distances repulsive, and at greater distances again attractive. From these forces of the points arise the cohesion of the parts of the same body, the resistance which it excites against the pressure of another body, and, finally, the attraction of gravitation, which it exerts upon bodies at a distance. The most important works on the subject are those of Gauss on *Terrestrial Magnetism,* and Dr. Simon George Ohm's *Contributions to Molecular Physics.* In the latter work, Ohm supposes that ultimate molecules have both *simple* and *polar* powers, and on the ground of this hypothesis, attempts to educe a complete system from which the phenomena of light, heat, and electricity necessarily and harmoniously flow forth.

Molecular'ity, *n.* State or quality of being molecular.

Mol'ecule, *n.* [Fr., dimin. of Lat. *moles,* a mass.] (*Chem.*) One of the constituent particles of bodies. They are divided into *integrant* and *constituent* molecules. Integrant molecules have similar properties to the mass, and are, therefore, simple or compound, as the mass is either one or the other. Thus a mass of pure metal consists of integrant particles, each of which has metallic properties similar to those possessed by the whole mase. In the same manner, a mass of alloy consists of integrant partioles, each of which is a compound of the different metals forming the alloy. The decomposition of an integrant *M.* yields constituent *M.* Thus the *M.* of water may divide into oxygen and hydrogen molecules. A *M.* may be made up of one or more atoms, but is the smallest mass which can exist in the free state without modification, through subdivision, of its chemical constitution or its physical properties.

Mole'-eyed (*-īd*), *a.* Having very small eyes, like a mole; hence, blind, or of imperfect vision.

Mole'-hill, *n.* A little hillock or elevation of earth thrown up by moles; hence, a very small hill, or minor obstacle or impediment.

Mole, Le, a seaport town on the S. W. extremity of the island of Hayti, West Indies. It has an excellent harbor, and commands an active trade in cotton, coffee, indigo, &c.

Mole'-rat, *n.* (*Zoöl.*) The common name of a genus *Bathyergus,* order *Rodentia,* native of the Cape of Good Hope. It is about the size of a rabbit, and burrows under-ground, throwing up large hillocks, which are exceedingly dangerous to travellers on horseback.

Mole'skin, *n.* A kind of cotton cloth, having a furry or flocculent surface resembling the skin of a mole, and used for garments of laborers, &c.

Molest', *v. a.* [Lat. *molesto — molestus,* from *moles,* trouble, labor, distress; Fr. *molester.*] To incommode or trouble; to vex; to annoy; to render uneasy; to tease; to disturb.

Molesta'tion, *n.* [L. Lat. *molestatio.*] Act of molesting, or state of being molested; dieturbance; annoyance; uneasiness caused by vexation.

Molest'er, *n.* One who molests or annoys.

Molest'ful, *a.* Vexatious; troublesome.

Mole'-tree, *n.* (*Bot.*) The Caper-spurge, *Euphorbia latyris.*

Mole'warp, *n.* Same as Mole, *q. v.*

Molfet'ta, a sea-port town of S. Italy, prov. of Terra di Bari, on the Adriatic, 18 m. N.W. of Bari. Prominent among the public buildings is its magnificent cathedral. It has a considerable trade in corn, oil, and almonds. *Pop.* 24,658.

Molin'inous, *a.* [From Lat. *moliri,* to exert one's self.] Of great bulk, consequence, or import. (R.)

Molière, (*mol'e-air,*) a French dramatist, b. at Paris, 1622. His real name was Jean Baptiste Poquelin, and he took the name of Molière, out of regard to his parents, when he first becama an actor. He was brought up to his father's trade, that of npholsterer; but when 14 yeare of age he was sent to study at the college of Clermont, where he remained several years. As substitute for his father he attended Louis XIII. as valet-de-chambre on his expedition to Narbonne, in 1642. He studied law at Orleans, and was received advocate at Paris, and in 1645 he began acting there with a company of amatenrs. After obtaining great success in the provincee, he eettled at Parie in 1658, having previously produced his two comediee, *L'Etourdi* and *Le Dépit Amoureux.* In the following year he increased bis reputation by the comedy *Les Précieuses Ridicules,* which had a run of about 120 nights. Continuing to produce new plays, and acting in the principal comic parts, he was a favorite both with the court and the people. He succeeded to his father's office under Louis XIV., who gave him, in 1663, a pension of 1,000 livres. He was the in-

Fig. 1826. — Molière.

timate friend of La Fontaine, Boileau, and other distinguished men; but his happiness was impaired by an ill-assorted union with a young actress. He excited the animosity of the medical profession, by several sharp attacks on them in his comedies; and that of the priestly and priest-ridden classes, by his terrible attack on pious hypocrites in the famous *Tartuffe,* which was withdrawn from the stage by order of the king. The order was annulled in 1668. Among the most admired plays of *M.* are, *L'Ecole des Femmes; Tartuffe; Le Misanthrope; Les Femmes Savantes; Le Médecin malgré lui;* and *Le Malade Imaginaire.* In some of his comedies he borrowed from, or imitated, the Latin comic writers, and in some the Italian and Spanish. Among these imitations are *L'Avare, Amphitryon,* and *Les Fourberies de Scapin.* But in the delineation of character and the portrayal of the vices and follies of social life, *M.* is thoroughly original; and whatever materials he may have appropriated from earlier writers, he so treated them as to make the result entirely his own. He is called by Voltaire the Father of French Comedy, and alone among French comic writers is classical. While he treats some subjects with exquieite refiuement, he indulges too frequeutly in ex-

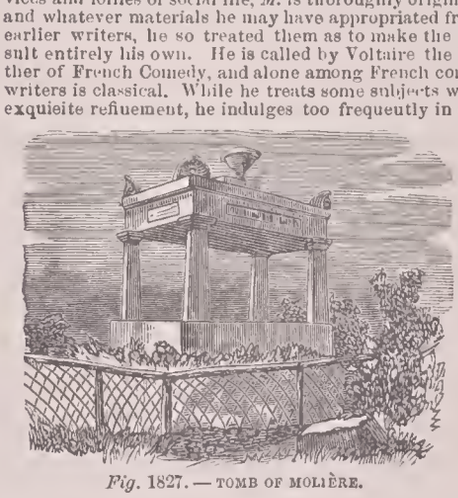


Fig. 1827. — Tomb of Molière.

aggeration, coarseness, and mere buffoonery. His works, it is said, have been more frequently republished than those of any other French author. In 1673, he took part in the presentation of his last comedy, *Le Malade Imaginaire,* being at the time seriously out of health; the effort was too much for him, and he d. the same night, February 27. He was buried without the usual religioue rites, through the influence of the priests, who hated him, though they could allege nothing against his character. His profession excluded him from the French Academy; but a century after his death, his bust was set up in the hall with this iuscription — "*Rien ne manque à sa gloire; il manquait à la nôtre.*"

Moline (*mō-lēn'*), in *Illinois,* a fine city of Rock Island co., on the Mississippi river and three R. R. lines. Has extensive plow factories aud various other large industriee. *Pop.* (1897) 14,700.

Molinists, (*mo-le'nists.*) (*Eccl. Hist.*) The name of a sect in the Roman Catholic Church, which adopted the opinions of Molina, a Spanish Jesuit and professor of theology at Evara, in Portugal, (1535–1600.) In order to remove the difficulties attending the doctrinee of predestination and free will, and to reconcile the jarring opinions of Augustines, Thomists, semi-Pelagians, and otbers, he had recourse to the hypothesis that the decree of predestination to eternal glory was founded upon a previous knowledge and consideration of the merits of the elect; that the grace from whose operations those merits are derived, is not efficacious by its own intrinsic power only, but also by the consent of our own will, and because it is administered in those circnmstances in which the Deity, by that branch of his knowledge which is called *scientia media,* foresees that it will be efficacioue. Thie *scientia media* is that foreknowledge of future contingents that arises from an acquaintance with the nature and faculties of rational beinge, of the circumstances in which they shall be placed, the objects that shall be presented to them, and the influence of these upon their actions. This doctrine was soon violently assailed, especially by the Dominicans, and at length Pope Clement VIII. appointed a congregation to investigate the matter. Opinion was so much divided upon the subject, that the Pope decided that both doctrines (that of Molina and that of his opponents) might safely be taught in the Church. The Molinists, however, soon disappear, as other views iuvolving the question of predestination and grace were advanced. — See Jansenists.

Molino, (*mo-lee'no,*) in *Mississippi,* a village of Tippah co., abt. 40 m. E.S.E. of Holly Springs.

Molinos, Miguel, (*mo-le'nos,*) a Spanish theologian, and founder of the sect called *Quietists,* was b. in 1627, near Saragossa, but passed the greater part of his life at Rome. There, in 1675, he published his celebrated *Spiritual Guide,* which was condemned by the Inquisition 10 years after its first appearance, and the author sentenced to perpetual imprisonment. He d. in prison, in 1696. The followers of *M.,* of whom Madame Guyon was the principal, were called Quietists because they maintained that religion consists in an abstraction of the mind from external and finite objects.

Molise, or **San'nio,** (*mo-lee'sai,*) a prov. of S. Italy, bordering on the Adriatic, having E., S., and W. Capitanata, Principato-Ulteriore, Terra di Lavora, and Abruzzo Citeriore. *Area,* 1,785 sq. m. The surface is mountainous, and in the S. it is traversed by the principal chain of the Apennines. *Prod.* Wheat, millet, maize, fruits, wine, and oil. There are extensive forests, and the inhabitants are generally devoted to pasturage. *Cap.* Campo-basso. *Pop.* 346,007.

Moll, (*mōl,*) *a.* [Ger.] (*Mus.*) Minor.

Mol'la, *n.* The name of a spiritual and judicial officer among the Turks, superior to the cadis or inferior judges, and having civil and criminal jurisdiction over towns or large districts. Over the mollas are the cadileskers, or supreme judges of the empire, who sit in the divan.

Mol'lah, *n.* [Ar. *maula.*] In Mohammedan countriee, a high-priest. (Sometimes written *moolah.*)

Mol'le, *n.* [It.] (*Mus.*) Flat, or lower by a semitone than the sound to whose uame it is appeuded; as, "B *molle.*"

Mol'lebart, Mol'lebœrt, Mould'ebœrt, *n.* (*Agric.*) An implement of husbandry used in Flanders, being a kind of large spade, drawn by a horse, and guided by a man.

Mol'leton, *n.* [Fr.] Swan-skin; a kind of blanket or flannel.

Mol'lient, *a.* Same as Emollient, *q. v.*

Mol'liently, *adv.* Softeningly; assuagingly.

Mol'lifiable, *a.* That may be softened or mollified.

Mollifica'tion, *n.* Act of mollifying or softening; state or condition of being mollified; mitigation; an assuaging or appeasing; — opposed to *induration.*

Mol'lifier, *n.* He who, or that which mollifies, softens, assuages, or pacifies.

Mol'lify, *v. a.* [Fr. *mollifier;* Lat. *mollifico — mollis,* soft, and *facio,* to make; *mollis.*] To soften; to make tender. — To assuage, as pain, anuoyance, or irritation; as, a *mollifying* ointment. — To appease; to pacify; to calm or quiet.

"With sweet science *mollified* their stubborn hearts."—*Spenser.*

—To qualify; to lessen in harshness or asperity; as, to *mollify* a peremptory demand.

Mol'linet, *n.* A mill of inferior size.

Mollities, (*-lish'ī-ēz,*) *n.* [Lat., softness.] (*Med.*) Preternatural softness of an organ or part of an organ.

M. ossium. (*Med.*) A *softening* of the bones. This is one of the most extraordinary diseases to which the body is liable, but fortunately it is a very rare one; and thongh some constitutional predisposition seems to be necessary to lead to it, it has been clearly shown that the immediate exciting cause is, on the part of the patient, an inordinate desire for aud consumption of salt. Mollities ossium may be regarded as a general condition of rickets, in which the bones of the *entire body* are seemingly deprived of their earthy particles — the phosphate of lime, — become little more than gristle, and, like a stick of Indian-rubber, can be bent into any shape the individual or his attendant may please to place them. The disease, though gradnal, is comparatively rapid in its progress; the legs first suffer from pain and weariness, and are soon unable to support the weight of the body; the patient, unable to stand or walk, is obliged to remain seated, when the large bones of the thigh and leg, having lost the counteracting weight of tbeir earthy particles, are by the strong muscles of the hip and legs drawn gradually upwards, till, warped and distorted in an extraordinary fashion, they are finally crossed over the back of the patient's shoulders, the right leg to the left, and the left to the right side; the arme at the same time become similarly deformed, till the helplese patient is fixed like a hideous Mongolian idol, unable to move or even feed himself. — See Rickets.

Mol'litude, *n.* [From Lat. *mollis,* soft.] Softness; effeminacy; languor.

Moll'town, in *Pennsylvania,* a post-village of Berks co., abt. 64 m. E. of Harrisburg.

Mollu'go, *n.* (*Bot.*) A genne of plants, order *Caryophyllaceæ.* They are small prostrate annuals, leaves at length apparently verticillate, each whorl consisting of one or two large, substipulate leaves, with several axillary smaller ones. *M. verticillata,* the Carpet-weed, is found in dry places throughout N. America.

Mollus'ca, *n. pl.* [Lat.] (*Zoöl.*) A branch of the animal kingdom, belongiug to the eeries designated as the *Invertebrates.* They usually possess a shell, the body being covered with a eoft moist skin, mostly

forming over the back a duplication, free at the margin, and termed a *mantle*. The head is more or less distinct, is furnished with tentacles, and is often provided with two eyes. The shell is calcareous, mostly univalve; in some this covering is multivalve, in others internal, and in others absent altogether. The organs of circulation and respiration are generally distinct, and the heart is always aortic. A nervous ring exists around the œsophagus, while the nerves proceeding from ganglia are various in number, and are principally directed to the peripheral parts of the body. Cuvier supposes that the veins of molluscous animals perform the functions of absorbent vessels; their blood is of a white or bluish-white color, and appears to contain a smaller portion of fibrin than vertebrated animals. The muscles are attached to various points of their skin, forming three tissues, which are more or less complex and dense. Their motions consist, principally, of contractions in different directions, which produce inflections and prolongations, or relaxations of their various parts, by which means they creep, swim, and seize upon objects, just as the form of those parts may permit. In the gasteropods, or univalves, locomotion is produced by means of the "foot," a muscular protrusion of the ventral surface, which grasps the ground and drags them forward by its contraction. The skin is naked, very sensitive, and usually covered with a humor that oozes from its pores. The sense-organs vary greatly, but hearing and smell are general, there being in nearly all cases a pair of ear-sacs in the front of the foot and a smelling-patch at the base of the gills. There are well-developed eyes, borne on tentacles, like the snail's "horns," in most of the gasteropods, while many of the bivalves possess a row of eyes on the edge of the mantle. The cephalopoda, or cuttle-fish, have them as com-

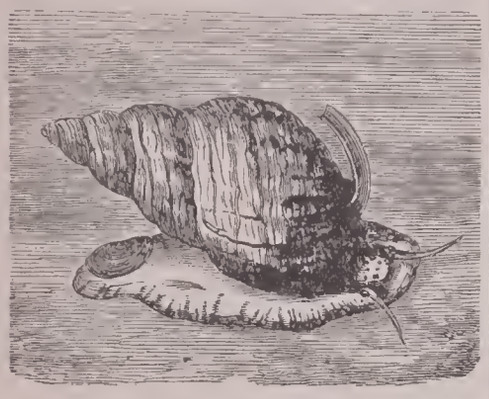


Fig. 1828.—BUCCINUM UNDATUM.

plicated and perfect for purposes of vision as the vertebrate animals, and they are the only class in which the brain has been discovered to be inclosed in a particular cartilaginous box. Nearly all molluscs have, more or less, a development of the skin termed the mantle, as before stated; and this is often narrowed into a simple dish, formed into a pipe, hollowed into a sac, or extended and divided in the form of fins. The *naked mollusca* are those in which the mantle is simply membranous, or fleshy; most frequently, however, it forms in its thickness one or several laminæ, of a substance which is more or less hard, and is deposited in layers, always increasing in extent, as well as in thickness, because the recent layers always outedge the old ones. When this substance remains concealed in the thickness of the mantle, it is customary still to apply the term, *naked mollusca*. Generally, however, it becomes so much developed that the animal, when contracted, can find shelter beneath it. In such a case it is then termed a *shell*, and the animal is said to be *testaceous*. The shells are various, and differ in form, color, surface, substance, and brilliancy. They are usually calcareous, though some are horny, and they always consist of matter deposited in layers, and exuded from the skin under the epidermis, like the enamel covering the nails, horns, scales, and teeth of other animals. All modes of mastication and deglutition can be traced in the mollusca. Their stomachs are sometimes simple, at other times multiple, and frequently provided with a peculiar anatomy, while their intestines are variously prolonged. They commonly have salivary glands, and always a large liver, but neither pancreas nor mesentery; several, also, have secretions which are peculiar to themselves. Their modes of generation vary considerably. Several possess the faculty of self-impregnation; others, although hermaphrodites, have need of a reciprocal intercourse; while many, indeed, have the sexes distinct and separated. Some, again, are viviparous, others oviparous; the eggs of the latter are sometimes enveloped with a shell, more or less hard, but sometimes covered with a simple viscosity. These varieties of the digestive and generative processes are found in the same order, and sometimes in the same family. Molluscs convert nearly every substance, both animal and vegetable, into food, which some take in a decomposed state, while others will only eat such substances as are perfectly fresh. Some are terrestrial, but the bulk of them inhabit only the sea and fresh waters. A few varieties are also amphibious; but this class is much restricted in number. The uses and advantages of molluscs are various. Some supply food to man, and others to birds and fishes. Their shelly coverings are also converted into useful articles of commerce, and the celebrated Tyrian dye of the ancients was made from the veins of different shells, termed *purpura* by the Romans. The molluscs are divided into classes, in accordance with their difference of structure. The most developed of these are the *Cephalopoda*, including the cuttle-fish, nautilus, and other forms. These possess arms attached to the head, forming a circle round the mouth, which aid them in

Fig. 1829.—THE PULP (*Octopus vulgaris*).
(It is the *Pieuvre* of Victor Hugo in the *Toilers of the Sea*, drawn after nature, by M. Mesnel.)

walking, swimming, and food-getting. Modern forms usually possess only a small internal shell. The arms in the Octopus possess sucking disks, by aid of which they cling to their prey. Class II, the *Gasteropoda*, or Univalves, are enclosed in shells usually whorled or twisted, the animal being unsymmetrical in shape. These usually move by aid of the foot. There is a subclass, sometimes considered a distinct class, of pelagic forms, called *Pteropoda*, small in size, with transparent shells, and swimming by aid of the mantle. Class III, the *Scaphoda*, contains a few peculiar forms, such as Dentalium. Class IV, the *Lamellibranchiata*, or Bivalves, include the clam, mussel, oyster, &c. They are the least developed of the molluscs, and often pass a sedentary existence. This is particularly the case with the oyster, which has no powers of motion. Molluscs have existed in great abundance throughout the whole life period of geology and are the best known of all fossil animals, their shells having been preserved in myriads. Remains of all the leading types are found as far back as the Cambrian rocks. At present there are estimated to be 16,000 species of gasteropods, 5,000 of bivalves, and lesser numbers of the other classes, while the fossil forms are known in great numbers.

Mollus'can, Mollus'cous, *a.* Pertaining to, or partaking of, the characteristics of the mollusca.

Mollus'cum, *n.* (*Path.*) A skin disease, generally affecting the hair follicles, and characterized by the appearance of slow-growing soft tumors.

Mol'lusk, Molluscan, *n.* One of the mollusks; an individual of the family *Mollusca*.

Mo'loch, *n.* (*Script.*) See MOLECH.

(*Zoöl.*) A singular genus of Saurians, established by Gray, and thus described in Capt. Gray's Travels in Australia: "Body depressed, covered with irregular, unequal, small, granular plates, each furnished with a more or less prominent central spine, and with a series of large, conical convex, acute spines; head and limbs covered with similar scales and spines; head small, with very large spines over the eyebrows; tail with irregular rings of very large acute spines; femoral and sub-anal pores none; teeth small, subequal; toes 5·5, short, covered above and below with keeled scales; claws long, acute. The external appearance of this lizard is the most ferocious of any that I know, the horns of the head and the numerous spines on the body giving it a most formidable aspect."

Fig. 1830 — MOLOCH HORRIDUS.

Mollus'cum, *n.* [From Lat. *mollis.*] (*Med.*) A cutaneous affection which consists of numerous tumors, varying in size from that of a pea to that of a pigeon's egg, filled with an atheromatous matter, which are developed in the substance of the derma.

Molokoi', or **Morotoi',** one of the Sandwich Islands in the Pacific Ocean; Lat. 21° 9′ N., Lon. 156° 51′ W. It is abt. 40 m. long, and 7 m. broad, and apparently formed by a chain of volcanic mountains. *Pop.* 5,000.

Molosse', Molos'sus, *n.* [Gr. *molossos.*] (*Anc. Pros.*) A foot containing three long syllables.

Molt, *v. a.* and *n.* See MOULT.

Molt'en, *p. a.* (old *pp.* of MELT.) Melted; made of melted metal; as a *molten* image.

Moltke. See VON MOLTKE.

Mol'ton, (South,) a town of England, co. of Devon, on the Mole, 24 m. N.N.W. of Exeter, and 164 m. N.E. of London. *Manuf.* Lace, woollen goods, and felts. *Pop.* 4,500. — N. Molton is 4 m. N. of this town. *Pop.* 2,000.

Molu'ca Balm, *n.* (*Bot.*) See MOLUCCELLA.

Molu'cas, or Spice Islands, a group of the Eastern Archipelago, between Celebes and Papua, belonging to the Dutch. They are generally mountainous, and very fertile. *Prod.* Cloves, nutmegs, sago, breadfruit, cocoa-nut, &c.; also, ebony, and other valuable timbers. Around them are numerous pearl and trepang fisheries. The principal islands are, Amboyna, Bauda, Ceram, Ternate, and Tidore, *q. v.* They were taken by the British from the Dutch in 1796, but restored in 1814. *P.* 331,879.

Moluccel'la, *n.* [From the *Molucca* Islands.] (*Bot.*) A gen. of plants, ord. *Lamiaceæ*. *M. lævis*, the Molucca Balm, or Shell Flower, is a curious garden-plant, smooth in all its parts and of a glaucous green, from 1 to 2 ft. in height. It is chiefly remarkable for its ample, bell-shaped calyx, in the bottom of which is seated the yellowish-green flower.

Moluches, (*mo-loo'ches,*) a warlike tribe of Indians in the W. part of Patagonia, S. America.

Molyb'dena, or **Molyb'denite,** *n.* (*Min.*) See MOLYBDENUM.

Molyb'denate, *n.* (*Chem.*) See MOLYBDENUM.

Molyb'denous, *a.* Pertaining to, or obtained from molybdenum.

Molybde'num, *n.* [From Gr. *molybdaina*, lead, on account of the resemblance of its chief ore, *molybdena*, to black lead.] (*Chem.*) A rare metal found in nature principally as the bisulphide *Molybdena*, in Bohemia and Sweden. It is also found oxidized in combination with lead, as *molybdate of lead*. The metal is obtained by roasting the bisulphide in excess of air, and mixing the remaining molybdic acid into a paste with oil and charcoal. If this be exposed to the heat of a smith's forge, it is reduced to the metallic state as a white, brittle, difficultly fusible mass. It forms three oxides — the protoxide, deutoxide, and teroxide. The two former are possessed of basic properties, and form salts; the latter is *molybdic acid*, the only important salt of which is the phospho-molybdate of soda, which is a test for ammonia. The sulpho-molybdates of the alkalies are beautiful iridescent metallic salts, rivalling in brilliancy rosaniline and murexide compounds. Its other compounds are unimportant. *Equivalent* 96; *sp. gr.* 8·625; *symbol* Mo.

Molyb'dic Acid, *n.* (*Chem.*) See MOLYBDENUM.

Molyb'dous, *a.* (*Chem.*) Having reference to, containing, or procured from molybdenum.

Mol'witz. (*Hist.*) The Prussians defeated the Austrian army in the plain of Molwitz, near Brieg, in Silesia, April 10, 1741. At the commencement of the battle the Austrians were victorious, and Frederick II. fled to Oppeln, were he took refuge in a windmill. This circumstance gave rise to the remark that in this battle Frederick had covered himself with glory and with flour. A writer says: "On this occasion he rode a horse called 'Tall Grey,' which carried him 65 English miles without food or resting. Ever after the battle the horse was called 'Molwitz Grey,' and survived to the year 1760." The panic caused by the defeat of the Prussian cavalry having subsided, the Prussian infantry, who are said to have delivered five volleys for one of the Austrians, gained the battle which Frederick II. deemed lost.

Mo'mence, in *Illinois*, a post-village of Kankakee co., abt. 50 m. S. of Chicago.

Mo'ment, *n.* [Fr.; Lat. *momentum*, contracted from *movimentum* — *moveo*, to move.—See MOVE.] An instant; a second; a twinkling; an infinitesimal portion of time.

"While I a *moment* name, a *moment's* past." — *Young.*

—Force; actuating power; momentum; impulsive weight.

"Can there be a *moment* to our enterprise?" — *Ben Jonson.*

—Consequence; import; importance in influence or effect; weighty significance; estimable value.

"It is an abstruse speculation, but also of far less *moment* and consequence to us than the others." — *Bentley.*

—An essential point; a governing or vital fact, circumstance, or consideration.

(*Mech.*) Force of motion; tendency to cause motion about an axis.

M. of a couple. (*Mech.*) The product of either of the two equal and opposite forces, of which the couple consists, or the distance between their lines of action. The *moment of a force with respect to a point* is the product of the force into the distance of the point from its line of action. The *moment of a force with respect to a plane* is the product of the force into the distance of its

point of application from that plane. The *moment of a force with respect to a line* is found by first resolving the force in two components, one parallel and the other perpendicular to the line, and then taking the product of the latter component into its distance from the line.

Momen'tal, *a.* Same as MOMENTOUS, *q. v.*

Mo'mentarily, *adv.* From moment to moment; every moment.

Mo'mentariness, *n.* State of being of momentary duration.

Mo'mentary, *a.* [L. Lat. *momentarius.*] Continuing only a moment; lasting an infinitesimally short time; done in a moment.

"*Momentary* as a sound, swift as a shadow." — *Shaks.*

Mo'mently, *adv.* Lasting only a moment. — Every moment; as, a person *momently* expected to appear.

Momen'tous, *a.* [Lat. *momentosus.*] Important; weighty; of moment, import, or consequence; as, a *momentous* struggle.

Momen'tously, *adv.* Weightily; importantly; significantly.

Momen'tousness, *n.* State of being of great weight, import, or significance.

Momen'tum, *n.*; Lat. *pl.* MOMENTA; Eng. *pl.* MOMENTUMS. [Lat., movement, weight, influence. See MOMENT.] (*Dynamics.*) The force of a body in motion. When the motion of a body is considered with respect to the mass, or quantity of matter moved, as well as its velocity, it is called its *momentum*, or quantity of motion. The *M.* of a body is therefore in the compound ratio of its quantity of matter and velocity. — Constituent element.

Mom'ier, *n.* [From Fr. *momerie*, mummery.] A term derisively applied to the French and Swiss evangelical Protestants.

Mom'mery, *n.* Same as MUMMERY.

Momor'dica, *n.* [From Lat. *mordere*, to chew.] (*Bot.*) A genus of plants, order *Cucurbitaceæ*, having lateral tendrils, and the fruit splitting when ripe. *M. Balsamina*, a native of the S. of Europe and of the East, produces a curious, oblong, much-warted fruit, called the Balsam-apple, which, when green, is infused in oil, to form a vulnerary much esteemed in Syria and some other countries. The ripe fruit is a dangerous poison. The plant is used to form arbors. The large, red, thorny fruit of *M. mixta*, called *Gol-kakra* in India, is there used for food. *M. echinata* is called the *Gooseberry Gourd*, because its fruit, which is covered with bristles, is about the size and shape of a large gooseberry. The unripe fruit is used for pickling.

Mo'mot, *n.* (*Zoöl.*) Same as MOTMOT, *q. v.*

Mompoj, or **Mompox,** (*mom-poh',*) a town of the United States of Colombia, abt. 140 m. S. by W. of Santa Martha; Lat. 9° 15′ N., Lon. 74° 30′ W. It is the principal entrepot of the valley of the Magdalena, and has an active trade. *Pop.* 10,000.

Mo'mus, *n.* [Gr. *mōmos.*] (*Myth.*) The god of raillery and ridicule, said by Hesiod to have been the progeny of Night.

Mo'na, an island of the W. Indies, in Mona Passage, between Hayti and Porto Rico; *area*, abt. 14 sq. m.

Mo'na, in *Iowa*, a post-village of Mitchell co., abt. 60 m. N.N.W. of Waverly.

Monachal, (*mŏn'a-kal,*) *a.* [Fr.; L. Lat. *monachalis.* From *monachus*, a monk.] Monastic; pertaining or having reference to monks or a monastic life; conventual.

Mon'achism, *n.* [Fr. *monachisme.* See MONK.] (*Eccl. Hist.*) A state of religious retirement, more or less complete, accompanied by contemplation, and by various devotional, ascetic, and penitential practices. Long before the rise of Christian *M.*, the Essenes in Palestine, and the Jewish sect of the Therapeutæ in Egypt, seem to have formed regular communities of ascetics. Christian *M.* may be regarded as having its first beginning in the 2d century, when we find some ascetics who lived in celibacy and voluntary poverty, and shunned intercourse with the world. They, however, lived isolated, and not in communities. The father of *M.* proper is generally agreed to have been St. Anthony, who, in the year 305, collected a number of ascetics into an associated community in Egypt, and regulated their mode of living by fixed rules. His disciple Hilarion soon after undertook the same thing in Palestine and Syria. Almost at the same time, Aones, or Eugenius, with his associates Gaddanas and Azyzus, introduced this mode of life into Mesopotamia and the neighboring countries. These were imitated by many others with so much success, that in a short time all the East swarmed with persons who, abandoning the occupations and conveniences of life, and all intercourse with society, pined away amid various hardships, hunger, and suffering, in order to maintain a closer communion with God, and confine themselves to the exhortations in the Gospel to voluntary poverty (*Matt.* xix. 21), and to celibacy (1 *Cor.* vii. 37). From the East this austere discipline passed into the West, and first into Italy and the adjacent islands; but who conveyed it thither is uncertain. Afterwards, St. Martin, the celebrated bishop of Tours, erected some monasteries in Gaul, and by his example and discourses produced such an effect, that 2,000 monks are said to have assembled at his funeral. This way of life gradually extended over the other countries of Europe. The ancient monks were not like the modern, distinguished into orders, but took their names from the places which they inhabited, or were distinguished by their different mode of living; as — 1. the *Anchorets*, who lived alone in private cells in the wilderness; 2. the *Cœnobites*, who lived in community, several of them in the same house, under the direction of a superior; and 3. *Sarabites*, or strolling monks, who had no fixed rule or residence. The first and last of these came gradually to be absorbed in the regular Cœnobite system, which was principally regarded by the Church, and most under its direction. Originally, monks were no more than laymen, whose office, says St Jerome, "is not to teach but to mourn." Not only were they prohibited the priesthood, but priests were expressly prohibited from becoming monks. Pope Siricius was the first who called them to the clericate, on the occasion of a great scarcity of priests which the Church was then supposed to labor under; and since that time the priesthood has been usually united to the monastical profession. The manner of admission to the monastic life was usually by some change of habit or dress, not to signify any religious mystery, but only to express their gravity and contempt of the world. No solemn vow or profession was required at their admission, but they underwent triennial probation, during which time they were inured to the exercises of the monastic life. If after that time they chose to continue the same exercises, they were without further ceremony admitted into the community. They were also at liberty to return at any time to secular life again. Nor was any solemn vow of poverty required, though it was usual for men voluntarily to dispose of their estates for charitable purposes before they entered into a community. The monasteries were commonly divided into several parts, and proper officers appointed over each of them. Over every ten monks was a *decanus*, or dean, and over every hundred a *centenarius*. Above these were the *patres*, or fathers of the monasteries, called also the abbots or presidents. The business of the dean was to exact every man's daily task, and to bring it to the *œconomus*, or steward, who gave a monthly account of it to the father or abbot; for, as the monasteries at that time had no standing revenues, all the monks were obliged to exercise bodily labor, so as to maintain themselves and not be burdensome to others. The monk that did not work was viewed as no better than a covetous defrauder. Toward the close of the 5th century, the monks, who had formerly lived only for themselves in solitary retreats, and had never thought of assuming any rank in the Church, came to be gradually endowed with such honorable privileges and wealth that they soon found themselves to be in a position of great power and influence. The fame of their piety and sanctity was very great, and the passion of erecting edifices and convents for their benefit was carried beyond all bounds. A new epoch in the history of western *M.* began with Benedict of Nurcia, whose rule (529) came gradually into general use, transforming the previously independent communities into an hierarchical religious order. It became the bond of union for most of the western convents, but the many favors received from church, State, and individuals, facilitated the growth of moral corruption to a great extent, and called forth repeated attempts at reform; so that for many centuries the history of *M.* presents a continued struggle of reformers with the laxity and indifference, obtaining in a greater or lesser number of the convents of their times. Among the earlier of these reformers were Benedict of Aniane, who died 821, and whose commentary on the rule of St. Benedict enjoyed a high character; Benno, who became abbot of Cluny, 910, and laid the foundation of the congregation of Cluny; Romuald, who founded the congregation of Camaldoli, in 1023; and Gualbert, that of Vallombrosa, in 1036. Towards the end of the 11th century arose the Cistercian and Carthusian orders, the order of St. Anthony, the Hospitallers, &c. The warlike spirit of the times brought about a union of the monastic with the military life; and hence arose the various military orders; as, the Knights of St. John, the Templars, the Teutonic Knights, the orders of St. Jago, Calatrava, Alcantara, &c. The large increase of orders called forth much opposition, and the council of Lateran, in 1215, passed a resolution that no new order should be established. Notwithstanding this prohibition, there almost immediately arose an entirely new class of orders: — the Carmelites, Augustinians, and others, who inaugurated a new æra in the history of western *M.* They directed their attention more particularly to the lower orders of society, among whom they became very popular. They spread with great rapidity, and had many important privileges conferred on them by the popes. Several of their members filled the highest offices in the Church, even to the papal chair. In the 14th century, a general degeneracy of *M.* commenced, until at length the name of monk came to be almost synonymous with ignorance and rudeness. The dawn of the Reformation, in the 16th century, had an important influence on this state of things, and strong efforts were made to enforce a more strict observance of the rules of the respective orders. The Council of Trent passed a number of regulations for the internal management of religious houses. Several new orders were formed upon improved rules, the most famous of which is that of the Jesuits, who were, more than any other order, under the absolute power of the Pope. Since the 16th century, however, *M.* cannot be said to have manifested an inherent vitality or power; and with the advance of modern civilization it has lost its highest meaning and conservative use. An account of the principal monastic orders will be found under their own names in other parts of this work. The number of monastic institutions in 1860 was estimated as follows: Male orders and congregations, 83, with about 7,065 establishments, and 100,000 members; female orders and congregations, 94, with 9,247 houses, and a little more than 100,000 members. At present, they are most numerous and influential in France, Belgium, Austria, and S. America. In Spain and the kingdom of Italy they have been almost entirely suppressed: and in Italy, in consequence of recent events, they have been very much reduced.

Mon'aco, a city and principality of Italy, b. S. by the Mediterranean, and surrounded on all other sides by the French dep. of Alpes-Maritimes, 9 m. E.N.E. of Nice, under the protection of France. The city is built on a rocky promontory stretching into the sea, and is walled. The climate is mild, and the country fertile, producing oranges, lemons, and other fruits. *Pop.* (1878), 7,029; of the city, 2,863. *M.* passed into the hands of the Genoese house of Grimaldi, about 968. The male branch of the Grimaldis becoming extinct in 1731, the state passed, by marriage, to the house of Matignon, which assumed the name of the original family. Mentone and Roccabruna having been sold to France in 1861, the principality is now confined to the city of Monaco and the town of Monte Carlo. In 1869, the reigning prince, Charles III., abolished all taxes, his revenue being now confined to the rent of the casino, which has become notorious as a gambling establishment.

Mon'ad, *n.* [Fr. *monade*; Gr. *monas, monados* — *monos*, alone, single = Ir. *amain*, alone, Gael. *mhàin*, only; and probably allied to Gr. *mia, henos*, and Lat. *unus*, one.] An indivisible thing; an ultimate atom or simple unextended point.

(*Metaphysics.*) The word *M.* has been used by Leibnitz and his followers, partisans of what has been called the Monadic Theory. "After studying," says Stewart, "with all possible diligence, what Leibnitz has said of his *monads* in different parts of his works, I find myself quite incompetent to annex any precise idea to the word as he employed it." He then quotes the following as "some of his most intelligible attempts to explain his meaning." "A simple substance has no parts; a compound substance is an aggregate of simple substances, or of monads." "Monads, having no parts, are neither extended, figured, nor divisible. They are the real atoms of nature; in other words, the elements of things." "Every monad is a living mirror, representing the universe, according to its particular point of view, and subject to no regular laws, as the universe itself." "Every monad with a particular body makes a living substance." The groundwork of the monadic theory is to be found in the different philosophical systems of Zeno, Leucippus, Democritus, and Epicurus; but Leibnitz was the first who reduced it to a system.

(*Zoöl.*) The simplest kind of minute animalcules.

Monadel'phia, *n.* [From Gr. *monos*, sole, and *adelphos*, brother.] (*Bot.*) The 16th class in the Linnæan system, characterized by the stamens having their filaments united in a ring or cylinder around the pistil.

Monadelph'ous, *a.* [Fr. *monadelphique.*] (*Bot.*) Having the stamens incorporated by the filaments; pertaining or having reference to the class of plants *Monadelphia.*

Monad'ic, Monad'ical, *a.* Relating or pertaining to monads.

Monad'nock Mountain, or GRAND MONADNOCK, in *New Hampshire*, an elevated peak in Cheshire co., abt. 22 m. E. of the Connecticut River. *Elevation*, about 3,718 feet.

Monadol'ogy, *n.* [Gr. *monas*, unity, and *logos*, treatise.] The science or theory of monads.

Mon'agan, in *Missouri*, a post-village and township of St. Clair co., abt. 28 m. W.S.W. of Warsaw; *pop.* of township abt 1,311.

Monaghan, (*mon'a-han,*) an inland co. of Ireland, prov. of Ulster, having N. Tyrone, E. Armagh, S. Louth and Meath, and W. Cavan and Fermanagh; *area*, 500 sq. m. The surface is hilly, and the soil moderately fertile; agriculture rather backward. The rivers are, the Lagan, Fane, Myrvale, Fin, and Blackwater. There are numerous small lakes. *Prod.* Oats, potatoes, and flax. *Min.* Lead, and limestone. *Manuf.* Principally linen. The chief towns are Monaghan, the cap., a town of 4,000 inhabitants, abt. 76 m. N.N.W. of Dublin, Clones, Carrickmacross and Castleblayney.

Monan'dria, *n.* [Gr. *monos*, single, and *andros*, man.] (*Bot.*) The first class in the Linnæan system, including plants which have only one stamen.

Monan'drous, *a.* [Fr. *monandrique.*] (*Bot.*) Possessing but a single stamen; pertaining or relating to the class *Monandria.*

Mon'amine, *n.* (*Chem.*) See DIAMINE.

Monan'thous, *a.* [Gr. *wonos*, sole, and *anthos*, flower.] (*Bot.*) Single-flowered.

Monarch, (*mŏn'ark,*) *n.* [Fr. *monarque*; It. and Sp. *monarca*; Gr. *monarchos*, ruling alone — *monos*, single, and *archē*, rule.] The ruler of a nation who is vested with absolute sovereign power; an emperor, potentate, or reigning sovereign; a king, queen-regnant, prince, or sovereign whose powers are in some respects limited by the constitution of the government.

"A merry *monarch*, scandalous and poor." — *Earl of Rochester.*

—He or that which is preëminent among others of the same kind.

"Mont Blanc is the *monarch* of mountains."—*Byron.*

—A presiding deity, ruling genius, or patron.

"Bacchus, *monarch* of the vine."—*Shaks.*

—*a.* Supreme; ruling; preëminent; elevated above others.

"The *monarch* oak, the patriarch of the trees."—*Dryden.*

Monarch'al, *a.* Pertaining or having reference to a monarch; befitting a monarch; sovereign; regal; imperial; princely.

"Satan, . . . raised above his fellows, with *monarchal* pride." *Milton.*

Mon'archess, *n.* A female monarch. (R.)

Monarchial, *a.* See MONARCHICAL.

Monar'chians, *n. pl.* (*Eccl. Hist.*) A sect of Christians that arose about the end of the 2d century, and insisted upon the unity or oneness of God, as opposed to the commonly received doctrine of three persons in

the Godhead. The upholders of this doctrine, however, differed greatly from each other on other points, more particularly regardiug the nature of Christ; some of whom held that he was God himself; others, that he was a power or manifestation of the Deity, but that he did not exist as a distinct person before his incarnation; while others regarded him only as a mere man. Their opinions were thus not unlike those of the Unitarians of the present day.

Monarch'ic, Monarch'ical, *a.* [Fr. *monarchique.*] Pertaining or relating to monarchy; as, *monarchical* dignity. (Sometimes *monarchial* is used.)

—Vested in a single ruler; as, *monarchical* government.

"The decretals resolve all into a *monarchical* power at Rome." *Baker.*

Monarch'ically, *adv.* In a monarchical manner; after the style of a monarch.

Mon'archism, *n.* The goveruing system of monarchy; attachment to the principles of monarchy.

Mon'archist, *n.* [Fr. *monarchiste.*] One who advocates monarchy.

Mon'archize, *v. n.* To play the king; to act the monarch or sovereign. (a.)

—*v. a.* To rule; to sway; to govern monarchically. — To change to a monarchy; as, to *monarchize* the constitution of a country.

Mon'archizer, *n.* A monarchist. (R.)

Mon'archy, *n.* [Fr. *monarchie;* Sp. *monarquia;* Gr. *monarchia.* See MONARCH.] A state or government in which the supreme power is vested in the hands of a single ruler, and which is absolute, limited, or constitutional, hereditary, or elective. — An empire; a kingdom; the state or country ruled by a monarch, absolute or constitutional.

Monar'da, *n.* [After *Monarda*, a Spanish botanist of the 16th century.] (*Bot.*) A genus of plants, order *Lamiaceæ.* They are perennial herbs, found more or less throughout the U. States and Canada. *M. didyma*, the Mountain Mint, is a handsome fragrant plant, 2 to 3 ft. high, with crimson or scarlet flowers; stems mostly branching; leaves very broad at base, often cordate, serrate, with scattered hairs above, and prominent hairy veins beneath; flowers in heads, which are often proliferous, with large, ovate-lanceolate bracts tinged with the same color as the corollas; calyx colored; corollas large and showy. The leaves are often used as tea, under the name of Oswego Tea, and the flowers are said to contain the same coloring principle as cochineal. *M. punctata*, the common Horse-mint, is used medicinally, and resembles the ordinary mints in its properties, but is much more stimulating. *M. fistulosa*, the Wild Bergamot, or Horse-mint, is said to be febrifugal.

Monas'ter, or **Bitole'a,** a town of European Turkey, prov. of Macedonia, on the Vestrizza, 82 m. N.N.E. of Janina, and 90 W.N.W. of Salonica. It is the principal entrepôt for merchandise passing from Albania into Roumelia. *Pop.* 15,000. — A seaport-town of N. Africa, on the Gulf of Sidra, 80 miles S.E. of Tunis. *Manuf.* Woollen and camlet fabrics. *Pop.* 12,000.

Monaste'rial, *a.* [Lat. *monasterialis.*] Pertaining or having reference to a monastery.

Mon'astery, *n.* [Fr. *monastère;* L. Lat. *monasterium;* Gr. *monastērion*, from *monos*, sole, single. See MONAD.] (*Eccl.*) A house of religious retirement for monks, sometimes for nuns; a place of seclusion from the world, or from the temporal concerns of life; an abbey; a priory; and, frequently, a nunnery or conveut.

Monas'tic, *n.* A monk a friar.

Monas'tic, Monas'tical, *a.* [Fr. *monastique;* L. Lat. *monasticus.*] Pertaining or having reference to monasteries, or to their inmates; as, a *monastic* brotherhood. — Recluse; secluded from the world and the temporal concerns of life; devoted to religion; as, a *monastic* life.

Monas'tically, *adv.* In a retired or secluded method of life; reclusely; in a monastic or monkish manner.

Monas'ticism, *n.* The system of monastic institutions.

Monas'ticon, *n.* [Gr. *monastikos.*] A book containing an account or description of monasteries; as, Dugdale's *Monasticon.*

Mon'azite, *n.* [Gr. *monazo*, I live alone.] (*Min.*) A native phosphate of cerium, lanthanum, and thorium, found near Slatousk, in the Ural. (See Section II.)

Moncaglieri, (*mon'kal-ye-air'e,*) a town of Italy, prov. of Turin, on the Po, 4 miles S. of Turiu. It contains a royal palace. *Pop.* 9,000.

Mon'cey. ADRIEN JEANNOT, DUKE DE CONEGLIANO, a French marshal, distinguished in the wars of Napoleon I.: b. in 1754. He d. in 1842.

Monch, (*mawnsh,*) ("the Monk,") one of the loftiest of the Alpine heights of Switzerland, cant. of Berne, 3 m. N.E. of the Jungfrau; *height*, 13,045 feet.

Monch'es, in *Wisconsin*, a post-village of Waukesha co., abt. 28 m. N.W. of Milwaukee.

Moncloʻva, in *Ohio*, a post-township of Lucas county.

Monday, (*mŭn'dy*, or *mŭn'dā.*) *n.* [A. S. *Monandæg; moon* and *day* — *i. e.*, the day sacred to the moon; Ger. *Montag.*] The second day of the week; the day following next to Sunday.

Mon'day Creek, in *Ohio*, enters the Hockhocking a few miles above Athens.

—A township of Perry co.

Monde, *n.* [Fr., from Lat. *mundus.*] The world; — hence, inhabitants of the world; society at large; specifically, the upper class of society; as, the *beau monde* (*i. e.*, the bon-ton; the aristocratic circles; the fashionable world). — The globe, as an ensign of dominion. (R.)

Monde'go, a river of Brazil, flowing into the Paraguay River abt. 45 m. below the mouth of the Tacoary.

Mondoʻvi, in *Wisconsin*, a city of Buffalo co., on C., St.P M. & O. R.R., 25 m. S.W. of Eau Claire. *Pop.* (1895) 928.

Mondoviʻ, a walled town of Italy, in Sardinia, near the Ellero, 45 miles S. of Turin. *Manuf.* Woollen and muslin goods, silks, and bonnet-straw. *Pop.* 20,000.

Monee', in *Illinois*, a post-village and township of Will county, about 34 miles south by west of the city of Chicago.

Moneʻka, in *Kansas*, a village of Linn co., about 26 m. N. by W. of Fort Scott.

Monemvasia, MONEMBASIA, or NAPOLI DI MALVISIA, (ancient *Minoa,*) (*mo-nem-va-see'a,*) a maritime town of Greece, in the Morea, on the Ægean Sea, 20 m. N.N.W. of Cape Malea. It stands on an island, having one entrance by a bridge from the mainland, whence it derives its name, and consists of a fortress and an outer town. Near it are the remains of Epidaurus Limera. *Pop.* 2,000.

Monetary, (*mŭn'e-tĕr-y,*) *a.* [Fr. *monetaire.*] Relating or pertaiuing to money, or to moneyed concerns; consisting in money; pecuniary; as, a *monetary* basis, a *monetary* crisis, *monetary* affairs, &c.

Monetary unit. The standard of currency or money value, as the U. S. dollar, the English pound sterling, the French franc, &c.

Monetizaʻtion, *n.* Act, process, or operation of transmutiug or converting into money; as, the *monetization* of gold.

Money, (*mŭn'y,*) *n.; pl.* MONEYS, or MONIES. [A. S. *mynet;* D. *munt;* Ger. *münze;* Ir. *monaz;* Fr. *monnaie;* Lat. *moneta;* perhaps from Heb. *mâne*, part, number — especially, a *mnia* = Gr. *mna*, a weight, a sum of money, from Heb. *mânâ*, to divide out; Chald. *menâ*, to number.] Any substance or device which, by law or custom, serves as a common medium of commercial exchange; specifically, coins and paper currency so employed. In a restricted sense, the term contemplates coins only, as distinguished from paper currency consisting of notes redeemable in coin, or legal tender paper not so redeemable. This distinction has been made by numerous economists, but is not observed in popular usage, and the later academic schools hold that any thing or substance which functions as money is money. "Money is that money does." (*F. A. Walker.*)—A conventional system, with suitable nomenclature, in terms of which values [prices] are expressed and differentiated, debits and credits computed, &c., as the dollar, franc, pound; in this sense known as *money of account*, being from the nature of things an ideal or non-material device, and thus distinguished from monetary tokens, or currency.

(*Fig.*) Wealth; property; an accumulation of exchangeable goods; as, "he married *money.*"

Origin and History.—Money is an outgrowth of necessity; a device developed from the desirability of interchanging goods and services between men and communities. In earliest days one object was exchanged directly for another, as a measure of grain for a skin-bottle, an ox for a camel, etc. We may

Fig. 1831.—FIRST MONEY COINED IN AMERICA.

readily believe that the demand for money first arose from the frequent impossibility of equitably exchanging one whole object for another, and the consequent desire to have some common medium in which the resulting balance might be paid. Another step was made when a community, a tribe, or a nation agreed upon some one special article for which there was a constant demand, and by common consent used such article as a basis of exchange. Thus 1 cowrie, 2 cowries, 10 cowries, &c., came to represent the different values of articles variously esteemed. The cowrie corresponded to our present unit of value, and by its multiples, if not its fractions, any price could be expressed. Next, the credit system was introduced, in accordance with which (for example) A would agree to give B, a year hence, 100 cowries in payment for a goat delivered by B to A to-day. This introduced a new problem in monetary science,—that which we now know as the "standard of value." Would such a goat, a year hence, be worth as much as 100 cowries? A "corner" in cowries, or a scarcity from any other cause, might reduce the *price* to 50 cowries; if so, A would be the loser; but if cowries should become more plentiful, as compared with goats, so that such an animal would readily command twice 100 cowries on pay day, then B would receive in fact only one-half the price for which he bargained. Here arose the necessity for selecting, as a standard of valuation, some substance not subject to fluctuations due to the vicissitudes of production and consumption—some commodity entirely free from the influence of the law of supply and demand. Inasmuch as no such substance has ever existed, it is not strange that this very same problem still vexes the wise economist. But a further complication arose, that of the quantity of the currency. It presently was found (we continue the story as of cowries, because the same principle holds good to-day) that the commercial need of money varied with the seasons and years, and that at times there were not enough cowries to go round. The next development in monetary science, therefore, was the issuance of paper promises to pay money, the integrity and ready exchangeability of which depended upon the resources and honor of the issuer. It may be readily understood, too, that even in the older days there were doubtless those who believed that certain schemers "cornered" the cowrie product; and it is equally probable that occasional widespread doubt as to the existence of sufficient cowries to redeem all the extant promises precipitated panic and commercial disaster. It will be seen, however, that the only important advance, so far noted, from simon-pure barter or spot-exchange of goods, has been the expedient of "inflating the currency" by means of "promises to pay;" and these, if issued in excess of the property they represent, kept actually in hand, seem specially designed to be a menace to the safety and stability of business done on credit. Substantially the same conditions prevail to-day in the monetary systems of the highest civilization, except that such systems are becoming more highly specialized. We have not yet discovered a substance that is changeless in its exchange relations; we still barter commodity (gold) for commodity; but we have learned to more thoroughly inflate the currency by the employment of almost limitless credits, and we periodically suffer from the panics inevitably attending the uncertainty of full redemption. In these respects we have advanced hardly a step since the time of Abraham. A detailed history of monetary systems would be so bulky as to be out of place in this work, and, moreover, would be of small educational value to our readers. The principal questions involved in present financial discussion are elsewhere treated under MONETARY STANDARDS, FIAT MONEY, MONOMETALLISM, BIMETALLISM, GRESHAM'S LAW, VALUE, &c., which see.

CHARACTER AND FUNCTIONS.—In all civilized countries money is a creation of law, and therefore has no legal existence, as money, outside of the jurisdiction under which it is created. The "money of the world," so-called, is not money at all, but a specified quantity of a certain thing. The unit of international exchange is now the grain of gold—a weight troy, and not a monetary unit. By legislative convention a nation or a people can invest any substance whatsoever with the monetary function and even with the legal tender quality; its usefulness as a medium of exchange will then depend upon the degree of exchangeability it may possess, and this will be determined by the amount of confidence it shall command amongst its users. Confidence may be inspired (1) by the use of a valuable material in the substance of the currency, or (2) by implicit belief in the good faith and wealth (resources) of the issuing power. Savage tribes and nomadic races are obliged to use a bartering or commodity system in their exchanges, but a higher civilization performs nine-tenths of its monetary operations by means of a paper currency. With us, credit has supplanted commodity so far as the volume of currency is concerned, although we still employ metal as a so-called standard of value. The purpose of this is professedly to secure a stable monetary unit, but the effect is precisely the reverse. Stability in the *price* of the selected commodity is generally secured, as a matter of course, since such price is expressed in terms of that commodity itself; but this gives no assurance of stability in the purchasing power of the unit so maintained. Metal in the shape of coined money will circulate as currency so long as the bullion contained therein is not greater in exchange value (as expressed in the current money of account) than the amount indicated on the face of the coins; when it exceeds this, the coins circulate no longer, and cease to be money—a common medium of exchange. Commodity money—*i. e.*, money made of or specifically redeemable in gold or silver, or both—involves the essential principle of bartering these commodities for all others—a method that has prevailed since the time of the patriarchs; but we have learned to issue vast quantities of credit paper that is nominally sound because of its convertibility into coin, but which really owes its existence to its convenience and the lack of sufficient metallic money, while its integrity is based upon known possessions of vast general wealth.

Mon'ey, *v. a.* To furnish with funds; to supply with cash.

Moneyed, (*mun'id,*) (sometimes written MONIED,) *a.* Possessing money; rich in money; able to command money; consisting in money; as, a *moneyed* man, the *moneyed* interest.

Mon'eyer, *n.* [Fr. *monnayeur.*] One who deals in money; a money-lender; a banker. (a.) — An authorized coiner.

Mon'eyless, *a.* Impecunious; without money; fundless; penniless.

Mon'ey-matter, *n.* An account involving the employment or exchange of money; a debtor and creditor transaction.

Mon'ey-order, *n.* An order for money issued by one post-office, and made payable at another; — a method adopted for the safe and speedy transmission of small sums of money from one place to another throughout the country. (Called also *Post-office order.*)

Monge, GASPARD, (*mŏnj,*) a celebrated French mathematician and natural philosopher, was B. at Beaune, in 1746; taught physics and mathematics at the military school of Mézières; became a member of the Academy of Sciences in 1780; was made minister of the marine in 1792; and was one of the founders of the Polytechnic School. In 1796 he was commissioned to go to Italy, and collect the treasures of art and science from the countries conquered by the French; and, in 1798, he accompanied Buonaparte to Egypt, where he was chosen president of the Institute of Cairo. Napoleon, when emperor, made him a senator, created him count of

Pelusium, and gave him an estate in Westphalia, accompanied by a present of 200,000 francs. On the return of the Bourbons he was deprived of all his offices and emoluments, and died in 1818. His principal works on geometry, which are among the clearest and best in the French language, are, *Descriptive Geometry*; *The Application of Analysis to the Geometry of Surfaces*; and a *Treatise on Statics*.

Monger, (*mung'gĕr,*) *n.* [A. S. *mangere, manegere.*] A trader; a dealer; one who buys or sells; — principally used in composition; as, fish-*monger*, cheese-*monger*, iron-*monger*, &c.

—*v. a.* To traffic or deal in; to make merchandise or trade of; — chiefly used in composition, in the sense of denoting a petty, illegal, or discreditable traffic.

Monghir, or **Mungger,** (*mon-geer',*) a town of Hindostan, prov. of Bahar, dist. of Bhaugulpore, on the Ganges, 80 m. E. of Patna; Lat. 25° 23′ N., Lon. 86° 26′ E. *Manuf.* Hardware and fire-arms; the latter, however, of a very inferior quality. *Pop.* 30,000.

Mon'go, a mountain-range of W. Africa, opposite Fernando Po, its highest peak, Mongomasomah, "God's mountain," being subject to volcanic eruptions.

Mongo'lia, an extensive tract of country of N. Asia, belonging to China, between Lat. 35° and 52° N., Lon. 82° and 123° E.; bounded N. by the Russian govt. of Irkutsk, E. by Mantchooria, S. by China, and W. by Chinese Tartary; *area*, 1,400,000 sq. m. *Desc.* This immense region is occupied by the great sandy desert of Gobi, and by a high table-land, above 3,000 feet over the sea-level, stretching out in vast plains, surrounded by low ranges of mountains on its northern boundary; from this physical character the climate of the country is often rigorous and colder even than Siberia, while in summer the heat is so intense in parts, that not a blade of grass will grow. The most fertile portion of Mongolia is the whole N.W. belt of the Gobi, through which the caravan road runs from Siberia to China, and from which rise the chief rivers of the country, the Selenga, Kerlon, and Onon. This district forms a separate government of the Chinese empire, the governor residing at Urga, the chief of the very few towns in the country; near to Urga also resides the Kootookhtu, or high-

Fig. 1832. — TARTAR AND MONGOL WOMEN.

priest of the Buddhists. The population of Urga is abt. 8,000, but fully 5,000 of those are Lamas or priest-attendants on the great head of their faith. The Mongols themselves seldom inhabit either towns or villages, but lead a nomadic life, passing the summer on the banks of rivers, where there is abundant pasturage for their flocks; and spending the winter at the base of some tall hill or mountain-range, which affords them protection from the severe winds. The wealth of the natives consists in their numerous flocks and herds of sheep, camels, and horses. The chief mountain-ranges are the Altai, and its subordinate chains. The principal lakes are Baikal Kokonor, or the Azure Sea, Oling, and Dzaring. The wild animals are, antelopes, wild asses, deer, hares, foxes, squirrels, sables, and numbers of marmots. The Mongols are generally satisfied with such food as their flocks supply, and seldom seek for variety, or trouble themselves to cultivate the soil. In summer they live almost entirely on milk, using without distinction or preference that of the sheep, camel, mare, cow, or goat. Their ordinary drink is warm water, in which an inferior tea is infused; with this they mix cream, milk, or butter, according to abundance or convenience. A spirituous liquor to which they are much attached on certain occasions, is distilled from sour mare's milk. The people are very dirty, but are reported to be open and generous; their great pride is to excel in handling the bow and arrow (*Fig.* 1833), in martial exercises, riding, mounting a fleet horse, and hunting wild animals. They have no knowledge of money, and trade only with the Chinese by barter for clothes, silks, arms, tobacco, and other necessary articles, for which they exchange horses, camels, and oxen. Their religion is a kind of Buddhism, called *Lamaism*; for their Lamas or priests they have the most blind and infatuated reverence, giving them whatever they possess of value; and in every respect are the dupes of their ignorant priesthood, to whom they attribute the most miraculous powers. The Mongols are divided into the Eastern or Mongols Proper, and the Western or Calmucks or Eluths. The first, or those only inhabiting Mongolia, are subdivided into three nations, who are all subject to the Emperor of China, whom they consider the Grand Khan of the Tartars. These nations are further split into tribes, each of which has an hereditary chief called a khan, most of whom claim to be descended from Genghis Khan. Each chief pays a small annual tribute to the Emperor; but this is always out of policy returned with a handsome gift by way of acknowledgment for their military services.

Mon'gols, *n. pl.* One of the great ethnological divisions of the human family — the second in the classification of Blumenbach, including not only the Mongols Proper, but the Chinese and Indo-Chinese, Thibetans, Tartars of all kinds, Burmese, Siamese, Japanese, Esquimaux, Samoïedes, Finns, Lapps, Turks, and even Magy-

Fig. 1833. — MONGOL ARCHERS.

ars. Collectively, they are the great nomadic people of the earth, as distinguished from the Aryans, Semites, and Hamites; and are the same who, in remote antiquity, founded what was called the "Median Empire" in Lower Chaldæa, an empire, according to Rawlinson, that flourished and fell between about 2458 and 2234 B. C.; that is, before Nineveh became known as a great city. Nearly all the wandering tribes of Asiatic barbarians that desolated Europe from the 4th to the 12th century are supposed to have been of Mongolian origin. Under their leader Genghis Khan (1206–1227) they ravaged Asia, invaded China in 1210, and Persia in 1218. They invaded Russia in 1235, reached Siberia in 1242, completed the conquest of the empire of the caliphs in 1258, and reached India in 1298. The death of Cazan, May 31, 1304, put an end to the Mongol supremacy in Persia; but under Tamerlano (1370–1405) they reconquered that country, and subdued Hindostan and other parts of Asia. They have been known under various designations; among others, as Scythians, Huns, Tartars, and Turks. Professor Dieterich estimates their number at 528,000,000, or about half the human race. The physical characteristics of the *M.* in their primitive state are thus described by Dr. Latham in his *Descriptive Ethnology*: "The face of the Mongolian is broad and flat. This is because the cheek-bones stand out laterally, and the nasal bones are depressed. The cheek-bones stand out *laterally*. They are not merely projecting, for this they might do without giving much breadth to the face, inasmuch as they might stand forward. . . . The distance between the eyes is great, the eyes themselves being oblique, and their caruncuIæ being concealed. The eyebrows form a low and imperfect arch, black and scanty. The iris is dark, the cornea yellow. The complexion is tawny, the stature low. The ears are large, standing out from the head; the lips thick and fleshy rather than thin, the teeth somewhat oblique in their insertion, the forehead low and flat, and the hair lank and thin." Of course, such a description as this cannot be understood as applying to the more civilized nations of Mongol origin, such as the Turks and Magyars, especially the latter, who in physical appearance differ but little, if at all, from other European nations.

Mongoquinong', in *In* a village of LaGrange co.

Mongoose, or **Mongo's** (*mon-goos'*). See ICHNEUMON, and LEMUR.

Mongrel, (*mŭng'grel,*) *a.* [From A.S. *mengan*, to mix, to mingle; Lat. *misceo*. See MIX.] Of a mixed breed; of different kinds; hybrid; heterogeneous.

"No fools of rank, or *mongrel* breed." — *Swift.*

—An animal of a mixed breed; as, a *mongrel* cur.

Mon'ied, *a.* Same as MONEYED, *q. v.*

Monil'ifer, *n.* (*Pal.*) A certain kind of fossil fish.

Monil'iform, *a.* [Fr. *moniliforme*, from Lat. *monile*, necklace, and *forma*, form.] (*Bot.*) Jointed after the manner of a string of beads; as, a *moniliform* root.

Mon'iment, *n.* [From Lat. *monere*, to remind.] An aid to memory; a reminder. — A mark; an inscription; a token.

Monimia'ceæ, *n. pl.* (*Bot.*) A sub-order of plants, alliance *Menispermales*. — DIAG. Perigynous stamens, pendulous seeds, and a minute embryo on the outside of copious fleshy albumen. This order consists of eight genera of fragrant trees or shrubs, chiefly natives of S. America, but found also in Australia, Java, the Mauritius, and New Zealand. The flowers generally resemble those of *Atherospermaceæ*, which see; but they differ in always being unisexual, in the longitudinal dehiscence of the anthers, and in the absence of feathery styles to the fruit.

Mon'isher, *n.* An admonisher; a monitor.

Moniteau, (*mon-e-to',*) in *Missouri*, a central co.; *area*, abt. 400 sq. m. *Rivers.* Missouri River, and Saline, Moreau, and Moniteau creeks. *Surface*, diversified; *soil*, fertile. *Min.* Coal and limestone. *County-seat.* California.

Moniteau' Creek, in *Missouri*, enters the Missouri River from Cole co.—Another, enters the Missouri River from Howard co.

Moniteur, (*mon-e-tuhr',*) *n.* [Fr.] The name of one of the most celebrated of the French newspapers. It was commenced as a daily journal at Paris on 24th Nov., 1789, under the title of *Gazette Nationale, ou le Moniteur Universel*. At first it was a simple gazette, without any official character; but on the 7th Nivose, of the year VIII. (1799), it was declared an official organ, and it still continues to be the official organ of the French government. Since 1811, it has dropped the title *Gazette Nationale*, and retains only that of *Moniteur Universel*. It contains, in addition to news foreign and domestic, literary notices, &c., not only the official ordinances and documents of the government, but also such political information as the government intends to be regarded as official. It now comprises upwards of 100 thick folio volumes, and contains a vast amount of valuable information connected with the history of France. Entire sets of it are now rare and very valuable.

Monition, (*-nish'un,*) *n.* [Fr.; Lat. *monitio*, from *moneo, monitum*, to remind.] A reminding or admonishing; warning; instruction given by way of caution; as, "the counsels and *monitions* of reason." (*L'Estrange.*). —Information; indication; hint.

(*Law.*) In admiralty practice, a process summoning a party to appear and answer an alleged charge.

Mon'itive, *a.* Admonitory; conveying warning or counsel.

Mon'itor, *n.* [Lat., one who warns.] One who reminds or admonishes; one who points out faults, or informs of dereliction of duty; one who gives advice and instruction by way of reproof or caution.

"You need not be a *monitor* to the king." — *Bacon.*

—A pupil selected to supervise the conduct of scholars in schools or seminaries in the absence of the instructor, usher, or preceptor.

(*Zoöl.*) A genus of large lizards, having teeth in both jaws, and none on the palate. The greater part have the tail compressed laterally, as an adaptation to their aquatic habits. The first of the two distinct groups into which the genus is divided bears the name of Nilotic monitors, their chief characteristics being numerous small scales upon the head and limbs, and a keel above the tail, formed of a double range of projecting scales. The second group carries angular plates upon the head, while the body and tail carry large rectangular scales. The monitors are found in most parts of the world, and the fossil remains of species larger than any at present in existence have been discovered in Europe. Their name is said to be derived from their making a whistling sound as a warning of the approach of crocodiles and alligators, whose haunts the monitors frequent.

Fig. 1834. — MONITOR OF THE NILE. (*M. niloticus.*)

(*Navy.*) A species of iron-clad war-vessel, invented by Capt. John Ericsson of New York, in which the guns are carried in one or more iron turrets, which may be rotated either by hand-winches, or by a steam-engine, so that the guns may be fired in any required direction, and which derives its name from that of the first vessel of this kind that was constructed. It is far superior to the turret-ship (*q. v.*), adopted by the British navy, in this respect that the American *M.* is so provided with artificial ventilation that all the orifices in the deck may be hermetically sealed, except those provided for the admission of the air, which enters through high shot-proof trunks; which trunks, while admitting the air, exclude the water. They may thus be made much thicker in the sides than any other vessels which depend for their ventilation upon open hatches or gratings, as the sides may, without risk, be made very low. Usually only a portion of the saving effected in the weight by lowering the side is expended in increasing the thickness of the armor, the residue being expended in increasing the weight of the gun and the power of the engine. Much doubt was at one time entertained by some, whether vessels with the low sides of the *M.* would be safe at sea. But such doubts were at once extinguished by the course and result of the engagement between the *Monitor* and *Merrimac*, in Hampton Roads, March 9, 1862; and it is plain that as the *M.* construction combines the greatest power of resistance, it constitutes one of the most formidable varieties of the war-vessels of the present day. The presiding principle in the design of the first monitors was concentration. The armor was collected into a narrow belt of great thickness, and into a single turret, though in some cases two turrets were employed, each carrying two guns of great size, the turret being attached to the vessel by means of the central spindle, and the bottom edge of the turret resting water-tight upon a metal ring let into the deck.

This armor or belt of iron was applied to the outside of the ship, and projected several feet beyond the stem, being prolonged at stem and stern to form a ram at each end, and also to protect the rudder and the screw from shot. The turret was placed in the center of the

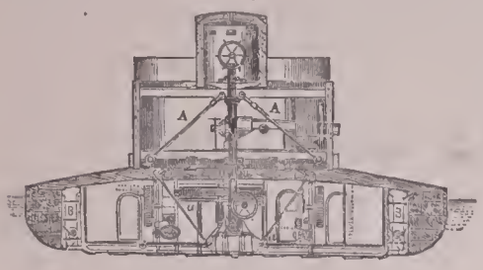


Fig. 1835.

MONITOR "NAUSET."—SECTION THROUGH TURRET.

A A. Coating of hard timber 5 feet thick at the boilers. B B. Space between the wood casing and the skin of the ship, for pipes through which air passes for ventilation. *a a a a.* Diagonal braces attached to the interior of the turret to support the hull.

ship; and to the top of it a bell was attached to throw off any water that might dash against it. The top of the turret was covered with strong bars of iron, set about two inches apart, over which were spread perforated iron plates 1 inch thick. The turret was for the most part built up of thicknesses of inch plate riveted together, but the central part was built of thick slabs of wrought iron. The pilot-house was a cylindrical iron chamber, set on top of the central pillar or spindle, round which the turret revolved. The iron wall of the pilot-house was pierced with sight-holes. Within the pilot-house the steering-wheel was placed, and the captain of the vessel could there direct the steersman, while the gunners were below the grated platform on which he stood, and therefore easily accessible to instructions. The ventilation of the ship was maintained by fans, which sucked the air through high trunks or tubes, made shot-proof, and also inaccessible to rain or spray, the top being covered by a hood. The air having

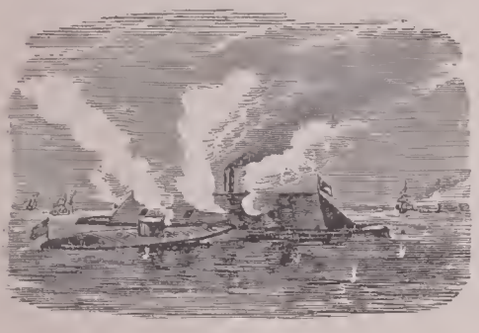


Fig. 1836.

BATTLE BETWEEN THE "MONITOR" AND "MERRIMAC" IN HAMPTON ROADS.

traversed the ship, finally entered the furnaces and escaped by the chimney, the bottom part of which was made shot-proof, and a grating of bars was also carried across it to prevent shells from being sent through the chimney into the flues of the boiler. The bell mouth of the turret had a promenade or platform carried around its edges; and a narrow grated hurricane-deck, supported on pillars, was carried from the after side of the turret for some distance toward the stern. From this deck the ship's boats were suspended. The cabins were lighted from the deck with bull's-eyes, proper shutters being provided to cover these lights when the vessel was in action, at which times the cabins were lighted artificially. The English iron-clad *Inflexible* carried four 81-ton guns in turrets, protected by 18-inch armor, and two Indian ships, launched in 1878, were mounted with four 100-ton guns. See TURRET-SHIP; VESSELS, ARMORED; NAVY; and MONITOR in SECTION II.

Mon'itor, in *California*, a village of Alpine co.

Monito'rial, *a.* Relating or pertaining to a monitor. Performed by a monitor. — Conducted by or under the supervision of monitors or subordinate teachers; as, *monitorial* instruction.

Monito'rially, *adv.* In a monitorial or warning manner.

Mon'itory, *a.* [Fr. *monitoire*; L. Lat. *monitorius.*] Conveying admonition or warning; instructing by way of caution.

"Losses, miscarriages, and disappointments, are *monitory* and instructive." —*L'Estrange.*

Mon'itress, Mon'itrix, *n.* A female monitor.

Monk, GEORGE, DUKE OF ALBEMARLE, a distinguished military commander, and the great promoter of the restoration of Charles II., was the son of Sir Thomas Monk, of Potheridge, Devonshire, and B. in 1608. Being a younger son, he entered the army as a volunteer, and served under his relation Sir Richard Grenville, in an expedition to Spain, and afterwards served for some years in the Netherlands. On the breaking out of the war between Charles I. and the Scots, in 1639, he obtained a colonel's commission, and attended the king in both his expeditions to the north. When the Irish rebellion began in 1641, his services there were so very important, that the lords-justices appointed him governor of Dublin. On his return to England he was sent to relieve Nantwich, where he was taken prisoner by the army of the Parliament, and sent to the Tower, where he remained till 1646. The royal cause being ruined, he obtained his liberty on condition of taking a command in Ireland, concluded a peace with the rebels, which displeased the Parliament, and had a vote of censure passed upon him for it. Cromwell, however, who thought highly of his military talents, made him lieutenant-general, and gave him the chief command in Scotland. *M.* distinguished himself at the battle of Dunbar, and afterwards in the war with the Dutch. He resumed his command in Scotland. But the sagacious Protector had strong suspicions of *M.*'s sincerity; and not long before his death wrote him a letter, to which he added this postscript: "There be that tell me that there is a certain cunning fellow in Scotland, called George Monk, who is said to lie in wait there to introduce Charles Stuart; I pray you use your diligence to apprehend him and send him up to me." On the decease of the Protector, the resignation of power by his son, and the contest of parties which subsequently took place, he availed himself of the commanding situation which he occupied, to crush the republicans, and promote the recall and restoration of the Stuart family to the throne, in the person of Charles II. As the reward of his loyalty, he was created Duke of Albemarle, with a pension of £1,000 a year, made a privy-councillor, and invested with the order of the Garter. In 1664 he was appointed admiral of the fleet in conjunction with Prince Rupert, and in 1666 obtained a great victory over the Dutch, in a battle which lasted three days. He D. in 1670, and was buried in Westminster Abbey. Guizot has written a *History of General Monk*, which has been translated into English.

Monk, (*mŭnk,*) *n.* [A. S. *monec;* Ger. *mönch;* Icel. *munkr;* It. *monacho;* L. Lat. *monachus* = Gr. *monachos*, an anchorite, from *monos*, alone.] One of a religious community withdrawn from general intercourse with the world; a solitary; a recluse; an anchoret.

(*Typog.*) In printing, a blur of ink on a page of type, caused by a superfluity of ink; — in contradistinction to a *friar*, or white vacuum, occasioned by a deficiency of ink.

Monk'ery, *n.* Monastic life; — used, generally, in a reproachful sense.

"Wretched dead mediæval *monkeries.*" —*Carlyle.*

Monkey, (*mŭnk'y,*) *n.*; *pl.* MONKEYS. [From *monikin*, or *manikin* — A. S. *mon, man,* man, and term. *kin*, a little man.] (*Zoöl.*) In the article on *Mammalia* the reader will find that the larger section of the animal creation has been divided into various classes in a descending scale, from the highest animal, man, to the lowest group of the cetaceous or whale tribe. Ranking next to man are the Quadrumana, under which heading apes, baboons, gorillas, and monkeys are generally classed. As the other subdivisions have been already described in distinct articles, the present one will be only devoted to the consideration of the monkeys proper, whose technical characteristics will be found given under the article *Simiadæ*. The true monkeys, the *sapajous*, are only such as have prehensile tails, and are inhabitants of South America exclusively; but as the name has become extended in its signification, the monkeys of the whole world may as well be described at the same time. The monkeys form by far the largest portion of the quadrumana. The *sapajons* are very active, climb well, and by the aid of their tail, which is as good as another hand, they can spring from tree to tree in the vast forests of South America with inconceivable rapidity and agility. The fore-hands, however, are not so perfectly organized as those belonging to the monkey of Africa, the thumb being longer and more on a line with the other fingers. The facial angle of the *sapajons* is 60°, which forms a marked contrast to others of the species. They are small in size, and very playful. Foremost among them may be placed the weeper, *Cebus apella*. Its fur is of a rich olive-color, inclining to golden on the lighter parts. There is also the horned Sapajon, *Cebus fatuellus*, the Large-headed Sapajon, *Cebus monachus*, and more than fifteen or sixteen other species. To turn to the monkeys of Asia and Africa, we find a great change in the generic character. The first variety is the Spotted, or Diana *M.*, *Cercopithecus Diana* (Fig. 813). The Green *M.*, *Cercopithecus sabæus*, is one of the most prolific of the group, and is oftener seen in a state of captivity. It is a native of the Cape de Verd Islands, and of the continent of Africa. In its disposition, it approaches the long-armed apes, although it is more lively and playful. The color is greenish-yellow above, arising from the hair being arranged according to different shades of yellow and black; but the color is more of a dark, grizzled appearance on the sides of the body, and on the sides of the limbs, which becomes gradually darker towards the hands. The face, ears, and naked part of the hands are of a jet-black; the former is of a triangular shape, bounded above the eyes by a straight line of stiff black hair, and on the sides by spreading tufts of light hair, with a yellowish tinge, meeting in a point beneath the chin. The neck and chest, and the under parts of the body, have a yellowish tinge, and the inside of the limbs is grayish in color. The length of the head and body is about from 16 to 18 inches, while that of the tail is somewhat more. One of the most peculiar of the monkey class is the genus termed the Proboscis monkey, *Nasalis larvatus* of Geoffroy, which is distinguished by the extraordinary elongation of its nose, which gives it the most grotesque appearance. This nose is about four inches long; the body is unshapely, protruding in front, like the ourang's; the arms are of considerable proportionate length, like the gibbon's; while, like the howling monkeys, it possesses a large guttural sack; the presence, also, of a very long tail and naked callosities combine, with the protrusion of the nasal organ, to give the Proboscis *M.* the most eccentric and peculiar appearance of the whole tribe. It is about three feet in height, and is a native of the island of Borneo. The Red *M.* may next be mentioned, as it is one of the oldest known to naturalists. It is a native of Senegal. The length of the body is about a foot and a half, or one foot four inches, while that of the tail is nearly equal. All the upper parts are of a brilliant reddish fawn color, which is shaded into a pale grayish tinge on the arms and legs, while the face, cheeks, breast, and under-surface of the body are pure white; a band of black hair crosses above the eyebrows, and there are two lines of the same color upon the upper lip in the shape of a moustache, which tends to give this *M.* a most peculiar appearance. The Entellus *M.* (*Semnopithecus entellus* of F. Cuvier) is another variety, a native of the Indian Archipelago, and of some parts of the Asiatic continent. According to Cuvier, the height of the Entellus *M.* is generally about one foot five inches, and the length of the tail two feet. Another species, the Negro *M.* (*Semnopithecus maurus*), is a native of Java and Sumatra; is somewhat larger than the variety last described; the length of the body being about two feet and a half, and that of the tail nearly equal. According to Doctor Horsefield's description, this class of *M.* inhabits the extensive forests of the Spice Islands, and associates in numerous bands or societies, numbering more than fifty at a time, and is pursued by the natives for the sake of the fur. In these pursuits, which are regularly organized and prepared beforehand by the chiefs of the various tribes, the animals are attacked with cudgels and stones, and are destroyed in large numbers. The skins are then prepared by a simple process, which the natives learned from Europeans, and are exported. The fur is of a jet-black color, covered with long, silky hair. The Simpai (*Semnopithecus melalophos* of F. Cuvier) is also a native of Java and Sumatra, and is remarkable for the flatness of the face and the development of the

Fig. 1837. — THE ANDAMAN MONKEY.

(At the Zoölogical Society's Gardens, London.)

facial angle. The White-eyelid *M.* (*Cercopithecus fuliginosus* of Geoffroy) is distinguished by the peculiar color of the eyelids; they are of a clear grayish-white, but with a dead chalky line. The hair is soft and fine to the touch, and in the upper parts is sooty black, which is even darker on the hands, but which generally shades into a yellowish tint on the breasts, belly, and inside of the thighs, and on these parts the thin coating of hair plainly shows the skin, which is of a very pure flesh-color. — The last genus, a female *M.* of a species hitherto unknown to naturalists, was presented to the Zoölogical Society of London, by Capt. Brown, R. N., of her Majesty's ship *Vigilant*. It dates its joining the ship's company from Port Blair, Andaman Islands, in the Gulf of Bengal, Lat. 11° 43′ N., Lon. 92° 47′ E., in the year 1864. "Jenny (for that is her name) is supposed to be eight or nine years old. For after four years she 'served' on board the ship, and having passed all the dangers of the Abyssinian campaign, being discharged with a first-class certificate and silver chain and medal for good conduct, she is now waiting to receive her share of the prizes taken during the time she was in her Majesty's service. Jenny stands about two feet four inches in height. In general appearance she is most like the 'pig-tailed' *M.* (*Macacus nemestrinus*), but is at once distinguished from that species by a remarkable arrangement of the hair on the top of the head, which is somewhat of a V-shape, and is parted down the middle. The hair itself is very fine, and is elegantly arranged around the ears. The first impres-

sion upon seeing this animal is, that it is intermediate between *Macacus rhesus* and *Macacus nemestrinus*. The face is by no means fierce; the features may even be called good-natured. She has been made a great pet by the sailors. The result is that she has been educated to an extraordinary degree of cleverness. She is fond of company, and her constant companion is a chicken (a regular ship-chicken, with hardly any feathers), which lives with her in her cage day and night, and accompanies her in her perambulations. She walks upright on her hind-legs with remarkable facility, and with much less effort than even the performing *M.*, as seen in the streets. When in an erect attitude, she will carry things. Thus she will pick up her chicken, and run about with it, holding it in her arms as a nurse does her child. The chicken does not seem to mind this in the least. At the word, 'Heave her overboard!' Jenny throws the chicken smartly away from her. It has been said that monkeys would talk, but that they know that if they talked they would be made to work. Now the Andamanian Jenny forms an exception to the 'working' part (only that is very agreeable work) of the story; for if a soda-water bottle is given to her, she will set to work to untwist the wire. This done, she will get out the cork, if it be not too tightly fixed, and then drink the contents of the bottle. Her attitude in drinking is something quite new. She sits down on her haunches, holds the bottle with both hands, and tilts the end of it up with her hind-foot, so that the liquid shall flow at the proper level into her mouth. In this attitude her appearance is highly comical, and at the same time very interesting. The most extraordinary part of Jenny's performance is that she smokes a pipe. Other monkeys will carry a pipe in their mouth, and pretend to smoke, but this is the first monkey that we have ever known actually to smoke lighted tobacco out of a pipe. Other monkeys will drink grog, but Jenny is especially fond of it, and always takes her glass with her pipe, which she enjoys quite as much as Forecastle Jack after he has been reefing topsails." See CHIMPANZEE, GORILLA, ORANG-OUTANG, QUADRUMANA, SIMIADÆ, &c.

—A term of contempt, or of slight kindness. (Used colloquially.)

"Poor *monkey!* how wilt thou do for a father?" — *Shaks.*

—The weight of a pile-driver, that is, a very heavy mass of iron, which, being raised on high, descends with great momentum on the head of the pile, and forces it into the earth.

Mon'key-apple, *n.* (*Bot.*) See CLUSIA.

Mon'key-block, *n.* (*Naut.*) A small, stropped, single block.

Mon'key-boat, *n.* (*Naut.*) A boat employed in harbor-service.

Mon'key-bread, *n.* (*Bot.*) The fruit of *Adansonia digitata*.—See ADANSONIA.

Mon'key-flower, *n.* (*Bot.*) See MINSULUS.

Mon'key-grass, *n.* (*Bot.*) See LEOPOLDINIA.

Mon'keyism, *n.* The characteristic qualities of a monkey; hence, resemblance to a monkey in conduct and actions.

Mon'key-jacket, *n.* A tailless, close-fitting jacket, made of stout, nappy cloth, usually worn double-breasted and buttoned.

Mon'key-pot, *n.* (*Bot.*) See LECISTRIS.

Mon'key-rail, *n.* (*Naut.*) A second rail, lying a little above a ship's quarter-rail.

Mon'key-tail, *n.* A short, round, iron bar used in naval gunnery.

Mon'key-wrench, (*-rĕnch,*) *n.* A spanner with a movable jaw, which can be adjusted by a screw or wedge to the size of the nut which it is required to turn.

Monk'-tish, *n.* (*Zoöl.*) See SQUALINÆ.

Monk'hood, *n.* State or condition of a monk; monasticism.

(*Bot.*) See ACCONITUM.

Monk'ing, *a.* Monkish.

Monk'ish, *a.* Monastic; pertaining or having reference to, or resembling, monks; consisting of monks; as, a *monkish* fraternity, *monkish* dress, *monkish* superstitions.

Monk'ly, *a.* Relating to or befitting a monk; monkish.

Monk's-seam, *n.* (*Naut.*) A seam made by overlapping one selvage of a sail over another.

Monk'ton, in *Vermont*, a post-township of Addison co.

Monk'ton Mills, in *Maryland*, a post-village of Baltimore co., abt. 22 m. N. of Baltimore.

Mon'mouth, JAMES FITZROY, DUKE OF, a natural son of Charles II., of England, was b. at Rotterdam, in 1649. He was distinguished by his personal attractions, his affable address, and thoughtless generosity; hence he became very popular. But he was weak-minded and pliant; and had he not resigned himself to the guidance of the restless and ambitious Shaftesbury, who flattered him with the hopes of succeeding to the crown, his popularity would never have become dangerous. At the age of 14 he was created Duke of Monmouth, and two years later was made Master of the Horse. He was concerned in various plots, which had for their object the exclusion of the Duke of York from the crown; and he was, in consequence, ordered by Charles to quit the kingdom. On the accession of James II., being urged to the act by some of his partisans, he left Holland and landed at Lyme with scarcely a hundred followers, (June, 1685,) but their numbers were soon increased, and he assumed, at Taunton, the title of king, and asserted the legitimacy of his birth. The royal forces were sent against him, and an engagement took place at Sedgmoor, near Bridgewater, on the 6th July. The rebels were defeated, and the Duke himself was made prisoner, being found in the disguise of a peasant, lying at the bottom of a ditch, overcome with hunger, fatigue, and anxiety. He nobly refused to betray his accomplices, and conducted himself with much firmness on the scaffold, where his head was severed from his body, after four unsuccessful blows, 15th July, 1685. The people, of whom he was still the favorite, believed that the person executed was not *M.*; and it was probably this belief which has led some to conjecture that the famous *Iron Mask* was the Duke of Monmouth.

Mon'mouth, a maritime co. of the W. of England, bounded N. by the cos. of Hereford and Brecknock, E. by Gloucester, S. by the British Channel, and W. by Glamorgan. *Area*, 446 sq. m. The surface is extremely diversified; the soil is fertile, particularly in the E., and along the river Usk. The rivers are the Usk, Rumney, Wye, and Ebwy. *Prod.* Wheat, barley, oats, &c. *Min.* Iron, stone, lead, coal, and limestone. *Manuf.* Woollen goods. The cap. is Monmouth.

MONMOUTH, the cap. of the above co., at the confluence of the Monnow and Wye, 21 m. W.S.W. of Gloucester. The Saxons erected here a fortress, which, after the Conquest, was bestowed upon William Fitz-Baderon, whose sons assumed the surname of *Monmouth*. In 1240,

Fig. 1838. — MONMOUTH CASTLE.
(From a sketch on the spot, by Prout.)

two hospitals were founded by John de Monmouth, and in 1257, John, Lord of Monmouth, rebuilt the castle (Fig. 1838) on a larger scale. It suffered so severely from siege by the Earl of Leicester, in 1265, that it had to be rebuilt. It then passed into the hands of John of Gaunt. Henry V. was born here, Aug. 9, 1388. *Pop.* 5,346.

Monmouth, (Battle of.) (*Amer. Hist.*) An engagement between the American forces under Gen. Washington, and the British under Sir Henry Clinton, took place near Freehold, Monmouth co., N. J., June 28, 1778. Gen. Washington, having overtaken the British forces which had previously evacuated Philadelphia for the purpose of embarking at Sandy Hook, ordered the advance, under Gen. Charles Lee, to attack the enemy. The Americans were at first successful, but from some unknown cause, they were seized with a panic, in which Gen. Lee participated, and fell back to the main body. Gen. Washington, with the latter, succeeded in rallying the fugitives, and repulsed the British. The approach of night and the exhaustion of the men prevented a pursuit, and the British succeeded in embarking under cover of the darkness. The American lose was 69 killed and 160 wounded; that of the British, nearly 300 killed, and 100 prisoners, including the wounded.

Mon'mouth, in *Illinois*, a city and township, cap. of Warren co., on the Ch., B. & Q. and Iowa Cent. R. Rs., 15 m. W. by S. of Galesburg. Has extensive and varied industries. Seat of Monmouth College. *Pop.* (1897) 6,500.

Monmouth, in *Indiana*, a post-village of Adams co., about 114 m. N.E. of Indianapolis.

Monmouth, in *Iowa*, a post-village of Butler co., about 12 m. N.W. of Waverley.

—A post-township of Jackson co., about 35 m. S. by W. of Dubuque.

Monmouth, in *Kansas*, a township of Shawnee co.

Monmouth, in *Maine*, a post-town and township of Kennebec co., about 15 m. S.W. of Augusta. *Pop.* (1897) 1,385.

Monmouth, in *New Jersey*, an E. central co., bordering on the Atlantic Ocean; *area*, about 415 sq. m. *Rivers.* Navesink and Manasquan rivers, Crosswick's and Doctor's creeks. The coast is indented with numerous bays and inlets, the most important of which are Sandy Hook and Raritan Bays. *Surface*, finely diversified; *soil*, very fertile, producing in one year nearly 800,000 bushels of potatoes, besides the usual quantity of other crops. *Cap.* Freehold. *Pop.* (1895) 75,543.

Monmouth, in *Oregon*, a post-village of Polk co., about 7 m. S.E. of Dalles.

Monni'na, *n.* [After *Monino*, a Spanish botanist.] (*Bot.*) A genus of plants, order *Polygalaceæ*. The bark from the roots of *M. polystachya*, and *M. salicifolia*, is especially remarkable for the presence of a saponaceous principle; it is used in Peru as a substitute for soap, and for cleaning and polishing silver. The bark is, moreover, said to be a valuable medicine in diarrhœa and similar diseases.

Mo'no, in *California*, an E. co., adjoining Nevada. *Area*, abt. 3,200 sq. m. *Rivers.* Owen's River, and several smaller streams. Mono Lake (*q. v.*) is in the N. central part of the co. *Surface*, mountainous; the Sierra Nevada forming the S.W. boundary; *soil*, in some parts fertile. *Min.* Gold and silver. *County-seat.* Bridgeport.

Monobas'ic, *a.* [Gr. *monos*, sole, and *basis*, base.] (*Chem.*) Possessing only one part of base to one of acid.

Monoc'acy, in *Maryland*, a post-village of Frederick co., abt. 50 m. W. of Baltimore.

Monocacy Creek, in *Pennsylvania*, enters Lehigh River in Northamptou co.

Monocacy River, in *Maryland*, is formed in Frederick co. by the confluence of several creeks which rise in Adams co., Pennsylvania, and flowing S., enters the Potomac River near the border of Montgomery co. *Length*, abt. 50 m. On the banks of this stream, July 9, 1864, the Confederates, under Gen. Early, defeated the Nationals, under Gen. Wallace.

Monocar'dian, *a.* [Gr. *monos*, and *kardia*, heart.] Having a single heart, as certain animals.

Monocar'pous, *a.* [Gr. *monos*, single, and *karpos*, fruit.] (*Bot.*) A term invented by De Candolle to designate what gardeners call *annual plants*, and a few others which, like the American aloe, although they may live for many years, yet perish as soon as they have once borne fruit.

Monoceros, (*-os'se-ros,*) *n.* [Lat., from Gr. *monos*, sole, and *keras*, horn.] (*Astron.*) A modern constellation, made out of the unformed stars of the ancients that lay scattered over a large space of the heavens, between the two dogs. It contains 31 small stars.

Monochlamyd'eæ, *n. pl.* (*Bot.*) Same as APETALÆ, *q. v.*

Monochlamyd'eous, *a.* [Gr. *monos*, and *chlamys*, a cloak.] (*Bot.*) A term applied to those plants which have but one floral envelope.

Mon'ochord, (*-kôrd,*) *n.* [Gr. *monos*, and *chordē*, a musical string.] (*Mus.*) An instrument of one string, used to ascertain and demonstrate the several lengths of the strings required to produce the several notes of the musical scale.

Monochromat'ic, *a.* [Fr. *monochromatique.*] Consisting of one color only.

M. lamp. (*Chem. and Optics.*) When a solution of common salt is added to spirit of wine, the mixture burns with a flame in which yellow predominates almost to the exclusion of the other colored rays; the consequence is, that objects viewed by this light are all either yellow or black, and deficient in the tints which they exhibit when seen by solar light, or by that of our ordinary combustibles.

Mon'ochrome, *n.* [Gr. *monochromos*, of one color.] (*Paint.*) A painting executed in a single color, but relieved by light and shade. A drawing in chiaro-oscuro is a monochrome, whether in black and white, or in any color and white. Many of the ancient painters were monochromists, as for instance Zeuxis; the sciagram or silhouette is not a monochrome, though executed in a single color.

Monochron'ic, *a.* [Gr. *monos*, single, and *chronos*, time.] Contemporaneous; coeval.

Monocil'iated, *a.* [Gr. *monos*, and *cilium*, an eyelash.] Having but one cilium.

Monoclin'ic, *a.* [Gr. *monos*, and *klinein*, to incline.] (*Crystallog.*) Having one oblique intersection; — said of a certain system of crystallization, in which the vertical axis is inclined to one, but at right anglee to the other, lateral axis.

Monoc'linous, *a.* [From Gr. *monos*, and *klinein*, to recline.] (*Bot.*) Hermaphrodite, or including both stamens and pistils in each flower.

Mon'ocotyle, Monocotyle'donous, *a.* (*Bot.*) Possessing one cotyledon only.

Monocotyle'don, *n.* [From Gr. *monos*, and *kotelydōn*, a cup-shaped cavity.] (*Bot.*) A plant having only one cotyledon or seed-lobe (Fig. 1839).

Fig. 1839.—MONOCOTYLEDON.
(Genus *Cocos.*)

Monocotyle'dons, or **Monocotyle'dones,** *n. pl.* (*Bot.*) One of the two great classes into which the phanerogamous or flowering plants are divided. It agrees with the *Endogenæ* of some botanists, and includes the *Endogens* and *Dictyogens* of Lindley.—See BOTANY.

Monoc'racy, *n.* [Gr. *monos*, and *kratos*, strength, power.] Government vested in one person; autocracy; undivided rule or power.

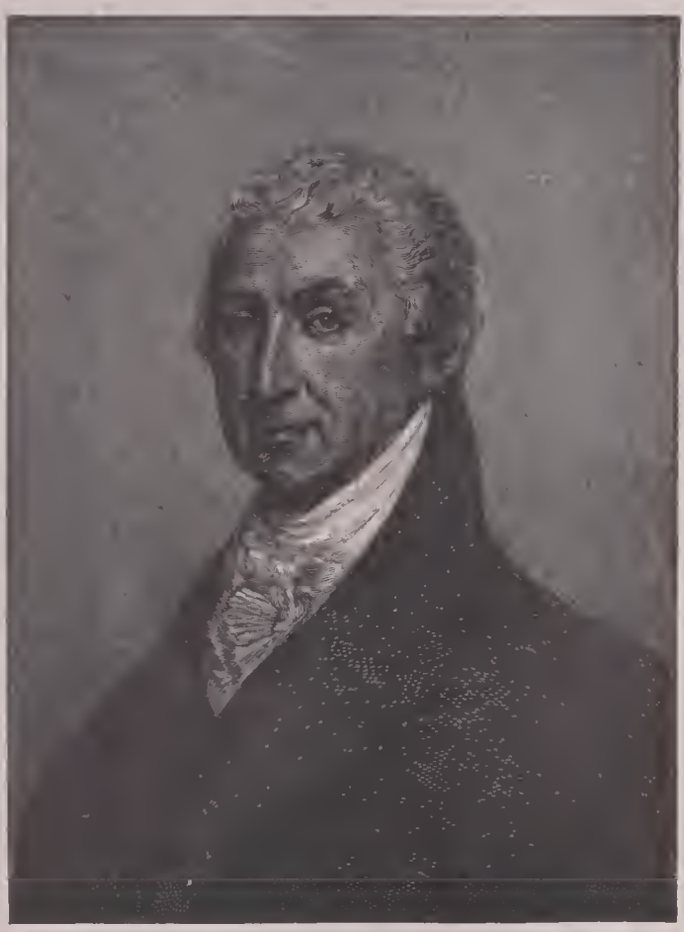
Mon'ocrat, *n.* One who governs alone; a monarch; an autocrat.

Monoc'ular, Monoc'ulous, *a.* [Gr. *monos*, single, and Lat. *oculus*, eye. See OCULAR.] One-eyed.

"Those of China repute the rest of the world *monoculous.*" *Glanville.*

—Constructed to be used with one eye only, at one time; as, a *monocular* field-glass.

Mon'ocule, *n.* [Fr.] (*Zoöl*) A one-eyed insect.
Monodac'tylous, *a.* [Gr. *monos*, and *daktylos*, finger.] One-fingered, or one-toed.
Mon'odelphs, *n. pl.* [Gr. *monos*, and *delphos*, a womb.] (*Zoöl*) A name given by De Blainville to the first subclass in his binary division of Mammalia, comprehending those which have no supplementary external pouch or marsupium, but which bring forth the young in a state sufficiently mature, not to require such additional protection. It is antithetical to *Didelphs*.
Monodimet'ric, *a.* [Gr. *monos*, single, and *metron*, measure.] (*Crystallog.*) Dimetric.
Mon'odist, *n.* A writer of monodies.
Mon'odon, *n.* [From Gr. *monos*, and *odous*, tooth.] (*Zoöl.*) Same as NARWHAL, *q. v.*
Monodramat'ic, *a.* Belonging or having reference to a monodrame.
Mon'odrame, *n.* [Gr. *monos*, and *drāma*, drama.] A dramatic piece performed by one person only.
Mon'ody, *n.* [Gr. *monōdia* — *monos*, alone, and *ōidē*, a song, lay, ode. See ODE.] (*Poet*) An ode, song, or poem of a mournful character, in which lamentation is expressed by a single mourner.
Monodynam'ic, *a.* [Gr. *monos*, and *dynamis*, powsr.] Possessing but a single power or capacity; as, "*monodynamic* men."—*De Quincey.*
Monœ'cia, *n.* [Gr. *monos*, and *oikos*, a house.] (*Bot.*) The 21st class in the system of Linnæus, comprising the androgynous plants, or those whose structure is both male and female. Thus, *monœcious* means having both male and female flowers on the same plant, but separate.
Monœ'cian, Monœ'cious, *a.* (*Bot.*) Having the stamens and pistils in flowers apart, but growing on the one individual plant.
Monoga'mia, *n.* [Gr. *monos*, and *gamos*, marriage.] (*Bot.*) An order of plants in the Linnæan system, whose flowers are not aggregated into bundles, but whose anthers are more or less adhering.
Monoga'mian, Monog'amous, *a.* (*Bot.*) Belonging or having reference to the *Monogamia*.
Monog'amist, *n.* One who disallows second marriages
Monog'amous, *a.* (*Bot*) Same as MONOGAMIAN, *q. v.*
—Having one wife only, and not allowed to marry a second.
Monog'amy, *n.* [Gr. *monos*, single, only, and *gamos*, marriage. See MISOGAMY.] The marriage of one wife only, or the state of such as are restricted to a single wife.
Monogas'tric, *a.* [Gr. *monos*, and *gaster*, stomach.] Having only one stomach.
Monogen'esis, *n.* [Gr. *monos*, and *genesis*, beginning.] Oneness of source, beginning, or origin.
Mon'oghan, in *Pennsylvania*, a township of York co.
Mon'ogram, *n.* [Fr. *monogramme*; Gr. *monos*, single, and *gramma*, a letter or character.] A cipher or intertexture of letters in one figure; a character compounded of various letters fancifully or grotesquely arranged, and forming the initials of a name. (Used on seals, heads of letters, buttons, and the like.)
Mon'ogrammal, Monogrammat'ic, Mon'ogrammous, *a.* Monogrammic; in the style, manner, or fashion of a monogram.
Monogram'mic, *a.* Pertaining or having reference to, or resembling a monogram
Mon'ogrammous, *a.* See MONOGRAMMAL.
Mon'ograph, *n.* [Gr. *monos*, alone, single, and *graphō*, to write.] A special treatise on one particular subject; a written account or description of a single thing or class of things; as, a *monograph* on mummies, a *monograph* on roses.
Monog'rapher, *n.* A writer of a monograph.
Monograph'ic, Monograph'ical, *a.* [Fr. *monographique*.] Pertaining or having refereuce to a monograph — Drawn in lines without colors.
Monograph'ically, *adv.* In the manner, form, or style of a monograph.
Monog'raphist, *n.* The writer of a monograph.
Monog'raphous, *a.* Same as MONOGRAPHIC.
Monog'rapny, *n.* [Fr. *monographie*.] An outline, representation, sketch, or drawing without colors. — A monograph.
Monogyn'ia, *n.* [Gr. *monos*, and *gune*, a female.] (*Bot*) The name given by Linnæus in his system to the first order or subdivision in each of the first thirteen classes of plants, comprising such as have one pistil or stigma only in a flower. Thus, *monogynous* means having one style or stigma.
Monogyn'ian, Monog'ynous, *a.* [Fr. *monogyne*.] (*Bot.*) Having only one style or stigma; belonging or having reference to one of the class of plants *Monogynia*.
Monohem'erous, *a.* [Gr. *monos*, and *ēmera*, day.] (*Med.*) Lasting for one day only.
Mo'no Lake, in *California*, a "sink," or lake, of Mono co., on the E. slope of the Sierra Nevada, about 12 miles S.W. of Aurora. It is nearly circular in outline, and covers an area of about 200 square miles. It receives several large streams, but has no apparent outlet. The waters are strongly alkaline, and contain no fish; but a species of insect deposit their ova upon the surface in such immense quantities that they sometimes appear like small islands. These insects and their ova are said to be collected by the Digger Indians of the vicinity, dried, and devoured as a choice delicacy
Mon'olith, *n.* [Fr., from Gr. *monos*, single, and *lithos*, stone.] A pillar, column, &c., consisting of a single stone. Herodotus speaks of a huge rock of this sort in front of a temple at Sais, which was scooped out, and contained an apartment eighteen cubits in length, twelve in breadth, and five in height. It was said to have been transported from the town of Elephantine by order of king Amasis, and to have occupied 3,000 men for three years in conveying it. Some remarkable monoliths have been found in Egypt; of these the zodiac of Dendera, and the obelisk of Luxor, both of which have been removed to Paris, are the most remarkable.
Monolith'al, Monolith'ic, *a.* Consisting of a single stone; pertaining to, or supplied with monoliths.
Monol'ogist, *n.* One given to soliloquy. — A person who monopolizes conversation to the exclusion of others.
Monologue, (*mŏn'o-lŏg,*) *n.* [Fr., from Gr. *monos*, single, and *logos*, speech. See LOGIC.] A speech or piece of declamation spoken by a person alone; a soliloquy. — A poem, song, or scene, composed for a single performer.
Monol'ogy, *n.* The practice of uttering soliloquies, or of monopolizing conversation.
Monomachia, (*-ki-a,*) **Monom'achy,** *n.* [Gr. *monos*, alone, and *machesthai*, to fight.] A duel; a rencontre; a single combat.
Monom'achist, *n.* A duellist; one who meets another in single combat.
Mon'omane, *n.* A monomaniac. (R.)
Monoma'nia, *n.* [Gr. *monos*, single, and *mania*, madness. See MANIA.] Insanity in regard to a single object, or derangement of a single faculty of the mind. See INSANITY
Monoma'niac, *a.* Affected with monomania.
—*n.* A person affected with monomania.
Mon'ome, *n.* [Fr., from Gr. *monos*, and *nomē*, distribution.] (*Alg.*) Same as MONOMIAL, *q. v.*
Monom'etre, *n.* [Fr., from Gr. *monos*, and *metron*, measure.] (*Pros.*) A rhythmical series, comprising a single metre.
Monomet'ric, *a.* (*Crystallog.*) Noting crystals with the axes equal, or of one kind, as the cube, octohedron, and dodecahedron.
Mono'mial, *n.* [See MONOME.] (*Math.*) A single algebraic expression.
—*a.* (*Math.*) Consisting of but a single Algebraic expression.
Monomor'phous, *a.* [Gr. *monos*, single, and *morphē*, form.] (*Zool.*) Single-formed; as, a *monomorphous* insect.
Monomotapa, a region of E. Africa, Lat. between 15° and 19° S., Lon. between 30° and 35° E., supposed to comprise various independent states; and which, at the time of its discovery, at the beginning of the 16th cent., was described in very exaggerated terms as an empire of immense extent, wealth, and magnificence.
Monomya'ria, *n.* (*Conch.*) A group of bivalves or conchifers, which have only one adductor muscle, and consequently but one muscular impression on each valve
Monomy'ary, *n.* [Gr. *monos*, and *myān*. to keep the mouth shut.] (*Conch.*) One of the order *Monomyaria*
Mo'non, in *Indiana*, a post-village and township of White county.
Mono'na, or MANONA, in *Iowa*, a W. co., adjoining Nebraska; *area*, about 684 sq. m. *Rivers*. Missouri, Inyan Yankee, Little Sioux, and Soldier rivers. *Surface*, mostly level, *soil*, fertile. *Products*, corn, wheat, oats, potatoes, butter, wool, hay; large herds of live stock, and numerous creameries are maintained. Within the recent period increased attention has been given to coal mining. *Cap.* Onawa. *Pop.* (1895) 16,005.
—A post-village and township of Clayton co., located on the Chicago, Milwaukee & St. Paul Railroad, about 15 m. N.W. of McGregor. *Pop.* (1897) 640.
Mononeu'rans, *n. pl.* [Gr. *monos*, and *neuron*, nerve.] (*Zoöl.*) A term applied by Rudolphi to the series or primary division comprehending the animals which he believed to have only the ganglionic system of nerves, as the molluscs and insects.
Monongahe'la City, in *Pennsylvania*, a city of Washington co. (formerly called WILLIAMSPORT), located on the Monongahela river, 32 m. above Pittsburg; is also reached by the Penna. and the Pittsburg & Lake Erie railroads. Its principal industries include foundries, machine shops, glass works, planing mills, &c. *Pop.* (1897) 5,150.
Monongahe'la River, is formed by the West Fork and Tygart's Valley rivers, in Marion co., West Virginia, and flowing N.E. and N. into Pennsylvania, unites with the Allegheny river at Pittsburg, in Allegheny co., to form the Ohio river.
Mononga'lia, in *West Virginia*, a N. co., adjoining Pennsylvania; *area*, about 365 sq. m. *Rivers*. Monongahela and Cheat rivers. *Surface*, much diversified; *soil*, fertile. *Cap.* Morgantown. *Pop.* (1890) 15,705.
Monon'omy Point Light, in *Massachusetts*, an island and light-house off the S.E coast of Barnstable co. It exhibits a fixed light 20 ft. above sea-level; Lat. 41° 33′ 4″ N., Lon. 70° W
Monoon'sian, Monoousi'ous, *a.* [Gr. *monos*, and *ousia*, essence.] (*Theol.*) Possessing but one and the same essence.
Monop'athy, *n.* [Gr. *monos*, and *pathos*, suffering.] Solitary suffering
Monoper'sonal, *a.* [Gr. *monos*, and Lat. *persona*, person.] Having but a single personification, or form of existence
Monopet'alous, *a.* [Gr. *monos*, and *petalon*, a petal.] (*Bot.*) A term applied to a corolla, the petals of which cohere by their contiguous margins, so as to form a tube.
Monoph'anous, *a* [Gr. *monos*, and *phaneïn*, to appear.] Possessing one and the same appearance or semblance.
Monophon'ic, *a.* [Gr *monos*, single, and *phonē*, voice.] Single-voiced; — opposed to *polyphonic*.
Monophthong, (*mon'of-thong,*) *n.* [Gr. *monos*, single, and *phthoggos*, voice.] A single uncompounded vowel sound. — A diagraph.
Monophthong'al, *a.* Consisting of, or belonging or having reference to a monophthong
Monoph'yllous, *a.* [Gr. *monophyllos*, one-leaved.] (*Bot.*) A term applied to a calyx, the sepals of which cohere by their contiguous edges into a kind of tube or cup. It also denotes anything which has only one leaf.
Monophy'odonts, *n.* [Gr. *monos*, and *phuō*, I generate; *odous*, tooth.] (*Zoöl.*) Those mammals which generate one set of teeth, as *e. g* the sloths, armadillos, orycteropus, ornithorhynchus, and the true cetacea; all other mammals that have teeth generate two sets, called *deciduous* and *permanent*.
Monophysite, (*mo-nŏf'i-sīte.*) *n.* [Gr. *monos*, and *physis*, nature.] (*Eccl. Hist.*) The name given in the 5th century to certain heretics who, in the language of the Athanasian creed, "confounded the substance," that is, the divine and human substance, which are united in Christ, but neither absorbed into the other.
Monophysit'ical, *a.* Belonging or having reference to the Monophysites, or their doctrines.
Monop'ody, *n.* [Gr. *monos*, and *pous*, *podous*, foot.] (*Pros.*) A measure consisting of a single foot only.
Monopoli', a seaport-town of Italy, prov. of Terra di Bari, on the Adriatic, 27 m. S.E of Bari, and 32 m. N.N. E. of Taranto. It is surrounded by a wall, and strongly fortified. There are 2 ports capable of accommodating vessels of large size, but the deepest is exposed to the N.E. winds. *Manuf.* Cotton and linen cloths; also trade in wine and olive oil. *Pop.* 20,205.
Monop'olist, Monop'olizer, *n.* [Sp. and It. *monopolista*.] One who monopolizes; a person who buys the whole of a certain marketable article, for the purpose of selling at an advanced price; one who by license or vested right has the privilege of being the sole buyer or seller of any commodity.
Monop'olize, *v. a.* [Sp. *monopolizár*; Gr. *monos*, single, and *pōleō*, to sell See BIBLIOPOLE.] To purchase or secure possession of the whole of any goods or commodity in market with the view of selling them at advanced prices; as, to *monopolize* tobacco. — To obtain the exclusive right or privilege of trading in a certain article, to any place, or with any country or district; as, to *monopolize* the China trade. — To engross or absorb the whole of; as, to *monopolize* conversation.
Monop'oly, *n.* [Fr. *monopole*; Sp. *monopolio*; Lat. *monopolium* = Gr. *monopōlion*. See MONOPOLIZE.] Sole power, right, or privilege of trading in any particular commodity, or of dealing with a country or market; license or privilege granted by royal or state authority, for the sole buying, selling, making, working, and using any commodity or set of commodities; sole permission and power to transact commercial business; exclusive absorption or command of anything.
Monopol'ylogue, *n.* [Gr. *monos*, single, *polos*, many, and *logos*, discourse.] A performance in which an actor sustains many characters.
Monop'teral, *a.* [Gr. *monos*, and *pteron*, feather; Fr. *monoptère*.] (*Arch.*) A temple which has no cella, but consists of columns disposed in the form of a circle, covered with a conical roof. (Also written *monopteron*, and *monopteros*.)
—*a.* (*Arch*) Having one wing only, as certain ancient temples.
Mon'optote, *n.* [Gr. *monoptōtos*.] (*Gram.*) A noun having only one case.
Monopyre'neous, *a.* [Gr. *monos*, single, and *pyrēn*, the stone of a fruit.] (*Bot.*) Having a single stone or kernel only.
Monoquet, (*mon-o-ket',*) in *Indiana*, a village of Kosciusco co., abt 5 m. N. of Warsaw.
Mon'orhyme, *n.* [Gr. *monos*, and Eng. *rhyme*; Fr. *monorime*.] A poetical composition, in which all the lines end with the same rhyme.
Monosep'alous, *a* [Gr. *monos*, and Eng. *sepal*.] (*Bot.*) Consisting of one sepal only.
Monosperm'ous, *a.* [Gr. *monos*, and *sperma*, seed.] Possessing but one seed.
Monospherical, (*-sfĕr'i-kl.*) *a.* [Gr. *monos*, and *sphaira*, sphere. See SPHERE.] Having one sphere only.
Mon'ostich, (*-stik,*) *n.* [Fr. *monostique*; Gr. *monostichon* — *monos*, and *stichos*, line, verse. See DISTICH.] A composition consisting of one verse only.
Monosto'ma, *n.* [Gr. *monos*, and *stoma*, mouth.] (*Zoöl.*) A genus of trematoid entozoa, so called from having only a single sucker, which is situated anteriorly, and surrounds the mouth.
Monostrophic, (*-strof'ik,*) *a.* [Gr. *monostrophōs* — *monos*, single, and *strophē*, a turning, from *strephō*, to turn. See STROPHE.] (*Pros.*) Consisting of one strophe only; composed in unvaried measure.
Monosyllab'ic, *a.* [Fr. *monosyllabique*.] Containing one syllable only; as, a *monosyllabic* word — Consisting of words of one syllable; as, a *monosyllabic* verse.
Monosyl'labism, *n.* The state of having a monosyllabic form; frequent repetition of monosyllables.
Monosyl'lable, *n.* [Gr. *monos*, sole, and *syllabē*, a syllable. See SYLLABLE.] A word of one syllable.
Monosyl'labled, *a.* Consisting of one syllable.
"Nine tailors, if rightly spelled,
In one man are *monosyllabled*."— *Cleaveland.*
Monotes'saron, *n.* [Gr. *monos*, and *tessares*, four.] A gospel harmony. (R.)
Monothal'amian, *n.* (*Zoöl.*) A one-chambered univalve shell.
Monothal'amous, *a.* [Gr. *monos*, and *thalamos*, chamber.] One-chambered; — said of certain shells.
Mon'otheism, *n.* [Gr. *monos*, single, and *Theos*, God. See THEISM.] The doctrine or belief of the existence of one God only, — in opposition to *polytheism*, which acknowledges a plurality of gods.
Mon'otheist, *n.* One who believes in one God only.



James Monroe

1758–1831

Monotheis'tic, *a.* Belonging or having reference to, or partaking of the doctrinal principles of monotheism.

Monoth'elism, Monoth'elitism, *n.* [Fr. *monothélisme.*] The doctrinal theory of the Monothelites.

Monothelites, (*mo nŏth'e-lītz,*) *n. pl.* [Gr. *monos,* and *thelema,* from *thelo,* I will.] (*Eccl Hist.*) A sect that arose in the early Church, which, while accepting the doctrine of the two natures in the person of Christ, maintained that there was but one manifestation of will. They arose in the early part of the 7th century, and being for a time nurtured and protected by imperial approbation, which thus sought to unite the opposing parties of the orthodox and the Monophysites, they spread very rapidly. The first council of Lateran under Pope Martin I. (649) condemned the Monothelites; and in 1680 the sixth œcumenical council at Constantinople affirmed two wills in Christ, and excommunicated Macarius, patriarchs of Constantinople, and other leaders of the party. After a time, being much reduced by persecution, they retired to the neighborhood of Mount Libanus, where they maintained themselves till the 12th century, when they abjured their opinions, and were received into the Roman Catholic Church.

Monothelit'ic, *a.* Having reference or pertaining to the Monothelites, or their doctrine.

Monot'onous, *a.* [Gr. *monos,* and *tomos,* a cutting.] (*Min.*) Possessing a distinct cleavage only in one direction, — said of certain rocks.

Mon'otone, *n.* [See MONOTONY.] (*Mus.*) A single tone; a sound never varied.

(*Rhet.*) A sameness of tone, or unvaried pitch of the voice in reading or speaking.

Monoton'ic, Monoton'ical, *a.* Relating or pertaining to, or uttered in, a monotone; monotonous.

Monot'onous, *a.* Characterized by monotony; wanting variety in cadence or inflection of voice; uniform or unvaried in sound; — hence, continued with dull uniformity; humdrum.

Monot'onously, *adv.* With one unvaried or uniform tone.

Monot'onousness, *n.* State or quality of being monotonous or unvaried; monotony.

Monot'ony, *n.* [Gr. *monotonia* — *monos,* single, and *tonos,* tone, sound. See TONE.] Uniformity or sameness of sound; a frequent recurrence or continuance of the same cadence of tone or sound, producing a dull, tiresome uniformity; lack of vocal variety in speaking or singing. — An irksome sameness, or want of variety, as in literary composition, scenery, or mode or condition of life; as, the *monotony* of a long sea-voyage.

Monotrem'ata, Mon'otremes, *n. pl.* [Gr. *monos,* and *trēma,* a hole.] (*Zoölogy.*) A tribe of oviparous mammalia, of which only two genera are known to exist: viz., the *Platypus* or *Ornithorhynchus,* and the *Echidna,* both peculiar to Australia. The term is indicative of the common cloacal outlet for the excremental and generative products.

Monotrem'atous, *a.* [Fr. *monotrème;* Gr. *monos,* and *trēma,* a hole, an orifice.] Resembling, or pertaining, or having reference to, the monotremes.

Monotrig'lyph, *n.* [Gr. *monos,* and *triglyphos,* triglyph.] (*Arch.*) The interval observed between the columns of a Doric portico, where a space is left sufficient for the insertion of one triglyph only between those immediately over two contiguous columns.

Monot'ropa, *n.* (*Bot.*) The typical genus of the order *Monotropaceæ,* including *M. uniflora,* the Indian Pipe or Bird's-nest, a small succulent, yellowish-white plant, common in woods from Canada S. to Georgia, and W. to Illinois.

Monotropa'ceæ, *n.* [Gr. *monos,* one, *tropo,* I turn.] (*Bot.*) The Fir-rape family, an order of plants, alliance *Ericales.* DESC. Half monopetalous flowers, free stamens, all perfect, loose-skinned or winged seeds, and an embryo at the apex of the albumen. They are parasitic plants, with scaly stems, found growing at the base of fir-trees. The order includes 6 genera and 10 species.

Mon'otype, Monotyp'ic, *a.* [Gr. *monos,* and *typos,* type.] Comprising one representative only; as, a *monotypic* genus.

Monox'ylon, *n.* [Gr.] A boat, skiff, or canoe formed out of one piece of wood; — perhaps resembling the American *dug-out.*

Mon'radite, *n.* (*Min.*) A hydrated silicate of magnesia and protoxide of iron, from Bergen, in Norway. (Named after M. Monrad.)

Monreale, or **Montreale,** (*mon'rai-a'lai.*) a town of Italy, in Sicily, prov. of Palermo, 4 m. S.W. of Palermo. It has an export trade in corn, oil, and fruit. *Pop.* 11,000.

Monroe', JAMES, 5th President of the United States, b. in Westmoreland co., Va., April 28, 1758, of a Scotch family. Nothing is known of his early life, but he seems to have shown great decision of character, having entered the army as a volunteer at the age of sixteen. In 1777, in the retreat through New Jersey, he was wounded at Trenton. He was then a lieutenant, and on his recovery was made an aide-de-camp to Lord Stirling, with the rank of major. Just before the close of the war he was appointed colonel on the recommendation of General Washington. He then went to the college of William and Mary, in Virginia, where he studied law, and soon after represented his native county in the legislature, and was also appointed to the Council of State. In 1788 he was a member of the Virginia Convention, and was opposed to the adoption of the Constitution. After it came into operation he became a candidate for a seat in the House of Representatives, in opposition to Madison, and lost his election. He was, however, soon after chosen a senator of the United States by the State of Virginia, and after continuing in that body about three years, he was appointed by General Washington Minister to France, in the place of Mr. Gouverneur Morris, who had become unacceptable to the ruling party in that country. It was thought that a well-known member of the party friendly to the French revolution might be able to restore that confidence between the two countries which was already diminished by the supposed leaning of Hamilton and his party toward Great Britain. *M.* accordingly endeavored to fulfil this object of his mission, and, as some thought, at too great a sacrifice of the rights and interests of his own country. Such was the opinion of the administration, especially after the avowed change of policy by France, in consequence of Mr. Jay's treaty, and he was accordingly recalled in August, 1796. It was considered by the Opposition, French, or Democratic party, — for it was called by all these names, — that he had been sacrificed for his attachment to liberal principles; and as the majority in Virginia belonged to this party, he was appointed governor of that State in 1798–99. He held the office for three years. In 1802 he was appointed minister to France, and, in conjunction with Mr. R. R. Livingston, who was already in Paris and engaged in negotiating the purchase of New Orleans, he succeeded in effecting the purchase of Louisiana. From France he went to Spain, and thence to Great Britain, as minister, where, with his adjunct, Mr. Pinckney, he concluded a treaty in 1807, which Mr. Jefferson, disapproving, refused to lay before the Senate. *M.* returned home in 1808, much dissatisfied that the treaty, which had been with great

Fig. 1840. — MONROE.

difficulty effected, had been received with so little respect; and that his return had been delayed, as he supposed, for the purpose of preventing his competition with Madison for the Presidency. He was accordingly supported by the opposition in Virginia, and great efforts were made to enlist the popular sympathies in his favor; but all these efforts failed, and he obtained no votes in his own State or elsewhere. By means of Jefferson a reconciliation was brought about, and *M.* was then made Secretary of State under Madison, in which office he continued until he was chosen President, in 1816, by 128 votes against 34. So prudent and conciliatory had been his conduct, and so little had the course of public affairs interfered with his popularity, that he was re-elected, in 1821, unanimously, with the exception of a single vote. It was in his message of Dec. 2, 1823, that he promulgated the policy of neither entangling the U. States in the broils of Europe, nor suffering the powers of the Old World to interfere with the affairs of the new — a platform generally known as the "Monroe Doctrine," which has been approved by the prominent statesmen of this country from the time of its proclamation to the present. After his term of office expired, he lived a short time in Loudoun co., Virginia, where he accepted the office of justice of the peace. He was also a visitor of the University of Virginia. Toward the close of his life he removed to New York, where he D. July 4, 1831. He left two daughters, Mrs. Hay and Mrs. Gouverneur, who resided in New York, where he had married while member of Congress, in 1790. *M.* was not endowed with very shining abilities, but he had great prudence, united to much firmness, great regard to reputation, sound judgment, and unwearied perseverance; and there has seldom been so striking an example of what steadiness of purpose and untiring perseverance can accomplish. His manners were mild and amiable, and his want of distinctive oratory was amply compensated by his wise and sagacious manner of administering important affairs. When he retired from the Presidency, he left the country in a high state of prosperity, and carried with him the general respect and regard of the nation. He was, however, even a worse manager of his own business than Jefferson. He was always in debt, and always in want of money, which may be in great part attributed to his boundless generosity toward his family and friends; but by the grants which he obtained from Congress, and an inheritance derived from an uncle, he left to his daughters a competent fortune. See MONROE DOCTRINE, in SECTION II.

Monroe, in *Alabama,* a S.W. co., *area,* about 990 sq. m. *Rivers.* Alabama river, and several less important streams. *Surface,* nearly level; *soil,* fertile. *Cap.* Monroeville. *Pop.* (1890) 18,990.

Monroe, in *Arkansas,* an E. by S. co., *area,* about 696 sq. m. *Rivers.* White and Cache rivers. *Surface,* mostly level; *soil,* in some parts fertile. *Cap.* Clarendon. *Pop.* (1897) 18,700.

—A township of Mississippi co.

—A township of Sevier co.

Monroe', in *Connecticut,* a post-town and township of Fairfield co., about 17 miles W. by N. of New Haven. *Pop.* (1897) 1,020.

Monroe, in *Florida,* an extreme S.W. co., bordering on the Gulf of Mexico; *area,* including the Islands and keys, about 692 sq. m. *Rivers.* North, Young's, Caximbas, Shark's, and Sanybel. Lake Okeechobee washes the N.E. border, and the sea-coast is indented with numerous bays and inlets, of which Chatham Bay is the largest. *Surface,* generally low and level, mostly occupied by swamps known as everglades; *soil,* in some parts fertile. *Cap.* Key West. *Pop.* (1897) about 18,900.

Monroe, in *Georgia,* a W. central co.; *area,* about 490 sq. m. *Rivers.* Ocmulgee and Towaliga rivers, and Tobesofka, Shoal, Rum, and Crooked creeks. *Surface,* generally level; *soil,* in some parts fertile. *Cap.* Forsyth. *Pop.* (1890) 19,137.

—A post-town, cap. of Walton co., on the Georgia R. R., about 40 m. N.W. of Macon. Has a good trade with the surrounding farming region. *Pop.* (1897) 1,040.

Monroe, in *Illinois,* a S.W. co., adjoining Missouri; *area,* about 380 sq. m. *Rivers.* Missouri river, and Prairie and Eagle creeks. *Surface,* undulating; *soil,* fertile. *Cap.* Waterloo. *Pop.* (1890) 12,948.

—A township of Cass co.—A township of Hardin co.—A township of Ogle co.

Monroe, in *Indiana,* a S. by W. central co.; *area,* about 430 sq. m. *Rivers.* Salt and Bean-blossom creeks, and the East Fork of White river, besides some smaller streams. *Surface,* hilly; *soil,* fertile. *Prod.* Indian corn, wheat, oats, and pork. The county is intersected by the Louisville, New Albany & Chicago R. R. *Cap.* Bloomington. *Pop.* (1890) 17,673.

—A post-township of Adams co., intersected by the Cincl., Richmond, & Ft. Wayne R.R.—A township of Allen co.—A township of Carroll co.—A township of Clarke co.—A township of Delaware co.—A township of Grant co.—A township of Howard co.—A township of Jefferson co.—A township of Kosciusko co.—A township of Madison co.—A township of Morgan co.—A township of Pike co.—A township of Pulaski co.—A township of Putnam co.—A township of Randolph co.—A township of Washington co.

Monroe, in *Iowa,* a S. by E. co.; *area,* about 432 sq. m. *Rivers.* Des Moines river, Cedar creek, and numerous smaller streams. *Surface,* mostly undulating prairies; *soil,* fertile. *Prod.* Wheat, corn, oats, hay, butter, live-stock, &c. *Cap.* Albia. *Pop.* (1895) 15,790.

—A township of Butler co.—A township of Fremont co.—A post-village of Jasper co., about 14 m. S. of Newton.—A township of Johnson co.—A township of Linn co.—A township of Madison co.—A township of Mahaska co.—A township of Monroe co.—A township of Ringgold co.—A township of Wayne co.—Over 30 post-offices in the U. S. have this name.

Monroe, in *Kentucky,* a S. co., adjoining Tennessee; *area,* about 272 sq. m. *Rivers.* Big Barren and Cumberland rivers. *Surface,* diversified; *soil,* fertile. *Cap.* Tompkinsville. *Pop.* (1895) 18,989.

—A post-village of Hart co., about 90 m. S.W. by S. of Frankfort.

Monroe, in *Louisiana,* a post-village, cap. of Ouachita parish, on the Ouachita river and 2 railroad lines, 72 m. W. of Vicksburg, Miss.; has oil mills, cotton compress, and other industries. *Pop.* (1897) 3,922.

Monroe, in *Massachusetts,* a post-town and township of Franklin co.

Monroe, in *Maine,* a post-town and township of Waldo co.

Monroe, in *Michigan,* an extreme S.E. co., bordering on Lake Erie on the E., and Ohio on the S. *Area,* about 550 sq. m. *Rivers.* Raisin, Huron, and Macon rivers, and Stony, Saline, and Swan creeks. *Surface,* undulating, or level; *soil,* fertile. *Cap.* Monroe. *Pop.* (1894) 33,179.

—A city, cap. of the above co., on the Raisin river, 2 m. above Lake Erie, and 40 m. S.W. of Detroit. It is finely located in the midst of a fertile region, and has an active trade. *Pop.* (1894) 5,613.

Monroe, in *Mississippi,* a N.E. co., adjoining Alabama; *area,* about 770 sq. m. *Rivers.* Tombigbee, Buttahatchee, and Oktibbeha rivers. *Surface,* level; *soil,* very fertile. *Cap.* Aberdeen. *Pop.* (1890) 30,730.

Monroe, in *Missouri,* a N.E. co; *area,* about 644 sq. m. *Rivers.* Salt river and its tributaries, the North, South, and Elk Forks, and Long Branch, besides Crooked, Otter, and Indian creeks. *Surface,* undulating; *soil,* very fertile. *Min.* Coal, limestone, and freestone. *Cap.* Paris. *Pop.* (1890) 20,790.

—A village of the above co., aht. 116 m. S.W. of Palmyra.

Monroe, in *North Carolina,* a post-village, cap. of Union co., about 15 m. S. W. of Raleigh. *Pop.* (1897) 1,960.

Monroe, in *Nebraska,* a post-township of Platte co.

Monroe, in *New Hampshire,* a post-township of Grafton co.

Monroe, in *New Jersey,* a township of Gloucester co.

—A township of Middlesex co.—A village of Morris co., about 3 m. N.E. of Morristown.

Monroe, in *New York,* a N.W. co., bordering on Lake Ontario. *Area,* about 720 sq. m. *Rivers.* Genesee river and Allen's and Sandy creeks, besides numerous smaller streams. *Surface,* diversified; *soil;* very fertile, producing great quantities of wheat. *Min.* Iron, sandstone, and gypsum. *Cap.* Rochester.

Monroe, in *New York,* a post-village and township of Orange co., about 50 m. N. of New York city.

Monroe', in *Ohio*, an E. by S. co., adjoining West Virginia; *area*, about 468 sq. m. *Rivers.* Ohio and Little Muskingum rivers, and Seneca and Sunfish creeks. *Surface*, hilly; *soil*, fertile, producing the greatest amount of tobacco of any county in the State. *Min.* Coal and iron. *Cap.* Woodsfield. *Pop.* (1890) 25,175.
—A township of Adams co.—A township of Allen co.—A township of Ashtabula co.—A post-village of Butler co., about 12 m. E.N.E. of Hamilton, Monroe R.R. station is 1½ m. distant, on the C., C. & C. R.R.—A township of Carroll co.—A township of Clermont co.—A township of Coshocton co.—A township of Darke co.—A township of Guernsey co.—A township of Harrison co.—A township of Henry co.—A village of Highland co., about 14 m. E. by N. of Hillsborough.—A township of Holmes co.—A township of Knox co.—A township of Licking co.—A township of Logan co.—A township of Madison co.—A township of Miami co.—A township of Muskingum co.—A township of Perry co.—A township of Pickaway co.—A township of Preble co.—A township of Putnam co.—A township of Richland co.

Monroe, in *Oregon*, a post-village of Benton co., about 17 m. S. of Corvallis, on or near the Willamette river.

Monroe, in *Pennsylvania*, an E. co., adjoining New Jersey; *area*, about 625 sq. m. *Rivers.* Delaware and Lehigh rivers, and several less important streams. *Surface*, diversified; *soil*, in some parts fertile. *Min.* Limestone and slate. *Cap.* Stroudsburg. *Pop.* (1890) 20,111.
—A township of Armstrong co.
—A township of Bedford co.
—A village of Bucks co.
—A station in Butler co., on the W. Penna. R. R., Butler extension.
—A post-township of Clarion co.
—A village and township of Cumberland co., about 5 m. S.E. of Carlisle.
—A village of Fayette co., about 180 m. W. by S. of Harrisburg.
—A township of Juniata co.
—A township of Snyder co.
—A township of Wyoming co.
—A village of Wyoming co., in Monroe township, about 20 m. W. of Scranton; has flouring and lumber mills.

Monroe, in *Tennessee*, a S.E. co., adjoining North Carolina; *area*, about 580 sq. m. *Rivers.* Tellico and Little Tennessee rivers. *Surface*, much diversified, the Alleghany Mountains forming the S.E. boundary; *soil*, generally fertile. *Cap.* Madisonville. *Pop.* (1890) 15,329.
—A post-village (former cap.) of Overton co., about 106 m. E. by N. of Nashville.

Monroe, in *Virginia*, a village of Southampton co., about 45 m. W.S.W. of Norfolk.

Monroe, in *Wisconsin*, a S.W. co.; *area*, about 900 sq. m. *Rivers.* La Crosse, Lemonweir, and Kickapoo rivers. *Surface*, diversified; *soil*, fertile. *Cap.* Sparta. *Pop.* (1895) 26,350.
—A city, cap. of Green co., on the Ill. Cent. and the C., M. & St. P. R.Rs., 34 m. W. of Janesville. *Pop.* (1895) 3,843

Monroe, in *West Virginia*, a S.E. co., adjoining Virginia; *area*, about 460 sq. m. *Rivers.* Kanawha and Greenbrier. *Surface*, much diversified, the main range of the Alleghenies forming its S.E. border; *soil*, fertile. *Min.* Coal in large deposits. *Cap.* Union. *Pop.* (1890) 12,429.

Monroe, Fortress, in *Virginia*. See FORTRESS MONROE.

Monroe Center, in *Maine*, a post-village of Waldo co., about 45 m. E.N.E. of Augusta.

Monroe Center, in *Ohio*, a post-vill. of Ashtabula co.

Monroeton (*mon-ro'ton*), in *North Carolina*, a post-vill. of Rockingham co., about 16 m. N. of Greensborough.

Monroe'ton, in *Pennsylvania*, a post-village of Bradford co., about 130 m. N. of Harrisburg.

Monroe'ville, in *Alabama*, a post-village of Monroe co., about 10 m. E. of Claiborne.

Monroe'ville, in *California*, a town of Colusa co.
—A vill. of Mono co., abt. 25 m. W.S.W. of Aurora, Nev.

Monroe'ville, in *Ohio*, a post-village of Huron co., about 16 m. S. of Sandusky. *Pop.* (1897) 2,175.
—A vill. of Jefferson co., abt. 24 m. N.W. of Steubenville.
—A village of Summit co., abt. 130 m. N.E. of Columbus.

Monroe Works, in *New York*, a village of Orange co., about 52 m. N. of New York city.

Mon'rolite, *n.* (*Min.*) A variety of kyanite, from Monroe, Orange co., N. Y.

Monro'via, in *Indiana*, a post-village of Morgan co., abt. 25 m. S.W. of Indianapolis.

Monro'via, in *Kansas*, a post-village of Atchison co., abt. 13 m. W. by S. of Atchison.

Monro'via, in *Maryland*, a post-village of Frederick co., abt. 50 m. W. of Baltimore.

Mons, a town of Belgium, cap. of the prov. of Hainault, on the Trouille, 35 m. S.W. of Brussels. It has 5 gates, and is protected by the fortress "Chateau-Lieu," access to which is rendered difficult, owing to two lakes on the E. which command facilities for inundating the adjacent country. Its principal architectural ornament is the cathedral of St. Waudru, a splendid Gothic edifice. *Manuf.* Woollen and cotton goods, linen, lace, cutlery, fire-arms, musical instruments, &c.; also, iron foundries. In the vicinity are extensive coal-mines, which employ 26,000 workmen. A large trade is carried on in coal, flax, hemp, horses and cattle. *Pop.* 23,128.

Monseigneur, (*mông-sân'yur,*) *n.*; *pl.* MESSEIGNEURS, (*mes-sân'yur.*) [Fr. *mon*, my, and *seigneur*, lord.] My lord; your highness; your grace;—a title of courtesy in France, which was prefixed to the titles of dukes and peers, archbishops, bishops, and some other exalted personages, and used in addressing them. *Monseigneur* simply, before the Revolution, was the title given to the dauphin. This title is now only given, in speaking and writing, to bishops and archbishops.

Monselice, (*mon-sal-le'chal,*) a town of N. Italy, prov. of Padua, 13 m. S.W. of Padua. *Manuf.* Woollen and linen goods. *Pop.* 5,500.

Monsieur, (*mo-sêr',*) *n.*; *pl.* MESSIEURS, (*mes-sêr'.*) [Fr. *mon*, my, and *sieur*, abbreviated from *seigneur*, sir, master, lord; from Lat. *senior*. See SENIOR.] My lord, master, or sir;—the common title of courtesy and respect in France, corresponding to the English *Mr*, German *Herr*, Dutch *Heer*, Ital. *Signor*, and Spanish *Señor*. It is also employed specifically in addressing the princes of the French blood-royal.—In general, a Frenchman;—sometimes used in a sense of ridicule.

"A Frenchman, his companion;
An eminent *monsieur*." —*Shaks.*

Monson, in *Maine*, a post-township of Piscataquis co.

Mon'son, in *Massachusetts*, a post-village and township of Hampden county, about 20 miles east of Springfield.

Monsoon', *n.* [Fr. *monsoon;* Ar. *mausim*, a season.] (*Meteorol.*) A periodical wind of the Indian Ocean. From a very early period, these winds have attracted the attention of the navigator, as, by taking advantage of their regular blowing, a quick and easy journey can be depended upon. Monsoons blow with the greatest force and with most regularity between the east coast of Africa and Hindostan. A N.E. wind blows over this part of the ocean when the sun is in the southern hemisphere, and a S.W. when it is in the northern hemisphere. When the sun crosses the equator, the winds are variable, and gales, hurricanes, calms, and thunderstorms occur. The N.E. monsoon blows from November to March, while the S.W. monsoon, which does not extend south of the equator, blows from the end of April to the beginning of October. It is difficult to account for these periodical winds. They appear to be a modification of the trade-winds, produced by the peculiar form of the countries lying within and around the Indian Ocean.

Mon'ster, *n.* [Fr. *monstre;* Lat. *monstrum*, from *moneo*, to remind, to admonish, to warn. See MONITOR.] Anything extraordinary or supernatural; any unnatural production; a prodigy; an enormity; something out of the common order of nature.

"There 's no such thing in nature; and you 'll draw
A faultless *monster*, which the world ne'er saw."—*Sheffield.*

—Anything large beyond usual character or dimensions.
(*Physiol.*) An animal in which one or more parts of the body present some congenital malformation. This is sometimes apparent externally, and then must amount to something exceeding any ordinary deformity; or it may be confined to internal organs. Buffon, Blumenbach, and Meckle have treated on monstrosity, classifying its modifications under three heads: the first including cases in which parts of the body are increased in number; the second those where certain organs are deficient; and the third including cases in which size, situation, and structure are concerned. Other writers, such as Geoffroy St. Hilaire (*Histoire des Anomalies*), have adopted more comprehensive arrangements, arising, however, out of the general subdivision of monsters into simple and compound,—the former including all cases in which the elements of a single individual only are concerned, the latter those in which the constituent parts of two or more individuals are united. Simple monsters have again been distributed into three classes,—the first including such varieties of malformation as chiefly affect one organ or system of organs, without materially interfering with any vital function. These anomalies are extremely numerous, and have been further subdivided into cases where size, form, or structure is affected, and those in which the malformation affects the arrangement, connection, or number of parts. The second class in this arrangement includes cases of extensive malformation, attended by great deformity and by disturbance of vital functions. The third class is limited to malformations of the organs of generation, including among others the various cases miscalled hermaphrodites.

Monstrel'et, ENGUERAND DE, a French chronicler of the 15th cent., born about 1390, and died in 1453. He was provost of Cambray, and bailiff of Walincourt, and wrote a *Chronicle of Events*, from the year 1400 to 1453, the year in which he died. An English translation of this *Chronicle* was published in 1810.

Mon'strance, *n.* [From Lat. *monstro*, to show.] (*Eccl.*) In the Roman Catholic Church, a transparent box, or pyx, in which the consecrated wafer is carried in solemn processions, and exposed upon the altar. It is also called *ostensory.* (Fig. 1841.)

Fig. 1841.—MONSTRANCE.

Monstros'ity, *n.* [Fr. *monstruosité;* L. Lat. *monstrositas.*] State or quality of being monstrous, or out of the common order of nature.

"We read of monstrous births; but we often see a greater *monstrosity* in education."—*South.*

—That which is monstrous; an unnatural or abnormal production.

Mon'strous, *a.* [Fr. *monstrueux;* Lat. *monstrosus.*] Abnormal or unnatural in form; having the appearance or qualities of a monster; out of the ordinary course of nature; deviating strangely out of the natural form; as, a *monstrous* production,—very wonderful or marvellous; huge; prodigious; enormous; as, a *monstrous* height.
—Disgusting or hateful to the sight or other senses; shocking; revolting; horrible; dreadful; as, a *monstrous* crime.
—Prolific in monsters; as, "the *monstrous* world." *Milton.*
—*adv.* Excessively; exceedingly; very much; as, she was a *monstrous* fat woman. (Used colloquially.)

Mon'strously, *adv.* In a manner out of the common order of nature; in a monstrous or revolting manner; shockingly; dreadfully; horribly.—To a great or extravagant degree; enormously; vastly.

Mon'strousness, *n.* State or quality of being monstrous.—Irregular behavior; enormity of conduct.

Mon'sum River, in *Maine*, enters Kennebunk River in York co.

Montagnac, (*mon-tan'yak,*) a town of France, dept. of Herault, 20 m. W.S.W. of Montpellier; *pop.* 4,000.

Montagnana, (*mon-tan-ya'na,*) a town of N. Italy, prov. of Padua, 32 m. S.W. of Padua. It is protected by walls, and has a fine cathedral and palace. Its chief trade is in silk, wool, hemp, and cotton. *Pop.* 8,500.

Montagnards, or **"The Mountain,"** (*môn-tân-yâh',*) *n. pl.* (*Hist.*) The Extreme or Red Republican party in the French Revolution,—so named from the higher benches in the hall of the National Assembly, on which they took their places in 1791. Under the leadership of Robespierre, Danton, Marat, &c., they opposed the Girondists (*q. v.*), and inaugurated the Reign of Terror (*q. v.*), but at length suffered on the guillotine. An attempt to form another Mountain party during the revolution of 1848 proved a failure.—See JACOBINS.

Mon'tagu, LADY MARY WORTLEY, an English lady, distinguished for her literary attainments, was the eldest daughter of Evelyn, duke of Kingston, and b. abt. 1690, at Thoresby, Nottinghamshire. In 1712 she married Edward Wortley Montagu, whom she accompanied in 1716 on his embassy to Constantinople, from which place she wrote *Letters* to Pope, Addison, and other eminent literati of the time, which are very interesting, and contain many curious facts respecting the manners of the Turks. She also first introduced the practice of inoculation into her native country. She closed a life marked by a great variety of adventures in 1762. Her collected Works have been published in 6 vols.; and her *Letters* certainly place her at the head of female epistolary writers in Great Britain.

Mon'tague, (*mon'ta-gu,*) an island in the N. Pacific Ocean, between Lat. 59° 50′ N., Lon. 147° and 148° W. *Ext.* 50 m. long, and 8 m. in breadth.

Mon'tague, in *Alaska*, an island in Prince William's Sound; Lat. 60° N., Lon. 146° 50′ W.; *area*, abt. 400 sq. m.

Mon'tague, in *Massachusetts*, a post-village and township of Franklin county, about 30 miles north of Springfield.

Mon'tague, in *New Jersey*, a post-township of Sussex co.

Mon'tague, in *Texas*, a N.E. county, adjoining Indian Territory; *area*, about 800 sq. m. *Rivers.* Red River, West Fork of Trinity River, and some smaller streams. *Surface*, generally level; *soil*, not very fertile. *Cap.* Montague.
—A post-village, cap. of the above co., abt. 100 m. W. of Bonham.

Mon'tague, in *Virginia*, a post-village of Essex co., abt. 54 m. E.N.E. of Richmond.

Mon'tague Canal, in *Massachusetts*, a village of Franklin co., abt. 85 m. W. by N. of Boston.

Montaigne, MICHEL, (*mon'tain,*) SEIGNEUR DE, a French essayist, born of a noble family at the château of Montaigne, in Perigord, 1533. He was taught Latin from

Fig. 1842.—TOMB OF MONTAIGNE.

his cradle, and till he was six years of age was not permitted to hear any other language. He was then sent to the college of Guienne, at Bordeaux, where he remained seven years, having in that time gone through the whole college course. In 1554, he was appointed a judge in the parliament of Bordeaux, and about that time he gained the esteem of the chancellor L'Hôspital, and the warm friendship of Etienne Boëtie, a fellow-judge. In 1569, he married, more to please custom and his friends, he says, than himself. He had several children, who died in infancy, and one daughter Leonora, who survived him. During the civil wars which desolated his country, he lived in retirement on his own estate, profoundly afflicted by the general suffering, and especially by the massacre of St. Bartholomew. In 1580–81, he travelled in Germany, Switzerland, and Italy, visited Rome, and was presented to the Pope. While at Venice, he was elected mayor of Bordeaux; and he held that office four years. The pestilence and the war of the League drove him from his château in 1586; and he did not return for two years. It was during this period that his friendship with Marie de Gournay began. She was attracted to him by his writings, and

Mary Wortley Montagu

1690–1762

Montaigne

1533–1592

visited him at Paris with her mother. A mutual attachment was the result, and *M.* called her his adopted daughter. The high esteem in which *M.* was held is shown particularly in his being chosen, when at Blois, in 1588, to negotiate an arrangement between Henry of Navarre and the Duke of Guise. During the last few years of his life he suffered from most painful diseases; and, like his father, grandfather, and great-grandfather, who all lived to a great age, he would have nothing to do with doctors or drugs. He died while mass was being said in his bedroom, and in the attitude of prayer, Sept. 13, 1592. He was buried at Bordeaux, where his wife and daughter erected a monument to his memory. Montaigne's *Essays* rank among the few great books of the world. Pervaded by a philosophical scepticism, which they, more than any book, contributed to popularize in France; distinguished especially for their masculine good sense, abundance of learning, knowledge of man and the world, clearness and simplicity of style, and complete sincerity, they were not long in winning the place in literature which they still hold. They have been translated into almost all languages, and have passed through about eighty editions in Europe. The subjects of the *Essays* are immensely various; and everything is discussed in the freest manner. *M.* thinks aloud in them, and has no reserve. Occasionally the freedom passes into grossness; but there is no evil intention in it. It is more symptomatic of the manner of his age than of moral fault in the author. The book was at one time called the breviary of freethinkers; and it is still, from some of its characteristics, chiefly read by men — wits, courtiers, soldiers, and philosophic thinkers, men of the world. It is the only book we *know* to have been in Shakspeare's library, the copy of Florio's translation with Shakspeare's autograph being still extant. *M.* began writing the *Essays* in 1572. The first edition appeared in 1588; and a third, under the care of Mademoiselle de Gournay, in 1595. The English translation by Cotton was published early in the 18th century.

Mont Al'ban, in *Mississippi*, a village of Warren co., abt. 8 m. E. of Vicksburg.

Montalegre, (*mon-ta-la-gra'*,) a town of Brazil, on the Amazons, abt. 100 m. W. of Almeirim.

Montalembert, Charles-Forbes de Tryon, Comte de, (*mon-tal'em-bair*,) in London, 1810, was one of the most distinguished writers and brilliant orators of modern France, descended of an old family of Poitou. Having acquired his education at the University of Paris, early in life he distinguished himself as an advocate of Catholicism, and was connected with Lamennais and Lacordaire in giving expression to his views, by the establishment of schools and journals. His opposition to the government of the day led to his citation before the Tribunal of Justice, upon which, having just succeeded to his hereditary honors by the death of his father, he declined to appear, claiming his right as a peer to be tried by the Upper Chamber. His defence on that occasion was the commencement of his after-celebrity. In 1836, he gave to the world his *Life of Elizabeth of Hungary*, a work that obtained great popularity. In 1840, having attained the prescribed age of 30 years, he took his seat in the Chamber of Peers, and soon made himself conspicuous by his remarkable oratorical powers, and in 1832 delivered his 3 celebrated speeches on the liberty of the Church, and of the monastic orders, and on the freedom of education. On the formation of the Republic in 1848, Montalembert

Fig. 1843. — MONTALEMBERT.

was elected a member of the Constituent Assembly, opposed the continuance of the state of siege, and the return of Louis Napoleon; he, however, subsequently approved of the President's measures, especially the occupation of Rome; and after the *coup d'etat*, declined a seat in the Consultative Commission, but accepted one in the council of the Corps Législatif. In 1857, on losing his seat, he retired into private life, though, as a political writer in the public journals, he made himself so conspicuous, that he was summoned before the Correctional Police for one of his articles, and, after a trial that attracted unusual attention, was fined 3,000 francs, and committed to custody for six months. His best works, after the above-named, are the *Catholic Interests in the 19th Century*, and the *Political Future of England*, both of which have been translated into English. *M.* was the principal leader of the Liberal Roman Catholic party. Both as a writer and a speaker he showed himself one of the first men in Europe; and by his influence and his great interests in literature and education, he was among the leaders of the French Academy, of which he was elected a member in 1852. The photograph from which our portrait is copied, although it represents *M.* as a young man, is dated 1848, and is the last that was ever taken. D. 1870.

Monta'na, in *Colorado*, a village of Arapahoe co., abt. 8 m. N. by E. of Denver.

Montana, or **Montano,** in *Iowa*, a town of Boon co., about 30 m. N.W. of Des Moines.

Montana'ro, a town of Italy, prov. of Turin, 15 m. N. E. of Turin. *Pop.* 4,500.

Monta'na, a Western State, bounded N. by the territories of the Dominion of Canada, S. by Wyoming and Idaho, and W. by Idaho. Its northern limit is 49° N. lat.; its eastern, 104° W. lon.; its southern is defined principally by the 45° of N. lat.; and its western line for the most part follows the crest of the Bitter Root mountains and the main chain of the Rocky mountains. *M.* was organized by an act of Congress in 1864, and by act of Feb. 17, 1873, a tract of about 2,000 sq. m. previously belonging to Dakota, was annexed to it. *M.* was admitted to organization as a State in the Federal Union, under an act of Congress, signed by Pres. Cleveland, Feb. 22, 1889, declared a State, by proclamation of Pres. Harrison, Nov. 8, 1889, *a.*, 145,776 sq. m. *M.* consists of a series of basins, five in number; four of them lying on the E. side of the Rocky Mountains, and one on the W. These basins are, for the most part, subdivided into a number of valleys by spurs jutting down from the main chain of the "Rockies." These offshoots are often of great elevation, frequently exceeding that of the parent chain; but there are numerous passes between them, connecting the valleys with each other by low gaps, which are open at all seasons of the year. The basin W. of the Rocky Mountains, in the N.W. corner of the Territory, is drained by the Flathead and Missoula rivers and their branches, the last-mentioned being the outlet of the lake of the same name. This lake is surrounded by a beautiful country, a portion of which is valuable for agricultural purposes. From this sheet of water there extends S. along the base of the mountains to Pend d'Oreilles Mission, a distance of over 50 m., a well-wooded, gently rolling country, clothed with a good growth of grass, a large proportion being excellent farming land; then crossing a range of hills to the S., the Jocko Valley is entered, which, though small, in beauty and fertility is unsurpassed. Here is located the reserve of the Pend d'Oreilles Indians. From this point crossing, by an easy pass, the lofty mountain-spur running down from the main chain between the Jocko and Hell-gate rivers, the valley of the latter is reached, which is 25 m. long, with an average breadth of 6 m. This tract is nearly all excellent farming land, with a good coating of bunch-grass, and a large proportion of it covered with valuable pine timber. The Bitter Root Valley, also fertile, extends S. 60 m., with an average breadth of 7 or 8. This valley, with that of Hell-gate, contains many settlers, whose number is rapidly increasing. These valleys are bounded on the W. by the Bitter Root Mountains, covering an extent of country 75 m. wide, reaching to the valley of Snake River in Idaho, and 200 m. in length. This region is very lofty, snow lying on many of the peaks the entire year. In this tract of country the mineral wealth is believed to be very great. Big Blackfoot River runs through a cañon for 15 m. above its mouth, where it opens into a large and picturesque valley, well timbered and watered, and betokening a good grazing region. Ascending Hell-gate cañon 40 m., we emerge into the rolling grassy hills, which reach 12 m., to the Valley of Flint Creek, a locality well adapted to grass and the cereals. Deer Lodge Valley is also available for agricultural purposes; for, though possessing within itself but a sparse growth of wood, yet the surrounding mountains are well timbered. Its natural advantages for grazing and stock-raising are, taken on the whole, unsurpassed. This valley is 35 m. long, averages 10 m. in width, and is drained by the Deer Lodge River and its affluents; but at the lower end its name becomes changed to that of Hell-gate River, its course being from N. to N.W. The north-western basin contains 8 principal valleys, viz.: those of the Flat-head Lake, Mission, Jocko, Hell-gate, Bitter Root, Big Blackfoot, Flint Creek, and Deer Lodge, besides many other smaller ones of great beauty and fertility. The watershed of this basin trends toward the N.W., and is 250 m. long, having an average width of 75 m. It forms the best timbered section of the country, owing, probably, to the moist warm winds blowing from the Pacific Ocean, and generating a luxuriant vegetation. The N.E. basin extends from the Rocky Mountains to the E. frontier of the Territory, along its N. extremity, a distance of nearly 600 m. by 150. The E. portion of this vast region is composed of clay table-lands, or "mauvaises terres;" but there is, nevertheless, a large area of cultivable land along the river-courses. There are several mountain-spurs here, and occasional peaks, among which may be mentioned the Bear's Paw, Little Rocky Mountains, and Three Buttes. The basin is drained in the direction of the E. by the Milk, Marias, Teton, Sun, and Dearborn rivers, the first three emptying into the Missouri below Fort Benton, and the last two a short distance above the Great Falls. The W. portion of this basin is but little broken by mountains. The greater part of these lands may be made productive by a well-directed system of irrigation, which the abundant water-supply renders comparatively easy. The want of timber may be redeemed to a great extent by coal, of which there are large deposits. The W. central basin is drained to the E. by the Jefferson Fork of the Missouri, and its tributaries, of which the principal are the Big Hole and Beaver-head rivers. Rattlesnake Creek flows from the N.W., and a few m. further west, Williams' Creek takes a like direction. Horse Prairie Creek, which forms the headwaters of the Beaver-head, Red Rock Creek, Black-tailed Creek, and Stray Water River, also drain this basin, which lies in the shape of a spread fan, being 150 m. wide by 100 long. The E. central basin is drained by the Missouri River below the Three Forks, and above them by the Jefferson Fork, into which empty the N. Boulder Creek, S. Boulder Creek, and Williams' Creek. This basin contains a large area of arable land, with a climate fully equal to that of Utah. Its dimensions are 150 m. in length, from N. to S., by 80 m. E. and W., and it contains 5 principal valleys, viz.: those of the Jefferson, of the Three Forks, of N. Boulder, of the lower part of the Jefferson, of the Madison, and of the Gallatin. It comprises even a greater extent of farming lands than the basin of the Beaver-head and affluents. Next, and last, is the basin of the Yellowstone and its branches. This flows towards the E., and is 400 miles long, by 150 wide. In climate and productive capacity, this valley forms a medium between the valleys of the mountains and prairies of the Western States; corn, beans, and pumpkins thrive here, and attain considerable size. This basin contains 7 principal valleys, namely: The main valley of the Yellowstone, of Shields' River, of the Rose-bud, of Clark's and Pryor's Forks, and of the Bighorn River, besides numerous smaller ones. The Yellowstone River is navigable for steamers of light draught nearly to the W. edge of the basin, or almost to the centre of the territory. — *Climate.* The climate of *M.* in the mountainous districts is as cold as that of the New England States. Snow generally falls to a great depth, so that communication in the higher regions is somewhat irregular and uncertain during the winter. In the valleys, where the altitude is less, the temperature is milder. In Deer Lodge and Gallatin and Madison valleys, farm-stock continues in good condition throughout the year, without fodder or grain, the grass being in sufficient abundance nearly all the time. *M.* is a remarkably healthy country, there seeming to be no peculiar diseases ascribable to climatic influence. — *Geol.* It is impossible at present to more than generally outline the main geological features of this Territory. The want of a thorough scientific investigation of its mineral resources is just beginning to be felt. Drift and alluvium, spread over a wide expanse of low, rolling hills, terraces, and prairie, unbroken by other than occasional outcrops of sandstone, make up the majority of the E. formations. Those of the W., on the contrary, prolific of metallic veins and placere, consist in the main of granite. The waters and glaciers, have, likewise, given rise to very extensive gravel deposits, merging into conglomerates of greater or less compactness. In the superficial inequalities of the mountains are found clay schists evidently of comparatively recent formation. Gneiss, mica-schist, quartzite, pitchstone, and greywacke, likewise occur as subordinate local peculiarities. Talcose and reddish silicious slates, slightly charged with copper, and syenitic granite bearing gold are to be found in the mining regions. But most prominent as an ore-bearer — being, with granite, almost universal — are found large masses of blue, yellow, and occasionally whitish metamorphic limestone of a distinctly crystalline structure, and highly magnesian. This rock occurs apparently as an intercalation between dikes of quartzite and the grand granitic substratum of the country. It forms a species of mineral belt, disconnected, however, and generally in each district of limited extent. *M.* is rich in fossils, and hence the geologic age of the various formations admits of a reasonably easy determination. — *Min.* Veins of gold, silver, lead, and copper, are found largely distributed through all the mountainous portions of the Territory. So far as discovered, they usually come to the surface on the foot-hills, and sides of the valleys and cañons. A large portion of these lodes are *true veins*, cutting through granite, syenite, porphyry, trap, gneiss, mica-slate, hornblende slate, talcose slate, argillaceous slates, sandstone, and limestone. These veins vary in thickness from a few inches to 50 or 60 ft. The gangue, or vein rock, or, as called by the miners, *quartz*, is very variable in character. In the gold-bearing veins it is usually a whitish quartz, more or less ferruginous — often, indeed, nearly all iron. In some veins it resembles a stratified quartzite; in others it is syenitic; pyrites, hornblende, calc-spar, arsenic, antimony, copper, and tellurium are found in these veins. In the silver veins the iron so rife in the gold veins is usually replaced by oxide of manganese. This mineral is sometimes so abundant as to constitute the larger portion of the gangue. The latter, in many of the copper-mines, is usually quartz, heavy spar, calc-spar, and brown spar more or less commingled. There seems to be no marked segregation from one another of the gold, silver, copper, or coal bearing localities, other than that the coal deposits are found mainly in the sedimentary foundations of the E. *M.* has been second only to California in the production of gold. The placers diggings are chiefly on the tributaries of the Hell Gate, Big Blackfoot, Madison, and Jefferson rivers, and on the Missouri and its tributaries from the junction of the three forks to the mouth of Smith's river, and on the base of the Yellowstone. The principal quartz mines are near Argenta, Bannock, Helena, Highland in Deer Lodge co., and Virginia City. Silver is chiefly found on Flint and Silver Bow creeks, affluents of Hell Gate river; Alder and Ram's Horn

gulches of Stinking Water river; Ten Mile creek, near Helena; and on Rattlesnake creek, a tributary of Beaver Head river. Copper ores, or such as carry a predominating percentage of this metal, are found among the east foot-hills, near the sources of the Muscle-shell river, also west of the range near Butte City. Clays and sandstones are also found superimposed and underlying the coal-beds in those places where the local peculiarities of the surface have proved favorable to sedimentary and drift formations; that is, mainly in the E., and among the foot-hills. The number of acres of mineral land in *M.* is estimated to amount to 9,200,000. The product of precious metals, from 1862 to 1897, has been, gold, about $190,000,000; silver, $120,000,000. Placer mining being practically exhausted, a large part of the population is now engaged in stock-raising, for which *M.* is better adapted than for agriculture.—*Soil, Veg, and Agric.* The cultivable lands of *M.* consist, generally, of mountain-slopes, table-lands, and rich alluvial bottoms. As before stated, the table-lands require systematic irrigation to develop their fecundity. The soil of the valleys is highly favorable to the growth of cereals and vegetables, and extensive crops of the former are raised on well-watered lands, averaging from 50 to 60 bushels per acre. The alkaline soil, mostly covered with sage-brush, has proved well adapted to the cultivation of grain. There has been much activity in irrigation; hundreds of irrigating ditches exist within the State, and the Federal government is locating storage reservoirs along the mountain chains for the purpose of storing water from the melting snows of the spring for irrigating purposes. It is estimated that 20,000,000 acres may be in this way reclaimed. The grazing-lands are of great extent and of the best quality, the most nutritious herbage clothing all the valleys, hills, and mountains, except on the very highest ranges. The rich grasses, in fact, are found to fatten cattle into beef of even finer quality than is yielded by the grain-fed stock of the States. The value of live-stock throughout the State in 1890 was $21,620,687. Of timber, pine, fir, and cedar predominate; the cedar is, however, usually stunted and scrubby, and fit only for firewood. Timber for building, fencing, and fuel, as well as for mining purposes, is found in sufficient plenty, not only to supply the wants of the settlers, but also to run numerous saw-mills to supply the demand for lumber, which sells readily at from $30 to $50 per 1,000 feet. Building-stone, limestone, slate, brick-clay, roofing-slate, and fire-clay, are found in all parts of the country. The cereal crops for the year 1895 were: 33,975 bushels of Indian corn; 1,065,223 of wheat; 2,446,071 of oats, with small quantities of rye, barley, and buckwheat.—*Polit. Div* The State is divided into 16 counties, viz.:

Beaver Head,	Dawson,	Jefferson,	Missoula,
Cascade,	Deer Lodge,	Lewis and Clarke,	Park,
Choteau,	Fergus,	Madison,	Silver Bow,
Custer,	Gallatin,	Meagher,	Yellowstone.

Cities and Towns. There are about 63 urban settlements; of these the principal places are Butte, Helena (the cap.), Great Falls, Missoula, Anaconda, Livingston, Bozeman, &c.—*Ind.* After mining, agriculture forms the leading Industry of the settlers. *M.* is represented in Congress by one representative and two senators. The settlement of *M.* dates from the opening of the gold mines in 1861. *Pop.* of Territory (1870) 20,595; (1880) 39,159; of State (1890) 131,769; (1900) 243,329.

Mon'tanic, *a.* [Lat. *montanus*, from *mons, montis*, mountain.] Pertaining, or having reference to, or consisting in, mountains.

Mon'tanism, *n.* The doctrinal tenets held by the Montanists.

Mon'tanists, *n. pl.* (*Eccl. Hist.*) A sect that sprung up toward the end of the 2d century, and were so called after their leader Montanus, a Phrygian. He pretended to inspiration, and gave out that the Holy Ghost had instructed him in several points which had not been revealed to the apostles. Two of the most celebrated of his followers were Maximilla and Priscilla, two ladies of fortune, who were early converted to his opinions, and pretended to prophesy. Soon after he found a zealous and gifted advocate in Tertullian. The Montanists preached a most rigid asceticism; they held it unlawful to fly from persecution, condemned second marriage, and forbade forever communion to such as had been guilty of certain notorious offences. They represented the millennium as being near at hand, and taught that Pepuza, in Phrygia, was to be its centre. Hence they were sometimes called *Pepuzians, Purygians*, and *Cataphrygians*. They spread rapidly in Phrygia and other parts, but were violently opposed by the Alexandrian school, and condemned by several provincial councils; and they at length disappeared about the end of the 4th century.

Montanis'tic, Montanis'tical, *a.* Having reference, or pertaining to the heresy of the Montanists.

Mon'tanize, *v. n.* To follow the heretical tenets of Montanus.

Mon'tant, *n.* [See MOUNT.] A term formerly used in fencing.

(*Arch.*) An upright shaft in any framework.

Montargis, (*mon-tar'zhe.*) a town of France, dept. of Loiret, 40 m. E.N.E. of Orleans. *Manuf.* Cloth and leather; also has considerable trade in corn, cattle, &c. *Pop.* 8,000.

Montauban, (*mon'to-ba,*) a town of France, dept. of Tarn-et-Garonne, on the Tarn, 32 m. N. of Toulouse, and 132 E.S.E. of Bordeaux. It is well built, and contains several public squares, the most prominent, the *Place Imperiale*, being adorned with a double range of arcades, with pilasters of the Doric order. The principal public buildings are, the cathedral, the town-hall, and the prefecture. There is also an elevated public walk, called the *Fulaise*, which commands an extensive view. Its celebrated Protestant university, suppressed in 1629, was re-established by Napoleon I. in 1810. *Manuf.* Silk fabrics, hosiery, linen, serges, flannels, earthenware, brandy, &c. It has also a considerable trade, and is a large entrepôt for grain. *Pop.* 25,991. — *M.* was founded in 1144 by Count Alphonse of Toulouse, embraced the Reformation in 1572, and suffered severely during the civil wars that ensued, acquiring celebrity as the stronghold of the Huguenots. It was taken by Richelieu in 1623, and its fortifications were destroyed.

Montauk', in *Missouri*, a village of Dent co., abt. 110 m. S.W. of St. Louis.

Montauk' Point, in *New York*, a promontory and light-house at the E. extremity of Long Island. It exhibits a fixed light 161 feet above sea-level, Lat. 41° 4′ 12″ N., Lon 71° 51′ 54″ W.

Mont Bal'do, a monutain of Italy. See BALDO (MOUNT).

Montbelliard, (*mawnt-bel'le-ar,*) a town of France, dept. of Doubs, 40 m. E.S.E. of Besancon. *Manuf.* Woollen and linen fabrics. *Pop.* 6,000.

Mont Blanc, (*mawnt-blan',*) the loftiest mountain of Europe. See BLANC, (MONT.)

Montblanch', a town of Spain, prov. of Tarragona; *pop.* 4,300.

Montbrison, (*mawnt-bre'swang,*) a town of France, cap. of the department of the Loire, 40 miles S.W. of Lyons; *pop.* 8,000.

Mont'calm de Saint Veran, LOUIS JOSEPH, MARQUIS DE, a French general, b. at Candiac, near Nimes, 1712, entered the army at an early age, and signalized himself on many occasions, particularly that of Placenza, in 1746. In 1756 he became maréchal de camp, and was appointed to command the French army in Canada, where he opposed Lord Loudoun, with considerable skill and success. He afterwards defeated Abercrombie, his lordship's successor; but in the battle fought under the walls of Quebec, in 1759, *M.* received a mortal wound, as did, also, his opponent, the English general Wolfe.

Mont'calm, in *Michigan*, a W. central co. of the lower peninsula; *area*, abt. 790 sq. m. *Rivers.* Flat and Pine rivers, besides several smaller streams and a number of lakes. *Surface*, nearly level; *soil*, very fertile. *Cap.* Stanton.

—A village and township of the above co., abt. 50 m. N.W. of Lansing.

Mont Cenis, See ALPS.

Mont Cer'vin, a mountain of the Alps. See CERVIN, (MONT.)

Mont Clair, in *New Jersey*, a post-village of Essex co., abt. 6. m. N.W. of Newark.

Mont-de-Marsan, (*mawnt-de(r)-mar'sa,*) a town of France, cap. of the dept. of Landes, 64 m. S. of Bordeaux. *Manuf.* Woollen goods, leather, and sail-cloth. It is an entrepôt for wine, brandy, wool, and the agricultural produce of the surrounding country. *Pop.* 6,000.

Mont de Piété, (*mon(g)-de(r)-pe'ai-tay.*) *n.* [It. *monte di pieta.*] A public benevolent institution, existing in Italy, France, Spain, &c., and said to have been first established at Perugia in the latter half of the 15th century by Father Barnabas of Terni, and to have taken its name from the hill on which it was situated. The object was to deliver the needy from the usurious Jewish money-lenders, by lending money upon pledges at a very moderate rate of interest, so as barely to cover the necessary expenses. Popes Leo X. and Paul III. issued bulls approving of these institutions, which were soon established in other towns of Italy, as well as in Spain, the Netherlands, and other countries. There are at present, besides those in Italy, about 50 monts de piété in France, upwards of 100 in Holland, about 20 in Belgium, and some in Germany. The mont de piété of Paris advances to the value of about two-thirds of the pledges, charging interest at the rate of 4½ per cent. per annum, besides ¾ per cent. per month for the expenses of the establishment. Its annual receipts and expenditure amount respectively to about 40,000,000 francs. The *monti frumentarii* are granaries established in different parts of Italy to supply the needy with grain on the same principle as the montes de piété.

Monté, (*mon'tā,*) *n.* [Sp.] (*Games.*) A favorite game of cards, among Spaniards and Hispano-Americans.

Monte-Al'to, a town of Brazil, prov. of Bahia.

Montebel'lo, in *Illinois*, a township of Hancock county.

Montebel'lo, in *Indiana*, a village of Porter co., abt. 51 m. S.E. of Chicago, Illinois.

Montebello Casteggio, (*mon'tai-bel'lo kas-tedj'e-o,*) a town of Italy, prov. of Alessandria, 23 m. E.N.E. of Alessandria. Here the Austrians were defeated by the French, under Lannes, in 1800. The French general took the title of Duke of Montebello from this victory. The Austrians were again defeated here in 1859, by the French and Sardinians.

Monte-Casi'no, a celebrated Benedictine abbey of Naples, prov. of Terra di Lavoro, on a mountain near the San Germano. The Saracens destroyed it in 883. It was restored and greatly extended in 1065. Markwold besieged it for eight days in 1198, when it was delivered, according to monkish legends, by a miracle. Milman terms it "that great model republic, which gave its laws to almost the whole of the western monasticism." Gregory VII. took refuge here in 1083. Its library was spared on the suppression of monastic institutions in Italy in 1866.

Monte Chiaro, (*mon'tai-ke'a-ro,*) a town of Italy, prov. of Brescia, on the Chiese, 10 m. S.E. of Brescia. *Manuf.* Silk stuffs. *Pop.* 7,000.

Monte-Chris'ti, a maritime town on the N. coast of the island of Hayti, W. Indies, abt. 30 m. E. of Cape Haytien; *pop.* 3,000.

Monte-Chris'ti, or **Monte-Cris'ti,** a town of Ecuador, abt. 96 m. N.W. of Guayuquil.

Monte Chris'to, a small rocky island in the Mediterranean, off the western coast of Italy, and pertaining to the state of Tuscany. Monte Christo lies about twenty-five miles south of Elba, and between Corsica and the Tuscan peninsula of Argentaro. This rocky islet, the resort of a vast number of sea-birds, has had a fortuitous interest attached to it by M. Dumas, *père*, who gave the hero of one of his best-written romances the title of "Count of Monte Christo," and made it the "Golconda" of his fabulous wealth.

Monte Cristo, in *California*, a mining village of Sierra co., abt. 4 m. W. by N. of Downieville.

Montecuculi, RAYMOND, COUNT DE, (*mon'ta-kod'koo-le.*) a celebrated general in the service of Austria, b. at Modena, 1680. He entered early into the army, under his uncle, who commanded the artillery of the emperor. The first action in which he distinguished himself was in 1658, when, at the head of 2,000 men, he surprised 10,000 Swedes, who were engaged in besieging Numslau, in Silesia, and whom he compelled to abandon their baggage and artillery, but was subsequently taken prisoner by General Bannier. He did not regain his liberty till two years after; but he employed that time to great advantage in study. On returning to his profession, he defeated the Swedes in Bohemia. After the pence of Westphalia, he travelled in different countries. In 1657 he was appointed field-marshal, and sent to the relief of John Casimir, king of Poland, who was attacked by Sweden and the prince of Transylvania. After defeating the latter, he took Cracow from the Swedes, and gained several splendid actions, which produced a peace. He next served against the Turks, and drove them out of Transylvania, for which he was made president of the imperial council. In 1673 he was sent against the French, and had to oppose the great Turenne, who fell in the contest; and Montecuculi, in his despatch to the emperor, regretted the loss of a man who was an honor to humanity. He afterwards acted with great courage and skill against the Prince de Condé. D. 1680.

Monte Fiascone, (*fe-as'ko-nai,*) a town of Italy, Pontifical States, 9 m. N.N.W. of Viterbo; *pop.* 5,453.

Monte'go Bay, a seaport-town, on a bay of the same name, on the N.W. coast of the island of Jamaica, Lat. 18° 29′ 24″ N., Lon. 77° 56′ W. The harbor is well defended, and a considerable trade is carried on. *Pop.* 4,600.

Montelimart, (*mon-tel'e-mar,*) a town of France, dept. of Drome, on the Jabron, near its confluence with the Rhone, 70 m. S. of Lyons. *Manuf.* Silk, cotton, and woollen goods. It is the entrepôt of an extensive and productive dist., and has a considerable trade. *Pop.* 12,600.

Montel'lo, in *Wisconsin*, a post-village and township, cap. of Marquette county, about 55 miles north of Madison.

Montelo'vez, a town of Mexico. See COHAHUILA.

Monte Maggiore, (*madj-e-o'rai,*) a town of Italy, in Sicily, 29 m. S.E. of Palermo; *pop.* 6,000.

Monte-Moreno, (*mon-ta-mo-ra'no,*) a promontory of Brazil, on the S. shore of Espirito Santo.

Monte-mor-No'va, a town of Brazil, abt. 60 m. S. of Ceara; *pop.* 3,000.

Montenegro, or **Kara-dagh,** (*Black Mountain,*) a principality on the W. frontier of E. Turkey, formerly under the suzerainty of Turkey, having N. Herzegovina, E. Bosnia, S. Albania, and W. a narrow strip of Austrian Dalmatia, separating it from the Adriatic; Lat. bet. 42° 10′ and 43° 10′ N., Lon. 18° 41′ and 19° 30′ E. *Area*, 3,550 sq. m. The surface is generally mountainous and rugged, rising in some places to peaks 5,000 ft. above the sea, and are well timbered. The rivers are numerous, flowing S.E. into the Moracca, which falls into Lake Scutari, the neighborhood of which is very fertile, the other parts of *M.* being generally unfertile. —*Prod.* Corn, potatoes, tobacco, and fruits. Cattle, sheep, hogs, and goats are numerous. *M.* is divided into 8 *nahiyes*, or departments. The inhabitants are of Slavonic origin, well made, robust, and active; they belong to the Greek Church, and are devoted to their priests, and especially to their bishop. The latter, previous to 1851, was also *vladika*, or sovereign, including the offices of judge, legislator, civil governor, and commander-in-chief. He is not despotic, however, being assisted and controlled by a senate, consisting of the heads of the principal families. The dignity of vladika is hereditary. Since 1851, the civil government has been directed by the "hospodar," or governor. The other public offices, as the secretary of state, the chancellor, and the local judges, are elected. The expenses of the govt. are defrayed by taxes levied on every household. *Cap.*, Cettigne; commercial mart, Cattaro. *Pop* 100,000.—*M.* became independent in 1700. On the death of the last prince-bishop in 1851, his successor, Daniel I., separated the religious from the secular supremacy, retaining the latter under the title of hospodar. The Turks invaded *M.* in 1853, but soon retired. They again invaded *M.* in 1862, captured Rjeka, and defeated the last effective forces of *M.* A treaty of peace was concluded the same year, which affirmed the sovereignty of the Porte; but in 1878 the independence of *M.* was forced upon Turkey by the Congress of Berlin, which besides effected annexations including Antivari, and the town and district of Dulcigno on the Adriatic.

Montenotte, (*mon'tai-not'tai,*) a mountain of Italy, in Sardinia, having on its side two villages, Montenotte Superior and Inferior, noted for the defeat of the Austrians by Napoleon in 1796.

Montepulciano, (*mon'tai-pul-che-a'no,*) a town of Central Italy, prov. of Sienna, 27 m. S.E. of Sienna.

MONTANA

SCALE OF MILES

10 5 0 10 20 30 40 50

Military Reservations

Indian Reservations

State Capital ⊛ County Seats ⊙

Places of 10,000 and over		BUTTE
" "	3,000 to 10,000	Anaconda
" "	1,000 to 3,000	Dillon
" "	500 to 1,000	Sheridan

Hammond's 8 x 11 Map of Montana.
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MONTANA.

Land surface, Sq. m. 145,310
Water surface, Sq. m. 770
Pop. 1900...243,329
White....226,283
African.....1,523
Indian.....11,343
Chinese.....1,739
Japanese...2,441
Native-born, 176,262
Foreign-born, 67,067
Males.....149,842
Females...93,487

COUNTIES.

Beaverhead...C 4
Broadwater...E 3
Carbon .... ..G 4
Cascade.....E 2
Chouteau .....F 1
Crow Indian Reservation.J 4
Custer.....L 4
Dawson..... K 2
Deerlodge ....C 4
Fergus..... G 2
Flathead.....B 1
Gallatin..... E 4
Granite .....C 3
Jefferson.....D 3
Lewis & Clarke.....D 2
Madison .....D 4
Meagher..... F 3
Missoula.....B 2
Park.....F 4
Powell ... .C 2
Ravalli.. .. B 3
Rosebud.....J 4
Silverbow ....D 4
Sweet Grass. G 4
Teton.....D 1
Valley.....K 1
Yellowstone . H 3

CITIES-TOWNS

Pop. Thousands.	
30	Butte.....D 4
14	Great Falls E 2
10	Helena . .D 3
9	Anaconda...D 3
4	Missoula.....C 3
3	Walkerville D 3
3	Bozeman....F 4
3	Billings .....H 4
2	Sandcoulee..E 2
2	Belt .....F 2
2	Livingston..F 4
2	Kalispell....B 2
2	Red Lodge..G 4
1	Miles City .. L 3
1	Big Timber .G 4
1	Dillon .....D 4
1	Glendive....M 2
1	Deerlodge ..D 3
1	Gunderson..D 3
1	Hamilton ...B 3
1	Boulder... .D 3
1	Lewistown..G 2
1	Havre ..... G 2
1	Fort Benton F 2

Pop. Hundreds.	
9	Philipsburg.C 3
9	Basin ... .D 3
8	E. Helena ...E 3
8	Neihart.....F 3
7	Clancey .... E 3
6	Whitehall...D 4
5	Stockett. .. E 2
5	Sheridan ... D 4
5	Virginia City E 4
4	Choteau ....D 2
4	Forsyth .. .K 3
4	White Sulphur Sprs.F 3
4	Townsend...E 3
3	Glasgow ....K 1

Montereau, (*mon'te-ro,*) a town of France, dept. of Seine-et-Marne, at the confluence of the Seine and Yonne, 42 m. S.E. of Paris. *Manuf.* Earthenware and leather. *Pop.* 6,500.

Monterey, (*mon-ta-ra',*) an important city of Mexico, cap. of the state of Nuevo Leon, on the Tigre, abt. 85 m. E. by S. of Saltillo; Lat. 26° N., Lon 100° W. The streets are neatly paved, and the houses are generally handsome and substantial, being built after the Moorish style, with flat roofs. *Pop.* 14,000.—On Sept. 19, 1846, Gen. Taylor with an army of 6,625 men assaulted this city, and after a desperate contest of four days carried it by storm. The American loss was 120 killed and 368 wounded. That of the Mexicans was not ascertained, but was believed to be much greater.

Monterey, in *California*, a S.W. co., bordering on the Pacific Ocean; *area*, about 3,452 sq. m. *Rivers.* Pajaro, Salinas, or San Buenaventura, Carmel, Arroyos of San Bruit, and Nacimiento rivers. *Surface*, much diversified, the Coast Range forming the E. boundary, and spurs of it traversing the county in different directions. *Soil*, in the valleys very fertile. *Min.* Gold and silver in moderate quantities, and some sulphur. *County-seat.* Salinas. *Pop.* (1890) 18,037.

—A post-village, formerly the capital of the above co., on Monterey Bay, about 94 m. S.S.E. of San Francisco; Lat. 36° 37′ N., Lon. 119° 40′ W. It was settled in 1776, and for a time was the seat of State government. The harbor is good except during the prevalence of N. winds.

Monterey, in *Illinois*, a village of Calhoun co., about 70 m. S.W. of Springfield.

Monterey, in *Iowa*, a post-village of Davis co., abt. 13 m. S.W. of Bloomfield.

—A village of Lee co., abt. 90 m. S. by E. of Iowa city.

Monterey, in *Kentucky*, a post-village of Owen co., on the Kentucky River, abt 40 m. N. by W. of Frankfort.

Monterey, in *Massachusetts*, a post-township of Berkshire co.

Monterey, in *Michigan*, a post-township of Allegan co.

Monterey, in *Ohio*, a post-village of Clermont co., abt. 26 m. E. by N. of Cincinnati.

—A township of Putnam co.

Monterey, in *Pennsylvania*, a village of Allegheny co., on the Monongahela River, abt. 4 m. above Harrisburg.

—A post-office of Berks co.

Monterey, in *S. Carolina*, a village of Abbeville dist.

Monterey, in *Tennessee*, a village of McNairy co., abt. 8 m. N. of Corinth, Mississippi.

Monterey, in *Texas*, a village of Cass co., abt. 30 m. N.W. of Shreveport.

Monterey, in *Virginia*, a post-village, cap. of Highland co., abt. 180 m. W.N.W. of Richmond.

Monterey, in *Wisconsin*, a post-village of Wankesha co., abt. 14 m. E. by S. of Waterton.

Monterey Bay, in *California*, an indentation of the Pacific Ocean, between Monterey and Santa Cruz cos. It receives the Salinas and several other rivers, and affords harbors for the towns of Monterey and Santa Cruz.

Monte Ro'sa, a peak of the Pennine Alps. See ALPS.

Monte Roton'do, the loftiest mountain of the island of Corsica, 25 m. from Ajaccio. It has an elevation of 8,760 feet above the sea.

Montesa'no, in *Washington*, a post-town, cap. of Chehalis co., 47 m. W. of Olympia. *Pop.* (1897) 2,400.

Monte-Sant'o, a town of Brazil, abt. 210 m. N.W. of Bahia.

Montespan, FRANÇOISE ATHENAISE, MARQUISE DE, (*mon'tes-pa',*) was B. in 1641. She was daughter of the first duke of Mortemart, and married in 1663 the marquis of Montespan; soon after which she appeared at the court of Louis XIV., and attaching herself to the Duchess de la Vallière, then the favorite mistress of the king, she attracted his admiration, and supplanted the duchess. She had several children by Louis, who were ultimately declared legitimate. She was in turn supplanted by Madame de Maintenon, and in 1686 was commanded by the king to quit the court. She passed her last years in devotional retirement and benevolent attention to the poor. She was tortured by remorse for her guilty life, offered to return to her husband, who refused to receive her, and D. in 1707.

Montesquieu, CHARLES DE SECONDAT, BARON DE, (*mon'tes-kyu,*) was B. at the castle of La Brède, near Bordeaux, in 1689, and in 1716 became president of the parliament of Bordeaux. The publication of the *Persian Letters* first made him famous as an author. It is a

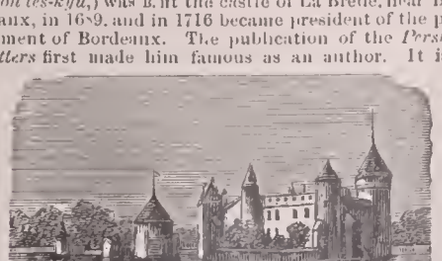

Fig. 1844.—BIRTH-PLACE OF MONTESQUIEU.

vigorous yet delicate picture of the manners, follies, and vices of his countrymen, interspersed with luminous passages on graver matters, and enjoyed an immense popularity. In 1728 he was admitted to the French Academy, on which occasion he delivered an eloquent discourse. Having given up his civil employment, he began to travel through Europe, to collect materials for his long meditated work on politics and jurisprudence. After his return he retired to his estate, and there completed his work *On the Causes of the Grandeur and Declension of the Romans*, which was published in 1734. His greatest work, however, is the *Spirit of Laws*, which occupied him twenty years, was published in 1748, and secured to him a very high place among writers on political science. His other works are, the *Temple of Cnides*, a piece called *Lysimachus*, and an *Essay on Taste*. Burke characterizes him as "a genius not born in every country, or every time,—with an herculean robustness of mind, and nerves not to be broken with labor." D. 1755.

Monteth, *n.* A vessel in which glasses are washed; —named after the inventor.

"New things produce new words, and thus *Monteth*
Has by one vessel saved his name from death."—*King.*

Monteur, (*mông'tûr',*) *n.* [Fr., from *monter*, to mount.] A French artist in artificial flowers, wreaths, bandeaux, &c.

Montevallo, in *Missouri*, a post-village of Vernon co., abt. 17 m. E.S.E. of Nevada City.

Montevid'eo, ("Mountain of Life,") a sea-port city of South America, cap. of the republic of Uruguay, on a peninsula extending into the estuary of the Rio de la Plata, on its N. side, 125 m. E. by S. of Buenos Ayres; Lat. 34° 54′ 11″ S., Lon. 56° 13′ 18″ W. The town is well fortified, and has a citadel. The houses, which are of stone or brick, are seldom above one story in height; they are flat-roofed; and timber is so scarce that their floors consist, for the most part, of brick or bare earth. The city has been much improved of late; streets formerly unpaved, teeming with dust or mud, as the weather happened to be dry or wet, are now well paved and clean; indeed, they furnish an example in this respect worthy imitation by cities further north boasting greater progress. The port is the best on the Plata. An outer and inner breakwater, a stone quay, and other port improvements, are being constructed, at a cost of $15,000,000. It is a large circular basin, open to the S.W.; generally the water is shallow, not exceeding from 14 to 19 feet; but the bottom being soft mud, vessels are seldom damaged by grounding. However, the depth of water in the harbor, as well as throughout the whole of the Rio de la Plata, depends very much on the direction and strength of the winds. The harbor is exposed to the *pamperos*, or S.W. winds, which sometimes blow with so much force and continuance as to cause the rise of a fathom or more in the depth of water; but they rarely do any damage to vessels properly moored with anchors to the S.W. and S.E., and one to the N. On the opposite side of the bay is a mountain called "Monte Video," whence the city has derived its name; on its summit is a light-house, having the lantern 475 feet above the sea. *M. V.* has considerable commerce; the imports consist chiefly of British textile and metal manufactures, breadstuffs and liquors, sugar, tobacco, &c. The great articles of export consist of animal products.—*Hist.* Montevideo was founded by a colony from Buenos Ayres, and its possession was long a matter of dispute between the Spaniards and Portuguese. It was taken by the Brazilians in 1821, and became, in 1828, the cap. of the new republic of Uruguay. The population in 1897 was about 216,500, of whom nearly one-half were foreigners, chiefly from Italy, France, and Spain. This foreign element is mainly engaged in the retail trade.

Montevid'eo, in *Georgia*, a village of Elbert co., abt. 90 m. N.E. of Milledgeville.

Montezu'ma II., surnamed XOCOJOTZIN, or "the Younger," 9th king of Mexico, was B. about 1470, and was elected on the death of his grandfather, in 1502. He had distinguished himself as a general, and at the time of his election held the office of high-priest. He dropped the mask of moderation and humility, was crowned with more than usual pomp, and had an extraordinary number of human victims, prisoners taken in war for the purpose, sacrificed on the occasion. He dismissed from his court and palace all plebeians, and gave their employments to persons of noble birth, alienating by this and other arrogant measures the affections of his subjects. He carried on almost continual wars with the neighboring provinces, suffering occasionally reverses. But his health was undermined and his character enervated by his excessive sensual indulgences, and he became timid and superstitious. The apparition of a comet caused great alarm in his kingdom about 1512, and the astrologers could not interpret its meaning. A neighboring king, skilled in divination, affirmed that it foreboded disasters from the arrival of foreigners—a warning soon confirmed. *M.*, however, still extended his empire, and at the same time increased the number of disaffected subjects. In 1519, Cortez and the Spaniards invaded the empire and approached the capital. *M.* sent presents and complimentary messages to them. But was in the utmost terror. He at length went with a magnificent cortege to meet Cortez, and conducted him into the city, where, after eight days of ceremonious civilities, Cortez made *M.* his prisoner, and had irons put on his legs. They were, however, soon removed, and the captive king professed himself the vassal of Charles V. He remained inflexible in the matter of religion. Left by Cortez, in 1520, in charge of Alvarado, and a small body of Spaniards, severe conflicts took place in the city, which were renewed on the return of Cortez. The Mexicans assaulted the city on June 27, and Montezuma, while standing on the walls in his royal robes, exhorting his subjects to submit to their enemies, was wounded by Mexican arrows, and by the blow of a stone, before the Spaniards could cover him with shields. He refused all food and attendance to his wounds, and died June 30, 1520.

Montezu'ma, in *Alabama*, a village of Covington co., about 80 m. S. of Montgomery.

Montezu'ma, in *California*, a village of Tuolumne co., about 8 m. S.W. of Sonora.

Montezu'ma, in *Georgia*, a post-village of Macon co., about 80 m. S.W. of Milledgeville.

Montezu'ma, in *Illinois*, a post-township of Pike co., about 58 m. W. by S. of Springfield.

Montezu'ma, in *Indiana*, a post-town of Parke co., about 60 m. W. of Indianapolis.

Montezu'ma, in *Iowa*, a post-town, cap. of Poweshiek co., about 65 m. E. of Des Moines. *Pop.* (1895) 1,231.

Montezu'ma, in *Kentucky*, a village of Union co.

Montezu'ma, in *New York*, a post-village and township of Cayuga county, about 35 miles west of Syracuse.

Montezu'ma, in *Ohio*, a post-village of Mercer co., about 82 m. N.N.W. of Piqua.

Montezu'ma, in *Penn.*, a post-village of Chester co.

Montezu'ma, in *Wisconsin*, a village of Green co.

Montfaucon, BERNARD DE, (*mawnt'fo-kawng.*) a celebrated French critic and antiquary, was B. at the castle of Soulage, in Languedoc, in 1665; became a Benedictine monk, after having engaged in the military service; settled at Paris in 1687; visited Rome, and was received with distinction by Pope Innocent XII., was admitted to the Academy of Inscriptions in 1719, and D. in 1741. He was a voluminous writer; but the most important of his works, all of which abound in learning, is that treasure of classical archæology, entitled *L'Antiquité Expliquée et Representée en Figures*, forming 15 vols., in folio.

Mont'ferrat, (*Hist.*) A territory of N. Italy, formerly an independent duchy, between Milan, Piedmont, and Genoa, was created by Otho I (the Great) in 967, in favor of Alderan. In 1187 the titles of Marquis of Montferrat and of Tyre were united in the person of Conrad, who was assassinated April 29, 1192; and by the marriage of Yolande, daughter of William V., with the Greek emperor Andronicus Palæologus in 1224, the succession to the marquisate became hereditary in their line. In 1414 the Emperor Sigismund bestowed upon Theodoro II the title of the "Imperial Vicar in Italy." On the extinction of the male line in 1533, the succession was contested by Frederick II., Gonzaga, Marquis of Mantua, Louis II., Marquis of Saluces, and Charles III., Duke of Savoy. Charles V. decided the case in favor of the Marquis of Mantua, Jan. 5, 1536. In 1574 it was erected into a duchy; and in 1613 it was taken by Charles Emanuel I., Duke of Savoy, who was soon compelled to relinquish his conquest. His son, Victor Amadeus I., obtained the cession of part of the country in 1631; and in 1708 the whole of Montferrat was annexed to his dominions. In 1797 it was incorporated with the Cisalpine republic; in 1805 it formed part of the kingdom of Italy; and in 1815 it was given to the king of Sardinia.

Montfort, SIMON DE, (*mawnt'fort.*) This name, famous in the mediæval history of France and England, was first borne by a knight crusader, descended from the lords of Montfort, near Paris. His career dates from 1199, when he went to the Holy Land, companion-in-arms of Thibault, count of Champagne; but it becomes of more historical importance in 1208, when he was appointed chief of the barbarous crusade against the Albigenses, then protected by Raymond, count of Toulouse. In 1213 he obtained a great victory at Muret over the confederated armies of that prince, of his brother-in-law, Peter, king of Arragon, and the nobles who had united with them, and was then appointed by the Pope sovereign of all the countries conquered from the alleged heretics. He was killed while besieging Toulouse, 1218.

M., SIMON DE, a younger son of the preceding, who quitted France either in 1231 or 1236, in consequence of a dispute with Queen Blanche, mother of Saint Louis. He was the heir of estates in England, which had been held by his family in the reign of King John, and on coming to settle here, received possession of them with the title of Earl of Leicester. Henry III., in fact, received him into great favor, permitted him to marry his sister, the countess dowager of Pembroke, and appointed him lieutenant-general, or seneschal, of Gascony. From this time the interest of English history turns on the disputes between this turbulent subject at the head of a confederacy of the barons and the Crown, the first incident in it being Montfort's recall from his government. In 1258 Henry had convoked a Parliament, to procure supplies for the conquest of Sicily. The occasion was seized by Montfort and the barons, to make an armed protest against his government, the end of which was the appointment of twenty-four of their number, with Montfort as president, to administer the affairs of the kingdom. Such a truce could not, in the very nature of things, be of long duration. The king and his son, Prince Edward, endeavoring to reconquer the royal authority by force of arms, were defeated at the battle of Lewes, 1264, an event which transferred the government, in reality, to Simon de Montfort, though he acknowledged the Bishop of Chichester and the earl of Gloucester as his associates. In the year following, January, 1265, De Montfort convened a parliament, in which representatives were sent from the boroughs for the first time on record, and thus originated the *House of Commons*. He was now the leader of the popular party, and was obliged to take the field by the disaffection of the Earl of Gloucester, who soon after, with many other of the barons, joined Prince Edward, previously a captive with his father in the camp of Mont-

fort. The battle of Evesham, 5th August, 1265, decided the contest. Simon de Montfort, overpowered by numbers, fell in the midst of his friends, and the ruin of his family succeeded, as a matter of course.

Mont'fort, or WINGVILLE, in *Wisconsin*, a post-village and township of Grant co., about 18 miles N.E. of Lancaster.

Montgolfier, (*mawnt-gol'fe-ai.*) See BALLOON.

Montgomery, (*mont-gom'e-re.*) the name of a noble family, sprung from ROGER DE MONTGOMERY, a companion-*in*-arms of William the Conqueror. The son of Roger was banished the kingdom in the reign of Henry I., and one of his descendants was created earl of Eglinton by James IV. of Scotland, 1502.—GABRIEL DE MONTGOMERY, a member of this family, had the misfortune to wound Henry II. in a tournament, of which the king died, 1559. He afterwards distinguished himself in the religious wars of France, and was beheaded by order of the Catholic queen, Catherine de Medici, 1576.

Montgom'ery, JAMES, an English poet, B. at Irvine, 1771. He early showed the possession of a poetical impulse, and soon gave a shape to his crude fancies by writing a volume of poems, which he sent to London for publication; but they being declined, he left Scotland, and by some means found his way to London, where he accepted a situation in a publisher's office; and after some time, proceeded to Sheffield, where he became attached to the "Iris" newspaper, and continued its editor without anything of importance occurring for several years. In 1806 he produced his *Wanderer in Switzerland*, the success of which induced him to bring out his *West Indies; The World before the Flood;* and *Greenland*. In 1823 appeared *Original Hymns for Public, Private, and Social Devotion;* and in 1830, *History of Missionary Enterprise in the South Seas*. D. 1854.

Montgom'ery, RICHARD, an American revolutionary general, B. in Ireland, 1736. Entering, at an early age, the British army, *M.* served at the siege of Louisbourg, 1758, and manifested high military talents, which were further displayed during the expeditions to Martinique and Havana. Resigning his commission in the British army, *M.* emigrated to America, and settled there, in 1773, in Dutchess co., New York. In 1775 he represented that co. in the Continental Congress, and was appointed brigadier in the newly organized national army. In this capacity he was despatched to Canada, and succeeded in reducing Montreal and other places. In conjunction with General Arnold, *M.* endeavored to take the citadel of Quebec by a *coup de main*, but was killed while heading the attack, Dec. 31. Gen. *M.* was interred at Quebec, whence his remains were brought to New York, in 1818.

Fig. 1845.—GEN. MONTGOMERY.

Montgom'ery, an inland co. of N. Wales, having N. Merioneth and Denbigh, E. Salop, S. Radnor, and W. Cardigan; *area*, 755 sq. m. The surface is generally mountainous, and the soil various, but in the valleys it is clayey, and in parts very fertile. The principal rivers are the Severn, Vyrnwy, and Dovey. *Prod.* Oats, barley, wheat, and rye; and is noted for its superior breed of horses. *Min.* Copper, lead, zinc, millstones, slate, and limestone. *Manuf.* Chiefly flannel. *Cap.* Montgomery, a small town of 1,500 inhabitants. *Pop.* 66,919.

Fig. 1846.—COTTON-CHUTE ON THE ALABAMA RIVER.

Montgomery, in *Alabama*, a S.E. central co.; *area*, about 772 sq. m. *Rivers.* Tallapoosa and Alabama rivers, Catama and Pintelala creeks. *Surface*, mostly level; *soil*, fertile, producing, on an average, more cotton, Indian corn, sweet potatoes, and oats, than any other co. in the State. *Cap.* Montgomery, which is also the seat of State government. *Pop.* (1890) 56,172.

—A city, seat of justice of the above co., and cap. of the State, on the Alabama River, 331 m. above Mobile, and 839 m. S.W. of Washington; Lat. 32° 21′ N., Lon. 86° 35′ W. In wealth, trade, and population, *M.* ranks next to Mobile, being one of the most important towns in the Southern States. The Alabama river affords communication with the Gulf of Mexico for the largest steamers during all seasons of the year, and numerous railroads connect it with the important places in the E., N., and W. *Pop.* (1890) 21,883.

Montgom'ery, in *Arkansas*, a S.W. central co.; *area*, about 834 sq. m. *Rivers.* Washita, and some less important streams. *Surface*, mostly hilly or mountainous; *soil*, moderately fertile. *Cap.* Mount Ida. *Pop.* (1890) 7,923.

Montgomery, or MONTGOMERY CITY, in *Colorado*, a village of Park co., about 90 m. S.W. of Denver.

Montgomery, in *Georgia*, a S.E. central co.; *area*, about 763 sq. m. *Rivers.* Ocmulgee, Oconee, and Little Ocmulgee rivers. *Surface*, generally level; *soil*, sandy, and not very fertile. *Cap.* Mount Vernon. *Pop.* (1890) 9,248.

Montgomery, in *Illinois*, a S.S.W. central co.; *area*, about 702 sq. m. *Rivers.* East and West Forks of Shoal creek, and some less important streams. *Surface*, undulating; *soil*, fertile. *Cap.* Hillsborough. *Pop.* (1890) 30,003.

—A village of Fulton co., about 25 m. S.W. of Peoria.

—A post-village of Kane co., about 45 m. S.W. of Chicago.

—A township of Woodford co.

Montgomery, in *Indiana*, a W. central co.; *area*, about 504 sq. m. *Rivers.* Sugar and Racoon creeks, besides some smaller streams. *Surface*, level or gently undulating; *soil*, fertile. *County-town.* Crawfordsville. *Pop.* (1890) 28,025.

—A township of Gibson co.

—A village and township of Jennings co., about 22 m. N.W. of Madison.

—A township of Owen co.

Montgomery, in *Iowa*, a S.W. co.; *area*, about 432 sq. m. *Rivers.* Nishnabatona, Big Tarkeo, and East Tarkeo rivers. *Surface*, level; *soil*, fertile. *Cap.* Red Oak. *Pop.* (1895) 17,119.

Montgomery, in *Kansas*, a village of Linn co., 5 m. W. of Mound City.

Montgomery, in *Kentucky*, a N.E. central co.; *area*, about 200 sq. m. *Rivers.* Small and unimportant. *Surface*, hilly, and in some parts mountainous; *soil*, generally very fertile. *Cap.* Mount Sterling. *Pop.* (1890) 12,367.

Montgomery, in *Maryland*, a S.W. co., adjoining Virginia; *area*, about 508 sq. m. *Rivers.* Potomac and Patuxent rivers, besides the E. Branch of the Potomac, the Seneca, Rock, and Watts' creeks. *Surface*, hilly; *soil*, except along the rivers, not very fertile. *Min.* Gneiss, serpentine, red sandstone and limestone, with some gold near Brookeville. *Cap.* Rockville. *Pop.* (1890) 27,185.

Montgomery, in *Massachusetts*, a post-township of Hampden co.

Montgomery, in *Minnesota*, a post-village and township of Le Sueur co.

Montgomery, in *Missouri*, an E. co.; *area*, about 546 sq. m. *Rivers.* Missouri River, Loutre River, and Riviere au Cuivre, or Copper River. *Surface*, diversified; *soil*, fertile. *Min.* Coal and iron. *Cap.* Danville. *Pop.* (1890) 16,850.

Montgomery, in *North Carolina*, a S.W. central co.; *area*, about 596 sq. m. *Rivers.* Yadkin, Lumber, Uharie, and Little rivers. *Surface*, much diversified, and mountains in the W.; *soil*, in the valleys fertile. *Min.* Gold has been found along the Yadkin. *County-seat.* Troy. *Pop.* (1890) 11,239.

Montgomery, in *New Jersey*, a post-township of Somerset co.

Montgomery, in *New York*, an E. central co.; *area*, about 396 sq. m. *Rivers.* Mohawk river, Schoharie creek, and many smaller streams. *Surface*, uneven, and in some parts mountainous; *soil*, generally fertile. *Cap.* Fonda. *Pop.* (1890) 45,699.

—A post-village and township of Orange co., about 88 m. W. by S. of Albany. *Pop.* of village (1897) 1,062.

Montgomery, in *Ohio*, a S.W. co.; *area*, about 480 sq. m. *Rivers.* Miami and Mad rivers, and Twin creek. *Surface*, diversified; *soil*, very fertile. *Cap.* Dayton. It is one of the most wealthy and populous counties in the State. *Pop.* (1890) 100,852.

—A township of Ashland co.

—A township of Franklin co.

—A post-village of Hamilton co., about 13 m. N.E. of Cincinnati.

—A township of Marion co.

—A township of Wood co.

Montgomery, in *Pennsylvania*, a S.E. co.; *area*, about 480 sq. m. *Rivers.* Schuylkill River, and Perkiomen, Manatawny, and Wissahickon creeks. *Surface*, pleasantly diversified; *soil*, very fertile, producing in one year, besides the ordinary quantity of other crops, 98,701 tons of hay and 3,048,098 lbs. of butter, the greatest amount of each raised in any county of the State. *Min.* Sandstone, marble of excellent quality, iron, lead, and copper. *Cap.* Norristown. *Pop.* (1890) 123,290.

—A township of Montgomery co.

Montgomery, in *Tennessee*, a N.N.W. co., adjoining Kentucky; *area*, about 540 sq. m. *Rivers.* Cumberland and Red rivers. *Surface*, undulating; *soil*, fertile, producing in one year 3,454,745 lbs. of tobacco. *Cap.* Clarksville. *Pop.* (1890) 29,697.

—A village, former cap. of Morgan co., about 115 m. E. of Nashville.

Montgom'ery, in *Texas*, a S.E. co.; *area*, about 1,100 sq. m. *Rivers.* San Jacinto, and several smaller streams. *Surface*, level; *soil*, very fertile. *Cap.* Conroe. *Pop.* (1890) 11,765.

—A post-village, former cap. of the above co., about 50 m. N. of Houston.

Montgomery, in *Vermont*, a post-township of Franklin co. *Pop.* (1897) 1,760.

Montgomery, in *Virginia*, n S.W. co.; *area*, about 442 sq. m. *Rivers.* Kanawha and Staunton, or Roanoke rivers, Craig's creek, and some smaller streams. *Surface*, hilly or mountainous, the Blue Ridge forming the S.E. boundary of the co. *County-seat*, Christiansburg. *Pop.* (1890) 17,742.

Montgomery Center, in *Vermont*, a post-village of Franklin co., about 45 m. N. of Montpelier.

Montgomery City, in *Missouri*, a post-town of Montgomery co. *Pop.* (1897) 2,310.

Montgomery's Point, in *Arkansas*, a village of Desha co.

Montgom'eryville, in *Pennsylvania*, a village of Montgomery co., about 12 m. N.E. of Norristown.

Month, (*munth,*) *n.* [A.S. *monath;* Ger. *monat;* Fr. *mois;* Gr. *mēn;* Lat. *mensis;* Sansk. *māca*, from *mā*, to measure.] The twelfth part of our calendar year. It is so called from being the period of the moon's revolution around the earth. See CALENDAR.

—The period measured by the moon's revolution; the time from one conjunction or new moon to another, a period averaging about 29½ days, and called the *lunar month;* a space or period of time constituting one of the twelve divisions of the year, called a *calendar month;* —in its popular sense, a period of four weeks.

Month'ling, *n.* That which is a month old, or which lives for a month. (R.)

Month'ly, *a.* Continued a month, or performed in a month; as, the *monthly* revolution of the moon. — Happening once a month; done every month; as, a *monthly* payment.

—*n.* A publication which appears regularly once a month; as, the "Atlantic *Monthly.*"

—*adv.* Once a month; in every month.

Month's-mind', *n.* Ardent longing; eager desire. (R.)

Mon'ti, VINCENZO, one of the most celebrated poets of modern Italy, was B. at Fusignano, near Ferrara, in 1753, and became as notorious for the versatility of his political principles as for his poetic talents. He commenced his career as secretary to Luigi Braschi, nephew of Pope Pius VI., and was then a violent enemy of the French; he afterwards became a republican, next a panegyrist of Napoleon, and ended by eulogizing the emperor of Austria. His *Basvilliana*, written on the murder of Hugo Basseville, the French ambassador at Rome, is in form a close imitation of Dante, and gained him high reputation. His other chief works were *Bardo della Selva Nera*, an unfinished eulogy of Napoleon; *Cantica*, another political poem; and a translation of Homer's *Iliad;* and his dramatic writings are the tragedies of *Galeotti Manfredi, Aristodemo*, and *Caio Gracco*. He was successively appointed professor of the belles-lettres at Milan, and of rhetoric in the university of Pavia, and historiographer of the kingdom of Italy; and was fortunate enough to preserve his place and pension under the new government. D. 1828.

Monticel'lite, *n.* (*Min.*) A variety of Chrysolite found in small embedded crystals at Vesuvius.

Monticel'lo, in *Arkansas*, a post-town, cap. of Drew co., about 85 m. S.S.E. of Little Rock. *Pop.* (1897) 1,350.

Monticello, in *Florida*, a post-town, cap. of Jefferson co., about 29 m. E.N.E. of Tallahassee. *Pop.* (1897) 1,050.

Monticello, in *Georgia*, a post-town, cap. of Jasper co., about 35 m. N.W. of Milledgeville.

Monticello, in *Illinois*, a city, cap. of Piatt co., on 2 railroad lines, 148 m. S.W. of Chicago. *Pop.* (1897) 2,000.

Monticello, in *Indiana*, a village of Madison co., about 4 m. N. of Alton.

—A post-village, cap. of White co., about 82 m. N.W. of Indianapolis.

Monticello, in *Iowa*, a city of Jones co., on C., M. & St. P. R.R., 43 m. W.S.W. of Dubuque. *Pop.* (1895) 2,079.

Monticello, in *Kansas*, a post-township of Johnson co.

Monticello, in *Kentucky*, a post-town, cap. of Wayne co., about 100 m. S. of Frankfort.

Monticello, in *Maine*, a post-township of Aroostook co.

Monticello, in *Minnesota*, a post-village and township cap. of Wright co., about 45 m. N.W. of St. Paul.

Monticello, in *Mississippi*, a post-village, cap. of Lawrence co., about 85 m. S. of Jackson.

Monticello, in *Missouri*, a village of Chariton co.

—A post-town, cap. of Lewis co., about 25 m. N.W. of Quincy.

Monticello, in *New York*, a post-village, cap. of Sullivan co., about 110 m. S.S.W. of Albany. *Pop.* (1897) 1,070.

Monticello, in *Ohio*, a village of Fairfield co.

Monticello, in *South Carolina*, a post-village of Fairfield district, about 30 m. N.N.W. of Columbia.

Monticello, in *Tennessee*, a village, former cap. of Putnam co., about 85 m. E. of Nashville.

Monticello, in *Washington*, a village, former cap. of Cowlitz co., on the Columbia river, at the mouth of the Cowlitz river.

Monticello, in *Wisconsin*, a post-village of Green co., about 35 m. S.S.W. of Madison.

Mon'ticle, Mon'ticule, *n.* [Lat. *monticulus*, dim. of *mons, montis*, a mountain.] A small mount or hillock.

Montic'ulate, *a.* Presenting monticles, or small elevations of surface.

Mon'ticule, *n.* See MONTICLE.

Montig'enous, *a.* [From Lat. *mons, montis*, mountain.] Produced on a mountain.

Montilla, a town of Spain, in Andalusia, prov. of Cordova, 19 m. S.E. of Cordova. *Manuf.* Woollen and linen goods. It has a considerable trade in manufactured goods, wine, horses, mules, and cattle. *Pop.* 13,500.

Montivilliers, (*mawnt-vil'le-ai,*) a town of France, dept. of Seine-Inférieure, 5 m. N.E. of Havre. *Manuf.* Linen goods. *Pop* 4,500.

Montlhçon, (*mawnt-lu'song.*) a town of France, dept. of Allier, on the Cher, 38 m. W.S.W. of Moulins, and 171 m. S.E. of Paris. *Manuf.* Coarse woollens. *Pop* 16,212.

Montmartre, (*mawnt-mar'tr,*) formerly a village of France, dept. of Seine, now a part of Paris, on a conical hill commanding an extensive view of the metropolis. This plain is celebrated for its quarries of gypsum, which, from immemorial time, supply the whole of Paris with plaster. The name is derived by some from *Mons Martis*, the sits of a temple to Mars; and by others from *Mons Martyrum*, because it was the scene of the martyrdom of St. Denis and his three companions. The Northmen pillaged it in 887, and Louis VI., "the Fat" (1108–37), formed a Benedictine abbey, which was suppressed in 1789. Combats between the allied armies and the French took place on the heights, of which Blücher gained possession, March 30, 1814.

Mont'mirail, (*-me-rail,*) a small town of France, dept. Marne, on the Little Morin. Here Napoleon defeated the allied Prussians and Russians, Feb. 11, 1814.

Montmorency, (*mawnt'mor-in'se.*) The name of one of the oldest and most illustrious of French families, the founder of which was BOUCHARD, one of the great feudatories of the 10th cent. Of its members distinguished in succeeding ages are: — MATHIEU, grand constable 1130, regent during the crusade 1147, D. 1160. MATHIEU, grandson of the latter, called the "Great Constable," served in the crusade against the Albigenses, and under the regency of Blanche, during the minority of her son, Louis IX., D. 1230. CHARLES, marshal of France, and governor of Normandy, D. 1381. ANNE, constable of France, B. 1493, companion-in-arms and in captivity of Francis I., 1525–26, gained the battle of Dreux against the Calvinists 1562, and that of St. Denis, where he fell gloriously, covered with wounds, 1567. HENRI I., second son of Anne, B. 1544, fought with his father, and was created marshal of France in Piedmont, 1566. He was one of the first to recognize Henry IV., who made him constable 1593: D. 1614. HENRI II., son of the latter, B. 1595, was named admiral by Louis XIII. as early as 1612, and greatly distinguished himself against the Calvinists. He was beheaded, after vainly opposing himself to the ambition of Richelieu, 1632. He was the last of the first ducal branch of this house. His sister, CHARLOTTE MARGUERITE, became wife of the second Henri, Prince de Condé, and mother of the great Condé; D. 1650. See the arms of that family, figure 86.

Montmoren'cy, a village of France, dept. of Seine-et-Oise, near Paris, in the middle of an extensive and romantic forest.

Montmoren'cy, in pr. of Quebec, a river flowing into the St. Lawrence abt. 6 m. N.E. of Quebec. A few m. above its mouth it forms a cataract 250 ft. in height.— A S.E co.; *area*, abt. 7,465 sq. m. *Rivers.* St. Lawrence and Montmorency.

Montoir, (*mông'twôr.*) *n.* [Fr.] A horse-block; a stone used as a help to mount a horse.

Montoire, (*mong-twar',*) a town of France, dept. of Loire-Inférieure, on the Loire, 29 m. W.N.W. of Nantes; *pop.* 5,000.

Mon'ton, *n.* (*Mining.*) A batch of ors under process of amalgamation.

Mon'toro, a town of Spain, prov. of Cordova, on the Guadalquivir, 26 m. E.N.E. of Cordova. *Manuf.* Woollen and linen fabrics. *Pop.* 11,000.

Mon'toro, a town of Italy, prov. of Principato Ulteriore, 12 m. N. of Salerno; *pop.* 6,200.

Montour', in *Pennsylvania*, an E. central co.; *area*, about 130 sq. m. *Rivers.* N. branch of the Susquehanna river, and Chillisaquaque and Roaring creeks. *Surface*, mountainous; *soil*, in the valleys fertile. *Min.* Limestone and iron. *Cap.* Danville. *Pop.* (1890) 15,645.

—A township of Columbia co.

Montours'ville, in *Pennsylvania*, a post-borough of Lycoming co., about 3 m. E. of Williamsport. *Pop.* 1,420.

Montpel'ier, in *Alabama*, a village of Baldwin co.

Montpelier, in *Georgia*, a village of Monroe co., about 50 m. W.S.W. of Milledgeville.

Montpelier, in *Indiana*, a post-town of Blackford co., about 40 m. S. by W. of Fort Wayne. *Pop.* (1897) 920.

Montpelier, in *Iowa*, a post-township of Muscatine county.

Montpelier, in *N. Carolina*, a village of Richmond co., abt. 32 m. W.S.W. of Fayetteville.

Montpelier, in *Vermont*, a town, township, and seat of justice of Washington co., and capital of the State, on the Onion or Winooski River, abt. 200 m. N.W. of Boston, Massachusetts; Lat. 44° 17′ N., Lon. 76° 36′ W. It contains a fine State-house and several other handsome public edificee. The town is well laid out, regularly built, and has an active trade.

Montpelier, in *Virginia*, a post-village of Hanover co., abt. 24 m. N.W. of Richmond.

Montpelier, in *Wisconsin*, a post-township of Kewaunee co.

Montpellier, (*-pel'le-ai.*) a city of France, cap. of the dept. of Hérault, on the Lez, 5 m. from the Mediterranean, and 77 m. N.W. of Marseilles. It is beautifully situated, and has commanding views of the Alps, the Pyrenees, the Cevennes, and the sea. Among the objects of interest is the public walk called the *Place*, or *Promenade du Peyrou*, considered the finest in Europe. The most noteworthy public buildings are the Cathedral, the Theatre, Exchange, the Hall of Justice, the Prefecture, the Observatory, and the University. The latter was, at one time, among the most famous universities of Europe. The public library contains 35,000 vols., including many editions of the 15th century, and 600 MSS. in different European and Asiatic languages. Its botanical garden comprises more than 8,000 species of plants. *Manuf* Woollen, cotton, and linen fabrics, hats, hosiery, thread, chemicals, and surgical instruments. *Pop.* 55,106.

Montpensier, ANNE MARIE LOUISE, DUCHESSE DE, (*-pa'se-ai,*) B. at Paris, 1627, was the daughter of Gaston, Duke d'Orleans, brother of Louis XIII. She was generally known by the name of "Mademoiselle," and embraced the cause of Conde in the civil wars. She caused the cannon of the Bastille to be fired on the French troops, and showed, on many occasions, a most impetuous spirit. After trying in vain to espouse several sovereign princes, among the rest Charles II. of England, she is said to have secretly married the Count de Lauzun. (See LAUZUN.) Mademoiselle passed her last years in devotion, and wrote her memoirs, which are very curious, and full of anecdotes relative to the court of Louis XIV. and the Fronde leaders. D. 1693.

Montpen'sier, ANTOINE MARIE PHILIPPE LOUIS D'ORLÉANS, DUC DE, fifth son of Louis Philippe, king of the French, B. 1824, was educated at the college of Henri IV. at Paris, and after a special examination was appointed lieutenant of artillery in 1842. *M.* was sent to Algeria in 1844, where he participated in the expedition against Biskara, and was wounded during the campaign of Ziban. His services were rewarded with the cross of the Legion of Honor, and promotion to the rank of chef d'escadron. After visiting England in 1845, the duke rejoined the army in Africa, and distinguished himself against the Kabyles, after which he undertook a tour of the East. On his return he married, at Madrid, in 1846, the Infanta Maria Lonisa, sister of Queen Isabella II. of Spain. This alliance, regarded as a master stroke of policy by the crafty Louis Philippe, nearly led to a rupture between France and Great Britain. After the revolution of 1848, the duke, with the rest of his family, took refuge in England, and having remained a short time in that country, went thence to Holland, where he embarked for Spain, in which country he has since resided, at Seville. *M.*, after receiving the title of Infant of Spain, was made captain-general of the Spanish army in 1859. His eldest daughter, Princess Marie, was married in 1864, to her cousin, the Count de Paris, heirmale of the royal house of Orleans. After the flight of Isabella II from Spain in 1868, the duke was proposed as a candidate for the crown. In 1870 *M.* killed in a duel, Don Enrique de Bourbon. In 1878, his third daughter, Mercedes, became the wife of King Alfonso XII of Spain. She died in June of the same year. D. 1890.

Montpensier, CATHERINE MARIE DE LORRAINE, DUCHESSE DE, B. 1552, daughter of the Duke of Guise, and wife of the second Louis, Duc de Montpensier, noted for her animosity against Henry III., during the wars of the League. D. 1596.

Montreal, (*mon-tre-awl',*) a city and river-port of prov. of Quebec, on an island of the same name, in the St. Lawrence River, nbt. 180 m. S.W. of Quebec, and 600 m. from the Atlantic Ocean; Lat. 45° 30′ N., Lon. 73° 25′ W. *M.* is divided into the Upper and Lower town. In the former, which is the most modern, and is inhabited by the wealthier class, the houses are handsomely and solidly built in the modern style; but in the Lower town they are generally of a gloomy-looking gray-stone, with dark iron window-shutters and tinned roofs. Along the bank of this river is an extensive line of quays and warehouses. Among the more remarkable public edifices are the Roman Catholic cathedral, opened in 1829, and said to be superior to any other church in British America; the church of St. Sulpice, built by the Sulpicians, to whom *M.* chiefly owes its foundation, and who still hold the seigniory of the island upon which it stands; the Seminary of St. Sulpice, a large and commodious building, erected at an expense of $50,000; the Montreal General Hospital, erected in 1821–2 by voluntary subscription; the McGill College; and many convents and minor educational and benevolent institutions. *M.* also contains a house of industry, a penitentiary, public libraries, societies for the promotion of science, mechanics, agriculture, &c. The position of this city at the head of ship navigation of the St. Lawrence, and near the confluence of that river with the Ottawa, as well as its situation with respect to the U. States, necessarily make it one of the greatest inland emporiums of America. The harbor, though not large, is secure, and vessels drawing 15 feet of water may lie close to the shore. Its chief disadvantage consists in the rapids of St. Mary, abt. 1 m. below. To obviate the obstructions in the navigation above *M.*, the Lachine canal, 9 m. long, 20 ft. wide, and 5 feet deep, was undertaken in 1821, and completed at an expense of $650,000 *M.* is the centre of the commerce between Canada and the U. States, carried on via Lake Champlain and the Hudson. The chief manufactures are machinery, cast-iron ware, hardware and edge tools, tobacco, soap, candles, floor-cloth, linseed-oil, &c. *M.* occupies the site of an Indian village called *Hochelaga*, and was originally settled by a colony of French Catholics, who gave it the name of *Villemarie*. In 1760 it was taken by the English. About three-fourths of the population are of French descent; the remainder principally emigrants from Europe, and Americans. *Pop.* (1897) 260,000.

Montreal, a river forming a part of the boundary between Michigan and Wisconsin, and flowing N.W. into Lake Superior.

Montreal', in prov. of Quebec, a W. co., consisting of a number of islands in the St. Lawrence River; *area*, nbt. 197 sq. m. The largest island contains the city of Montreal, (*q. v.*)

Montreal, in *Missouri*, a village of Texas co., abt. 62 m. E. of Springfield.

Montros', *n.* Same as MATROSS, *q. v.*

Montrose', JAMES GRAHAM, MARQUIS OF, a Scottish noble, and a distinguished royalist leader under Charles I., known, in English history, as the "Great Marquis," was the son of the Earl of Montrose, and was born at Edinburgh, in 1613. He received an excellent education, which was improved by a residence in France, where he held a commission in the Scots Guards. On his return home he experienced such neglect through

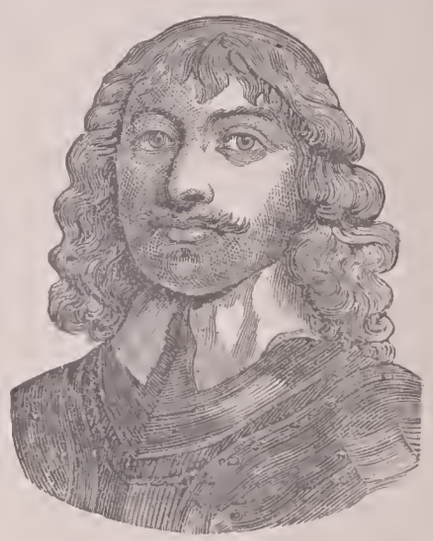

Fig. 1847. — THE MARQUIS OF MONTROSE.

the jealousy of the Marquis of Hamilton, as induced him to join the Covenanters; but he afterwards took a very active part on the side of the king, was created a marquis, and in a few months gained the battles of Perth, Aberdeen, and Inverlochy. In 1645 his fortune changed; and after suffering a defeat from Lesley, at Philiphaugh, near Selkirk, he was obliged to leave the kingdom; in 1648 he landed in Orkney with a few followers, but was soon overpowered, conveyed to Edinburgh, and there decapitated and quartered.

Montrose, a seaport town of Scotland, co. of Forfar, at the mouth of the S. Esk, on a projecting tongue of land, between the German Ocean on the E. and the basin of Montrose on the W., 60 m. N.N.E. of Edinburgh; Lat. 56° 42′ 5″ N., Lon. 2° 28′ W. The harbor is one of the best on the E. coast of Scotland. *Manuf.* Linen sheeting, and sail-cloth. *Pop.* 14,500.

Montrose, in *Iowa*, a town and township of Lee county, on the Mississippi River, about 12 miles above Keokuk.

Montrose, in *Michigan*, a post-township of Genesee county.

Montrose, in *Mississippi*, a village of Jasper co., abt 64 m. E. by S. of Jackson.

Montrose, in *Ohio*, a post-village of Summit co., abt. 27 m. S. of Cleveland.

Montrose, in *Pennsylvania*, a post-borough, cap. of Susquehanna county, about 165 miles north by west of Philadelphia.

Montrose, in *Wisconsin*, a township of Dane county.

Montrouge, (*-roozh',*) a town of France, dept. of Seine, forming the S. suburb of Paris, beyond the fortifications. *Manuf.* Soap, candles, varnish, locomotive engines, and hydraulic presses. Here is the entrance to the catacombs extending under Paris. *Pop.* 9,500.

Mont St. Jean, (*-zha',*) a village of Belgium, prov. of S. Brabant, 11 m. S.E. of Brussels, immediately E. of the scene of the battle of Waterloo, which has been sometimes called by the French the battle of *Mont St. Jean*.

Montserrat, (*mont'ser-răt',*) a British island of the West Indies, belonging to the Leeward group, 28 m. S.W. of Antigua; *area*, 47 sq. m. About two thirds of the island is mountainous and barren, but the remainder is fertile, and produces some of the best coffee and sugar in the West Indies. *Cap.* Plymouth. *Pop.* 8,000. Lat. 16° 45′ N., Lon. 62° 20′ W. It was discovered by Columbus in 1493.

Mont-Tendre, (*-tan'dr,*) one of the Jura mountains, in Switzerland, cant. of Vaud, 15 m. N.W. of Lausanne. *Height.* 5,540 feet.

Mont Vi'so, a peak of the Maritime Alps See ALPS.

Mont'ville, in *Connecticut*, a post-township of New London co.

Montville, in *Maine*, a post-township of Waldo co.

Montville, in *New Jersey*, a village of Morris co., abt. 24 m. N.W. of Jersey City.

Montville, in *New York*, a village of Cayuga co., abt. 20 m. S.S.E. of Auburn.

Montville, in *Ohio*, a post-township of Geauga county.

Montyon, ANTOINE JEAN BAPTISTE ROBERT AUGET,

BARON DE, (*mon-te'on,*) a French philanthropist, b. at Paris, 1733. He held various offices under the government, quitted France at the revolution, and lived in England till the restoration of the Bourbons, in 1814: and is remembered as the founder of the prizes for virtue, and for the work most conducive to good morals, in the gift of the French Academy. He was also author of several works of interest, including an essay on the *Influence of the Discovery of America upon Europe*. D. 1820.

Mon'ument, *n.* [Fr.; Lat. *monumentum*, from *moneo*, to remind, to warn. See MONITOR.] That which calls to mind, or preserves the remembrance of any person or thing; a memorial; a memento; a record.

—A structure or device, raised or placed as a memorial of a person deceased, or of a remarkable event, as a mausoleum, a pillar, an obelisk, a cenotaph, a tomb-stone: as, the Washington *Monument*. — A stone, or other fixed object, placed to mark a boundary, limit, frontier, &c.

Monument'al, *a.* [Fr.] Pertaining, or having reference to a monument; inscribed upon, or adapted to a monument.

"Smooth as *monumental* alabaster."— *Shaks.*

—Memorial; preserving memory; serving as a monument.

"The *monumental* pomp of age."— *Wordsworth.*

Monument'ally, *adv.* By the aid of monuments; memorially.

Monyna'gon, or **Montgua'gon,** in *Michigan*, a township of Wayne co.

Mon'za, a town of N. Italy, prov. of Milan, on the Lambro, 9 m. N.E. of Milan. It is interesting as having been the seat of government during the time of the Lombard kingdom, and the iron crown of Lombardy is still preserved in its cathedral. The principal public buildings are the royal palace and the former residence of the Lombard kings, now occupied by the court of justice. *Manuf.* Cotton and silk stuffs, shawls, hats, and leather. *Pop.* 22,106.

Moo, *v. n.* [Formed from the sound.] To low; to utter the noise of a cow; —(a childish, or trivial word.)

Mood, *n.* [Fr. *mode;* Lat. *modus*. See MODE.] Manner; style; mode.

(*Gram.*) The designation, by the form of the verb, of the manner of our conception of an event or fact, whether as certain, contingent, possible, desirable, or the like; — written also *mode*.

Mood, *n.* [A. S. *mód*, mind, passion; D. *moed;* Ger. *muth*, courage, humor.] Temper of mind; temporary condition of the mind as affected by passion or feeling; disposition; humor; frame of temper; as, an angry *mood*, a pensive *mood*, &c.

"Eyes . . . unus'd to the melting *mood*."— *Shaks.*

—Anger; choler; heat of temper; petulance. (R.)

Mood'ily, *adv.* In a moody manner.

Mood'iness, *n.* State or quality of being moody; — hence, sulleuness; peevishness; ill-humor.

Moo'dir, *n.* [Turkish.] The governor of a city, or of a large jurisdiction pertaining thereto.

Moo'dus, in *Connecticut*, a post-village of Middlesex co., abt. 25 m. S.S.E. of Hartford.

Mood'y, *a.* (*comp.* MOODIER, *superl.* MOODIEST.) [A. S. *modig.*] Subject to moods or humors; capricious; angry; peevish; fretful; petulant; out of humor; also, sad: pensive; abstracted; thoughtful; sullen. — Befitting, or harmonizing with, various turns of mind. (R.)

"Music, *moody* food of us that trade in love."— *Shaks.*

Moo'ers, in *New York*, a post-village and township of Clinton county, about 100 miles N. by E. of the city of Albany.

Mool'tan, or **Moul'tan,** a city of Hindostan, in the Punjab, cap. of a prov. of the same name, on the Chinaub, or Acesines, 190 m. S.W. of Lahore. It is 3 m. in

Moon, *n.* [A. S. *mona;* Ger. *mond;* Gr. *mene;* Sansk. *más*, the moon, also a month.] The earth's satellite. (See below, § *Astron.*) — A secondary planet or satellite, revolving about any luminary of the solar system; as, the *moons* of Saturn. — A month; being the period intervening from full moon to full moon. Used frequently in this sense by savage peoples; as, for instance, the Mexican *moon*, that is, the month selected by the Comanches for their annual raid into Mexico.

(*Fortif.*) Same as HALF-MOON, *q. v.*

(*Astron.*) The satellite of the earth. The moon, after the sun, is not only the most conspicuous, but, in an astronomical point of view, the most interesting of the celestial bodies. The variety of her phases, her eclipses, and the rapidity with which she changes her place among the fixed stars, drew the attention of the earliest observers of the heavens; and in modern times the important application of the theory of her motions to navigation and the determination of terrestrial longitudes, has given to its study the first rank among the objects of astronomical science. The mean distance of the moon from the earth is about 240,000 miles, which is a short distance when compared with the interval which separates us from any other globe. This distance also can be so largely diminished by the power of the telescope, that we know more of the side of the moon turned toward us, than we do of the geography of any one hemisphere of our own globe. The diameter of the earth is 7,926 miles, while that of the moon is only 2,153 miles; consequently the hemisphere which we see is only equivalent to a fourteenth of the terrestrial hemisphere; the surface visible is indeed not more than twice the size of Europe, but on it there are unmistakable indications of vast cosmical forces. In density the moon is little more than half that of the earth, and at its surface gravity is not more than one-sixth of our terrestrial gravity; if, therefore, explosive or upheaving forces exist there, and are independent of the size of the globe, we should expect to find disruptions on its surface, much exceeding in comparative magnitude any of the disruptions that have occurred in the most rugged places of the earth. Again, the moon turns toward the earth always the same face; this is equivalent to the fact of her rotation in space around an axis in the same time that she performs her monthly revolution. Although distinctes have arisen as to whether the term rotation ought to be applied to a phenomenon like this, they are merely verbal ones. The shape of the moon, like that of all the celestial bodies, is nearly spherical. It is scarcely possible to conceive a more remarkable contrast than that between the appearance of the moon to the naked eye, and the forms she presents to the telescope, whether in quadrature or when she is full. Instead of a plain bright surface, we discover a body of most strange character, broken by irregularities, which in extent and form present few analogies with the mountainous regions of the earth. In one region may be seen vast mountains throwing their long shadows on a plain; while in others are various pits or caverns, as deep as Mont Blanc is high, often crowded together with the compactness of a honeycomb. Many careful maps of the moon's surface have been made at various times. The lunar plains were formerly considered seas; whether or not they were seas ages ago we cannot say, but it is certain that there is no water in them now; while it is impossible not to be struck with the similarity between their outlines and the general aspect of our terrestrial system of oceans. The lunar plains are also distinguished by great variety of coloring, giving the appearance of the formation of successive shores, probably by the gradual retirement of an ocean. The mountain forms in the moon are of three kinds. First, a number of perfectly isolated peaks, or sugar-loaf mountains, unconnected with any group or range whatever. The finest instance of these is *Pico*, a very brilliant rock, about half as high as the loftiest of the Alps, which towers almost precipitously south of the crater *Plato*. Second, mountain ranges, or chains, which do not occur frequently; their usual position is that of a curvilineal but broken skirt of the great flats or plains. Some of these masses attain a height of from 18,000 to 20,000 feet. Third, lunar craters. The objects thus called may be termed the characteristic feature of the moon's disturbed region. Not less than three-fifths of the moon's surface is studded with vast caverns, or rather circular pits, penetrating into its mass, and generally girded around at the top with a wall of rock, which is sometimes serrated and crowned by peaks. These pits vary in diameter from 50 to 60 miles to the smallest space visible, probably about 500 feet. One of the most remarkable of the lunar craters is that called *Tycho*, which is readily distinguished in the southern part of the full moon by the number of luminous rays, or streaks of light, which diverge from it in a northeasterly direction. Tycho is an annular mountain or crater, no less than 54 miles in diameter. The height of the western wall above the interior level is, according to Mädler, 17,100 feet, and of the eastern border is somewhat more than 16,000 feet. A mountain nearly a mile high marks the center of the crater. Tycho is surrounded by a great number of craters, peaks and ridges of mountains, lying so close together that in some directions it is impossible to find the smallest level place. It would seem that on the moon's surface there is no atmosphere, or at least none dense enough to refract the rays of light. There is also, as stated before, no water on its surface, and consequently no animals similar to those which exist on the earth. There is no appearance of vegetation or of the variations which accompany the seasons. The hemisphere which we can see is a vast rugged desert, desolate and void of life. Various other phenomena connected with the moon will be found described under their various headings. See ACCELERATION OF THE MOON; ECLIPSE; EVECTION; LIBRATION OF THE MOON; METONIC CYCLE; PHASES OF THE MOON, &c.

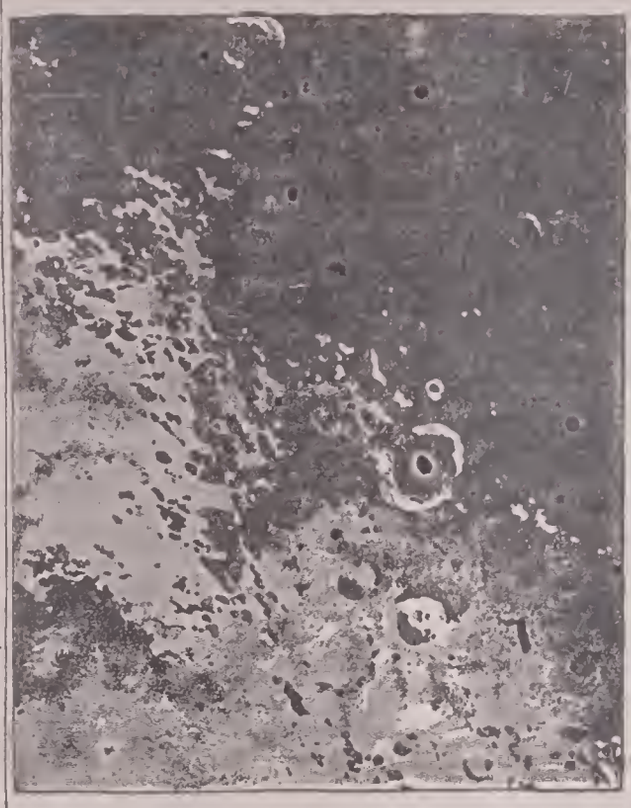

Fig. 1848.—THE LUNAR APENNINES.
From photograph made at the Lick Observatory, July 14, 1891.

Fig. 2989.—PHOTOGRAPH OF THE MOON.
Made at Goodsell Observatory, June 21, 1893, with 8¼ inch Photographic Telescope and Amplifier.

Moon, *v. a.* To throw light upon;—said of the moon. To form after the manner of a crescent moon; as, "*mooned* Ashtaroth."—*Milton.*

—*v. n.* To wander about listlessly or mopingly; to act as if moon-struck or demented; as, he went *mooning* about without any settled plans.

Moon'er, *n.* One who moons, or mopes about as if moon-struck.

Moon'-eye, *n.* An eye influenced by the moon.

(*Far.*) A disease in a horse's eye.

Moon'-eyed, *a.* Having eyes affected by the moon. Dim-eyed; purblind.—Having eyes of an elliptic form, as the Chinese; as, the *moon-eyed* Celestials.

Moon'-fish, *n.* A fish having a tail formed like a half-moon.

Moonish, *a.* Variable; like the moon.

Moon'less, *a.* Not lighted by the moon; as, a *moonless* night.

Moon'light, *n.* The light afforded by the moon.

—*a.* Illumined by the moon; taking place by moonlight.

Moon'shine, *n.* The light of the moon;—hence, figuratively, show, without substance or reality—the moon's rays yielding light without heat; fustian; nonsense; humbug.

Moon'-year, *n.* A lunar year.

Moor, *n.* [A.S. *mor;* Ger. *moor*. See MARSH.] A marsh; a bog; a fen; a morass; an extensive heathy tract of land, having generally a thin, poor soil, but sometimes marshy, with underlying quantities of peat.

Moor, *n.* [Fr. *Maure*, a Moor, an inhabitant of Mauritania, probably from Gr. *omauros*, darkling, dusk; Sp. *Moro.*] A native of the northern coast of Africa, which formed the ancient Mauritanie, now represented by the countries of Morocco, Algeria, Tunis, and Tripoli.

(*Hist.*) In 709 the Arabs conquered Mauritania, and converted the people to Mohammedanism. The conquerors and the conquered amalgamated together, and in 711 an army of this mixed population, under Arab leaders, crossed at the Straits of Gibraltar, and began the conquest of the Spanish peninsula. This they speedily effected, with the exception of the mountainous districts of Asturias and Galicia. When almost the whole of the rest of Europe was sunk in ignorance and barbarism, learning and the arts flourished among the Moors in Spain, where some remarkable monuments of their labors are still to be seen. About the middle of the 11th century, many of the local governors threw off their allegiance, and established themselves as inde-

Thomas Moore

1779–1852

pendent potentates. The wars that followed so weakened the power of the Moors, that the Christians rose against them under Alfonso, "the battler," and took Castile, with its capital, Toledo. Their progress was for a time checked; but subsequently they continued to extend their conquests till the power of the Moors was restricted to the kingdom of Granada, and in 1238 the king of that territory became the vassal of Ferdinand III., king of Castile. At length, in 1491, Ferdinand V., king of Castile and Aragon, after a ten years' war, conquered this also, and put an end to the dominion of the Moors in Spain, after it had lasted nearly 800 years. A portion of the Moors then returned to Africa; but most of them remained in Spain, where they became peaceful and industrious subjects, and adopted generally the external forms of Christianity. Philip II., however, in his hot zeal for Catholicism, resolved upon their entire destruction, and by his oppressions and cruelties, drove them into insurrection, in Granada (1571), after the suppression of which, over 100,000 of them were banished. Their expulsion from the country was completed by Philip III.; and this has been regarded as one of the leading causes of the subsequent decline of Spain; for they were ingenious and industrious citizens, and, after their departure, agriculture, trade, and manufacture fell into decay. The term Moor is frequently used in a very loose sense, particularly by Spanish writers, denoting sometimes the Mohammedan inhabitants of Northern Africa, and sometimes even the whole Mohammedan or Moslem race. Even the Turks, who, in descent, language, and everything but religion, are foreign and alien to both Moors and Arabs, are sometimes spoken of as Moors.

Moor, *v. a.* [Sp. *amarrar*, to make fast, from *amarra*, a cable; Fr. *amarrer*, to secure; Ar. *marasot*, pl. of *mars*, a rope, *mirsat*, an anchor; D. *marren*, to tie.] (*Naut.*) To confine, secure, or fast a ship in a particular station, as by cables and anchors, or by chains, weights, or fixed objects under water.

—To fasten, fix, or secure firmly.

—*v. n.* To be made fast by chains, cables, or ropes.

Moor, a town of Austria, in W. Hungary, 16 m. N.W. of Stuhlweissenburg; *pop.* 7,000.

Moor'age, *n.* A station for mooring ships.

Moor'-coal, *n.* (*Geol.*) A variety of lignite susceptible of easy pulverization.

Moore, THOMAS, Ireland's national poet,—"the poet of all circles," as Byron emphatically styled him,—was b. in Aungier Street, Dublin, in 1779. Like Pope, it may be said that he lisped in numbers; for in his 13th year he was a contributor to the "Anthologia," a Dublin magazine. This turn for versifying was coupled with great aptitude for singing and acting, for which talents the social habits of his native city afforded frequent opportunities of display; while at hom , to use his own words, "a most amiable father, and a mother such as in heart and head has rarely been equalled, furnished him with that purest stimulus to exertion—the desire to please those whom we at once most love and respect." His parents were Roman Catholics, a class then depressed by penal enactments. But Parliament having, in 1793, opened the university of Dublin to Roman Catholics, young Moore was sent to college, where he soon distinguished himself by his classical attainments. In 1799, when in his 19th year, he proceeded to London, with the view of keeping his terms in the Middle Temple, and publishing, by subscription, a translation of *Anacreon*. The translation appeared in 1800, and, through the good offices of the Earl of Moira, was dedicated to the Prince of Wales. At a subsequent period, *M.* was among the keenest satirists of this prince, for which he has been accused of ingratitude; but he himself has stated that the whole amount of his obligations to his royal highness was the honor of dining twice at Carlton House, and being admitted to a grand fête given by the Prince, in 1811, on his being made regent. His next publication—a brilliant, but somewhat licentious collection—was entitled *The Poetical Works of the late Thomas Little*, printed in 1802. Meanwhile, the Earl of Moira, in 1803, obtained for him a government appointment in Bermuda, whither he proceeded, but speedily left his duties to be performed by a deputy, and visited the U. States. This visit was followed by the publication, in 1806, of 2 vols. of *Odes and Epistles*, which were the occasion of a bitter criticism in the "Edinburgh Review." In consequence of that article, Jeffrey and Moore met as duellists at Chalk Farm, near London; but no harm was done, and they subsequently became fast friends. A report getting spread about that *M.* and Jeffrey fought with unloaded pistols, Byron commemorated the event in his *English Bards and Scotch Reviewers*, and Moore followed up his Chalk Farm adventure by sending a challenge to Byron. The challenge, however, led, as with Jeffrey, to a sincere friendship between the two rival poets. In 1811 he married Miss Bessy Dyke, an alliance which added materially to his happiness; and for some time after he resided in Bury Street, St. James's, and became a frequent guest at the tables of the Whig aristocracy, enjoying the friendship of Lords Lansdowne, Holland, and Jno. Russell. In 1813 he removed to Mayfield Cottage, near Ashbourne, in Derbyshire, and there commenced his patriotic task of wedding new words to the most exquisite of the Irish airs, and which resulted in the far-famed *Irish Melodies*. At Ashbourne he also wrote his *Intercepted Letters, or the Two-penny Post-bag*, one of the airiest of his satires, also his *Sacred Songs*, and commenced his Oriental romance, *Lalla Rookh*. Through the friendly offices of Mr. Perry, the copyright of that poem was secured to Messrs. Longman's house for the sum of 3,000 guineas. The work was hailed with a burst of admiration. Eastern travellers and Oriental scholars have borne testimony to the singular accuracy of *M.*'s descriptions; and, translated into Persian, this poem has even become a favorite with the Orientals themselves. Flushed with the success of *Lalla Rookh*, *M.*, with his friend Rogers, visited Paris, where he collected materials for his most humorous publication, *The Fudge Family in Paris*. He next removed to Sloperton Cottage, near Bowood, the residence of Lord Lansdowne; but he had scarcely settled there when he received the painful news that his deputy at Bermuda had involved him to the amount of some $30,000, and that he must be ready at once with a sum to stop proceedings against him. At this period he had many offers of pecuniary assistance; but feeling confidence in his own genius, he looked mainly to his pen. Meanwhile, a trip to the Continent was projected; and *M.*, accompanied by Lord John Russell, proceeded to Paris, and thence to Italy, where he paid a visit to his friend, Lord Byron, at Venice. On his return from this tour he took up his abode in Paris, where he resided till the end of 1822, when it was intimated to him by Messrs. Longman that a final arrangement had been completed with his creditors, and that he might now safely return to England. During his stay in Paris, he had published, *The Fudge Family in Paris*, under the name of "Thomas Brown, the Younger;" *Rhymes on the Road*, and *The Loves of the Angels*; the former the result of his visit to Italy, and the latter founded on an Eastern story. He now turned his attention to prose. He had already published *Memoirs of Captain Rock*, and the *Travels of an Irish Gentleman in Search of a Religion*; but his reputation was greatly increased by his *Life of Sheridan*, which he published in 1825. This was followed, in 1827, by *The Epicurean*, a prose tale. Byron had handed over to *M.*, for his own especial benefit, a manuscript autobiography, on the condition that it should not see the light till after its author's death. Byron died in 1821, and at the request of the deceased poet, the manuscript was burned. Although absolved from any intention to do injustice to the memory of his friend, *M.* has not escaped severe censure for destroying a manuscript which Byron had intrusted him with for the vindication of his name and honor, particularly as the objectionable passages, according to Lord John Russell, did not exceed 3 or 4 pages. In 1830, *M.* produced *The Life of Lord Byron*, in 2 vols. quarto. For this work he received from Murray 2,000 guineas. His next works were, the *Life of Lord Edward Fitzgerald*, in 2 vols. 8vo., 1831, and the *History of Ireland*, written for "Lardner's Cyclopedia." When the Whigs returned to office in 1835, *M.* received a pension of $1,500 a year, the reward of good service done to the Whig cause by his satirical and humorous poems. With the exception of writing short prefaces to the collected edition of his poetical works, printed in 1841 and 1842, his career as an author terminated with his *History of Ireland*. His latter years were clouded by a loss of memory; and, in 1848, he fell into a state of second childhood, and the name of *M.* was added to the sad list which includes the names of Swift, Scott, and Southey. But even the day before his death he "warbled," as Mrs. Moore beautifully expressed it; and the love of music never left him but with life. D. 1852.

Fig. 1849.—THOMAS MOORE.

Moore (*mor*), in *North Carolina*, a central co.; *area*, about 924 sq. m. *Rivers*. Deep, Little, and Lumber rivers. *Surface*, diversified; *soil*, fertile. *Cap.* Carthage. *Pop.* (1890) 20,179.

Moore, in *Pennsylvania*, a prosperous township of Northampton co.

Moore'field, in *Indiana*, a post-town of Switzerland co., about 95 m. S. E. of Indianapolis.

Moore'field, in *Kentucky*, a post-village of Nicholas co., abt. 56 m. S.E. of Frankfort.

Moore'field, in *Ohio*, a township of Clarke co.—A post-village and township of Harrison co., abt. 105 m. E. by N. of Columbus.

Moore'field, in *W. Virginia*, a post-village, cap. of Hardy co., abt. 150 m. S.E. of Wheeling.

Moores'burg, in *Pennsylvania*, a village of Huntingdon co., abt. 86 m. W.N.W. of Harrisburg.—A post-village of Montour co., abt. 5 m. W.N.W. of Danville.

Moore's Creek, in *Idaho*, enters Boisée River from Boisée co.

Moore's Flat, in *California*, a post-village of Nevada co., abt. 18 m. N.N.E. of Nevada city.

Moore's Hill, in *Indiana*, a post-village of Dearborn co., abt. 13 m. N.W. of Lawrenceburg.

Moore's Salt Works, in *Ohio*, a post-village of Jefferson co., abt. 130 m. E. by N. of Columbus.

Moor'ess, *n.* A female moor.

Moores'town, in *New Jersey*, a post-village of Burlington co., about 9 m. N.E. of Camden. *Pop.* 2,350.

Mooresville (*moor'vill*), in Alabama, a post-village of Limestone co., about 20 m. W.S.W. of Huntsville.

Moores'ville, in *Indiana*, a post-town of Morgan co., about 16 m. S.W. of Indianapolis.

Moores'ville, or MOOREVILLE, in *Mississippi*, a post-village of Itawamba co., about 35 m. N. of Aberdeen.

Moores'ville, in *North Carolina*, a post-town of Iredell co., on the Southern R. R. *Pop.* (1897) 950.

Moores'ville, in *New York*, a village of Delaware co., abt. 48 m. S.W. by S. of Albany.

Moores'ville, in *Tennessee*, a village of Marshall co., abt. 65 m. S. by W. of Nashville.

Moore'town, in *Pennsylvania*, a village of Montgomery co., abt. 11 m. N. of Philadelphia.

Moore'ville, in *Michigan*, a village of Washtenaw co.

Moorghaub, (*moor-gawb'*,) a river of Afghanistan, rising in Huzareh, and after a N.W. course of 250 m., losing itself in the sands beyond Mero, in the Khiva dominions.

Moor'ing, *n.* (*Naut.*) Act or operation of securing a ship or boat alongside of any wharf or landing place.

—*pl.* The anchors, chains, and bridles laid athwart the bottom of a river or harbor to confine a ship.—The condition of a vessel made fast by anchors and chains.

Mooring block. (*Naut.*) A kind of cast-iron anchor.

Moor'ish, *a.* Marshy; swampy; boggy; watery; as, a *moorish* fen.—Belonging, or having reference to Morocco, or the Moors; as, *Moorish* architecture.

Moor'-land, *n.* A marsh, or tract of low, swampy, fenny ground.—An elevated region, cold, and covered with morasses.

Moor'land, or MORELAND, in *Michigan*, a township of Muskegon co.

Moorshedabad', a dist of Hindostan, presidency of Bengal, between Lat. 23° 48′ and 24° 47′ N., Lon. 87° 52′ and 88° 41′ E. *Area*, 1,856 sq. m. *Pop.* estimated at 1,050,000.

MOORSHEDABAD, a large city, cap. of the above dist., on the Bhagirathi, a branch of the Ganges, 115 m. N. of Calcutta; Lat. 24° 11′ N., Lon. 88° 15′ E. It was formerly a fine city and the seat of government, but is at present much decayed. Many of its mosques and buildings are in ruins. *Pop.* 146,963.

Moor'-stone, *n.* A kind of English building-stone of course granite.

Moor'y, *a.* Pertaining, resembling, or having reference to moors; fenny, swampy; boggy; marshy; as, "*moory* vales."

Moor'y, *n.* A kind of brown cloth manufactured in India.

Moose, Moose'-deer, *n.* (*Zoöl.*) The common name of the genus *Alce*, family *Cervidæ*, characterized by very broad and palmated horns, found only on the male, and the nose wholly covered with hair, except a small spot between the nostrils. The Moose, *A. Americanus*, (Jardine,) is the largest member of the deer family, quite equalling the horse in bulk, and standing very high; and its broad antlers weigh from 50 to 70 pounds. The muzzle is very broad and prolonged, the ears long and hairy, the neck short and thick, the latter and the shoulders covered by a sort of mane, and the throat with long hair. The general color is grayish brown, and the hair is coarse and brittle. The movements of the moose are rather heavy, but its speed is great. It does not leap, but strides along without apparent effort over fallen trees, fences, and other like obstructions. It was common, some years ago, in the unsettled parts of Maine and New York, and is still to be found northward of those States to the frozen regions. It frequents wooded hill-sides in winter, and the borders of lakes in summer. Moose are hunted for their flesh, which is excellent. They sometimes turn against the hunters before being wounded or even shot at. Their usual mode of defence consists in striking with their fore-feet. The Elk of the N. of Europe is so nearly like our Moose, that the two have been regarded by most authors as one species. *Tenney*.—There are many fossil species of elk or moose; and one of them has been found in the U. States, with the bones of the mastodon.

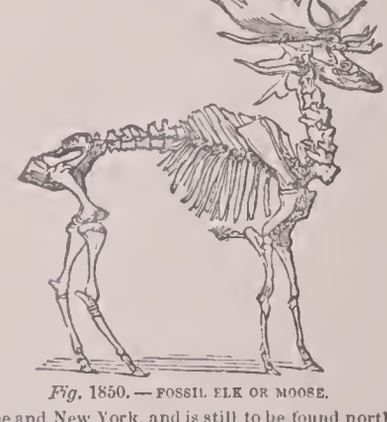

Fig. 1850.—FOSSIL ELK OR MOOSE.

Moose, a river of British N. America, flowing into James Bay from the S.W., abt. Lat. 51° N., Lon. 82° W.

Moose'apeak Light, in *Maine*, a light-house on Sibley Island, at the entrance of Machias Bay. It exhibits a fixed light 65 ft. above sea-level; Lat. 44° 32′ N., Lon. 67° 22′ W.

Moose'head, in *Maine*, a lake in Somerset and Piscataquis cos. It is 35 m. in length, with a maximum

breadth of 10 m. It receives Moose River and several other small streams, and gives rise to the Kennebec River. The waters are deep, and abound in fish.

Moose Hil'lock Mountain, in *New Hampshire*, a double peak of Grafton co., abt. 60 m. N. of Concord. *Height*, 4,636 ft.

Moose Island, one of the Bahama group, W. Indies, abt. 25 m. S E. of the Great Bahama Island.

Moose River, in *Maine*, enters Moosehead Lake from Somerset co.

Moose River, in *New York*, enters Black River in Lewis co.

Moose River, in *Vermont*, enters the Passumpsic River in Caledonia co.

Moose'-wood, *n.* (*Bot.*) *Acer Pennsylvanicum.* See ACER.

Moos'ic Moun'tain, in *Pennsylvania*, a ridge of the Alleghanies, in Luzerne co. It is abt. 30 m. long. *Height*, 1,000 ft.

Moos'up, in *Connecticut*, a post-village of Windham co., abt. 3 m. N.E. of Plainfield.

Moot, *v. a.* [A.S. *motian.*] To debate; to discuss; to argue for or against. — To plead, as a mock cause; to argue or discuss by way of exercise; as, to *moot* a proposition.

—*v. n* To argue or plead a supposed cause.

Moot, *a.* Debatable; that may be discussed; susceptible to argument.

Moot, Moot'-case, Moot'-point, *n.* [A.S. *mót, gemot*, an assembly or meeting for discussion, *pp.* of *metan*, to meet.] A point, case, or question to be mooted or debated; a disputable case; an unsettled or paradoxical argument.

"Who would require another to make an argument on a *moot-point*, who understands nothing of our laws?"—*Locke.*

Moot, *n.* Same as MOT, *q. v.*

Moot'able, *n.* Adapted for discussion; that may be mooted.

Moot'-case, *n.* See MOOT (the noun).

Moot'-court, *n.* A meeting or mock-court held by law-pupils for the purpose of trying imaginary causes.

Moot'-hall, Moot'-house, *n.* [A. S. *môthûs.*] Among the Anglo-Saxons, a town-hall, or building appropriated to the discussion of public affairs.

Moot'-hill, *n.* (*Old Eng. Law.*) An elevated space of ground in the open air, where, in Anglo-Saxon times, public assemblies were wont to be held.

Moot'-house, *n.* See MOOT-HALL.

Mop, *n.* [W. *mop*, or *mopa*; probably allied to Lat. *mappa*, a napkin.] A piece of cloth, or a collection of thrums or coarse yarns fastened to a long handle, and used for cleaning floors.—A wry face, made in contempt; a grimace.

"Each will be here with *mop* and mowe."—*Shaks.*

—*v. a.* To rub or wipe with a mop; as, to *mop* a floor.

Mop'-board, *n.* (*Carp.*) A skirting-board.

Mope, *v n.* [D. *moppen*, to grudge, to grumble, to pout.] To move silent and sluggish from discontent to be very dull or stupid; to be spiritless or gloomy; to drowse; to fret; to be listless; as, "*moping* pensiveness."—*Rowe.*

—*v. a.* To make stupid, dull, or spiritless; to deprive of activity or liveliness.

Mope'-eyed, (-*id*,) *a.* Purblind; short-sighted.

Mope'ful, *a.* Mopish; dull; spiritless. (R.)

Mop'ish, *a.* Dull; spiritless; inert; dejected.

Mop'ishly, *adv.* In a dull, mopish manner.

Mop'ishness, *n.* Dejection; dulness; stupidity; spiritlessness.

Mop'lah, *n.* A Moslem inhabitant of Malabar.

Mop'pet, Mop'sey, *n.* [Dim. of *mop.*] A rag-baby; a puppet made of cloth — hence, a fondling name for a girl or woman. — Also, a woolly variety of dog.

Mop'sey, *n.* See MOPPET.

Mop'sical, *a.* Mope-eyed; purblind; short-sighted.

Moquegua, or **Moquehua,** (*mo-ke'ha,*) an extreme S. department of Peru, bordering on the Pacific Ocean on the W., and Bolivia on the E. and S. It is divided into the provinces of Arica, Moquegua, and Tarapaca. *Cap.* Tacana. *Pop.* 61,432.

MOQUEGUA, a town, in the above department, cap. of a prov. of its own name, on the W. slope of the Andes, abt. 600 m. S.E. of Lima. *Pop.* 12,000.

Moquelum'ne, or **Mokelum'ne,** in *California*, a river rising on the W. slope of Sierra Nevada, and flowing W. into the San Joaquin River, abt. 50 miles below Stockton.

Moquelumne City, a village of San Joaquin co., abt. 23 m. N. by W. of Stockton.

Moquelumne Hill, in *California*, a post-village of Calaveras county, about 60 miles S.E. of Sacramento.

Mo'ra, *n.* (*Bot.*) A genus of trees, order *Fabaceæ. M. excelsa*, a large tree flourishing in Guiana, furnishes the Mora-wood, which is now largely employed for ship-building.

Mora'ceæ, *n. pl.* [Celtic *mor*, black; the color of the fruit of some of the species.] (*Bot.*) The Morad or Mulberry family, an order of plants, alliance *Urticales.* DIAG. Solitary suspended ovules, and a hooked albuminous embryo with a superior radicle. They are trees or shrubs, with a milky juice, sometimes climbing; leaves of various forms and texture, very commonly lobed and rough, with large stipules often rolled up, inclosing the younger leaves, and leaving a ringed scar when they drop off; flowers very inconspicuous. The plants of this order are native of the E., but inhabit the temperate and tropical regions of both hemispheres. The fruit of *Morus nigra* is the common Black Mulberry. The leaves of this species, as well as those of *M. alba*, the White Mulberry, and some others, are in common use as the staple food of silk-worms. *M. nigra* is supposed to be identical with the sycamore-tree of the Bible. *M. rubra*, the Red Mulberry, is another species, found in the Eastern, Middle, and Western States, having berries of a deep red color and an agreeable acid taste. The order includes 8 genera and 184 species.

Moradabad', a district of Hindostan, prov. of Delhi, between Lat. 28° and 30° N., Lon. 77° 40′ and 79° E.; *area*, 5,800 sq. m. The surface is level, well watered, and very fertile. *Prod.* Sugar, cotton, and wheat. *Pop.* 998,000.

MORADABAD', a town of Hindostan, cap. of the above dist., 105 m. N.E. of Delhi. It is the most populous and flourishing seat of commerce of the upper provs. *Pop.* 32,600.

Moraine', *n.* [Sp. *moron*, bullock.] (*Geol.*) A name given to débris, or broken fragments, of rocks brought down into the valleys below by glaciers. Such moraines are common in the Alps, and in other lofty mountain chains. They are found also occasionally where there are now no great glaciers. They assist greatly in determining the history of some of the more remarkable deposits of gravel in Europe.

Mor'al, *a.* [Fr.; Lat. *moralis — mos, moris.* manner, custom, way.] Relating to the practice, manners, or conduct of men, as social beings, in relation to each other, and with reference to right and wrong; subject to the moral law, and capable of moral actions; bound to perform social duties; supported by the evidence of reason or probability; founded on experience of the ordinary course of things. — Conformed to rules of right and propriety, or to the divine law regulating social duties; virtuous; just.

—Conformed to law and right in exterior conduct or deportment; as, to lead a *moral* life.

M. philosophy. See ETHICS.—*M. agent*, one that is capable of those actions which can properly be denominated good or evil in a moral sense. — *M. fitness* is the agreement of the actions of any intelligent being with the nature, circumstance, and relation of things; and *M. obligation* is the necessity of doing or omitting any action in order to being happy and good. — *M. sense* is that whereby we perceive what is good, virtuous, and beautiful in actions, manners, or character; or it is a kind of satisfaction in the mind arising from the contemplation of those actions of rational agents which we call good or virtuous. — *M. certainty* is a very strong probability, and is used in contradistinction to a *mathematical demonstration.* — *M. impossibility* is a very great or almost insuperable difficulty, in opposition to a physical or natural impossibility.

—*n.* [Fr. *morale.*] Morality; the doctrine or practice of the duties and requirements of life; manners, deportment; conduct; behavior; — course of life in regard to good or evil; moral philosophy or ethics, (see ETHICS.) (Generally employed in the plural.)

"The faith and *morals* hold which Milton held."—*Wordsworth.*

—The doctrine inculcated by a fiction, or allegory; the accommodation of a fable to practically instruct the morals.

"To point a *moral*, or adorn a tale."—*Pope.*

Mor'al, in *Indiana*, a post-township of Shelby county.

Mora'le, *n.* [Fr. *moral.*] Moral condition or mental state, as of an army or any organized body or community; as, the *morale* of the men was excellent. — Personal, in contradistinction to *material* force. (R.)

Mor'alist, *n.* [Fr. *moraliste*; It. *moralista.*] One who teaches morals, or the practice of the duties of life; a writer who essays to correct vice and inculcate moral principles. — One who practises moral duties; a mere moral person.

Moral'ity, *n.* [Fr. *moralité*; Lat. *moralitas.*] The doctrine or system of moral duties, or the duties of men in their social character; ethics. — The practice of the moral duties; outward virtue or propriety. — The quality of an action when tested by a moral standard; conformity of an act, principle, or sentiment to the divine law, or to moral precepts.

(*Dram.*) *Moralities, Miracle-plays*, or *Mysteries*, are terms applied to the religious and allegorical plays which constituted the drama in the Middle Ages. Though, as generally used, the terms are synonymous, the miracles, properly so called, were the earliest form, and represented either subjects of Scripture, or legends of the lives of saints. The moralities appear later, and were allegorical representations of virtues or vices, so contrived as to make virtue always desirable, and vice ridiculous and deformed. The mysteries were usually more elaborate and lengthened performances, representing some of the sacred mysteries of Christianity, particularly in the life of Christ. The early fathers of the Church were much opposed to the drama; but, probably finding their efforts unsuccessful, about the 4th century, Apollinaris, bishop of Laodicea, and others, wrote plays adapted for the stage on some of the great events of Scripture. Nothing further is known of them till about the 11th century, when Theophylact of Constantinople introduced certain Christian plays to attract the people from the Pagan revels that were then common. These were not only composed by ecclesiastics, but were also acted by them, usually in churches and the chapels of monasteries. They were afterwards exhibited by trading companies, each guild sharing the expenses, and undertaking a portion of the performances, and they were performed for the purpose of amusing the people on public occasions and festivals. In these mysteries they represented not only men, angels, and devils, but even the persons of the Trinity. Heaven, hell, the creation and consummation of all things, were vividly presented to the eyes of the spectators. According to Malone, the last mystery performed in England was that of Christ's Passion, in the reign of James I. They are still occasionally performed in some parts of Europe, particularly in Spain. At Ober-ammergau, in Bavaria, they are celebrated every ten years, in consequence, it is said, of a vow made by the inhabitants of that place.

Moraliza'tion, *n.* [Fr. *moralisation.*] Act of moralizing; moral reflections or disquisitions. — Exposition in a moral sense.

Mor'alize, *v. a.* [Fr. *moraliser.*] To apply to a moral purpose; to explain in a moral sense; to deduce a moral from.

"He stoop'd to truth, and *moraliz'd* his song."—*Pope.*

—To furnish with manners or examples; to apply a moral to.

"Fierce wars and faithful loves shall *moralize* my song."
Faerie Queene.

—To correct the morals of; to make just or virtuous.

—*v. n.* To speak or write on moral subjects; to make moral reflections.

Mor'alizer, *n.* One who moralizes.

Mor'ally, *adv.* In a moral or ethical sense; according to the rules of morality. — According to moral rules or principles; virtuously; honestly; justly; according to the dictates of the divine law. — According to the evidence of human reason or of probabilities.

"It is *morally* impossible for a hypocrite to keep himself long upon his guard."—*L'Estrange.*

Moran', in *Michigan*, a village of Mackinac co.

Mora'na, *n.* (*Myth.*) The old Bohemian goddess of winter and death; the Maryana of Scandinavia.

Mora'no, a town of Southern Italy, prov. of Calabria Citeriore, 35 m. N.W. of Cosenza. *Manuf.* Silk, cotton, and woollen fabrics *Pop.* 8,500.

Morant', in the island of Jamaica, a town on the S.E. coast, abt. 20 m. S.E. of Kingston, near the mouth of the river Morant, which falls in an arm of the Caribbean Sea called Morant Bay.

Morass', *n.* [D. *maras, morras*; Fr. *marais.*] A marsh; a fen; a bog; a quagmire; a tract of soft, wet ground.

Morass' Ore, *n.* Bog-iron ore.

Morass'y, *a.* Marshy; fenny; boggy.

Mo'rat, *n.* [From Lat. *morus*, mulberry.] A drink concocted of honey, flavored with mulberry-juice.

Morat, (Lake of,) (*mo-ra,*) a small lake of Switzerland, cants. of Freiburg and Vaud, 2 m. S.E. of the Lake Neufchâtel, with which it is connected by the river Broye. It is 7 m. long, and 2 m. broad. On its S.E. shore stands the small town of Morat, near which Charles the Bold, Duke of Burgundy, was defeated by the Swiss, June 22, 1476.

Mora'tin, NICHOLAS FERNANDEZ DE, a celebrated dramatic author of Spain, 1737–1780. His son, LEANDRO FERNANDEZ, appointed royal librarian under Joseph Buonaparte, and considered his father's superior as a dramatic poet, was born 1760, and was a great student of Shakspeare and Molière, but especially the latter; d. at Paris, 1828.

Mora'va, a river of Austria, in Moravia, rising in the Schneeberg, and after a S. course of 184 m., falling into the Danube, 8 m. above Presburg. It is navigable 60 m.

Mora'via, a prov. of Austria, between Lat. 48° 40′ and 50° N., Lon. 15° 5′ and 18° 45′ E., having N. Prussian and Austrian Silesia, E. Hungary and Galicia, S. Upper Austria, and W. Bohemia; *area*, 8,480 sq. m. The surface is generally mountainous except towards the S., which is level and fertile. The chief rivers are the Morava, from which the prov. derives its name, the Oder, Elsa, and Oppa. *Prod.* Corn, wheat, flax, hops, potatoes, wine, fruits, &c. The rearing of cattle and sheep constitutes an important branch of industry. — *Min.* Iron, alum, saltpetre, coal, marble, and sulphur. *Manuf.* Woollen, linen, and cotton goods, thread, leather, paper, potash, and glass. The exports are principally manufactured goods and cattle. The imports are chiefly oil, cotton, silk, wine, and hardware. The chief towns are Brünn (the cap.), and Olmütz.

Fig. 1851.—MORAVIAN COUNTRY-WOMAN.

Mora'via, in *New York*, a post-village and township of Cayuga county; about 18 miles south-southeast of Auburn.

Mora'vian, *a.* Pertaining, or having reference to Moravia, or to the United Brethren.

Mora'vians, or UNITED BRETHREN. (*Eccl. Hist.*) This body of Christians derive their origin from the Church of the Brethren, or *Unitas Fratrum*, which was founded in Bohemia in the year 1457. The work of reform in the Bohemian Church was commenced by John Huss, rector of the University of Prague. He was summoned

to appear before the Council of Constance, and, though a safe-guard had been promised him, he was condemned to death, and burned at the stake, July 6, 1416. His testimony in favor of a purer Christianity had found great acceptance, and his cruel fate was fiercely resented by the Bohemians. Hence arose the party of the *Hussites*, who soon became divided into the *Calixtines*, who afterwards became the National Church, and the *Taborites*, who insisted upon a more thorough reform. War ensued between these two parties, which ended in the overthrow of the Taborites. The hope of realizing the reforms of Huss was not abandoned by many of both parties, who met in secret for encouragement and instruction. From these persons sprang the Church of the United Brethren. In 1456 a number of them removed to the barony of Litiz, in Moravia, where a separation from the National Church was resolved upon; and in 1457 a distinct constitution and discipline were adopted. In 1467 they obtained a regular and independent ministry through a colony of Waldenses on the frontiers of Bohemia, by the consecration of three of their number as bishops. The Church prospered exceedingly. In 1500 there were more than 200 congregations. In 1609 they received recognition as a Church, but were afterwards so relentlessly persecuted, that in 1627 the Church in Bohemia and Moravia had ceased to exist. The branch of the Unity in Poland was merged into the Reformed Church. The last bishop of the Unity, *Amos Comenius*, who died in exile (1671), took measures for the perpetuation of the ministry, by ordaining two ministers as bishops, firmly believing that the Church would be revived. The succession was preserved until the year 1735, when the Episcopacy was transferred to the Renewed Church of the Brethren. This renewal took place in 1722, when some Moravian exiles, descendants of the Ancient Brethren, arrived on the estate of Count Zinzendorf, in Saxony, who granted them an asylum where they might enjoy religious freedom, and aided them in establishing a congregation (Herrnhut). Other Moravian emigrants and pious persons from all parts of Germany joined the new settlement, and in 1727 (May 12th and Aug. 13th), a congregation was organized according to the discipline of the Ancient Church. In 1735, this renewal was consummated by the reception and transfer of the Episcopacy. The first bishop was David Nitschman. In 1732 the first mission of the Brethren was commenced on the Island of St. Thomas. This effort was followed by others in almost all parts of the world. In 1749 an Act of Parliament was passed, which recognized the Church of the United Brethren as an ancient Episcopal Church. Zinzendorf died in 1760. The present constitution of the Church was adopted in 1764. In doctrine, the Moravian Church does not differ from other evangelical churches, so far as the main points of Christian belief are concerned. On minor points it allows a difference of opinion. The distinguishing characteristics of the Church relate to points of ritual and church-life. The highest legislative authority is the General Synod, which meets once in ten years. The Executive Board of the whole Church is the Elders' Conference of the Unity. Each of the three provinces (the German, British, and American) into which the Church is divided, has a Synod and Board of Elders of its own. The foreign mission work of the Church is embraced in nine provinces: Greenland, Labrador, the Indians of N. America, the W. Indies, the Mosquito Coast (Nicaragua), Surinam, S. Africa, Australia, and Central Asia (Thibet). The whole number of converts is 69,123. In the "Diaspora," on the continent of Europe, a species of home-mission, there are over 100,000 persons in spiritual connection with the Church. The number of congregations in America is 96; in Great Britain, 38; on the continent of Europe, 21, with a communicant aggregate of 15,265. The seat of the Provincial Board of the American branch of the Church is at Bethlehem, Pa. The educational institutions of the Church in America are located at Bethlehem, Nazareth, Lititz, Penna., Salem, N. C., and Hope, Ind. The organs of the Church are the *Moravian* and the *Brüder Botschafter*, published at Bethlehem, Pa.—This denomination is not to be confounded with the *United Brethren in Christ*, an exclusively American Church. The two are entirely distinct. The number of communicants in the United States, in 1895, was 12,535.

Mora'vianism, *n.* The religious doctrines followed by the Moravians.

Mo'ray, Mur'ray, or **El'gin,** a maritime co. of the N.E. of Scotland, having N. the Moray Frith, E. the co. of Banff, S. Inverness, and W. Inverness and Nairn; *area*, 531 sq. m. The surface is mountainous, except on the N., where the soil is so fertile that *M.* has been called the "Garden of Scotland." The principal rivers are the Lossie, Spey, and Findhorn. The climate is mild and dry. *Prod.* Oats, wheat, turnips, &c. *Manuf.* Woollens. The principal towns are Elgin (the cap.), and Forres. *Pop.* 44,218.

Mo'ray Frith, is the largest indentation on the Scottish coast, being 75 m. across, from Duncansby Head to Kinnaird Head. At its extremity it receives the rivers Ness and Beauly.

Morbeke, (*mor'bek.*) a town of France, dept. of Nord, 2 m. from Hazebrouck. *Pop.* 4,000.

Mor'bid, *a.* [Fr. *morbide*; Lat. *morbidus*, from *morbus*, a disease; akin to Ir. *marbhan*, a corpse; Lat. *murior*; Sansk. *mri*, to die. See MORTAL.] Diseased; sickly; not sound or healthful; as, *morbid* humors, a *morbid* sensibility.

Morbidezza, (*mor-bī-dĕd'sa,*) *n.* [It., delicacy.] (*Painting.*) A softness and delicacy of style. Its opposite is a style in which the lines are harsh and angular.

Morbid'ity, *n.* The quality of being morbid.—Morbid quality or condition; sickness; disease; unsoundness.

Mor'bidly, *adv.* In a morbid, unsound, or diseased manner.

Mor'bidness, *n.* State of being morbid or sickly, diseased or unsound.

Morbific, Morbifical, *a.* [Fr. *morbifique.*] Causing disease; generating a sickly state; as, *morbific* matter.

Morbihan, (*mor-be-an',*) a maritime dept in the N.W. of France, formerly a part of the prov. of Bretagne, having N. the dept. of Côtes-du-Nord, E. Ille-et-Vilaine and Loire-Inférieure, S. the Atlantic Ocean, and W. Finistère; Lat. bet. 47° 15′ and 48° 15′ N., Lon. 2° and 3° 45′ W.; *area*, 2,640 sq. m. Along the coast are numerous bays, harbors, and islands. The surface is hilly, except towards the S., which consists of rich and fertile plains stretching towards the sea. Agriculture, however, is backward. The climate is mild, though damp, W. winds generally prevailing. The principal rivers are the Vilaine, the Oust, the Blavet, and Scorff. *Prod.* Corn, wheat, rye, and oats. Large numbers of horses, cattle, and sheep are raised. The rearing of bees, and also the river and coast fisheries, are a source of considerable revenue. *Min.* Iron and lead. *Manuf.* Woollens, linens, paper, glass, lace, and chemicals; also, iron-works. Extensive ship-building is carried on at L'Orient, Vannes, Quiberon, and Port Louis. The chief towns are Vannes (the cap.), L'Orient, Ploermel, and Pontivy. *Pop.* 501,084.

Morbil'lous, *a.* [Fr. *morbilleux.*] Pertaining or having reference to measles; partaking of the characteristics of measles; measly.

Morbose', *a.* [Lat. *morbosus.*] Proceeding from disease; unhealthy; unsound; as, *morbose* tumors.

Morceau, (*mor'sō,*) *n.* [Fr.] A morsel; a minute quantity; also, a tit-bit.

Morchella, (*mor-kel'la,*) *n.* (*Bot.*) The Morel, a genus of fungi, order *Ascomycetes*. *M. esculenta*, the edible Morel, is much prized by cooks as a flavoring agent. It is found in greatest abundance in places where trees have been burned.

Morcone, (*mor-kō'nai,*) a town of S. Italy, prov. of Molise, 21 m. S.W. of Campo-basso. *Manuf.* Linen and cotton fabrics. *Pop.* 5,000.

Mordaccous, (*-dā'shus,*) *a.* [Lat. *mordax, mordacis*, from *mordeo*, to bite.] Biting; having a disposition to bite.—Pungent; sarcastic; severe; incisive; scathing.

Morda'ciously, *adv.* In a biting manner.—Sarcastically; scathingly; severely.

Mordacity, (*-dās'i-ty,*) *n.* [Fr. *mordacité*; Lat. *mordacitas.*] State or quality of being mordacious; power of biting.

Mor'dansville, in *Pennsylvania*, a post-village of Columbia co.

Mor'dant, *a.* [Fr., from Lat. *mordeo*, to bite, to take fast hold of.] Biting; caustic; incisive; keen; scathing. (*Manuf.*) Having the quality of fixing colors in textile fabrics,—said of certain substances.

—*n.* (*Manuf.*) In calico-printing, a substance, such as alum, which seizes hold of, or attracts coloring-matter, and serves to fix colors in different stuffs.—In gilding, any viscous or sticky matter employed to make gold-leaf adhere.

—*v. a.* To subject to the action of a mordant; as, to *mordant* goods for dyeing.

Mor'dantly, *adv.* In the manner of a mordant.

Mor'decai. (*Script.*) The uncle of Esther, who rose to dignity and honor in the court of Ahasuerus.

Mordel'la, *n.*; *pl.* MORDELLIDÆ. [From Lat. *mordere*, to bite.] (*Zoöl.*) A genus and family of Coleopterous insects, distinguished by the peculiar structure of their body, and their extreme activity both in flying and leaping. The body is elevated and arched, with the head inserted very low; the thorax is trapezoid or semicircular; the elytra either very short or acuminated at the extremity, as well as the abdomen; the antennæ rather short. The smaller typical species frequent flowers, especially those of the white-thorn and *umbelliferæ*. Some of these species are parasitic upon other insects.

Fig. 1852.
LUNATED POINT-TAIL BEETLE,
(*Mordella lunata.*)

Mor'denite, *n.* (*Min.*) A zeolitic mineral found in the form of concretions in a trap-rock near E. Morden, in the Bay of Fundy.

Mordica'tion, *n.* [Lat *mordicatio.*] Act of biting or corroding; corrosion. (R.)

More, *n.* A greater quantity, amount, degree, or number; greater thing; other thing.

"The lust of getting *more* will have no end." — *Dryden.*

—Something further, or in addition; as, I can do no *more* for you.

—*a.* [A.S. *mara*, greater, comp. of *mycel*, great; Ger. *mehr*; D. *meer*; O. S. *méro*; Gr. *meizōn*, greater.] Greater in quality, degree, or amount;—used in the singular.

"Give me *more* love or *more* disdain." — *Carew.*

—Greater in number; exceeding in numbers;—used in the plural.

"He had so many languages in store,
That only fame shall speak of him in *more*." — *Cowley.*

—Added to some former number; additional.

"But Montague demands one labour *more*." — *Addison.*

—*adv.* To a greater degree; in a greater quantity, or extent;—employed with an adjective to form the comparative degree; as, *more* idle, *more* conceited.—Added to some former number; additional; again; as, I shall not receive you any *more*.

More and more, with repetitive increase or application.

"As the blood passeth through narrower channels, the redness disappears *more and more*." — *Arbuthnot.*

No more, existing or continuing no longer; defunct; deceased; departed; as, "Cassius is *no more*." — *Shaks.*

The more, to a greater degree; by an increased quantity; for a cause already noted.

The more . . . the more, by so much more; additional in proportion.

"*The more* the kindled combat rises higher,
The more with fury burns the blazing fire." — *Dryden.*

More, *n.* [See MOOR.] A provincial Anglicism for a hill.

More, HANNAH, an English moralist and miscellaneous writer, b. at Stapleton, in Gloucestershire, 1744. She was one of the five daughters of a village schoolmaster. The literary abilities of Hannah early attracted notice, and a subscription was formed for establishing her and her sisters in a school of their own. Her first literary production, *The Search after Happiness*, a pastoral drama, was written when she was only 18 years of age, though not published till 1773. By the encouragement of Garrick, she wrote *The Inflexible Captive*, a tragedy, which was printed in 1764. Her tragedy of *Percy*, the most popular of her plays, was brought out in 1778, and ran 14 nights successively; and her last tragedy, *The Fatal Falsehood*, was produced in 1779. Shortly after, her opinions of public theatres underwent a change, and she did not consider the stage, in its present state, as "becoming the appearance or countenance of a Christian." Early in life she was honored by the intimate acquaintance of Johnson and Burke, of Reynolds and Garrick, and of many other eminent men; but she quitted, in the prime of her days, the circle of fashion and literature, and, retiring into the neighborhood of Bristol, devoted herself to a life of active Christian benevolence, and to the composition of various works, having for their object the religious improvement of mankind. Her first prose publication was *Thoughts on the Manners of the Great*; this was followed by her *Estimate of the Religion of the Fashionable World*. In 1795 she commenced at Bath, in monthly numbers, *The Cheap Repository*, a series of admirable tales for the common people, one of which is the well-known *Shepherd of Salisbury Plain*. The success of this tale was extraordinary; it is said that the sale reached the number of 1,000,000 copies. She subsequently produced *Strictures on the Modern System of Female Education*; *Hints towards Forming the Character of a Young Princess*; *Celebs in Search of a Wife*; *Practical Piety*; *Christian Morals*; an *Essay on the Character and Writings of St. Paul*; and *Moral Sketches of the Prevailing Opinions and Manners, Foreign and Domestic, with Reflections on Prayer*. The collection of her works comprises 11 volumes, 8vo. D. 1833.

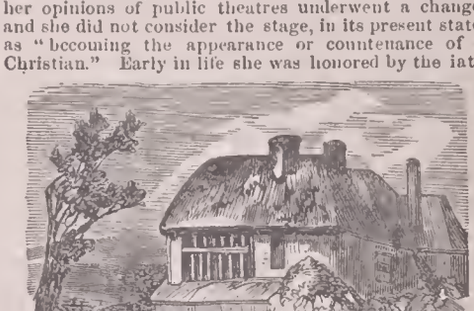

Fig. 1853.—HANNAH MORE'S COTTAGE.

More, SIR THOMAS, a distinguished English statesman and writer, b. in London, 1480, was the son of Sir John More, one of the judges of the King's Bench, and received his education at Oxford. As soon as he became of age, he obtained a seat in Parliament, where he opposed a subsidy demand by Henry VII. for the marriage of his eldest daughter, with such eloquence that it was

Fig. 1854.—SIR THOMAS MORE.

refused by the House. At the accession of Henry VIII. he was called to the bar, and, in 1509, appointed judge of the sheriff's court. In London, which was then a considerable post. By the interest of Wolsey, he obtained the honor of knighthood and a place in the Privy Council. In 1520 he was made Treasurer of the Exchequer, and, in 1523, chosen speaker of the House of Commons, where he resisted a motion for an oppressive subsidy, which gave great offence to Cardinal Wolsey. Sir Thomas was made chancellor in 1530, and, by his indefatigable application in that office, there was, in a short time, not a cause left undetermined. To the high qualities of learning, wit, and liberality, he joined a stanch adherence to the Roman Catholic religion and the papal authority. This led him to oppose the king's divorce from Catharine of Aragon, for which he was sent to the Tower, brought to trial, and condemned to lose his head, which sentence he courageously endured. The best of his works is a kind of political romance, composed in Latin, entitled *Utopia*, wherein the author delineates what he conceives to be a perfect commonwealth, situate in an imaginary island. This work has been translated into English by Bishop Burnet, Cayley, and others. The character of *M.* has been much misrepresented by Fox, in his *Martyrology*, and by Bishop Burnet in his *History of the Reformation*, both charging him with cruel persecution of the Protestants while chancellor. Erasmus, however, distinctly testifies, that "whilst More was chancellor, no man was put to death for these dogmas." All his contemporaries describe him as being of a singularly amiable disposition, and unaffectedly and sincerely pious. Beheaded, 1535.

More'a, (anc. *Peloponnesus,*) a principal division of Greece, consisting of a peninsula attached to N. Greece by the Isthmus of Corinth, between Lat. 36° 15′ and 38° 20′ N., Lon. 21° 9′ and 23° 30′ E. It is said to derive its name from *Morus*, a mulberry, — the peninsula bearing resemblance to the leaf of that tree. The surface is extremely diversified, and it is deeply indented with gulfs and inlets, the principal of which are, Patras, Arcadia, Koron, Kolokythia, and Napoli di Romania. The principal headlands are Cape Skyllo on the E., capes Matapan, Gallo, and St. Angelo S., and Cape Tornese W. There are several large and secure harbors. The rivers are the Alpheus, the Eurotas, the Panisos, and the Styx. The lakes are the Stymphalus, and Pheneus. *Prod.* Corn, olive-oil, wine, silk, cotton, wool, and fruits. The *M.* forms most of the S. part of the kingdom of Greece, and is divided into the nomarchies of Argolis, Corinth, Laconia, Messenia, Arcadia, Achaia, and Elis. See GREECE. — The peninsula received the name of *M.* about 1205, when the country was formed into the principality of Achaia. It was captured by the Turks in 1346, and held by them until 1687, when it passed under the rule of the Venetians. The Turks again took possession in 1715, retaining it until 1829, when it became a division of the kingdom of Greece.

Moreau, JEAN VICTOR, (*mo-rō',*) a French general, b. in Bretagne, 1763. He was educated for the law, but he enlisted when he was 17 years old, and thenceforth devoted himself to a military career. He was rapidly promoted during the first campaign of the wars of the French revolution, and in 1796 he was commander of one of the two French armies that invaded Germany. The other army, which was under General Jourdan, was completely defeated by the Austrians, who then brought their whole force to bear upon *M.* In this emergency, *M.* extricated himself by a retreat through the Black Forest, which is considered a masterpiece of military skill. Napoleon, in 1800, gave *M.* the command of the armies of the Danube and the Rhine; and in the winter of that year *M.* gained the great victory of Hohenlinden, the most splendid of his achievements. *M.* was afterwards suspected of plotting against Napoleon's government, and was banished from France. He lived in this country until 1813, when he returned to Europe and joined the armies of the allied sovereigns against the French. He was killed at the battle of Dresden in that year.

Morean', in *New York*, a township of Saratoga county.

Moreau Creek, in *Missouri*, enters the Missouri River about 5 m. below Jefferson City.

Morecambe Bay, or **Lancaster Bay,** (*mor'kam,*) an inlet of the Irish Sea, on the N.W. coast of England, co. of Lancaster. It is 16 m. long, and 10 m. broad, and receives the rivers Kent and Lune.

Moreen', *n.* [From Fr. *moire*, mohair, and *onde*, watered, waving.] A stout woollen stuff used for curtains, &c.

More'head, in *Kentucky*, a post-village, cap. of Rowan co., abt. 56 m. E.N.E. of Lexington.

More'head City, in *North Carolina*, a post-town of Carteret co., abt. 36 m. S.S.E. of Newbern. *Pop.* 1,150.

More'house, in *Louisiana*, a N. parish, adjoining Arkansas; *area*, about 845 sq. m. *Rivers.* Ouachita and Bartholomew rivers. *Surface*, undulating; *soil*, fertile. *Cap.* Bastrop. *Pop.* (1890) 16,786.

Morehouse, in *New York*, a prosperous township of Hamilton co.

More'houseville, in *New York*, a post-village of Hamilton co., about 115 m. N.W. of Albany.

Mor'el, *n.* [Fr. *morille.*] (*Bot.*) An edible genus of fungi. See MORCHELLA.—A MORELLO (*q. v.*).—The Garden-nightshade. See SOLANUM.

More'-land, *n.* Same as MOOR-LAND (*q. v.*).

More'land, in *Kentucky*, a post-village of Lincoln co., on the C., N. O. & T. P. R. R.

Moreland, in *Michigan*. See MOORLAND.

Moreland, in *Pennsylvania*, a post-township of Lycoming co.

—A township of Montgomery co. (spelled MOORLAND).

Morell', *n.* (*Bot.*) See MORCHELLA.

Morel'la, a town of Spain, prov. of Castellon-de-la-Plana, 45 m. N. of Tortosa. *Manuf.* Blankets and sashes. *Pop.* 6,500.

Morel'lo, *n.* An acidulous, juicy cherry.

Morel'schicks, or SELF-SACRIFICING SAINTS, *n. pl.* (*Eccl. Hist.*) A sect of fanatics, said to be widely spread in Russia. Their principles are altogether unknown, but their existence is asserted from time to time by acts of savage barbarism, chiefly committed in the N. prov. of Saratov and in Siberia. It seems that they dig, with strangely fantastic ceremonies, a deep hole in some remote place, around which they pile wood, brush, straw, and other combustibles in great quantity. Then they enter the hole in solemn procession, set fire to those materials, and burn themselves to death, chanting hymns, and without uttering a cry of pain. Others assemble in some house, around which they have packed combustibles up to the very roof. The house, like all Russian *isbas* built of logs, is in a few minutes enveloped in flames, and the fanatics perish in them, undisturbed by the spectators, in what they consider a religious duty. They are thought to be saints who give themselves the baptism of fire. These "saints" are mentioned in the writings of such travellers, as Guelin, Failes, Georgis, and others.

More'na, (Sierra,) or **Montes Maria'na,** a mountain-chain of Spain, separating the basins of the Guadiana and Guadalquivir; Lat. 38° 30′ N., Lon. bet. 3° and 4° W. Its culminating point is Aracena, 5,661 ft. above the sea. This chain is the scene of many incidents in "Don Quixote."

Moren'ci, in *Michigan*, a post-village of Lenawee co., abt. 16 m. S.W. of Adrian.

Moreo'ver, *adv.* [*more* and *over.*] Beyond what has been said; further; besides; also, likewise; over and above.

"*Moreover* by them is thy servant warned." — *Ps.* xix. 11

Moreri, LOUIS, (*mo-rar'e,*) a French ecclesiastic, b. 1643, distinguished as the first compiler of the great *Historical Dictionary* which bears his name. D. 1680.

Moresque, (*-resk',*) *a.* [Fr., from It. *Moresco* — *Moro*, a Moor.] Executed after the manner of the Moors; arabesque.

—*n.* A kind of painting, carving, &c., in the arabesque and grotesque styles of ornamental art; decoration after the Moorish manner. (Sometimes written *mauresque.*)

Mores'ville, in *New York*, a post-village of Delaware co., abt. 55 m. W.S.W. of Albany.

More'ton Bay, an inlet of the S. Pacific Ocean, on the E. coast of Queensland, Australia; Lat. 27° 30′ S., Lon. 153° E. It is 65 m. long and 23 broad, and receives the rivers Acrowsmith, Brisbane, Logan, and Pine. It contains several islands.

More'town, in *Vermont*, a post-township of Washington co.

Moret'tes, a town of Brazil, on the Nhuudiaguara River, near its mouth.

Mor'gan, SYDNEY, LADY, a distinguished Irish novelist, b. at Dublin, in 1783. She was the daughter of Mr. Owenson, an Irish musician and writer of songs, principally for the stage. Miss Owenson herself began her literary career as a song-writer, preceding Moore in the happily conceived work of setting ballads to old Irish airs. Before completing her sixteenth year she was the authoress of two novels, which are now seldom heard of; but her third attempt at prose fiction, the tale *Irish Girl*, raised her at once into notoriety, and obtained for her a welcome in the first literary and social circles. Pursuing steadily the path she had chosen, Miss Owenson wrote several books in quick succession; and, in ten years from the period of her first triumph, she was fully established as one of the most popular writers of the day. In 1811 she married Sir Charles Morgan, an eminent physician, whose congenial character and taste were afterwards shown in the *Book without a Name*, and other works which they wrote jointly. Besides the long list of novels, verse, and light social sketches which proceeded from Lady Morgan's pen, she published her travels in France and Italy, and many political and historical essays, characterized by a genial sympathy with liberal aims and opinions, which subjected her to severe attacks from the Tory writers of the day. A few months before her death she published a *Diary*, or species of autobiography, in which she recounted the incidents and anecdotes of her early life. D. 1859. Memoirs of her life have since been published.

Mor'gan, in *Alabama*, a N. co.; *area*, about 6 6 sq. m. *Rivers.* Tennessee and Flint rivers. *Surface*, hilly; *soil*, fertile. *Cap.* Decatur. *Pop.* (1890) 24,089.

Mor'gan, in *Georgia*, a N. central co.; *area*, about 322 sq. m. *Rivers.* Little and Appalachee rivers, and some smaller streams. *Surface*, undulating; *soil*, formerly very fertile, but now mostly exhausted. *Min.* Granite of excellent quality, and some gold. *Cap.* Madison. *Pop.* (1891) 16,011.

—A post-town, cap. of Calhoun co., about 28 m. W. by S. of Albany.

Mor'gan, in *Illinois*, a S.W. central co.; *area*, about 580 sq. m. *Rivers.* Illinois river, and Apple, Sandy, Mauvais Terre, and Indian creeks. *Surface*, mostly level prairie; *soil*, remarkably rich. *Min.* Coal in immense deposits. *Cap* Jacksonville. *Pop.* (1890) 32,636.—A township of Coles co.—A township of Grundy co.

Mor'gan, in *Indiana*, a S. W. central co.; *area*, about 430 sq. m. *Rivers.* White river, and several of its affluents. *Surface*, level or undulating; *soil*, very fertile. *Cap.* Martinsville. *Pop.* (1890) 18,643.

—A township of Harrison county.—A village of La Porte county, about 56 miles S. E. of Chicago.—A township of Owen county.—A township of Porter county.

Mor'gan, in *Iowa*, a township of Decatur county.—A township of Franklin county.—A township of Harrison county.

Mor'gan, in *Kentucky*, an E. by N. co.; *area*, about 288 sq. m. *Rivers.* Red and Licking rivers. *Surface*, diversified; *soil*, fertile. *Products* are chiefly corn, oats, pork, and butter. *Min.* Iron, coal, alum, and copperas. Oil springs are also abundant. *County-seat.* West Liberty. *Pop.* (1890) 11,240.

Mor'gan, in *Missouri*, a central co.; *area*, about 638 sq. m. *Rivers.* Osage and La Mine rivers, and Haw and Big Gravois creeks. *Surface*, diversified; *soil*, in some parts fertile. *Min.* Lead, coal, and limestone. *Cap.* Versailles. *Pop.* (1890) 12,311.

Mor'gan, in *Ohio*, a S. E. co.; *area*, about 400 sq. m. *Rivers.* Muskingum river, Meigs creek, and several smaller streams. *Surface*, finely diversified; *soil*, generally fertile. *Cap.* M. Connelsville. *Pop* (1890) 19,143. —A township of Ashtabula county.—A township of Butler county.—A township of Gallia county.—A township of Knox county.—A township of Morgan county.—A township of Scioto county.

Mor'gan, in *Pennsylvania*, a township of Greene county.

Mor'gan, in *Tennessee*, an E. N. E. co.; *area*, about 448 sq. m. *Rivers.* Emory's river, and several less important streams. *Surface*, mountainous; *soil*, in the valleys fertile. *Min.* Coal in abundance. *County-seat.* Wartburg. *Pop.* (1890) 7,630.

Mor'gan, in *Utah*, a N. co., *area*, about 725 sq. m. *Rivers.* Weber river, and numerous less important streams. *Surface*, mountainous; *soil*, in some of the valleys fertile. *Cap.* Morgan. *Pop.* (1895) 2,261.

Mor'gan, in *Vermont*, a post-township of Orleans co. *Pop.* (1897) 544.

Mor'gan, in *West Virginia*, a N. E. co., adjoining Maryland on the N., and Virginia on the S., *area*, about 230 sq. m. *Rivers.* Potomac river, and Cacapon and Sleepy creeks. *Surface*, mountainous; *soil*, not fertile. *Min.* Coal in large quantities. *Cap.* Berkeley Springs. *Pop.* (1890) 6,744.

Morganat'ic, *a.* [From Lat. *morganatica*, a kind of dowry paid on the morning of marriage.] Pertaining to, or after the manner of a marriage between a man of superior and a woman of inferior rank, in which it is stipulated that the latter and her children shall not enjoy the rank or inherit the possessions of her husband. Such marriages are not uncommon in the families of sovereign princes, and of the higher nobility of Germany; but they are restricted to persons of these exalted classes.

Morganat'ically, *adv.* In the manner of a morganatic marriage.

Mor'gan City, in *Illinois*, a village of Morgan co., abt. 25 m. W. of Springfield.

Mor'ganfield, in *Kentucky*, a post-vill., cap. of Union co., abt. 205 m. W. by E. of Frankfort.

Mor'gansville, or **Morganville,** in *Ohio*, a post-village of Morgan co., abt. 70 m. E.S.E. of Columbus.

Mor'ganton, in *Georgia*, a post-village, cap. of Fannin co., abt. 80 m. E. by N. of Dalton.

Mor'gantown, in *Indiana*, a post-village of Morgan co., abt. 35 m. S. by W. of Indianapolis.

Mor'gantown, in *Kentucky*, a post village, cap. of Butler co., abt. 141 m. S.W. of Frankfort.

Mor'gantown, in *N. Carolina*, a post-village, cap. of Burke co., abt. 200 m. W. of Raleigh.

Mor'gantown, in *Pennsylvania*, a post-village of Berks co., abt. 52 m. S. of Reading.

Mor'gantown, in *West Virginia*, a post-town, cap. of Monongalia co., about 35 m. S. of Pittsburg, Penna.

Mor'ganville, in *Ohio*. See MORGANSVILLE.

Morgan'zia, in *Louisiana*, a village of Point Coupee parish, about 45 m. N. W. of Baton Rouge.

Morgar'ten, a mountain of Switzerland, cant. of Zug, E. of Lake Egeri, famous as the scene of the first battle for Swiss independence, in 1315, in which the Austrians were defeated. The French defeated the Swiss at this place in 1798. Here, also, the Austrians were defeated by the French in 1799.

Mor'gay, *n.* [W. *mor*, sea, and *ci*, a dog.] (*Zoöl.*) A species of shark, *Scyllium canicula*; (also called Rough hound-fish.)

Morgue, (*mōrg,*) *n.* [Fr., from PROV. *morga*, a repulsive face.] A place where bodies of persons found dead are deposited for identification.

Moria, in *N. Y.*, a twp. of Franklin co.

Mori'ah. (*Script.*) The hill on which the temple of Jerusalem was built. Some authors believe it to be the mount on which Abraham was commanded to sacrifice his son Isaac.

Mori'ah, in *N. Y.*, a post-village and twp. of Essex co., abt. 115 m. N. by E. of Albany.

Mor'ibund, *a.* [From Lat. *moriri*, to die; Fr. *moribond.*] Dying; being at the point of death; colloquially at death's door.

—*n.* A dying person. (R.)

Morice, (*mōr'is,*) *n.* Another spelling of MORISCO, *q. v.*

Mor'iches, in *New York*, a post-village of Suffolk co., abt. 15 m. S.W. of Riverhead.

Morigerous, (*-rij'er-us,*) *a.* [Lat. *morigerus.*] Obedient; obsequious; submissive. (R.)

Mor'il, *n.* [Fr. *morille.*] Same as MOREL, *q. v.*

Moril'liform, *a.* Formed like, or resembling, the moril or morel.

Morin'da, *n.* (*Bot.*) A genus of plants, order *Cinchonaceæ*. The roots of *M. citrifolia* and *M. tinctoria* are used in India and other parts of Asia for dyeing red. They are occasionally imported under the name of *maulder*, *munjeet*, and *chay-root*; but such names are improperly applied to these roots.

Morin'ga, *n.* (*Bot.*) The typical genus of the order *Moringaceæ*, q. v.

Moringa'ceæ, *n. pl.* (*Bot.*) The Moringad or Ben-nut family, an order of plants, alliance *Violales*. DIAG. A many-leaved calyx, perigynous petals and stamens, 1-celled anthers, stipitate consolidated siliquose fruit, and exalbuminous seeds. They are trees with bi- or tripinnate leaves, and deciduous, colored stipules; flowers white, irregular; sepals and petals 5 of each, the former deciduous, petaloid, and furnished with a fleshy disc; æstivation imbricated; stamens 8 or 10, placed on the disc lining the tube of the calyx, in two whorls, the outer of which is sometimes sterile; ovary-stalk, superior, 1-celled, with 3 parietal placentas. Fruit long, pod-shaped, capsular, 1-celled 3-valved, with loculicidal dehiscence. The plants of this order are natives of India and Arabia. The root of *moringa pterygosperma* resembles that of horseradish in taste and odor, and has been used as a stimulant and rubefacient. A kind of gum resembling tragacanth exudes from the bark when wounded. Its seeds are called *ben-nuts*, or *pois queniques*. They yield a fixed oil (oil of ben), which is sometimes used by painters, and also by perfumers and watch-manufacturers. The ord. includes 1 genus and 4 species.

Morin'gic Acid, *n.* (*Chem.*) An oily acid obtained from oil of ben, which is expressed from the fruit of *Moringa pterygosperma*.

Mor'ingville, in *N. Carolina*, a vill. of Chatham co.

Moringville, in *New York*, a village of Westchester co., abt. 25 m. N. of New York city.

Mo'rion, *n.* An iron or steel head-piece worn by a man-at-arms in the days when armor was used. It was distinguished from the helmets of the knights and esquires in having neither visor nor bevor. (Figs. 24 and 1268.)

Moris'co, *a.* Same as MORESQUE, *q. v.*

—*n.* [Sp., from *Moro*, a Moor.] A person or thing of Moorish origin;—hence, a Moor; the Moorish language or dialect; a Moorish dance, popularly known as the *morris-dance;* also, one who executes the morris-dance. "I have seen him caper upward like a wild *morisco*." — *Shaks.*

(Also written *morish* and *morisce.*)

Morlaix, (*mor'lai,*) a sea-port town of France, dept. of Finistère, at the confluence of the Jarlean and Kerlent, 34 m N.E. of Brest; *pop.* 13,500.

Mor'lette, or MARLETTE, in *Michigan*, a township of Sanilac co

Mor'ley, in *New York*, a post-village of St Lawrence co.

Mor'ling, Mort'ling, *n.* Wool plucked from a dead sheep.

Mor'molyce, *n.* (*Zoöl.*) A singular gen. of Coleopterous insects found in Java, one species of which has been described by M. Hagenbach: our figure gives a very good idea of its form, which is remarkable for its extreme flatness, the elongation of the head, and the very great leaf-like dilatation of the elytra; it was first found by Kuhl and Van Hasselt. The larva has only lately been described and figured. M. Van Ovendyk found the larva and pupa in the *Polyporus fomentarius*, or an allied species of fungus growing on the trunks and roots of trees: the larva closely resembles that of *Carabus* and *Calosoma*.

Fig. 1855.
JAVANESE MORMOLYCE.
(*Mormolyce phyllodes.*)

Mor'mon, *n.* [Gr., a mask.] (*Zoöl.*) See PUFFIN.

Mor'mons, or LATTER-DAY SAINTS, the followers of a religion founded in this country by Joseph Smith, B. in Sharon, Windsor co., Vermont, 1805. He was but poorly educated, and he and his family had the reputation of being bad characters among their neighbors. He affirmed that in 1823 an angel appeared unto him, informing him where certain ancient records were to be found. These were a collection of three gold plates engraven with "Reformed Egyptian" characters, written in the 4th century A. D., by a prophet called MORMON, whence the name of the sect. He set to work to translate them, and produced the *Book of Mormon*. The angel then carried off the plates, no one being allowed to see them but a few of his own disciples. Some of these afterwards quarrelled with Smith, and acknowledged the falseness of their testimony. On the other hand, it is asserted that a clergyman of the name of Spalding had written a religious tale a few years before, entitled *The Manuscript Found*, the story corresponding to that of the Book of Mormon. After Spalding's death the manuscript fell into the hands of one Sidney Rigdon, an intimate acquaintance of Smith. The Book of Mormon was succeeded by a *Book of Doctrine and Covenants*, being a collection of the special revelations made to Smith and his associates upon all points connected with the course and welfare of the Church. This was continually enlarged as further revelations, consequent upon the varying fortunes and requirements of the body, were received. Among these was one by which the Aaronic priesthood was revived; another, by which baptism by immersion was commanded; a third, for the institution of apostles; and others, for the temporal regulation of the Church from time to time. In these productions the peculiar phraseology of Scripture is profusely imitated. At first, they were much persecuted and suffered gross ill-treatment at the hands of the mob, Smith himself being on one occasion tarred and feathered. In 1839 they took refuge in the State of Illinois, where they built the town of Nauvoo, or "Beautiful." Here, in 1841, they commenced the erection of a splendid temple, which was to be more wonderful than that of Solomon. In June, 1844, however, in consequence of a riot in the town, Smith and his brother Hiram were apprehended and lodged in Carthage prison; but the mob were so excited against them, that they broke into the prison and shot both of them. Brigham Young (*q. v.*) shortly afterward succeeded to the post of prophet, which he still retains. The hostility and riots being renewed against them from time to time, and finding themselves unable to cope with their antagonists, they at length quitted the State in 1846, resolved to seek a home beyond the Rocky Mountains away from any settled habitation. After suffering immense hardships from cold and hunger and disease, and being obliged to spend a winter on the way, they reached the valley of the Great Salt Lake, where they established themselves. Here, their object has been to strengthen themselves by inviting persons of their own faith from all parts to settle there. Agents were dispatched to almost every portion of the globe to make converts and to facilitate their transmission to America. After their settlement in Utah, various disputes arose between them and the U. States authorities; and at length a military force was sent by President Buchanan to compel obedience. The approach of this force caused great excitement among the *M.*; but they eventually agreed to submit to Federal authority, and, after remaining for a time, the troops, in May, 1860, left the territory. The number of *M.* in Utah is variously estimated from 60,000 to 100,000; in other parts, about 100,000. According to their own accounts, they believe in the three persons of the Godhead; that all mankind are in a state of sin in consequence of Adam's transgression; but that, in consequence of the sacrifice of Christ, they are free from the guilt of original sin, and only punishable for actual transgressions. In order to salvation, four things are necessary:—1. Belief in Christ's atonement; 2. remission of sins; 3. baptism by immersion for the remission of sins, administered by one authorized of Christ: and, 4. the laying on of hands for the gift of the Holy Ghost, to be administered only by duly authorized apostles or elders. All who comply with these conditions obtain forgiveness of their sins, and are made partakers of the Holy Ghost, enjoying the gifts of prophecy and healing, visions and revelations, and the power of working miracles. They believe in the literal gathering of Israel, and in the restoration of the ten tribes; that Zion will be established upon the Western continent; that Christ will reign personally upon earth a thousand years; and that the earth will be renewed, and receive its paradisiacal glory. They profess to copy the primitive Church in having apostles, prophets, pastors, teachers, evangelists, &c. They further profess to "believe in being honest, true, chaste, temperate, benevolent, virtuous, and upright, and in doing good to all men." The *M.* have something in common with nearly every sect that has ever been known. Hebraism, Persian Dualism, Brahmanism, Buddhistic apotheosis of saints; Christianity, both in its orthodoxy and heterodoxy; Mohammedanism, Druisism, Freemasonry, and latterly Methodism, Swedenborgianism, Mesmerism, and Spirit-rapping, have all contributed something. The Saints do not deny this. Smith, in fact, declares, that as every religion in the world "has a little truth mixed with error," it is the duty of his followers to pick it out, that "all the good and true principles may be gathered together;" "otherwise," he adds, "we shall never become pure Mormons." The great social peculiarity of the sect is their practice of polygamy. It was not so, however, from the first. From 1830 to 1843, they were monogamists, but in the latter of these years, Smith obtained a revelation permitting, and even recommending, a plurality of wives. Still, it does not appear to have become the practice, among the *M.*, till their journey across the prairies to the Valley of the Salt Lake. Since then, it has been boldly avowed, and defended against other Christians by an appeal to Scripture. *M.* are permitted to be monogamists, but encouraged to be polygamists by the "revelation" given to the prophet, that the rank and dignity of Saints in the other world is proportioned to the number of their wives and children. A defence of the practice is also set up on moral grounds. *M.* assert that their community is free of the horrible sin and viciousness that prevail elsewhere: fornication and adultery, with their guilty passions and abandoned conduct, are declared to be unknown; they boast that they have no wretched prostitutes, no illegitimate children, no vile seducers; their wives are asserted (Burton and others are very strong on this point) to be happy, virtuous, and healthy, and they challenge comparison in regard to their domestic and social purity and felicity with any monogamic community in the world. In 1870, the attention of Congress was called to the development of *M.*, and this body declared the practice of polygamy to be an offence punishable at common law. This practice has since been given up by the Mormons, as a result of restrictive laws passed by Congress. In this article we have confined ourselves to Mormonism in its religious aspect only; their civil and political organization is noticed under the head of UTAH, *q. v.*

Mor'mon, in *Utah*, a village of Salt Lake co., about 10 m. S. of Salt Lake City.

Mor'mon Bar, in *California*, a village of Mariposa co., about 2 m. S. of Mariposa.

Mor'mon Basin, in *Oregon*, a village of Baker co., about 60 m. S. of Auburn.

Mor'monism, *n.* The doctrine of the Mormons.

Mor'mon Island, in *California*, a post-village of Sacramento co., abt. 25 m. N.E. of Sacramento.

Mor'monite, *n.* A Mormon.

Morn, *n.* [S., Dan., and O. Fris. *morn*; N. Fris. *moarn.* See MOANING.] The first part of the day; the morning; — used chiefly in poetry.

"The breezy call of incense-breathing *morn*." —*Gray.*

—The morrow; the day following.

Morné, (*mör'nā,*) *n.* [Fr.] The curving head of a tilting-lance.

(*Her.*) A lion rampant, when depicted with no tongue, teeth, or claws.

Morn'ing, *n.* [A. S. *morgen, merigen*; D., Frls., Dan., and Ger *morgen*; Swed. *morgon*; Icel. *morgun.*] The first part of the day, beginning at 12 o'clock at night and extending to twelve at noon; popularly, the time between dawn and the beginning of the forenoon; also, all that part of the day before dinner.—Figuratively, the dawn; the first or early part or stage.

"O life! how pleasant is thy *morning*." —*Burns.*

—*a.* Belonging, or having reference to the first or early part of the day; being in the early part of the day; as, *morning* light, *morning* prayer.

Morn'ing-glory, *n.* (*Bot.*) See CONVOLVULUS.

Morn'ing-gown, *n.* A dressing-gown; a loose robe worn in the morning before one is regularly dressed.

Morn'ing-star, *n.* [A. S. *morgenstorra*.] The planet Venus, when it precedes the sun in rising, and shines in the morning; called by the Greeks *Phosphoros*, and by the Latins *Lucifer* — the light bearer. This planet has ever been an object of great interest, from its exceeding beauty looked upon with delight as the harbinger of the coming day, and accepted as the emblem of felicity in the future. See VENUS.

(*Mil.*) A weapon of offence (Fig. 1856) used in the Middle Ages. It consisted of a wooden ball containing iron spikes, and was suspended by a chain from the end of a pole.

Fig. 1856.
MORNING-STAR.

Morn'ing Sun, in *Iowa*, a town and township of Louisa co., abt. 125 m. E.S.E. of Des Moines.

Morn'ing Sun, in *Ohio*, a post-village of Preble co., abt. 111 m. W.S.W. of Columbus.

Morn'ington Isle, one of the Wellesley Islands, on the N. coast of Australia; Lat. 16° 24′ S., Lon. 139° 37′ E.

Mo'ro, *n.* [Gr. *moron.*] (*Med.*) A small tumor or abscess resembling a mulberry.

Mo'ro, in *Arkansas*, a river flowing into the Ouachita from Bradley co.

Mo'ro, in *Illinois*, a post-village of Madison co., abt. 10 m. E. by N. of Alton.

Moroc'can, *a.* (*Geog.*) Pertaining, or having reference to Morocco, or its inhabitants.

Morocco, (Empire of,) (*mo-rok'o.*) [Ar. *Moyhribul-Acsa*, the extreme west.] A tract of country in the S. W. of Africa, between 28° and 36° N Lat., and 2° and 12° W Lon., comprising the *Mauritonia Tingitana* of the ancients. It is bounded N. by the Mediterranean Sea and the Straits of Gibraltar, E. by the Atlas range, which separates it from the Algerine territory and Biled-ul-Jerid, S. by the river Akassa and Sahara Desert, and W by the Atlantic Ocean. Length of coast line along the Mediterranean, 250 m.; along the Atlantic Ocean, 600 m.; estimated area, 219,300 sq. m., distributed into four provinces, the area and pop. of which are estimated as below:

Provinces.	*Districts.*	*Area in sq. miles.*	*Population.*	*Chief cities.*
Fez.....	7	88,657	3,200,000	Fez, Tangier, Mequinez.
Morocco.....	7	51,380	3,600,000	Morocco, Mogador.
Suse.....	2	28,656	700,000	Agadir.
Tafilet.....	—	50,697	1,000,000	Ressant.
Total of empire.....		219,390	8,500,000	

Of the above population it is estimated that 3,550,000 are Moors, 3,750,000 Berbers, and Shelloohs (chiefly devoted to agricultural and pastoral pursuits), 740,000 Bedouin Arabs, 350,000 Jews, 120,000 negroes, and 500 Christians and renegades.—*Surface.* Morocco is mostly bounded on the E. by the stupendous chain of the high Atlas, which commences with Mount Beni-Ammer, S. of the desert of Angad, on the Algerine frontier, and extends S as far as capes Geer and Nun. The most elevated parts of the range occur between 30° and 33° Lat.; the highest point, Mount Hentet, is about 13,000 ft above the level of the sea. A subordinate range, sometimes called the Little Atlas, branches N.N.W. and N.W. towards Centa and C Spartel; and other chains, either continuous or detached, are thinly sprinkled over the country S. of Fez and Mequinez. The geological constitution of these mountains is granitic in the central ridges, on which are superimposed secondary and even tertiary formations in the less elevated parts of the chain. Silver, iron, and lead mines are wrought to some little extent. Mineral salt is found in great abundance throughout Morocco, and is a considerable article of export to Soudan. But notwithstanding the gigantic mountains by which it is in part bounded and in part overspread, Morocco has a large extent of comparatively level land. Some of the plains and valleys are of

great extent and extraordinary fertility, especially those of Shawiya, Temsena, Ducilla, and Terara between Fez and Morocco. The principal rivers are: 1. The Sebu, rising by several sources on the W. side of the Atlas range, falling into the Atlantic close to Mehedia, and having a probable length of 260 miles; 2. The Wad-Om-er-Beg, rising by two principal branches in the high Atlas, and flowing W. and W.N.W. to its mouth at Azamor, after a course of about 300 m.; and 3. The Wad-Tensift, rising about 40 m. E. of Morocco, takes a general course W. by N. to Lat. 32° 7′ N., and Lon. 9° 19′ W., where it falls into the Atlantic Ocean. The climate of the country is healthy and genial; the heat is less intense than might be expected from its geographical position, and epidemics are of rare occurrence. The thermometer, even in the hottest season, except during the occasional prevalence of hot winds from the desert, seldom exceeds 94° Fahr.; the barometer averages throughout the year 28·30 inches; and the annual fall of rain (chiefly confined to October and November), as calculated on a series of years, amounts to 29 inches. These observations, however, apply chiefly to the N. and W. portions of the empire E. of the Atlas range, the heat is intense, and rain seldom falls. The soil is now, as in antiquity, proverbial for its fertility. Agriculture, owing, perhaps, to the extreme fertility of the land, which produces luxuriant crops with little care or attention, is in the most backward state: fallows and rotations of crops are wholly unknown. The system of culture has remained almost unchanged since the invasion of the Arabs in the eleventh century: and it consists of little more, generally speaking, than grubbing up and burning the weeds before the autumnal rains, and afterwards ploughing the land about 6 inches deep with a machine of the most simple description, drawn by a heifer or ass, and in the S. provinces by a camel. — *Prod.* Wheat, maize, millet, barley, dates, grapes, olives, sugar-cane, tobacco, and cotton. Much more grain is produced than is sufficient for the home consumption. Wool is also very plentiful. Goats afford another very valuable commodity, their skins supplying that leather which, under the name of *Morocco*, is so distinguished for its softness, pliancy, and beauty. (See LEATHER.) The grass lands feed a fine race of horses, the exportation of which is prohibited: and large numbers of sheep, oxen, and mules are reared. Ostriches are numerous on the borders of the southern desert, and their feathers form a valuable article. Fruits abound; but *M.* is chiefly distinguished for almonds. — *Manuf.* Woollen, cotton, and silk fabrics, carpets, red caps, leather, saddlery, chip baskets, and earthenware. The trade with the Levant is carried on by the Mecca and other caravans, while a coasting-trade is carried on by feluccas with the Barbary States. The Jews are very numerous, particularly in the cities; and, by dint of exclusive qualification, carry on all the mercantile and money transactions. Every species of oppression and contempt, however, is heaped upon this devoted race. They are considered by the Mussulmans of Morocco in the light of unclean animals and of enemies of God, and if they do not exterminate them, it is only because they are useful, and because true believers have a right to turn everything to account. Indeed, were the Jewish population suddenly removed from the country, such an event would be a public calamity of incalculable magnitude; for it is the Jew alone who can mend a lock, build a house, make gold and silver trinkets, coin money, decorate a room, or weave silk; all such handicrafts being regarded by the Mussulman with supreme contempt. Every night the Jews are shut up in a particular quarter, inclosed with a wall; and it is only after sunrise that they are allowed to enter the Mussulman town, where they have their shops. The Jewish quarter is called "Mellah," which means a place of damnation. The Jew is obliged to wear black clothes, that color being the emblem of misfortune and malediction. When the Sultan passes through a town, the Jews of the place are obliged to offer him rich and magnificent presents. Yet, with all this burden of servitude upon them, they never abjure their faith. This constancy, however, certainly commendable in itself, is coupled with the grossest ignorance and superstition. — *Exp.* Hides, skins, olive-oil, gums, wax, wool, honey, dates, indigo, shawls, and carpets. — *Gov.* The most despotic on the face of the earth, without either law or religion to modify it. The sovereign takes the title of Sultan. — *Army.* During war, about 100,000; consisting mostly of negroes. — *Navy.* Insignificant. — *Hist.* This empire, the ancient Mauritania (*q. v.*), was formed by the union of several small kingdoms under the Arabs. In the 11th century it fell under the sway of the Fatimite caliphs, who also held power over Algeria, Tunis, and Tripoli, and pushed their victorious arms into Spain. The Sherifs, who pretended to have been the lineal descendants of Mahomet, obtained power over the country in the 16th century. This last dynasty reigns in Morocco at the present time. Since the conquest of Algeria by the French, the Moors have frequently come into collision with the former, at whose hands they suffered a severe defeat at Isly in 1844. Troubles with Spain subsequently arose, on the ground of outrages committed on Spaniards by subjects of *M.*, and as the demands of Spain were not acceded to, a Spanish army invaded *M.* in 1860. The result was the acquisition by Spain of some territory near Ceuta. Trouble on the Algerian border continued, and in 1905 the aggressive attitude of France toward the Sultan's subjects was resented by Germany, which had important commercial interests in *M.* For a time there was talk of war between France and Germany, but the difficulty was finally settled by an international conference, which met at Algeciras, Spain, in Jan., 1906. It resulted in giving France the right to police certain Moroccan ports, the commercial rights of the other nations to be maintained.

Morocco, (Ar. *Marakasch,*) a large city, and the capital of the above empire, 105 m. E. by N. of Mogador; Lat. 31° 37′ 20″ N., Lon. 7° 36′ W. It is beautifully situated abt. 4 m. S. of the river Tensift, on a plain, elevated 1,450 feet above the sea, and is surrounded by a strong wall of lime and mud, 30 feet high, and 6 m. in circuit, with square turrets at intervals of 50 paces. The town

Fig. 1857. — CITY OF MOROCCO.

is ill built; the streets are narrow, irregular, and unpaved. The houses, generally built of the same materials as the wall, are one story high, with flat roofs, and narrow openings instead of windows. A large portion of the space within the wall is occupied with gardens, open areas, and market-places. In the bazaar and market-place a large miscellaneous trade is carried on. On the S. of the city, outside the walls, stands a palace of the sultan, occupying a space of 180 acres. Morocco possesses 19 mosques, of which 6 are remarkable for their size and elegance. There are several tanning and leather-dyeing establishments, some of them of great extent. Founded in 1072, the city of *M.* contained more than 700,000 inhabitants in the 13th century. It is now half in ruins. *Pop.* abt. 50,000. See *Tour in M.*, &c., Hooker and Ball (Lon. and N. Y., 1878).

Moroc'co, in *Ind.*, a v. of Jasper co., abt. 118 m. N. W. of Indianapolis.—A post-vill. of Newton co.

Morocco Leather. See LEATHER.

Moroman'no, a town of S. Italy, province of Calabria Citeriore, 13 m. N.W. of Castrovillari; *pop.* 6,000.

Moron de la Frontera, (*mo'rōn-dā-la-fron-tā'ra,*) a town of Spain, prov. of Seville, on the Guadeira, 37 m. S.E. of Seville. *Manuf.* Olive-oil.

Morone', *n.* Same as MAROON (*q. v.*).

Moro'ni, in *Utah*, a post-village and precinct of San Pete co., about 6 m. S. of Provo.

Morose', *a.* [Lat. *morosus — mos, moris,* manner, custom, way. See MORAL.] Wayward; capricious; sullen; austere; gloomy; crabbed; churlish; surly; ill-natured; ill-humored; peevish; testy; sour-tempered; crusty.

Morose'ly, *adv.* Sourly; peevishly; with sullen crabbedness or austerity.

"Many are as *morosely* positive in their age, as they were childishly so in their youth."—*Govt. of the Tongue.*

Morose'ness, *n.* State or quality of being morose; waywardness; sourness of temper; sullenness.

Moro'sis, *n.* [Gr.] (*Med.*) Idiocy; fatuity; imbecility; stupidity.

Morox'ite, *n.* [Fr.] (*Min.*) An opaque, greenish-blue variety of apatite, chiefly from Areudal, in Norway.

Moroxyl'ic Acid, *n.* (*Chem.*) An acid discovered by Klaproth in the bark of the *Morus alba*, or white mulberry-tree.

Morpan'kee, *n.* A sort of gondola, or pleasure galley, used on the Ganges, in India.

Mor'peth, a town of England, co. of Northumberland, on the Wansbeck, 15 miles N. of Newcastle. *Manuf.* Flannel. *Pop.* 4,500.

Mor'peth, a village of Kent co., Upper Canada, about 190 m. S.W. of Toronto.

Mor'pheus. [Lat. and Gr., from Gr. *morphe,* a form, an image as in dreams.] (*Myth.*) A minister of the god Somnus, who was wonderfully proficient in imitating the grimaces, gestures, words, and manners of mankind. He is sometimes called the god of sleep, and is generally represented as a slumbering child, of great corpulence, and with wings. He holds a vase in one hand, and in the other some poppies.

Mor'phew, *n.* [Fr. *morphée.*] (*Med.*) A scurfy eruption on the face and body.

Morphia, Morphine, (*mōr'fi-a, mōr'fīn,*) *n.* [Fr. *morphine;* Gr. *Morpheus,* the god of dreams.] (*Chem.*) The narcotic principle of opium, a powerful anodyne.—See OPIUM (ALKALOIDS).

Mor'phio, Mor'phion, *n.* See ANOPLURA.

Morphologic, Morphological, (*mōr-fo-lŏj'ik,*) *a.* Pertaining or relating to, or deduced from, the principles of morphology.

Morphologically, *adv.* With relation to the principles or data advanced in morphology.

Morphol'ogist, *n.* A writer on morphology; one who is learned in morphology.

Morphology, (*mōr-fŏl'o-je,*) *n.* [Gr. *morphē,* form, and *logos,* treatise.] That branch of science which treats of and depicts the ideal forms of the organic constituents of plants and animals, in their varieties, homologies, and metamorphoses.

Mor'phy, PAUL, an American lawyer, celebrated as a chess-player, born of creole parents, in New Orleans, in 1837, at an early age showed a strong disposition for games of skill, and played chess well; but these predilections were not allowed to interfere with his education for a learned profession. He found time, however, to pursue at intervals his favorite pastime, achieving in 1849 and the following years a series of triumphs over the best players in this country. A chess tournament, held at New York in 1857, brought his name so prominently before the public that his fame reached England, and the British Chess Association invited him to attend their annual meeting in 1858. This invitation he accepted, principally because he was eager to measure his strength with the English champion, Mr. Staunton, who nevertheless prudently avoided the opportunity. In a series of games with Andersen, Barnes, Bird, Harrwitz, Loder, and Mongredien, he was generally the victor; and at a great chess meeting at Birmingham, and at another in Paris, he played blindfolded with eight able competitors simultaneously, vanquishing six out of that number, the seventh contest being a drawn game, and losing only in one instance. After six months of a continued triumph in Europe, Mr. *M.* returned to the U. States, to resume his preparations for the legal profession, upon the practice of which he entered. Died 1884.

Mor'reil, in *Maine,* a flourishing post-township of Waldo co.

Mor'rhua, *n.* (*Zoöl.*) See COD

Mor'rice, *n.* Same as MORRIS, *q. v.*

Mor'ris, GEORGE P., an American poet and journalist, born in Philadelphia, 1802. At an early age he entered the journalistic profession in New York, where, in 1823, he commenced the publication of the *Mirror,* a periodical which flourished till 1842. In 1846, *M.* became associated with Mr. N. P. Willis in the conduct of the *Home Journal.* But it is as a writer of lyrics, rather than as a journalist, that *M.*'s reputation rests. Among the many fine songs that proceeded from his pen, "Woodman, spare that Tree," and "We were Boys Together," achieved immense popularity — this they still retain. In 1853, he published *The Deserted Bride, and Other Poems;* and, with Mr. Willis as his collaborator, he edited *Prose and Poetry of Europe and America.* D. 1864.

Mor'ris, GOUVERNEUR, an American statesman, b. in Morrisiana, N. Y., 1752. After graduating at Columbia Coll. in 1768, he commenced law practice in 1771, and four years later was returned as delegate to the Provincial Congress of New York, of which State he assisted to frame the constitution. In 1777, *M.* was elected a member of the Continental Congress, and in 1781 was appointed assistant superintendent of finance. In 1791, he was sent by General Washington to London, in order to settle certain unfulfilled stipulations of the old treaty with England. In this, however, he was unsuccessful. In 1800, he was returned to the U. S. Senate. D. 1816.

Mor'ris, LEWIS, one of the signers of the declaration of American Independence, was b. in Morrisiana, N. Y., in 1726, and graduated at Yale Coll. in 1746. In 1775 he was elected to Congress, and ably assisted in the work of the Revolution. D. 1798.

Mor'ris, ROBERT, an American financier, and a signer of the Declaration of Independence, was b. in Lancashire, England, in 1734. Coming to America at an early age, he embarked in mercantile business in Philadelphia, and rapidly acquired wealth. On the outbreak of the Revolution, *M.* took a prominent part in upholding the national cause. In 1775, he was returned to Congress, and in 1781 appointed superintendent of finance. D. 1806. See Hart's *Life of M.,* and *Finances Am. Rev.*

Mor'ris, in *Illinois,* a city, cap. of Grundy co., on the Illinois river, the Ill. & Mich. Cent. and the C., R. I. & P. R. Rs., 61 m. S.W. of Chicago; has some local manufactures and a large trade with the rich region surrounding. It is the chief depot for the agricultural products of Grundy co., and is increasing rapidly in population and importance. *Pop.* (1897) 4,100.

Mor'ris, in *Indiana,* a post-village of Ripley co.

Mor'ris, in *Iowa,* a village of Woodbury co.

Mor'ris, in *Kansas,* an E. central co.; *area,* about 684 sq. m. *Rivers.* Neosho river, and Diamond and other creeks. *Surface,* mostly level; *soil,* in some parts fertile. *Cap.* Council Grove. *Pop.* (1895) 10,944.

Mor'ris, in *New Jersey,* a N. co.; *area,* about 470 sq. m. *Rivers.* Pequannock, Passaic, Musconetcong, and North and South branches of the Raritau and Rockaway rivers. *Surface,* much diversified, Schooley's and Trowbridge mountains forming considerable elevations near the center of the co.; *soil,* generally fertile. *Min.* Copper, iron, zinc, sandstone, limestone, marble, plumbago, and manganese. *Cap.* Morristown. *Pop.* (1895) 59,536.

Mor'ris, in *New York,* a post-village and township of Otsego co.; has manufacturing interests of some importance.

Mor'ris, in *Ohio,* a township of Knox co.

Mor'ris, in *Pennsylvania,* a township of Clearfield co.—A township of Greene co.—A township of Hunterdon co.—A post-township of Tioga co.—A village and township of Washington co., about 40 m. S.S.W. of Pittsburg.

Morrisa'nia, in *New York,* formerly a town of Westchester co.; about 10 m. N. of the city of New York; now included in New York city.

Mor'risdale, in *Pennsylvania,* a village of Clearfield co. Its post-office is MORRISDALE MINES.

Mor'ris-dance, MORRICE-DANCE, *n.* [Fr. *moresque.*] A peculiar kind of dance practised in Europe during the Middle Ages, and originated among the Moors. In Spain it

was accompanied by the castanets, tambourines, &c., and usually performed in fanciful garbs, each dancer having bells at his feet, and ribbons of various colors tied round his arms, or flung across his shoulders. The Fandango, as now executed in Spain, is a close copy of the old Morris-dance, or dance of the Moors of Andalusia.

Morrisia'na, in *New York*. See MORRISANIA.

Mor'ris Island, in *S. Carolina*, an island of Colleton dist., on the S. side of the entrance of Charleston Harbor, abt. 1 m. S.S.E. of Fort Sumter.

Mor'ris Plains, in *New Jersey*, a village of Morris co.

Mor'rison, in *Illinois*, a city, cap. of Whitesides co., on the Ch. & N. W. R R., 124 m. W. of Chicago. Has some manufacturing industries. *Pop.* (1897) 3,000.

Mor'rison, in *Minnesota*, a central co.; *area*, abt. 970 sq. m. *Rivers.* Mississippi and Crow Wing rivers, besides several less important streams and many lakes. *Surface*, pleasantly diversified; *soil*, fertile. *Cap.* Little Falls. *Pop.* (1895) 19,163.

Mor'rison, in *Pennsylvania*, a village of Luzerne co., abt. 12 m. N. by W. of Mauch Chunk.

Mor'rison, in *Wisconsin*, a post-township of Brown co.

Morriso'nians, *n. pl.* (*Eccl. Hist.*) A religious body known also as the *Evangelical Union*, which was formed in Scotland in 1843. Their founder, the Rev. James Morrison, of Kilmarnock, was ejected from the United Secession Church for holding views contrary to the standards of that body. He held that the death of Christ bore no special relation to the elect, but was for the sins of the whole world; that all men were able of themselves to believe the Gospel; that original sin cannot render men liable to condemnation; that no person ought to be directed to pray for grace to help him to believe. Mr. Morrison was soon after joined by several other ministers of the United Secession Church, and also by several of the Independents; and they formed themselves into a body. They comprise now upwards of forty churches, and have a theological hall in Glasgow for the training of their students. Their opinions are generally those of Mr. Morrison, but their government is independent, and considerable differences of opinion exist among them.

Mor'rison's, in *Illinois*, a village of Monroe co.

Mor'ristown, in *California*, a village of Sierra co., abt. 15 m. N.W. of Downieville.

Mor'ristown, in *Illinois*, a post-village of Henry co., abt. 15 m. E. of Rock Island.

Mor'ristown, in *Indiana*, a village of Clarke co., abt. 20 m. N. of Jeffersonville.—A post-town of Shelby co., 12 m. N. by E. of Shelbyville.

Mor'ristown, in *Minnesota*, a post-village and township of Rice co., about 11 m. W. S.W. of Faribault.

Mor'ristown, a seaport town of Shelby co., Nova Scotia, abt. 120 m. N. E. of Halifax.

Mor'ristown, in *New Jersey*, a city, cap. of Morris co., on the Del., Lack. & W. R. R., about 30 m. W. by N. from Jersey City. Has some manufactures and a good local trade, and is a place of considerable activity; memorable as being the headquarters of the American army twice during the War of Independence. The State Insane Asylum, erected in 1875, is near *M.* *Pop.* (1895) 19,290.

Mor'ristown, in *New York*, a post-village and township, river-port of St. Lawrence co., abt. 14 m. S.W. of Ogdensburg.

Mor'ristown, in *Ohio*, a post-village of Belmont co., abt. 21 m. W. of Wheeling, W. Virginia.

Mor'ristown, in *Tennessee*, a post-town, cap. of Hamblen co., 42 m. N. E. of Knoxville.

Mor'ristown, in *Vermont*, a post-village and township of Lamoille county, about 20 miles N. by W. of Montpelier.

Mor'risville, in *Indiana*, a village of Hendrix co., abt. 25 m. W. by S. of Indianapolis.

Mor'risville, in *New York*, a post-village, cap. of Madison co., 100 m. W. by N. of Albany.

Mor'risville, in *Ohio*, a post-village of Clinton co., abt. 37 m. S.S.E. of Dayton.

Mor'risville, in *Pennsylvania*, a post-borough of Bucks co., abt. 30 m. N. of Philadelphia.

Mor'risville, in *Vermont*, a post-village of Lamoille co., abt. 20 m. N. by W. of Montpelier.

Mor'risville, in *Virginia*, a post-village of Fauquier co., abt. 95 m. N. by W. of Richmond.

Mor'ro-de-São-Paulo, a village of Brazil, abt. 50 m. S.W. of Bahia.

Mor'ro-Grande, in Brazil, a mountain-chain forming a part of the boundary between the provinces of Goyaz and Minas-Geraes.

—A town of Brazil, abt. 15 m. S.E. of Cahete; *pop.* 6,000.

Morrope, a town of Peru, on the Leche, near its mouth in the Pacific Ocean.

Morrow, (*mŏr'rō*), *n.* [A. S. *morgen*, morning, *on to morgen*, to-morrow; Gael. *marach*.] The next day subsequent to any day specified.

"Give not a windy night a rainy *morrow*."—*Shaks.*

—The day next following the present.

"Parting is such sweet sorrow,
That I shall say good-night till it be *morrow*." — *Shaks.*

Good-morrow, good-morning; — a common form of salutation.

To-morrow, on the next day following; on the day next subsequent to the present.

Mor'row, in *Ohio*, a central co.; *area*, abt. 432 sq. m. *Rivers.* Vernon and East Branch of the Olentangy or Whetstone, besides some smaller streams. *Surface*, generally level; *soil*, very fertile. *Cap.* Mount Gilead. *Pop.* (1890) 18,120.

—A post-village of Warren co., abt. 37 m. N.N.E. of Cincinnati.

Morrumbidg'ee, a river of Australia. See MORUMBIDGEE.

Mors. (*Myth.*) One of the infernal deities, born of Night, without a father. She was worshipped by the ancients with great solemnity, and represented not as an actually existing power, but as an imaginary being. The moderns represent her as a skeleton, armed with a scythe and a scimitar.

Mors, or **Mor'soe,** an island of Denmark, in Jütland, in the gulf of Lymfiord; Lat. 56° 40′ N., Lon. 9° E. It is 23 m. long, and 12 m. broad. The surface is level and fertile, but about one-third is covered with marshes. The chief town is Nykiobing. *Pop.* 6,000.

Morse, *n.* [Lat. *morsus*, a clasp.] A clasp, buckle, or other fastening formerly used for the fronts of garments.

Morse, or **Wal'rus,** *n.* (*Zoöl.*) A group of amphibious mammalia comprising the genus *Trichecus*, in the family *Phocidæ* (Fig. 1859), having their distinctive character in the cranium and the teeth. The head is well proportioned, round, obtuse; eyes small and brilliant; upper lip remarkably thick, covered with large pellucid whiskers or bristles. Nostrils large, rounded, placed on the upper part of the snout; no external ears. In the adult lower jaw there are neither incisors nor canines, and the lower jaw itself is compressed anteriorly so as to fit between the two enormous tusks (canines) of the upper jaw, which are directed downwards, and are sometimes two feet long. The great alveoli, or sockets for containing these formidable teeth, produce the characteristic form of the skull of the *M.* (Fig. 1858), and make the anterior part of the upper jaw present an immense convex muzzle, the nostrils having an upward direction, and not terminating at the snout. It is evident that there is a general resemblance between the organization of the *M.* and that of the seal; but the development of the brain is not so great in the former as it is in the latter, and the *M.* appears to be gifted with less intelligence. They are of the size of a large ox, attain the length of 20 feet, and are covered with short brown hair. It is the opinion of most naturalists that walruses feed on shell-fish and

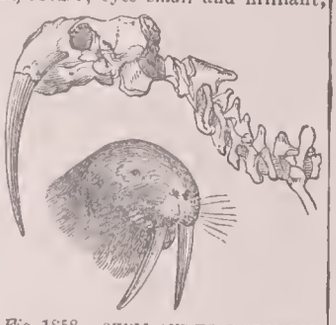

Fig. 1858.—SKULL AND HEAD OF MORSE.

Fig. 1859. — THE MORSE, OR WALRUS.

marine vegetables which adhere to the bottom of the sea, and that one of the uses of their tusks is to root up their food from the spot to which it is fixed; and the probability is, that, though the *M.* does not abstain entirely from carnivorous habits, marine plants form the bulk of its food. They swim rapidly, but their progress on land is awkward and tedious. They appear to be monogamous, and the female is said to bring forth her young, one only at a birth, either on shore or on the ice. The flesh is highly valued by the inhabitants of the Arctic regions. The *M.* of the Arctic seas is gregarious, and resorts in vast herds to icebergs, or the ice-bound coast, to breed and sleep. When attacked, numbers hasten to assist each other, in their turn become assailants, and often use the boats very roughly. It is valuable on account of its oil and tusks, and the skin makes excellent coach-traces.

Morse, SAMUEL FINLEY BREESE, an American artist and inventor, b. in Charlestown, Mass., 1791, was the son of Jedediah Morse, a clergyman and geographer, known as the father of American geography. After graduating at Yale College, 1810, *M.*, who from early age had determined to be a painter, sailed for England with Washington Allston, arriving in London in 1811, where he formed an intimacy with C. R. Leslie, and the first portraits by these artists painted in London were likenesses of each other. *M.*, who made rapid progress in his profession, exhibited at the Royal Academy, in 1813, his picture *The Dying Hercules*, of colossal size; and the plaster model which he made of the same subject, to assist him in his picture, received the prize in sculpture the same year. On his return to the U. States, having settled in Boston, he met with so little encouragement that he removed to New Hampshire, where he found employment in painting portraits at $15 per head. He went to Charleston, South Carolina, where he found more profitable employment, and about 1822, took up his residence in New York. Under a commission from the corporation, he painted a full-length portrait of Gen. Lafayette, then on a visit to the U. States. In 1829 he paid a second visit to Europe, and remained three years. On his return to the U. States in the packet-ship *Sully*, in 1832, a fellow-countryman, Professor Jackson, was describing the experiments that had just been

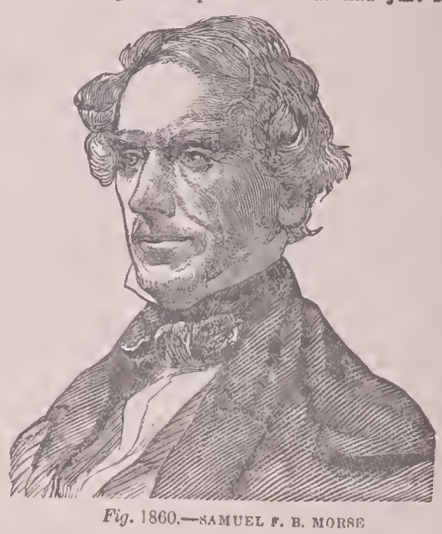

Fig. 1860.—SAMUEL F. B. MORSE

made in Paris with the electro-magnet, when a question arose as to the time occupied by the electric fluid in passing through the wire. The reply being made that it was instantaneous, Jackson, recalling the experiments of Franklin, suggested that it might be carried to any distance, and that the electric spark might be made a means of conveying and recording intelligence. This suggestion took deep hold of Morse, who proposed to develop the idea thus originated; and before the end of the voyage he had drawn out the general plan of the system known by his name. Almost immediately after his landing in America, he commenced a series of experiments; but having little time to give to the subject, it was not until four years afterwards that he succeeded in demonstrating his theory upon a wire half a mile in length. Congress at once voted him $30,000 to enable him to carry out his views; and, in 1844, he saw the realization of his hopes, in the perfect working of a wire 40 miles long, which had been constructed between Washington and Baltimore. Mr. Morse's invention is the simplest of all the electric telegraphs; it requires only a single wire, and is self-recording, or self-printing. The alphabet is formed of a combination of short strokes and dots, marked by a steel pricker upon a sheet of paper, uncoiled beneath it by clock-work mechanism. The system is adopted in almost all countries of the world, and its immense value may be understood from the fact that in France alone, the Morse telegraph brought to the public revenue 6,000,000 francs during the first 3 years, while, previously, the telegraphs on the semaphore principle left an annual deficit of 1,100,000 francs. From the *Nisham Iftichar* of the Sultan to the French cross of the *Légion d'Honneur*, *M.* was given nearly all the decorations of Continental Europe; but the gratitude of the sovereigns and states of Europe also manifested itself in a more substantial form. At the instance of Napoleon III., the representatives of France, Russia, Sweden, Belginm, Holland, Austria, Sardinia, Tuscany, the Holy See, and Turkey met for considering the best means of giving the inventor a collective testimonial, which resulted in a vote of 400,000 francs, "as an honorary and personal reward to Mr. *M.* for his useful labors." This eminent inventor was also member of many American and European scientific and art academies. D. 1872.

Mor'sel, *n.* [O. Fr. *morcel*; Lat. *morsus*, from *mordeo*, to bite.] A bite; a mouthful; a small piece of food. — A small quantity of something not eatable; a fragment; as, "*morsels* of native and pure gold."—*Boyle.*

Morse'ville, in *New York*, a village of Schoharie co., abt. 45 m. W. of Albany.

Morsure, (*mŏr'shur,*) *n.* The act of biting or gnawing.

Mort, *n.* [Fr., death, from Lat. *mors, mortis.*] A note sounded at the death of a stag or other game.

"The sportsman then sounded a treble *mort*. —*Sir W Scott.*

—[Icel. *morgt.*] An English provincialism for a large quantity or ample amount. — In gypsy cant, a woman. — A three-year old salmon. (Prov. Eng.)

Mortagne, (*mor-tain',*) a town of France, dept. of Orne, 20 m. E. of Alencon. *Manuf.* Linen, thread, and leather. *Pop.* 5,000.

Mor'tal, *a.* [Lat. *mortalis*, from *mors, mortis*, death.] Subject to death; fore-doomed to die; as, mankind are *mortal*. — Deadly; destructive to life; fatal; causing of bringing death; terminating life; deadly in malice or purpose; exposing to certain death; as, a *mortal* wound.

"The fruit whose *mortal* taste brought death."—*Milton.*

—Inferring or admitting death; susceptible to the influence of death; liable to destructive action.

"Or in the natal, or in the *mortal* hour."—*Pope.*

—Incurring the penalty of death; condemned to be punished with death; not venial; as, a *mortal* sin.—Human; belonging to man, who is mortal; as, *mortal* power.

"All men think all men *mortal* but themselves."—*Young.*

—Extreme; violent; harassing; tormenting.

"The nymph grew pale, and in a *mortal* fright."—*Dryden.*

Mortal foe, a relentless, implacable enemy; a foe bent on one's destruction.

"I am Palamon, thy *mortal foe*."—*Dryden.*

Mor'tal, *n.* A human being; a man, subject to death; —opposed to *immortal.*

"'Tis not in *mortals* to command success."—*Addison.*

Mortal'ity, *n.* [Fr. *mortalité*; Lat. *mortalitas.*] State or quality of being mortal; condition of being subject to death, or the necessity of dying.

"Thoughts of *mortality* are cordial to the soul."—*Fuller.*

—Death; destruction; end of life.

"I beg *mortality*,
Rather than life preserv'd with infamy."—*Shaks.*

—Actual demise of deaths in a stated time or given community.

"The year of 1592 was a time of great *mortality*."—*Graunt.*

—Human nature; the human race; humanity in general.

"Take these tears, *mortality's* relief."—*Pope.*

M., (*Law of.*) The mathematical relations subsisting among the number of persons living at the different ages of life; such that, the number of persons living at any assigned age being given, the number of them who remain alive at every subsequent age, and consequently the mortality which takes place in the interval, will be expressible by that relation. It must be obvious that in speaking of a law of this kind, we can only have regard to the averages of large numbers. In respect of a single individual, or a small number of persons, the uncertainty of the duration of life is proverbial; but the case is entirely changed when multitudes are concerned; and there are few classes of contingent events of which the results can be predicted with so little risk of departure from the truth as the average age to which the lives of a considerable number of persons will be prolonged. The circumstances which affect the mean duration of human life depend upon a great number of different causes; as climate, the facility of obtaining subsistence, the state of civilization, the manner of living, progress of medical science, &c.,—all of which vary in different countries and at different times. The law of mortality, therefore, must vary with these circumstances; and consequently, if expressible by any mathematical function, it must be one affected by numerical coefficients depending on the particular circumstances, and of which the values can only be determined by observation. The simplest expression which has been proposed for representing the course of mortality is that which is derived from the celebrated hypothesis of De Moivre; namely, that if a number of individuals be taken in any given year of age, the number of deaths which take place among them will be the same every year until the whole are extinct. In this hypothesis only one numerical quantity requires to be determined, viz., the average extreme age. De Moivre adopted 86; and his hypothesis may therefore be simply enunciated as follows: Out of 86 infants born, 85 will be alive at the end of the first year, 84 at the end of the second, and so on to the extremity of life, the decrement being one in each year. For a considerable number of years, about the middle ages of life, this hypothesis of equal decrements represents the observed facts with tolerable accuracy; and as it affords considerable facilities in various calculations, it was formerly much used in the computation of life contingencies. The difference between the given age and 86 is called by De Moivre the *complement of life*; thus the complement of a life of 50 is 36 years. On account of the multitude of causes which influence the rate of mortality among the inhabitants of a country, it is plain that any formula deduced from *à priori* considerations can only be trusted so far as it is found to agree with experience: and therefore, for all practical purposes, recourse is had to a table showing for each year of age the number of deaths which are observed to take place out of a large number of persons who enter upon that age. The ratio of those two numbers is the measure of the probability that an individual entering upon that age will not survive the year, and may be assumed as the law of mortality in respect of that age. The table may be exhibited under different forms: the most usual is a table of decrements, which is constructed by supposing a large number of persons, as 10,000 for example, to start together in the same year of age (the year of birth is usually assumed), and to write down in the same column the number of those who remain alive at the end of each successive year. From this the number who die in each year, and the chances of surviving a year, or any number of years, are easily found. For some purposes the table of the probabilities of living over a year at each age, or of dying in the course of the year, is more convenient; but either form can be readily reduced to the other.

Mor'talize, *v. a.* To render mortal. (a.)

Mor'tally, *a.* In a mortal manner; in a manner that must cause death: irrevocably; as, he fell, *mortally* wounded.—In the highest possible degree; inveterately; excessively.

"I *mortally* dislike a vulgar face."—*Granville.*

Mor'talness, *n.* Mortality; state or condition of being mortal.

Mor'tar, *n.* [Lat. *mortarium*; Fr. *mortier*; probably allied to Lat. *mordeo, morsus*, to bite, crunch, or chip with the teeth.] (*Chem.*) A vessel, usually made of iron, brass, marble, Wedgwood-ware, or glass, in which substances are pounded or bruised with a pestle.

(*Masonry.*) A mixture of lime, sand, and water, used for cementing stones and bricks in walls.

(*Gun.*) A variety of cannon of a large bore, with chambers (Fig. 1861), employed to throw shells or carcasses at considerable elevations, so that the missile may range to a great distance, and fall vertically upon the object. Mortars were first used in sieges for throwing large balls of stone and of red-hot iron, before the invention of shells.

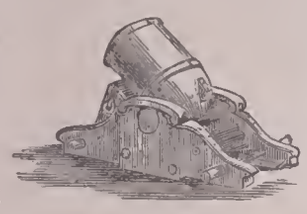

Fig. 1861.—MORTAR.

In consequence of this, the calibre of a mortar in Germany is estimated by the weight of a stone-ball, equal in bulk to the size of the bomb which it is intended to throw. In Russia and Denmark, the calibre of a mortar is estimated by the weight of an iron ball exactly fitting it; and in England, in France, and in the U. States, by its diameter in inches. The interior parts of a mortar are the chamber, the bore, the mouth, and the vent. The chamber is the place where the charge of powder is lodged. The shape of the chamber varies, but it is generally conical, and more or less truncated. The use of mortars is considered to be older than that of cannon by some writers. Shells were thrown out of mortars at the siege of Wachtendeuk, in 1588, by the Count of Mansfeld. See BOMB; GUN.

Mortar-bed (*Gun.*) A thick plank hollowed out to receive a mortar.

Mortar-vessel, mortar-boat. (*Navy.*) For a considerable period this term was applied to small vessels used in the navy, and armed with mortars for the purpose of bombarding. The increased use of shells in naval warfare, to be fired from ordinary guns, converts every vessel of war into a bomb-vessel; consequently, the term mortar-vessel will not long designate any particular kind of boat. In ordinary language, the term is applied, in the navy, to a few small craft of light draught of water.

Mortara, a town of Italy, prov. of Alexandria, 25 m. N.N.E of Alexandria; *pop.* 5,000.

Mortefontaine, (*mort-fon'tain.*) a village of France, dept. of Oise, in the castle of which the treaty of peace between France and the U. States was signed, in 1800.

Mortes, (Rio das.) a river of Brazil, prov. of Minas-Geraes, enters the Rio Grande near Macaia. *Length*, abt. 120 m.

MORTES, (RIO DAS,) a river of Brazil, prov. of Matto-Grosso, enters the Araguay opposite the centre of the island of Santa Anna.

Mortgage, (*mör'gej,*) *n.* [Fr. *mort*, dead, and *gage*, pledge. See GAGE.] (*Law.*) The conveyance of an estate, real or personal, by a debtor to his creditor, as a pledge or security for a debt. The debtor is called the *mortgagor*, the creditor *mortgagee*. The conveyance is absolute in form, but subject to a proviso by which it is to become void, or by which the pledge is to be reconveyed upon repayment to the grantee of the principal sum secured, with interest, on a certain fixed day. Upon the non-performance of this condition, the mortgagee's estate becomes absolute at law, but remains redeemable in equity during a limited period. (See LIMITATION.) In general, every description of property, and every kind of interest in which it is capable of absolute sale, may be the subject of a legal *M.*, or its equivalent in equity. A deed, if really intended only as a security for money, will be treated as a mortgage, although, in form, it purports to be an absolute conveyance or assignment. So long as the mortgagor remains in possession, the mortgagee's estate is not absolute. As to the rights of the mortgagee, he is entitled to enter into possession of the lands, and after a notice to the tenants, to recover the rents and profits, unless there is some agreement to the contrary. He may grant leases, subject to the equity of redemption, and avoid by ejectment, without notice, any leases that may have been made by the mortgagor without his concurrence subsequently to his mortgage. He must, however, account for the rents which he receives, and pay proportional for such parts as he may keep in his own possession. A mortgagee is not allowed to obtain any advantage out of the security beyond his principal and interest. Though the mortgagee, after the mortgagor's default in payment of the principal sum and interest, has the absolute legal estate, he is still considered in equity to hold only as a security for his debt. In order to obtain absolute possession of the estate, the mortgagee has to file a bill of foreclosure against the mortgagor, calling upon the latter to redeem his estate forthwith, by payment of the principal money, interest, and costs; and if he fail to do so within the time specified by the court (usually six months), he is forever barred and foreclosed of his equity of redemption, and the mortgagee becomes owner in equity, as he before was in law. (See FORECLOSURE.) In the event of a sale, the surplus, after deduction of the principal sum, interest, and expenses, must be accounted for and paid to the mortgagor, his heirs, executors, administrators, or assigns. The above general remarks apply principally to mortgages on land; the entire subject is vast and intricate, so that here we can do nothing more than refer for further particulars to special treatises on the subject, and especially to Washburn's *Real Property*, for a full abstract of the laws of the various States.

—The state of being pledged; as, land held on *mortgage.*

—*v. a.* To grant, as an estate in fee as security for the payment of money lent or contracted to be paid at a certain time; as, lands *mortgaged.*—To pledge; to render liable to the liquidation of any debt or expenditure; as, *mortgaged* capital.

Mort'gage-deed, *n.* (*Law.*) A deed of conveyance given by way of mortgage.

Mortgagee, (*mör-ga-jee',*) *n.* (*Law.*) The person who lends money on mortgage, or to whom a mortgage is made or given;—correlative to *mortgagor.*

Mortgager, Mortgageor', (*mör'ga-jer,*) *n.* (*Law.*) The person who grants an estate in fee as security for debt, as above specified.

Mort'gagor, *n.* (*Law.*) Same as MORTGAGER.

Mortier, (*mor'te-a.*) *n.* The name given to a cap of state, of great antiquity, worn by the first kings of France, and the form of which is still preserved in the cap worn by the president of the Court of Cassation.

Mort'ier, EDOUARD ADOLPHE CASIMIR JOSEPH, DUKE DE TREVISO, a marshal of France, born 1768, entered the army in 1791, with the rank of captain, and having distinguished himself on various occasions, he was rapidly promoted. In 1803, Napoleon appointed him to the command of the army sent to occupy Hanover. In 1804, he was raised to the rank of a marshal. In the campaigns of 1805 and 1806, Gen. Mortier headed one of the divisions of the grand army, commanded in chief by Napoleon in person; and displayed great enterprise and intrepidity. On one occasion, when at the head of 4,000 men, he fell in with the main body of the Russian army under Kutusoff, and being compelled to fight or surrender, by his superior tactics and valor he held out till the arrival of sufficient reinforcements. In 1808 he was raised to the dukedom of Treviso; and soon after the invasion of Spain, he took the command of the French armies there. He accompanied Napoleon in his expedition to Russia; and to him was intrusted the blowing up the Kremlin at Moscow. On the restoration of Louis XVIII. he gave in his adhesion, and lived as a private person in Paris till 1816, when he was appointed to the command of the 15th military division, at Rouen. He was afterwards elected a member of the Chamber of Deputies, in which he sat till 1819, when he was restored to the peerage. In 1834, Louis Philippe prevailed on him to accept office, on the resignation of Marshal Soult, but he soon after resigned. Being on the staff of the king and prince at the review in Paris, on the 28th of July, 1835, it was the fate of this brave officer to be one of the victims of the assassin Fieschi, (*q. v.*)

Mortif'erous, *a.* [Fr. *mortifère*, from Lat. *mors, mortis*, death, and *ferre*, to bear.] Bringing or superinducing death; fatal; deadly; destructive; as, a *mortiferous* herb.

Mortifica'tion, *n.* [Fr. See MORTIFY.] Act of mortifying, or state of being mortified.—The act of subduing the passions and appetites by penance, abstinence, or painful severities or macerations inflicted on the body.

"The *mortification* of our lusts has something in it that is troublesome, yet nothing that is unreasonable."—*Tillotson.*

—Humiliation or vexation; state of being humbled or depressed by disappointment, chagrin, crosses, or anything that wounds or abases pride.—That which mortifies; cause of humiliation, chagrin, or vexation.

(*Med.*) The loss of vitality in a part of the body. The incipient state of *M.*, when the case is still recoverable, is called *gangrene;* when totally dead, *sphacelus.* When any portion of the body loses its vitality, a process of separation takes place between it and the living parts that surround it; and when this happens in certain parts or organs, it is necessarily fatal. The symptoms attending *M.* of the viscera are generally loss of pain, diminution of fever, small sinking pulse, hiccough, delirium, cold sweat, and fainting, which precedes death. *M.* of a bone is called *necrosis.*

(*Scots Law.*) A bequest to an educational, literary, or religious institution.

Mor'tifiedness, *n.* State or condition of being mortified; abasement of the passions or appetites, humiliation; chagrin.

Mor'tifier, *n.* The person who, or thing which, mortifies.

Mor'tify, *v. a.* [Fr. *mortifier*; L. Lat. *mortifico*; Lat. *mors, mortis*, death, and *facio*, to make. See MORTAL.] To subdue or bring into subjection, as the bodily appetites by abstinence, or rigorous severities; to abase; to humble; to reduce; to restrain, as inordinate passions.

"With fasting *mortified*, worn out with tears."—*Harte.*

—To depress; to affect with slight or temporary vexation or chagrin.

"He is controlled by a nod, *mortified* by a frown, and transported by a smile."—*Addison.*

—To destroy the organic texture and vital functions of some part of a living animal; to alter; to gangrene.

—*v. n.* To become dead; to gangrene; to lose vitality, as flesh.—To be subdued; to die away.—To practise severities and penance from religious motives.

Mor'tifying, *a.* Humiliating; tending to humiliate, chagrin, or abase; vexatious; annoying; as, a *mortifying* rebuff.

Mor'tifyingly, *adv.* Vexatiously; humiliatingly.

Mor'timer, ROGER, EARL OF MARCH, an English noble of the 14th century, was b. about 1287, and on the death of his father, in the Welsh wars in 1303, was made the ward of Piers Gaveston. He served under Edward I. in the Scottish war, in 1306–7, and during the first 14 years of the reign of Edward II. was employed in Scotland, Ireland, and France, and was appointed lieutenant in Ireland in 1317. Three years later he joined the barons in revolt to banish the king's favorites, the Spensers, but was taken and imprisoned in the Tower. Having

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